



EDITION 5

Sensor Solutions Guide

SENSE • CONNECT • CONTROL

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Products and Solutions for Wearable Devices



Ultra-low power 6-axis INEMO® module



Leveraging its long experience in a wide range of technologies, ST offers a selection of products specifically designed for wearable devices targeting applications such as:

- Consumer fitness and wellness
- Healthcare
- Portable infotainment
- Monitoring and safety in Industrial

In these applications high precision, low power consumption, compact form factor and outstanding performance are a must and ST's products take into account the needs of the most recent and innovative wearable and industrial solutions.

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ACCELEROMETERS

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Part Number	Sensing Range (g)	Sensing Axis	Sensitivity Typ. (mV/g)	Zero-g Offset (V)	Bandwidth Typ. (Hz)	Supply Voltage (V)	Supply Current	Operating Temperature (°C)	Package Type / Size (mm)
FXLN8361	±2, ±8	X, Y, Z	229 (2g), 57.25 (8g)	0.75	1.1kHz (X&Y), 600Hz (Z)	1.95 to 3.6	180µA (Active), 30nA (Shutdown)	-40 to +105	QFN 3 x 3 x 1
FXLN8362	±4, ±16	X, Y, Z	114.5 (4g), 28.62 (16g)	0.75	1.1kHz (X&Y), 600Hz (Z)	1.95 to 3.6	180µA (Active), 30nA (Shutdown)	-40 to +105	QFN 3 x 3 x 1



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity Typ. (mV/g)	Zero-g Offset (V)	Bandwidth Typ. (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
KXTC9-2050	±2*	X, Y, Z	660	1.65	50*	3.3	0.24	-40 to +85	LGA-16 3.0 x 3.0 x 0.9

*Factory Programmable to ±6

*Factory Programmable to 2000



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity Typ. (mV/g)	Zero-g Offset (V)	Bandwidth Typ. (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LIS344ALHTR	±2, ±6	X, Y, Z	660	1.65	1800	3.3	0.68	-40 to +85	LGA-16 4 x 4 x 1.5



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity Typ. (mV/g)	Zero-g Offset (V)	Bandwidth Typ. (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
3038-0050	±50	Z	2	±0.025	0 to 1000	2 to 10	–	-54 to +125	LCC-8
3038-0100	±100	Z	1	±0.025	0 to 1200	2 to 10	–	-54 to +125	LCC-8
3038-0200	±200	Z	0.9	±0.025	0 to 1400	2 to 10	–	-54 to +125	LCC-8
3038-0500	±500	Z	0.4	±0.025	0 to 2000	2 to 10	–	-54 to +125	LCC-8
3038-2000	±2000	Z	0.16	±0.025	0 to 4500	2 to 10	–	-54 to +125	LCC-8
3038-6000	±6000	Z	0.1	±0.025	0 to 5000	2 to 10	–	-54 to +125	LCC-8
4030-002-120	±2	X, Y, Z	1000	2.5	0 to 200	5 to 30	–	-40 to +85	70.5 x 40 housing
4030-006-120	±6	X, Y, Z	333	2.5	0 to 200	5 to 30	–	-40 to +85	70.5 x 40 housing
805-0050	±50	Z	100	–	1 to 8000	18 to 30	2 to 10	-40 to +100	T0-5
805-0500	±500	Z	10	–	1 to 8000	18 to 30	2 to 10	-40 to +100	T0-5
805M1-0020	±20	Z	100	2.5	1 to 8000	3.0 to 5.5	<0.80	-40 to +100	T0-5
805M1-0200	±200	Z	10	2.5	1 to 8000	3.0 to 5.5	<0.80	-40 to +100	T0-5
832M1-0025	±25	X, Y, Z	50	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing

Part Number	Sensing Range (g)	Sensing Axis	Sensitivity Typ. (mV/g)	Zero-g Offset (V)	Bandwidth Typ. (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
832M1-0050	±50	X, Y, Z	25	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0100	±100	X, Y, Z	12.5	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0200	±200	X, Y, Z	6.25	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0500	±500	X, Y, Z	2.5	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
834M1-2000	±2000	X, Y, Z	0.62	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
834M1-6000	±6000	X, Y, Z	0.2	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
3038-0050	±50	Z	2	±0.025	0 to 1000	2 to 10	—	-54 to +125	LCC-8
3038-0100	±100	Z	1	±0.025	0 to 1200	2 to 10	—	-54 to +125	LCC-8
3038-0200	±200	Z	0.9	±0.025	0 to 1400	2 to 10	—	-54 to +125	LCC-8
3038-0500	±500	Z	0.4	±0.025	0 to 2000	2 to 10	—	-54 to +125	LCC-8
3038-2000	±2000	Z	0.16	±0.025	0 to 4500	2 to 10	—	-54 to +125	LCC-8
3038-6000	±6000	Z	0.1	±0.025	0 to 5000	2 to 10	—	-54 to +125	LCC-8
4030-002-120	±2	X, Y, Z	1000	2.5	0 to 200	5 to 30	—	-40 to +85	70.5 x 40 housing
4030-006-120	±6	X, Y, Z	333	2.5	0 to 200	5 to 30	—	-40 to +85	70.5 x 40 housing
805-0050	±50	Z	100	—	1 to 8000	18 to 30	2 to 10	-40 to +100	T0-5
805-0500	±500	Z	10	—	1 to 8000	18 to 30	2 to 10	-40 to +100	T0-5
805M1-0020	±20	Z	100	2.5	1 to 8000	3.0 to 5.5	<0.80	-40 to +100	T0-5
805M1-0200	±200	Z	10	2.5	1 to 8000	3.0 to 5.5	<0.80	-40 to +100	T0-5
832M1-0025	±25	X, Y, Z	50	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0050	±50	X, Y, Z	25	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0100	±100	X, Y, Z	12.5	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0200	±200	X, Y, Z	6.25	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
832M1-0500	±500	X, Y, Z	2.5	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
834M1-2000	±2000	X, Y, Z	0.62	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing
834M1-6000	±6000	X, Y, Z	0.2	2.5	2 to 6000	3.0 to 5.5	0.022	-40 to +125	18.50 x 14.48 housing



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Bosch MEMS sensors – enablers for IoT and wearable solutions

**BHI160**

Sensor with integrated microcontroller for always-on applications such as fitness tracking

**BMA456**

Step counter optimized acceleration sensor for wearable devices

**BME680**

IoT-ready environmental sensor for indoor air quality measurement

Bosch Sensortec GmbH is a fully owned subsidiary of Robert Bosch GmbH that develops and markets a wide portfolio of MEMS (micro-electromechanical systems) sensors and solutions tailored for smartphones, tablets, wearable devices and IoT (Internet of Things) applications. The product portfolio includes 3-axis acceleration, gyroscope and geomagnetic sensors, integrated 6- and 9-axis sensors, environmental sensors, and a comprehensive software portfolio. Since its foundation in 2005, Bosch Sensortec has sold more than 8 billion MEMS sensors.



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity	Output Interface	Bandwidth (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LIS2DW12TR	±2, ±4, ±8, ±16	X, Y, Z	0.244mg/digit to 7.808mg/digit	SPI, I ² C (2 Interrupts)	0.4 to 3200	1.62 to 3.6	0.00038	-40 to +85	LGA-12 2 x 2 x 0.7
LIS2DS12TR	±2, ±4, ±8, ±16	X, Y, Z	0.061 mg/digit to 0.488 mg/digit	SPI, I ² C (2 Interrupts)	11 to 3200	1.62 to 1.98	0.0025	-40 to +85	LGA-12 2 x 2 x 0.86
LIS2DH12TR	±2, ±4, ±8, ±16	X, Y, Z	1 mg/digit to 192 mg/digit	SPI, I ² C (2 Interrupts)	0.11 to 2688	1.71 to 3.6	0.002	-40 to +85	LGA-12 2 x 2 x 1.0
LIS2HH12TR	±2, ±4, ±8	X, Y, Z	0.061 mg/digit to 0.244 mg/digit	SPI, I ² C (2 Interrupts)	50 to 400	1.71 to 3.6	0.05	-40 to +85	LGA-12 2 x 2 x 1.0
AIS328DQTR	±2, ±4, ±8	X, Y, Z	0.98 mg/digit to 3.91 mg/digit	SPI, I ² C (2 Interrupts)	0.25 to 500	2.4 to 3.6	0.01	-40 to +105	QFN-24 4 x 4 x 1.8
AIS3624DQTR	±6, ±12, ±24	X, Y, Z	2.9 mg/digit to 11.7 mg/digit	SPI, I ² C (2 Interrupts)	0.25 to 500	2.4 to 3.6	0.01	-40 to +105	QFN-24 4 x 4 x 1.8
MIS2DHTR	±2, ±4, ±8, ±16	X, Y, Z	0.98 mg/digit to 188 mg/digit	SPI, I ² C (2 Interrupts)	0.11 to 2688	1.71 to 3.6	0.002	-40 to +85	LGA-12 2 x 2 x 1.0
IIS2DHTR	±2, ±4, ±8, ±16	X, Y, Z	1 mg/digit to 188 mg/digit	SPI, I ² C (2 Interrupts)	0.11 to 2688	1.71 to 3.6	0.002	-40 to +85	LGA-12 2 x 2 x 1.0
H3LIS100DLTR	±100	X, Y, Z	780 mg/digit	SPI, I ² C (2 Interrupts)	0.25 to 200	2.16 to 3.6	0.01	-40 to +85	TFLGA-16 3 x 3 x 1.0
H3LIS200DLTR	±100, ±200	X, Y, Z	780 mg/digit to 1560 mg/digit	SPI, I ² C (2 Interrupts)	0.25 to 500	2.16 to 3.6	0.01	-40 to +85	TFLGA-16 3 x 3 x 1.0
H3LIS331DLTR	±100, ±200, ±400	X, Y, Z	49 mg/digit to 195 mg/digit	SPI, I ² C (2 Interrupts)	0.25 to 500	2.16 to 3.6	0.01	-40 to +85	TFLGA-16 3 x 3 x 1.0
LIS2DE12TR	±2, ±4, ±8, ±16	X, Y, Z	15 mg/digit to 188 mg/digit	SPI, I ² C (2 Interrupts)	0.5 to 2688	1.71 to 3.6	0.002	-40 to +85	LGA-12 2 x 2 x 1.0
LIS3DSHTR	±2, ±4, ±6, ±8, ±16	X, Y, Z	0.06 mg/digit to 0.73 mg/digit	SPI, I ² C (2 Interrupts)	50 to 800	1.71 to 3.6	0.011	-40 to +85	LGA-16 3 x 3 x 1
LIS3DHHTR	±2.5	X, Y, Z	0.076 mg/digit	SPI (2 Interrupts)	235 or 440	1.71 to 3.6	2.5	-40 to +85	LGA-16 5 x 5 x 1.7



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Part Number	Sensing Range (g)	Sensing Axis	Sensitivity (LSB/g)	Output Interface	Bandwidth (Hz)	Supply Voltage (V)	Supply Current	Operating Temperature (°C)	Package Type / Size (mm)
BMA280	±2, ±4, ±8, ±16	X, Y, Z	4096, 2048, 1024, 512	SPI, I ² C	1003 to 8	1.62 to 3.6	6.5µA @ 40 Hz data rate low-power mode	-40 to +85	LGA-12 2 x 2 x 0.95
BMA253	±2, ±4, ±8, ±16	X, Y, Z	1024, 512, 256, 128	SPI, I ² C	1004 to 8	1.62 to 3.6	6.5µA @ 40 Hz data rate low-power mode	-40 to +85	LGA-12 2 x 2 x 0.95
BMA423	±2, ±4, ±8, ±16	X, Y, Z	1024, 512, 256, 128	SPI, I ² C	684 to 5	1.62 to 3.6	13µA @ 50 Hz data rate low-power mode	-40 to +85	LGA-12 2 x 2 x 0.95
BMA456	±2, ±4, ±8, ±16	X, Y, Z	16384, 8192, 4096, 2048	SPI, I ² C	684 to 5	1.62 to 3.6	13µA @ 50 Hz data rate low-power mode	-40 to +85	LGA-12 2 x 2 x 0.65



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity (LSB/g)	Output Interface	Bandwidth	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
FXLS8962AF	±2, ±4, ±8, ±16	X, Y, Z	1024, 512, 256, 128	SPI, I ² C	1.6 kHz (X&Y), 700 Hz (Z)	1.71 to 3.6	0.65 µA to 137 µA (Active), 0.6 µA (Standby), 50nA (Hibernate)	-40 to +105	DFN-10 2 x 2 x 0.95
MMA8451	±2, ±4, ±8	X, Y, Z	4096, 2048, 1024	I ² C	up to 400 Hz	1.95 to 3.6	6 µA to 165 µA (Active), 1.8 µA (Standby)	-40 to +105	QFN-16 3 x 3 x 1
MMA8491	±8	X, Y, Z	1024	I ² C	up to 400 Hz	1.71 to 3.6	400 nA/Hz (One Shot), 1.8 nA (Shutdown)	-40 to +105	QFN-12 3 x 3 x 1
MMA8652	±2, ±4, ±8	X, Y, Z	1024, 512, 256	I ² C	up to 400 Hz	1.95 to 3.6	6 µA to 185 µA (Active), 1.4 µA (Standby)	-40 to +105	DFN-10 2 x 2 x 1
FXLS8471	±2, ±4, ±8	X, Y, Z	4096, 2048, 1024	SPI, I ² C	up to 400 Hz	1.95 to 3.6	8 µA to 240 µA (Active), 2 µA (Standby)	-40 to +105	QFN-16 3 x 3 x 1
MMA68xx	±20 to ±120	X, Y	4.88-20.47 (X-axis), 4.09 to 9.76 (Y-axis)	SPI	up to 1 kHz	3.3 or 5	4 to 9	-40 to +125	QFN-16 6 x 6 x 1.98
MMA65xx	±80, ±105, ±120	X, Y	24 (80 g), 18.2 (105 g), 16 (120 g)	SPI	up to 1 kHz	3.3 or 5	4 to 8	-40 to +125	QFN-16 6 x 6 x 1.98
MMA6900/10	±3.5	X, Y	291	SPI	50 kHz	3.3 or 5	Up to 8	-40 to +125	QFN-16 6 x 6 x 1.98



Part Number	Sensing Range (g)	Sensing Axis	Sensitivity (LSB/g)	Output Interface	Bandwidth (Hz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
KXTJ3-1057	±2, ±4, ±8, ±16	X, Y, Z	1024, 512, 256, 128	I ² C (1 Interrupt)	800	1.71 to 3.60	0.0015 to 0.155	-40 to +85	LGA-12 2 x 2 x 0.9
KX122-1037	±2, ±4, ±8	X, Y, Z	16384, 8192, 4096	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-12 2 x 2 x 0.9
KX124-1051	±2, ±4, ±8	X, Y, Z	16384, 8192, 4096	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-16 3 x 3 x 0.9
KX126-1063	±2, ±4, ±8	X, Y, Z	16384, 8192, 4096	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-12 2 x 2 x 0.9
KX112-1042	±2, ±4, ±8	X, Y, Z	16384, 8192, 4096	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-12 2 x 2 x 0.6
KXCJB-1041	±2, ±4, ±8	X, Y, Z	1024, 512, 256	I ² C (1 Interrupt)	800	1.71 to 3.60	0.0017 to 0.120	-40 to +85	LGA-10 3 x 3 x 0.45
KX222-1054	±8, ±16, ±32	X, Y, Z	4096, 2048, 1024	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-12 2 x 2 x 0.9
KX224-1053	±8, ±16, ±32	X, Y, Z	4096, 2048, 1024	I ² C, SPI (2 Interrupts)	12,800	1.71 to 3.60	0.0018 to 0.145	-40 to +85	LGA-16 3 x 3 x 0.9

ACCELEROMETER / Shock Sensor



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Part Number	Primary Axis Inclined Angle	Sensitivity (pC/g)	Capacitance (pF)	Insulation Resistance (min)	Resonant Frequency (kHz)	Non-Linearity (Typ.)	Shock Resistance (g)	Operating Temperature (°C)
705	Z	8	600	100 MOhm	46	1%	10000	-73 to +200



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ACOUSTIC

MEMS Microphone 13



Part Number	Output	SNR (dB)	Sensitivity (dB)	Frequency Response	Supply (V)	Supply Current (μ A)	Port Location	Package Type / Size (mm)
MP23AB01DHTR	Analog Differential	65	-38	Roll-off @ 35Hz	2.3 to 3.6	220	Bottom	RHLGA 3.35 x 2.5 x 0.98 3LD METAL CAP
MP34DT01TR-M	Digital	61	-26	20Hz-20Khz	1.64 to 3.6	600	Top	HLGA 3 X 4 X 1.06 5L METAL CAP
MP34DT05TR-A	Digital	64	-26	20Hz-20Khz	1.64 to 3.6	600	Top	HCLGA 4 x 3 x 1.0 4LD

Part Number	Output	SNR (dB)	Sensitivity (dB)	Frequency Response	Supply (V)	Supply Current (μ A)	Port Location	Package Type / Size (mm)
IM69D130	Digital (PDM)	69	-36	< ± 1 dB sensitivity matching @ 1kHz	1.62 to 3.6	800 normal Mode 300 low-power Mode	Bottom	4 x 3 x 1.2
IM70A135	Analog Differential	70	-38	< ± 1 dB sensitivity matching @ 1kHz	1.52 to 3.0	170 normal Mode 70 low-power Mode	Bottom	4 x 3 x 1.2

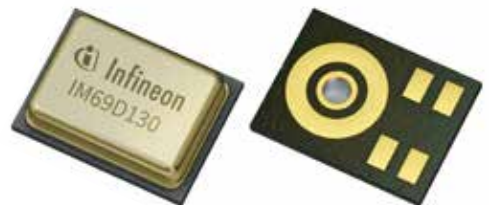
*PDM= Pulse Density Modulation



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AIR QUALITY

Air Quality – VOC Sensor	15
CO2 Sensor	17
Dust Sensor	19

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Part Number	Description	Output Interface	Measurement Range	Power Consumption	Supply Voltage	Operating Temperature (°C)	Package Type / Size (mm)
BME680	Integrated low-power, high-accuracy gas, pressure, humidity and temperature sensor	I ² C, SPI	G: 0 to 500 IAQ (equivalent to 0.2 to 20mg/m ³ TVOC levels) T: -40 to 85 H: 0 to 100 % P: 300 to 1100 hPa	Gas: Ultra-low-power mode (ULP): <0.1 mA Low-power mode (LP): <1 mA Sleep mode 0.1µA 2.1µA @ 1 Hz (H, T) 3.7µA @ 1 Hz (H, P, T) 0.09 to 12 mA (Gas, H, P, T) depending on operation mode	VDD main supply voltage range: 1.71 V to 3.6 V VDDIO interface voltage range: 1.2 V to 3.6 V	-40 to +85	8-pin metal-lid LGA 3.0 x 3.0 x 0.93

G= Gas; T= Temperature; H= Humidity; P= Pressure

Amphenol Advanced Sensors

Part Number	Description	Output Interface	Measurement Range	Power Consumption	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
MiCS-VZ-89TE	Integrated sensor board for indoor air quality monitoring	I ² C	0 to 1000 ppb isobutylene equivalent TVOCs	125 mW	3.3	0 to +50	23 x 14 x 3

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Part Number	Description	Output Interface	Measurement Range	Power Consumption	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
SGP30	MEMS metal-oxide gas sensor for measuring volatile organic compounds	Digital, I ² C	0 to 1000 ppm	1 mA	1.8	-40 to +85	2.45 x 2.45 x 0.9
SGPC3	MEMS metal-oxide gas sensor for measuring volatile organic compounds – Consumer version	Digital, I ² C	0 to 1000 ppm	0.48 mA	1.8	-40 to +85	2.45 x 2.45 x 0.9

am^{UN}

Part Number	Description	Output Interface	Measurement Range	Power Consumption	Supply Voltage	Operating Temperature (°C)	Package Type / Size (mm)
CCS811	Ultra- low-power digital gas sensor solution with integrated metal oxide (MOX) gas sensor for monitoring indoor air quality (IAQ)	I ² C	–	<1.2 mW	1.8 to 3.6	-5 to +50	LGA 2.7 x 4.0
iAM	USB indoor air monitor	I ² C	450 to 2.000 ppm CO2 equivalents (values up to 65.000)	150 mW	5	0 to +50	57 x 19 x 10 module
IAQ-core C	Indoor air quality module, continuous operation mode	I ² C	450 to 2.000 ppm CO2 equivalents (values up to 65.000)	67 mW	3.3	0 to +50	15.24 x 17.78 SMT module
IAQ-core P	Indoor air quality module, pulsed operation mode	I ² C	450 to 2.000 ppm CO2 equivalents (values up to 65.000)	9 mW	3.3	0 to +50	15.24 x 17.78 SMT module

iAM = Indoor Air Monitoring
IAQ = Indoor Air Quality
VOC = Volatile Organic Compound

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Part Number	Measurement Range (ppm)	Output Interface	Response Time	Power Consumption	Supply Voltage	Operating Conditions (°C)	Package Type / Size (mm)
T6713	0 to 5,000	I ² C, PWM	< 3 minutes for 90% step change	25 mA	4.5 to 5.5 VDC	-10 to +60, 0 to 95% RH, non-condensing	30 x 15.6 x 8.6
T6613	0 to 2,000	UART, I ² C	< 2 minutes for 90% step change typical	0.90 W peak 0.165 W average	5 VDC regulated (±5%)	0 to +50 0 to 95% RH, non-condensing	57.15 x 34.67 x 15.24
T6615	0 to 2,000 0 to 5,000 0 to 10,000 0 to 50,000	UART	< 2 minutes for 90% step change typical	0.90 W peak 0.165 W average	5 VDC regulated (±5%)	0 to +50 0 to 95% RH, non-condensing	57.15 x 34.67 x 15.24
T3031-2-10K-24-P	0 to 10,000	0 to 10 V	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3031-2-2k-24-P	0 to 2,000	0 to 10 V	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3031-2-5K-24-P	0 to 5,000	0 to 10 V	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3032-2-10K-24-P	0 to 10,000	4 to 20 mA	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3032-2-10K-24-P-CM	0 to 10,000	4 to 20 mA	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3032-2-2K-24-P	0 to 2,000	4 to 20 mA	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)
T3032-2-5K-24-P	0 to 5,000	4 to 20 mA	<200 sec for 63% change	0.90 W peak 0.165 W average	18-30VAC RMS, 50/60Hz, or 18 to 42 VDC, polarity protected	-20 to +50	70 x 68 x 45 approx overall (IP67)

Part Number	Measurement Range (ppm)	Output Interface	Response Time	Power Consumption	Supply Voltage	Operating Conditions (°C)	Package Type / Size (mm)
AS MLV-P2	30 to 500	Analog Rs	< 10 sec	34 mW	3.0	0 to +50	Surface Mount Custom PCB 9.1 x 9.1 x 4.53

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Part Number	Measurement Range (ppm)	Output Interface	Response Time	Power Consumption	Supply Voltage	Operating Conditions (°C)	Package Type / Size (mm)
SCD30	400 to 10,000	I ² C, Modbus	tau 63 = 20s	2 mW @ 1 measurement per minute	3.3 to 5.5	0 to +50	35 x 23 x 7

**Q1-2018
RELEASE**

Part Number	Measurement Range	Output Interface	Power-Up Time	Power Consumption	Supply Voltage (V)	Operating Conditions (°C)	Package Type / Size (mm)
SM-PWM-01C	0.01 to 3000 ug/m ³	PWM	90s	<100 mA	4.5 to 5.5	-10 to +60, <85%RH	59 x 46 x 18

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- Particulate Matter
- CO₂
- Temperature



BIOSENSORS

Biosensor	21
Defibrillation / Surge / ESD Protector	21
Biopotential AFE	21
Optical AFE	22



Part Number	Integrated LEDs	Integrated LED Driver Current (mA)	Sensor Spectrum Bandwidth ($\lambda_{0.5}$ nm)	ADC Resolution (Bit)	Output Interface	Supply Current (μ A)	Standby Current (μ A)	Supply Voltage (V)	I ² C Bus Voltage Range (V)	Package Type / Size (mm)
MAX30101EFD+T	Red, IR, Green	50	—	18	I ² C	600	0.7	1.7 to 2.0	1.7 to 5.0	OLGA, 14-pin, 3.3 x 5.6 x 1.55
MAX30102EFD+T	Red, IR	50	—	18	I ² C	600	0.7	1.7 to 2.0	1.7 to 5.0	OLGA, 14-pin, 3.3 x 5.6 x 1.55



Part Number	Integrated LEDs	Integrated LED Driver Current (mA)	Sensor Spectrum Bandwidth ($\lambda_{0.5}$ nm)	ADC Resolution (Bit)	Output Interface	Supply Current (μ A)	Standby Current (μ A)	Supply Voltage (V)	I ² C Bus Voltage Range (V)	Package Type / Size (mm)
BH1790GLC	No	2 x 60	527	16	I ² C	—	0.8	2.5 to 3.6	1.7 to 3.6	WLGA010V28, LGA-10, 2.8 x 2.8 x 1.0

BIOSENSORS / Defibrillation/Surge/ESD Protector

Part Number	Input Trigger Voltage (V)	Channels	C (pF)	Peak Pulse Current (A)	Withstand Defib Pulses	Turn On Time (ns)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
MAX30034CUA+T	±10.3	4	2	>4	>100,000	2	—	0 to +70	uMax, 8-pin, 3 x 3

BIOSENSORS / Biopotential AFE

Part Number	Features / Applications	Data Converter Resolution (bits)	Input Impedance (M Ω m)	CMRR (dB)	DC Offset Range (mV)	Supply Current	Shutdown Mode Supply Current (μ A)	Supply Voltage	Package Type / Size (mm)
MAX30001CWV+	ECG, R-R Detection, BioZ, Pace	18;15.5 effective (ECG) 20, 17 effective (BioZ)	1500 (Differential) 45000 (Common-mode)	115	±300 at 1.1V ±650 at 1.8V	205 at 1.1V 232 at 1.8V 242 at 2.0V	0.58	1.1-2.0 (AVDD, DVDD) 1.65 to 3.6 (OVDD)	WLP, 30-pin, 2.74 x 2.926
MAX30003CTI+T	ECG, R-R Detection	18;15.5 effective (ECG)	1500 (Differential) 45000 (Common-mode)	115	±300 at 1.1V ±650 at 1.8V	76 at 1.1V 100 at 1.8V 109 at 2.0V	0.51	1.1-2.0 (AVDD, DVDD) 1.65 to 3.6 (OVDD)	TQFN, 28-pin, 5 x 5 x 0.75
MAX30004CWV+T	R-R Detection	18;15.5 effective (ECG)	1500 (Differential) 45000 (Common-mode)	115	±300 at 1.1V ±650 at 1.8V	76 at 1.1V 100 at 1.8V 109 at 2.0V	0.51	1.1-2.0 (AVDD, DVDD) 1.65 to 3.6 (OVDD)	WLP, 30-pin, 2.74 x 2.926

Part Number	Output Interface	Receiver Channels	Transceiver Channels (LED Driver)	Integrated LED Driver Current (mA)	ADC Resolution (Bit)	Standby Current (uA)	Supply Voltage (V)	Package Type / Size (mm)
MAX86140ENP+	SPI	1	3 (up to 6 with external Mux)	124	19	0.6	1.7 to 2.0	WLP, 20-pin, 2.048 x 1.848
MAX86141ENP+	SPI	2	3 (up to 6 with external Mux)	124	19	0.6	1.7 to 2.0	WLP, 20-pin, 2.048 x 1.848
MAX30112EWG+	I ² C	1	2	200	19	1.6	1.7 to 2.0	WLP, 24-pin, 2.8 x 2.0
MAX30110EWG+	SPI	1	2	200	19	1.6	1.7 to 2.0	WLP, 24-pin, 2.8 x 2.0

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Part Number	Output Interface	Flow Range (slm)	Pressure Drop (mbar)	Calibrated Gases	Max. Working Pressure (bar)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
SFM3000	Digital I ² C	-200 to 200	< 1 @ 60slm	Air, N ₂ , O ₂	1.3	5.0	-20 to +80	82 x 33
SFM3100	Analog	-24 to 240	< 3 @ 60slm	Air, N ₂ , O ₂	1.3	5.0	5 to +60	57.5 x 31
SFM3200	Digital I ² C	-100 to 250	< 1 @ 60slm	Air, N ₂ , O ₂	1.07	5.0	10 to +50	73 x 22
SFM4100	Digital I ² C	0 to 20	< 25 @ 20slm	Air, N ₂ , O ₂ , N ₂ O, Ar, CO ₂	6.0	3.5 to 9.0	-20 to +80	93 x 11.91

FLOW / Ultrasonic Flow Converter



Part Number	Output Interface	Description	Integrated Functions	Resolution (ps)	Supply Voltage (V)	Current Consumption (uA)	Operating Temperature (°C)	Package Type / Size (mm)
TDC-GP21	SPI	Ultrasonic Flow Converter	TDC+AFE	22	2.5 to 3.6	2.2 @ 1Hz	-40 to +125	QFN-32; 5 x 5
TDC-GP22	SPI	Ultrasonic Flow Converter	TDC + AFE (1st Hit Detection)	22	2.5 to 3.6	1.1 @ 1Hz	-40 to +125	QFN-32; 5 x 5
TDC-GP30	SPI, UART, Pulse	Ultrasonic Flow Converter	TDC, AFE, 32-bit µC	11	2.5 to 3.6	6 @ 8 Hz	-40 to +125	QFN-32; 5 x 5 QFN-40; 6 x 6
TDC-GP30-F01	SPI, UART, Pulse	Ultrasonic Flow Converter	TDC, AFE, 32-bit µC w/ volume, flow & temp calculation	11	2.5 to 3.6	6 @ 8 Hz	-40 to +125	QFN-32; 5 x 5 QFN-40; 6 x 6



Part Number	Output Interface	Description	Integrated Functions	Resolution (ps)	Supply Voltage (V)	Current Consumption (uA)	Operating Temperature (°C)	Package Type / Size (mm)
MAX35102ETJ+	4-wire SPI	Time-to-Digital Converter without RTC	—	3.8	2.3 to 3.6	6	-40 to +85	TQFN-32 4 x 4
MAX35103EHJ+	4-wire SPI	Reduced Power Time-to-Digital Converter with AFE, RTC, and Flash	Event timing 8KB Flash RTC	3.8	2.3 to 3.6	6	-40 to +85	TQFP-32 5 x 5
MAX35104ETL+	4-wire SPI	Gas Flow Meter SoC	Event timing RTC Boost converter signal amplifier bandpass filter	3.8	2.3 to 3.6	6	-40 to +85	TQFN-40 5 x 5



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Part Number	Output Interface	Sensing Range (°/s)	Sensing Axis	Zero Rate Output (°/s)	Turn On Time (ms)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BMG160	SPI, I ² C	±125, ±250, ±500, ±1000, ±2000	X, Y, Z	±1	30	2.4 to 3.6	5	-40 to +85	LGA-12 3 x 3 x 0.95
BMG250	SPI, I ² C	±125, ±250, ±500, ±1000, ±2000	X, Y, Z	±3	55	1.7 to 3.6	0.85	-40 to +85	LGA-12 2.5 x 3 x 0.8



Part Number	Output Interface	Sensing Range (°/s)	Sensing Axis	Zero Rate Output (°/s)	Turn On Time (ms)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
FXAS21002CQR1	SPI, I ² C	±250, ±500, ±1000, ±2000	X, Y, Z	1.5	60	1.95 to 3.6	2.7	-40 to +85	QFN-24 4 x 4 x 1



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Part Number	Output Interface	Sensing Range (°/s)	Sensing Axis	Zero Rate Output (°/s)	Turn On Time (ms)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
L3GD20HTR	Digital	±250, ±500, ±2000	Yaw, Pitch, Roll	±25	50	2.2 to 3.6	4.5	-40 to +85	LGA-16 3 x 3 x 1
L2G2ISTR	Digital	±100, ±200	Pitch, Roll	±9	–	1.7 to 3.6	3.8	-40 to +85	LGA 2.3 x 2.3 x 0.7
I3G4250DTR	Digital	±245, ±500, ±2000	Yaw, Pitch, Roll	±25	–	2.4 to 3.6	6.1	-40 to +85	LGA-16 4 x 4 x 1.1
A3G4250DTR	Digital	±245	Yaw, Pitch, Roll	±25	–	2.4 to 3.6	6.1	-40 to +85	LGA-16 4 x 4 x 1.1



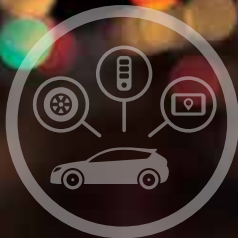
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HUMIDITY

Humidity Sensor 33



Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
HTS221TR	SPI, I ² C, DRDY*	±3.5	±0.5	1.7 to 3.6	0.002	-40 to +120	HLGA-6L 2 x 2 x 0.9

*DRDY= Data Ready

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Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
CC2D23	I ² C	±2	±0.3	3.3	0.75	-40 to +125	SMD
CC2D25	I ² C	±2	±0.3	5.0	0.75	-40 to +125	SMD
CC2D33	I ² C	±3	±0.3	3.3	0.75	-40 to +125	SMD
CC2D35	I ² C	±3	±0.3	5.0	0.75	-40 to +125	SMD
CC2A23	PDM	±2	±0.3	3.3	0.9	-40 to +125	SMD
CC2A25	PDM	±2	±0.3	5.0	0.9	-40 to +125	SMD
CC2A33	PDM	±3	±0.3	3.3	0.9	-40 to +125	SMD
CC2A35	PDM	±3	±0.3	5.0	0.9	-40 to +125	SMD
CC2D23S	I ² C	±2	±0.3	3.3	0.75	-40 to +125	SMD
CC2D25S	I ² C	±2	±0.3	5.0	0.75	-40 to +125	SMD
CC2D33S	I ² C	±3	±0.3	3.3	0.75	-40 to +125	SMD
CC2D35S	I ² C	±3	±0.3	5.0	0.75	-40 to +125	SMD
CC2D23-SIP	I ² C	±2	±0.3	3.3	0.75	-40 to +125	SIP
CC2D25-SIP	I ² C	±2	±0.3	5.0	0.75	-40 to +125	SIP
CC2D33-SIP	I ² C	±3	±0.3	3.3	0.75	-40 to +125	SIP
CC2D35-SIP	I ² C	±3	±0.3	5.0	0.75	-40 to +125	SIP
T9602-3-D	PDM	±2	±0.5	3.3	0.75	-20 to +70	Probe
T9602-5-D	PDM	±2	±0.5	5.0	0.75	-20 to +70	Probe
T9602-3-A	PDM	±2	±0.5	3.3	0.75	-20 to +70	Probe
T9602-5-A	PDM	±2	±0.5	5.0	0.75	-20 to +70	Probe

*PDM= Pulse Density Modulation



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Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
SHT30-ARP-B	ARV*	±3.0	±0.3	2.4 to 5.5	0.22	-40 to +125	0.9 x 1.6
SHT30-DIS-B	I²C	±2.0	±0.3	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
SHT31-ARP-B	ARV*	±2.0	±0.2	2.4 to 5.5	0.22	-40 to +125	0.9 x 1.6
SHT31-DIS-B	I²C	±2.0	±0.2	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
SHT31-DIS-F	I²C	±2.0	±0.2	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
STH31-DIS-P	I²C	±2.0	±0.2	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
SHT35-DIS-B	I²C	±1.5	±0.1	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
SHT35-DIS-F	I²C	±1.5	±0.1	2.4 to 5.5	0.20	-40 to +125	0.9 x 1.6
SHTC1	I²C	±3.0	±0.3	1.80	0.48	-40 to +125	2 x 2 x 0.75
SHTW2	I²C	±3.0	±0.4	1.80	0.48	-40 to +125	1.3 x 0.7 x 0.5

*ARV= Analog Ratiometric Voltage



Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
HPP801A031	Analog	±5 (w/ Calibration)	—	—	—	-60 to +140	10 x 6
HPP808H031	Analog	±3	±0.5	5.0	1.00	-40 to +85	18 x 13 x 11
HPP805D033	Analog	±3	±0.8	5.0	3.00	-40 to +100	35 x 13 x 13
HPP809A031	Analog	±3	±0.3	5.0	1.00	-40 to +60	75 x 11
HPP809A033	Analog	±3	±0.3	5.0	1.00	-40 to +85	75 x 11
HPP805A031	Analog	±3	—	5.0	1.50	-40 to +60	11 x 58
HPP805C031	Analog	±2 (for RH<15%RH)	—	5.0	1.50	-40 to +60	11 x 58
HPP815A533	Analog	±3	±0.3	3.0	1.00	-40 to +85	27 x 12 x 6
HPP815A535	Analog	±3	±0.3	5.0	1.00	-40 to +85	27 x 12 x 6
HPP815F535	Analog	±3	±0.3	5.0	1.00	-40 to +85	27 x 12 x 6
HPP831A210	Analog	±2	±0.3	5.0	1.00	-40 to +85	27 x 12 x 6
HPP831A610	Analog	±2	±0.3	5.0	1.00	-40 to +85	27 x 12 x 6
HPP831F511	I²C	±2	±0.3	3.0	0.50	-40 to +85	27 x 12 x 6
HPP831E511	I²C	±2	±0.3	5.0	0.50	-40 to +85	27 x 12 x 6
HPP831E910	I²C	±2	±0.3	5.0	0.50	-40 to +85	27 x 12 x 6
HPP845E031	I²C	±2	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9
HPP845E032	Analog	±2	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9
HPP845E131	I²C	±2	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9
HPP845E034	I²C	±3	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9
HPP845E035	Analog	±3	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9
HPP845E134	I²C	±3	±0.3	3.0	0.50	-40 to +125	3 x 3 x 0.9

Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
DS1923-F5#	1-wire	5	0.5	-0.3 to +6	20	-20 to +85	F5 Can 5.9 x 17.35



Part Number	Output Interface	Humidity Accuracy (%)	Temperature Accuracy (°C)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
ENS210	I ² C	±3.5	±0.2	1.71 to 3.6	Active current: 7.1 μ A @ 1 Hz (1.8V) Standby current: 40 nA	-40 to +100	QFN-4 2 x 2 x 0.75



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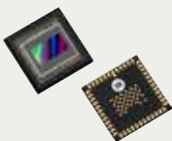




Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type	Color Filter	Frame Rate @ Full Resolution (FPS)	Resolution (Megapixels)	SNR Max (dB)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
AR0130CS	Parallel	3.75	1/3"	ERS	RGB, Mono	45	1	44	82	6.5 (mono) V/Lux-s	ILCC-48, PLCC-48
AR0132AT	HiSPi™, Parallel	3.75	1/3"	ERS	Mono, RCCC, RGB	45	1	44	115	5.48 V/Lux-s	IBGA-63
AR0134CS	HiSPi™, Parallel	3.75	1/3"	GS	RGB, Mono	54	1	38.4	64	6.1 (mono), 5.3 (color) V/Lux-s	IBGA-63, ILCC-48
AR0135AT	HiSPi™, Parallel	3.75	1/3"	GS	Mono	54	1	—	—	—	IBGA-63
AR0135CS	HiSPi™, Parallel	3.75	1/3"	GS	Mono	54	1	34	69	6.1 V/Lux-s	IBGA-63
AR0136AT	HiSPi™, Parallel	3.75	1/3"	ERS	RGB	54	1	43.9	120	6.3 V/Lux-s	IBGA-63
AR0140AT	HiSPi™, Parallel	3	1/4"	ERS	RGB	60	1	41	96	4 V/Lux-s	IBGA-63
AR0140CS	HiSPi™, Parallel	3	1/4"	ERS	RGB	60	1	41	96	4 V/Lux-s	IBGA-63
AR0141CS	HiSPi™, Parallel	3	1/4"	ERS	RGB, Mono	60	1	41	79	4 V/Lux-s	IBGA-63
AR0144CS	MIPI-2 lane, Parallel 12-bit	3	1/4"	GS	RGB, Mono	60	1	38	63.9	3.6 V/Lux-s	CSP-69, Bare die
AR0230AT	HiSPi™, Parallel	3	1/2.7"	ERS, GRR	RGB, Mono	30	2	—	—	4 V/Lux-s	IBGA-80
AR0230CS	HiSPi™, Parallel	3	1/2.7"	ERS, GRR	RGB	60	2	—	—	4 V/Lux-s	IBGA-80
AR0231AT	HiSPi™, Parallel	3	1/2.7"	ERS, GRR	RGB	40	2	42.8	120	34 ke-/Lux-s	IBGA-121
AR0237	HiSPi™, Parallel	3	1/2.7"	ERS, GRR	RGB Bayer, RGB-IR	60	2	41	96	—	IBGA-80, PLCC-48
AR0238	HiSPi™, Parallel	3	1/2.7"	ERS	RGB	60	2	41	96	—	PLCC-48
AR0238 RGB-IR	HiSPi™, Parallel	3	1/2.7"	ERS	RGB	60	2	41	96	—	PLCC-48
AR0239SR	HiSPi™, MIPI, Parallel	3	1/2.7"	ERS	RGB Bayer	60	2	—	—	—	IBGA-63
AR023Z	HiSPi™, Parallel	3	1/2.7"	ERS, GRR	RGB Bayer	60	2	41	80.5	4.0 V/Lux-s	IBGA-80

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Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type	Color Filter	Frame Rate @ Full Resolution (FPS)	Resolution (Megapixels)	SNR Max (dB)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
AR0261	MIPI	1.4	1/6"	ERS	RGB, Mono	60	2	37.5	66.5	0.75 V/Lux-s	Bare Die, CSP
AR0263	MIPI	1.4	1/6"	ERS	Mono	60	2	37.5	66.5	0.75 V/Lux-s	ODCSP-35
AR0330	HiSPi™, MIPI, Parallel	2.2	1/3"	ERS, GRR	RGB	60	3	39	69.5	2.0 V/Lux-s	CLCC-48, ODCSP-61, ODCSP-64, PLCC-48
AR0331SR	HiSPi™, Multi	2.2	1/3"	ERS, GRR	Bayer Color	60	3	39	100	1.9 V/Lux-s	IBGA-63, ILCC-48
AR0521	HiSPi™, MIPI CSI-2	2.2	1/2.5"	ERS, GRR	RGB, Mono	60	5	40	74.3	—	mPLCC, IBGA-63
AR0543	MIPI	1.4	1/4"	ERS	RGB Bayer	15	5	36.5	66	0.82 V/Lux-s	ODCSP-54
AR0833	HiSPi™, MIPI	1.4	1/3.2"	ERS	RGB	30	8	36	64	0.6 V/Lux-s	CLCC-48
AR0835HS	HiSPi™, MIPI	1.4	1/3.2"	ERS	RGB	42	8	36	64	0.6 V/Lux-s	CLCC-48
AR1335	MIPI	1.1	1/3.2"	ERS	RGB	30	13	37	69	4.7 ke-/Lux-s	CSP-63
AR1820HS	HiSPi™, MIPI	1.25	1/2.3"	ERS, GRR	RGB	24	18	36.3	65.8	0.62 V/Lux-s	IBGA-60
ARX342CS	Parallel	5.6	1/4"	ERS	Bayer RGB	60	VGA	46	87	16.5 V/Lux-s	IBGA-63
ARX550AT	HiSPi™, Parallel	3.75	1/5"	ERS	RGB, RCCC, RGBC	60	VGA	43.9	115	5.48 V/Lux-s	IBGA-63
AS0260	Parallel, MIPI	1.4	1/6"	ERS	RGB	30	2 Mp	33	65	0.64 V/Lux-s	ODCSP-54
ASX340AT	Parallel, NTSC, PAL	5.6	1/4"	ERS	RGB	30	VGA	—	—	—	IBGA-63
ASX340CS	Parallel, NTSC, PAL	5.6	1/4"	ERS	RGB	60	VGA	43	87	16.5 V/Lux-s	IBGA-63
ASX342AT	Parallel, NTSC, PAL	5.6	1/4"	ERS	RGB	60	VGA	46	87	16.5 V/Lux-s	IBGA-63
ASX344AT	Parallel, NTSC, PAL	5.6	1/4"	ERS	RGB	60	WVGA	—	—	16.5 V/Lux-s	IBGA-63
ASX350AT	Parallel, NTSC, PAL	3.75	1/5"	ERS	RGB	60	VGA	—	—	6.67 V/Lux-s	IBGA-63
ASX350CS	Parallel, NTSC, PAL	3.75	1/5"	ERS	RGB	60	VGA	—	—	6.67 V/Lux-s	IBGA-63
ASX370	Parallel, MIPI	3	1/7"	ERS	RGB Bayer	30	VGA	40	72.46	3.7 V/Lux-s	Bare Die; CSP
KAC-06040	LVDS	4.7	1"	Global Rolling	Bayer Color, Mono	160	6	—	—	—	CPGA-267
KAC-12040	LVDS	4.7	4/3"	Global Rolling	Bayer Color, Mono	70	12	—	—	—	CPGA-267
MT9F002	HiSPi™, Parallel	1.4	1/2.3"	ERS, GRR	RGB	13.7	15	—	—	0.724 V/Lux-s	ILCC-48

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Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type	Color Filter	Frame Rate @ Full Resolution (FPS)	Resolution (Megapixels)	SNR Max (dB)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
MT9J003	HiSPi™, Parallel	1.67	1/2.3"	ERS, GRR	RGB, Mono	15	10	—	—	0.31 V/Lux-s	ILCC-48
MT9M001	Parallel	5.2	1/2"	ERS	RGB, Mono	30	1	—	—	—	CLCC-48
MT9M024	HiSPi™, Parallel	3.75	1/3"	ERS	RGB, Mono	45	1	43.9	120	5.48 V/Lux-s	IBGA-63
MT9M025	HiSPi™, Parallel	3.75	1/3"	ERS	RGB, Mono	45	1	43.9	120	5.48 V/Lux-s	IBGA-63
MT9M034	Parallel	3.75	1/3"	ERS	RGB, Mono	45	1	43.9	120	5.48 V/Lux-s	ILCC-48
MT9M114	Parallel, MIPI	1.9	1/6"	ERS	RGB	30	1	30	70.8	2.24 V/Lux-s	ODCSP-55
MT9P001	Parallel	2.2	1/2.5"	ERS, GRR	RGB	15	5	38.1	70.1	1.4 V/Lux-s	ILCC-48
MT9P006	Parallel	2.2	1/2.5"	ERS	RGB	15	5	—	—	1.76 V/Lux-s	ILCC-48
MT9P031	Parallel	2.2	1/2.5"	ERS	RGB, Mono	15	5	—	—	1.4 V/Lux-s	ILCC-48
MT9P401	Parallel	2.2	1/2.5"	ERS	RGB	15	5	—	—	—	ILCC-48
MT9V022	LVDS, Parallel	6	1/3"	GS	RGB, Mono	60	WVGA	—	—	—	IBGA-52
MT9V024	LVDS, Parallel	6	1/3"	GS	Mono, RCCC, RGB	60	WVGA	—	—	4.8 V/Lux-s	IBGA-52
MT9V032	LVDS, Parallel	6	1/3"	GS	RGB, Mono	60	WVGA	—	—	—	CLCC-48
MT9V034	LVDS, Parallel	6	1/3"	GS	RGB, Mono	60	WVGA	—	—	4.8 V/Lux-s	CLCC-48
MT9V113	Parallel, MIPI	2.2	1/11"	ERS	RGB	30	VGA	—	63.5	1.15 V/Lux-s	Bare Die
MT9V115	Parallel, MIPI	1.75	1/13"	ERS	RGB	30	VGA	34.1	64	1.88 V/Lux-s	ODCSP-25
MT9V124	LVDS, Parallel	1.75	1/13"	ERS	RGB	30	VGA	—	—	1.65 V/Lux-s	ODCSP-25
PYTHON10K	LVDS	4.5	4/3"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	175	10	—	—	—	CPGA-355
PYTHON12K	LVDS	4.5	4/3"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	160	12	—	—	—	CPGA-355
PYTHON1300	LVDS, Parallel	4.8	1/2"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	210	1	40	60	7.7 V/Lux-s	LCC-48
PYTHON16K	LVDS	4.5	APS-H	GS Trigger, Pipeline	Bayer Color, Mono, NIR	120	16	—	—	—	CPGA-355
PYTHON2000	LVDS, Parallel	4.8	2/3"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	225	2	40	60	7.5 V/Lux-s	LCC-84
PYTHON25K	LVDS	4.5	APS-H	GS Trigger, Pipeline	Bayer Color, Mono, NIR	80	25	—	—	—	CPGA-355
PYTHON300	LVDS, Parallel	4.8	1/4"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	815	VGA	40	60	7.7 V/Lux-s	LCC-48
PYTHON480	LVDS, Parallel	4.8	1/3.6"	GS Trigger, Pipeline	Bayer Color, Mono	120	VGA	—	—	—	ODCSP-67

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Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type	Color Filter	Frame Rate @ Full Resolution (FPS)	Resolution (Megapixels)	SNR Max (dB)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
PYTHON500	LVDS, Parallel	4.8	1/3"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	545	VGA	40	60	7.7 V/Lux-s	LCC-48
PYTHON5000	LVDS, Parallel	4.8	1"	GS Trigger, Pipeline	Bayer Color, Mono, NIR	100	5	40	60	7.5 V/Lux-s	LCC-84

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Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type	Color Filter	Frame Rate @ Full Resolution (FPS)	Resolution (Megapixels)	SNR Max (dB)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
CMV300	LVDS (4x)	7.4 x 7.4	1/3"	Global	Optional	480 (LVDS 12-bit) 120 (CMOS 10-bit)	0.3	43	60	6 V/Lux-s	BGA 58-pins
CMV2000	LVDS (16x)	5.5 x 5.5	2/3"	Global	Optional	70	2.1	41.3	60	5.56 V/Lux-s	Ceramic 95-pins µPGA/LGA or 92-pins LCC
CMV4000	LVDS (16x)	5.5 x 5.5	1"	Global	Optional	180 (10-bit) 37 (12-bit)	4.0	41.3	60	5.56 V/Lux-s	Ceramic 95-pins µPGA/LGA or 92-pins LCC
CMV8000	LVDS (16x)	5.5 x 5.5	4/3"	Global	Optional	104 (10-bit) 46 (12-bit)	8.0	41.3	61	5.56 V/Lux-s	µPGA 107-pin
CMV12000	LVDS (64x)	5.5 x 5.5	APS-like	Global	Optional	300 (10-bit) 132 (12-bit)	12.0	41.3	60	4.64 V/Lux-s	µPGA 237-pin
CMV20000	LVDS (16x)	6.4 x 6.4	35mm	Global	Optional	30	18.7	41.7	66	8.3 V/Lux-s	PGA 143-pins
CMV50000	LVDS (22x)	4.6 x 4.6	35mm	Global	Optional	30	45.3	41.6	64	3.5 x10e7 DN/(W.s/m2) (@ 550 nm)	PGA ceramic package 141-pins
DR-2K7	4-wire SPI	7 x 7	Single-line or Dual-line	Global	No	up to 80 K scans/sec	—	44	—	77 DN/nJ/cm2 (@ 12-bit)	LCC or INVAR
DR-4K7	4-wire SPI	7 x 7	Single-line or Dual-line	Global	No	up to 80 K scans/sec	—	44	—	77 DN/nJ/cm2 (@ 12-bit)	INVAR
DR-4K3.5	4-wire SPI	3.5 x 3.5	Single-line or Dual-line	Global	No	up to 80 K scans/sec	—	44	—	39 DN/nJ/cm2 (@ 12-bit)	LCC or INVAR
DR-6K7	4-wire SPI	7 x 7	Single-line	Global	No	up to 80 K scans/sec	—	44	—	77 DN/nJ/cm2 (@ 12-bit)	LCC or INVAR
DR-8K7	4-wire SPI	7 x 7	Single-line or Dual-line	Global	No	up to 80 K scans/sec	—	44	—	77 DN/nJ/cm2 (@ 12-bit)	INVAR
DR-8K3.5	4-wire SPI	3.5 x 3.5	Single-line or Dual-line	Global	No	up to 80 K scans/sec	—	44	—	39 DN/nJ/cm2 (@ 12-bit)	INVAR
DR-16K	4-wire SPI	3.5 x 3.5	Single-line	Global	No	up to 80 K scans/sec	—	44	—	39 DN/nJ/cm2 (@ 12-bit)	INVAR
4LS-2K5	LVDS	5.6 x 5.6	4-line	Global	No	155 KHz	—	—	—	61 DN/nJ/cm2 (@ 12-bit)	Ceramic LGA
4LS-5K	LVDS	5.6 x 5.6	4-line	Global	No	155 KHz	—	—	—	61 DN/nJ/cm2 (@ 12-bit)	Ceramic LGA
4LS-7K5	LVDS	5.6 x 5.6	4-line	Global	No	155 KHz	—	—	—	61 DN/nJ/cm2 (@ 12-bit)	Ceramic PGA
4LS-10K	LVDS	5.6 x 5.6	4-line	Global	No	155 KHz	—	—	—	61 DN/nJ/cm2 (@ 12-bit)	INVAR
4LS-15K	LVDS	5.6 x 5.6	4-line	Global	No	155 KHz	—	—	—	61 DN/nJ/cm2 (@ 12-bit)	INVAR
ORION-2K (10x10)	4-wire SPI	10 x 10	Single line	Global	No	60 K scans/sec	—	—	59	113 DN/nJ/cm2 @ 12-bit	Ceramic LCC (90-pin)
ORION-2K (10x200)	4-wire SPI	10 x 200	Single line	Global	No	60 K scans/sec	—	—	59	211 DN/nJ/cm2 @ 12-bit	Ceramic LCC (90-pin)

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Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type*	Color filter	Frame Rate @ Full Resolution (FPS)	Resolution (Mega-pixels)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
KAE-02150	Analog	5.5	2/3"	GS	Bayer Color, Mono	30	2	68	*PEAK QE: 50%	CPGA-135, CPGA-143
KAE-02152	Analog	5.5	2/3"	GS	Bayer Color, Mono	30	2	68	*PEAK QE: 50%	CPGA-135, CPGA-143
KAE-04471	Analog	7.4	4/3"	GS	Bayer Color, Mono	30	4	72	*PEAK QE: 50%	CPGA-155
KAE-08151	Analog	5.5	4/3"	GS	Bayer RGB, Mono	14	8	66	*PEAK QE: 50%	CPGA-155
KAF-0261	Analog	20	1"	FF	Mono	15	VGA	87	*PEAK QE: 55%	CDIP-24
KAF-0402	Analog	9	1/2"	FF	Mono	20	WVGA	76	*PEAK QE: 77%	CDIP-24
KAF-09000	Analog	12	51.9 mm	FF	Mono	0.4	9	84	*PEAK QE: 64%	CDIP-34
KAF-09001	Analog	12	51.3 mm	FF	Mono	5	9	84	*PEAK QE: 64%	CDIP-34
KAF-1001	Analog	24	APS-H	FF	Mono	3	1	97	*PEAK QE: 55%	CDIP-26
KAF-1603	Analog	9	1"	FF	Mono	2.2	1	74	*PEAK QE: 77%	CDIP-24
KAF-16200	Analog	6	APS-H	FF	Bayer Color, Mono	1	16	-	*PEAK QE: 56%	CDIP-32
KAF-16801	Analog	9	52.1mm	FF	Mono	0.4	16	76	*PEAK QE: 67%	CDIP-34
KAF-16803	Analog	9	52.1mm	FF	Mono	0.2	16	80	*PEAK QE: 60%	CDIP-34
KAF-18500	Analog	6.8	35 mm	FF	Mono	0.8	20	68	*PEAK QE: 45%	CPGA
KAF-3200	Analog	6.8	4/3"	FF	Bayer Color	2.5	3	78	*PEAK QE: 80%	CDIP-24
KAF-40000	Analog	6	54.78 mm	FF	Bayer Color	1.3	40	70.2	*PEAK QE: 44%	CPGA-52
KAF-4320	Analog	24	70.7 mm	FF	Mono	2	4	87.5	*PEAK QE: 70%	CPGA-84
KAF-50100	Analog	6	61.3 mm	FF	Bayer Color, Mono	1	50	70.2	*PEAK QE: 62%	CPGA-52
KAF-6303	Analog	9	APS-H	FF	Mono	0.6	6	76	*PEAK QE: 68%	CDIP-26
KAF-8300	Analog	5.4	4/3"	FF	Mono	2.9	8	64.4	*PEAK QE: 56%	CDIP-32
KAI-01050	Analog	5.5	1/2"	IT	Bayer Color, Mono	120	1	64	*PEAK QE: 44%	CLCC-64 CPGA-68
KAI-01150	Analog	5.5	1/2"	IT	Bayer Color, Mono, Sparse CFA	147	1	64	*PEAK QE: 44%	CLCC-64 CPGA-68
KAI-02050	Analog	5.5	2/3"	IT	Bayer Color, Mono	64	2	64	*PEAK QE: 44%	CLCC-64 CPGA-68
KAI-02150	Analog	5.5	2/3"	IT	Bayer Color, Mono, Sparse CFA	64	2	64	*PEAK QE: 44%	CLCC-64 CPGA-68
KAI-02170	Analog	7.4	1"	IT	Bayer Color, Mono, Sparse CFA	60	2	82	*PEAK QE: 52%	CPGA-68
KAI-0330	Analog	9	1/2"	IT	Bayer Color, Mono	120	VGA	57	*PEAK QE: 36%	CDIP-20
KAI-0340	Analog	7.4	1/3"	IT	Bayer Color, Mono	210	VGA	69	*PEAK QE: 55%	CDIP-22
KAI-0373	Analog	11.6 x 13.6	2/3"	IT	Mono	30	WVGA	60	*PEAK QE: 35%	CDIP-24
KAI-04022	Analog	7.4	4/3"	IT	RGB	16	4	-	*PEAK QE: 50%	CDIP-34
KAI-04050	Analog	5.5	1"	IT	Bayer Color, Mono, Sparse CFA	32	4	64	*PEAK QE: 46%	CPGA-68
KAI-04070	Analog	7.4	4/3"	IT	Bayer Color, Mono, Sparse CFA	32	4	82	*PEAK QE: 52%	CPGA-68

GS= Global Shutter; ERS= Electronic Rolling Shutter; GRR= Global Reset Release (ERS); FF= Full Frame; IT= Interleave

*NOTE: PEAK QE: wave length, CFA, microlens dependent (only Mono max stated, review datasheet for clarification)



Part Number / Series	Output Interface	Pixel Size (µm)	Optical Format	Shutter Type*	Color filter	Frame Rate @ Full Resolution (FPS)	Resolution (Mega-pixels)	Dynamic Range (dB)	Responsivity	Package Type / Size (mm)
KAI-08051	Analog	5.5	4/3"	IT	Bayer Color, Mono, Sparse CFA	16	8	66	*PEAK QE: 50%	CPGA-68
KAI-08052	Analog	5.5	4/3"	IT	Bayer Color, Mono, Sparse CFA	16	8	66	*PEAK QE: 50%	CPGA-68
KAI-08670	Analog	7.4	APS-H	IT	Bayer Color, Mono, Sparse CFA	12	8	82	*PEAK QE: 48%	CPGA-72
KAI-1003	Analog	12.8	4/3"	IT	Mono	30	1	72	*PEAK QE: 45%	CDIP-28
KAI-1010	Analog	9	1"	IT	Mono	30	1	60	*PEAK QE: 37%	CDIP-24
KAI-1020	Analog	7.4	2/3"	IT	RGB, Mono	50	1	58	*PEAK QE: 44%	CLCC-64; CPGA-68
KAI-11002	Analog	9	35 mm	IT	RGB, Mono	5	11	66	*PEAK QE: 50%	CDIP-40
KAI-16000	Analog	7.4	35 mm	IT	RGB, Mono	3	16	65	*PEAK QE: 45%	CPGA-40
KAI-16050	Analog	5.5	APS-H	IT	Bayer Color, Mono, Sparse CFA	8	16	64	*PEAK QE: 43%	CPGA-72
KAI-16070	Analog	7.4	35 mm	IT	Bayer Color, Mono, Sparse CFA	8	16	82	*PEAK QE: 48%	CPGA-72
KAI-2020	Analog	7.4	1"	IT	RGB, Mono	30	2	68	*PEAK QE: 55%	CDIP-32
KAI-29050	Analog	5.5	35 mm	IT	Bayer Color, Mono, Sparse CFA	4	29	64	*PEAK QE: 43%	CPGA-72
KAI-29052	Analog	5.5	35 mm	IT	Bayer Color, Mono, Sparse CFA	4	29	64	*PEAK QE: 43%	CPGA-72
KAI-47051	Analog	5.5	56.7 mm	IT	Bayer Color, Mono, Sparse CFA	7	47	-	*PEAK QE: 43%	CPGA-201
KLI-2104	Analog	14	Linear	Linear	RGB	20 MHz (linear)	Linear	80	16 V/uJ/cm2	CDIP-32
KLI-2113	Analog	14	Linear	Linear	RGB, Mono	20 MHz (linear)	Linear	76	66 V/uJ/cm2	CDIP-28
KLI-4104	Analog	10	Linear	Linear	RGB, Mono	30 MHz (linear)	Linear	60	33 V/uJ/cm2	CDIP-46
KLI-8023	Analog	9	Linear	Linear	RGB, Mono	6 MHz (linear)	Linear	90	33 V/uJ/cm2	CDIP-40

GS= Global Shutter; ERS= Electronic Rolling Shutter; GRR= Global Reset Release (ERS); FF= Full Frame; IT= Interleave
 *NOTE: PEAK QE: wave length, CFA, microlens dependent (only Mono max stated, review datasheet for clarification)

IMAGE / Image Sensor Module



Part Number / Series	Output Interface	Optical Format	Shutter Type	Color filter	Frame Rate @ Full Resolution (FPS)	Resolution (Pixels)	SNR Max (dB)	Dynamic range (dB)	Responsivity	Package Type / Size (mm)
NanEye Module	LVDS	1/15"	Rolling shutter	No	44	62.5 k	41	58	11.5 DN/nJ/cm2 @ max gain	Chip + Lens + Cable
NanEye-Stereo Module	LVDS	1/15"	Rolling shutter	No	44	125 k	41	58	11.5 DN/nJ/cm2 @ max gain	2x (Chip + Lens + Cable)



Part Number / Series	Output Interface	Thermal Range (K)	FOV (degree)	Spectral Range (um)	Number of Pixels	Frame Rate (Hz)	Supply Voltage (V)	Current Consumption (mA)	Package Type / Size (mm)
500-0643-00	Video over SPI	273 to 393	50°	8 to 14	80 x 60	9	2.8	48 mA typical, shutter event (209 mA typical) at 3.1 VDC	8.5 x 8.5 x 5.6
500-0659-01	Video over SPI	273 to 393	25°	8 to 14	80 x 60	9	2.8	48 mA typical, shutter event (209 mA typical) at 3.1 VDC	8.5 x 8.5 x 5.6
500-0690-00	Video over SPI	273 to 393	50°	8 to 14	80 x 60	9	2.8	48 mA typical, shutter event (209 mA typical) at 3.1 VDC	10.5 x 11.7 x 6.4
500-0763-01	Video over SPI	263 to 723	50°	8 to 14	80 x 60	9	2.8	48 mA typical, shutter event (209 mA typical) at 3.1 VDC	11.8 x 12.7 x 7.2
500-0726-01	Video over SPI	273 to 393	56°	8 to 14	160 x 120	9	2.8	48 mA typical, shutter event (209 mA typical) at 3.1 VDC	11.8 x 12.7 x 7.2

IMAGE / 3D Image Sensor (Time of Flight)



Product	Description	Resolution	Pixel Size (µm)	Frame Rate (fps)	Optical Format (inch)	Output Interface	Temperature (°C)	Sunlight Robustness (lux)	Modulation Frequency (MHz)	Package Type
MLX75023RTF-BAA-000	Automotive ToF Sensor, without cover tape	QVGA	15 x 15	150 max.	1/3	analog	-40 to +105	120K	12 to 40	GBGA
MLX75023STF-BAA-000	ToF Sensor, without cover tape	QVGA	15 x 15	150 max.	1/3	analog	-20 to +85	120K	12 to 40	GBGA
MLX75023RTF-BAA-001	Automotive ToF Sensor, with cover tape	QVGA	15 x 15	150 max.	1/3	analog	-40 to +105	120K	12 to 40	GBGA
MLX75023STF-BAA-001	ToF Sensor, with cover tape	QVGA	15 x 15	150 max.	1/3	analog	-20 to +85	120K	12 to 40	GBGA
MLX75123RLA-ABA-000	Automotive ToF Companion Chip	QVGA	n/a	150 max.	1/3	12-bit Parallel with I ² C for control	-40 to +105	120K	12 to 40	AGFN
MLX75123SLA-ABA-000	ToF Companion Chip	QVGA	n/a	150 max.	1/3	12-bit Parallel with I ² C for control	-20 to +85	120K	12 to 40	AGFN

*Note: MLX7502x and MLX7512x must be used together
ToF=Time of Flight

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INERTIAL COMBO

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Part Number	Sensing Axis	Sensitivity Range (g)	Magnetic Field Range	Output Type	Supply Voltage (V)	Current Consumption Typ (mA)	Current Consumption (Power-Down Mode) Typ (μA)	Operating Temperature (°C)	Package Type / Size (mm)
FXOS8700CQ	X, Y, Z	±2, ±4, ±8	1200 μT	I ² C, SPI	1.95 to 3.6	0.5	2	-40 to +85	QFN-16 3 x 3 x 1.2



Part Number	Sensing Axis	Sensitivity Range (g)	Magnetic Field Range	Output Type	Supply Voltage (V)	Current Consumption Typ (mA)	Current Consumption (Power-Down Mode) Typ (μA)	Operating Temperature (°C)	Package Type / Size (mm)
KMX62-1031	X, Y, Z	±2, ±4, ±8, ±16	±12 Gauss	I ² C (2 Programmable Interrupts)	1.7 to 3.6 (VDD) 1.2 to 3.6 (I/O Ring)	0.395 A+M 0.295 M 0.150 A	1	-40 to +85	LGA-16 3 x 3 x 0.9

*1 Gauss = 100 μT

A= Accelerometer; M= Magnetometer; G= Gyroscope



Part Number	Sensing Axis	Sensitivity Range (g)	Magnetic Field Range	Output Type	Supply Voltage (V)	Current Consumption Typ (mA)	Current Consumption (Power-Down Mode) Typ (μA)	Operating Temperature (°C)	Package Type / Size (mm)
LSM303AHTR	X, Y, Z	±2, ±4, ±8, ±16	±50 Gauss (typ)	Digital	1.71 to 1.98	0.0362	2	-40 to +85	LGA-12 2 X 2 X 1
LSM303AGRSTR	X, Y, Z	±2, ±4, ±8, ±16	±50 Gauss (typ)	Digital	1.71 to 3.6	0.0212	2	-40 to +85	LGA-12 2 X 2 X 1

*1 Gauss = 100 μT

A= Accelerometer; M= Magnetometer; G= Gyroscope

INERTIAL COMBO / Inertial Measurement Unit



Part Number	Output Interface	Sensing Range	Sensing Axis	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LSM6DS3USTR	I ² C, SPI	G: 125 / ±245 / ±500 / ±1000 / ±2000 dps A: ±2 / ±4 / ±8 / ±16 g	X, Y, Z, Yaw, Pitch, Roll	1.7 to 3.6	0.8 (A+G)	-40 to +85	LGA-16L 2.5 x 3 x 0.83
LSM6DSLTR	I ² C, SPI	G: 125 / ±245 / ±500 / ±1000 / ±2000 dps A: ±2 / ±4 / ±8 / ±16 g	X, Y, Z, Yaw, Pitch, Roll	1.7 to 3.6	0.45 (A+G)	-40 to +85	LGA-16L 2.5 x 3 x 0.86
LSM6DSMTR	I ² C, SPI	G: 125 / ±245 / ±500 / ±1000 / ±2000 dps A: ±2 / ±4 / ±8 / ±16 g	X, Y, Z, Yaw, Pitch, Roll	1.7 to 3.6	0.45 (A+G)	-40 to +85	LGA-16L 2.5 x 3 x 0.86
ISM330DLCTR	I ² C, SPI	G: 125 / ±245 / ±500 / ±1000 / ±2000 dps A: ±2 / ±4 / ±8 / ±16 g	X, Y, Z, Yaw, Pitch, Roll	1.7 to 3.6	0.5 (A+G)	-40 to +85	LGA-16L 2.5 x 3 x 0.83

*1 Gauss = 100 μT

A= Accelerometer; M= Magnetometer; G= Gyroscope


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Part Number	Output Interface	Sensing Range	Sensing Axis	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BM1160	I ² C, SPI (4 interrupts)	A: ±2 g, ±4 g, ±8 g, ±16 g G: ±125°/s, ±250°/s, ±500°/s, ±1000°/s, ±2000°/s	6-axis	1.71 to 3.6	Full operation: 950 µA Suspend mode: 3 µA	-40 to +85	LGA-14 2.5×3.0×0.8
BM1055	I ² C, SPI (4 interrupts)	A: ±2 g, ±4 g, ±8 g, ±16 g G: ±125°/s, ±250°/s, ±500°/s, ±1000°/s, ±2000°/s	6-axis	2.4 to 3.6	Full operation: 950 µA Suspend mode: 3 µA	-40 to +85	LGA-16 3.0×4.5×0.95

INERTIAL COMBO / 9-DoF/9-Axis Combo Sensor



lite, augmented

Part Number	Output Interface	Linear Acceleration Full Scale (g)	Angular Rate Full Scale (dps)	Magnetic Full Scale Range (Gauss)	Resolution	Supply Voltage (V)	Supply Current (Acc+Mag+Gyro) (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LSM9DS1TR	I ² C, SPI	±2 / ±4 / ±8 / ±16	±245 / ±500 / ±2000	±4 / ±8 / ±12 / ±16	16-bit	1.9 to 3.6	4.6	-40 to +85	LGA-24 3.5 x 3 x 1

INERTIAL COMBO / Sensor HUB


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Part Number	Integrated Processor	Software Library	Software	Output Interface	Sensing Range	Bandwidth Typ. (Hz)	Current Consumption (mA Typ. @100 Hz ODR)	Supply Voltage (V)	Package Type / Size (mm)
BHI160	32-bit floating point Fuser Core	BSX Sensor Fusion Library	BSX Sensor Fusion + Custom Algorithms	I ² C	A): ±2, ±4, ±8, ±16g G): ±125, ±250, ±500, ±1000, ±2000°/s	A): 1600 G): 3200 (Full Data Fusion): 200	1.5 (Full 9-DoF Fusion) 0.01 (Standby)	1.71 to 3.6	3.0 x 3.0 x 0.95
BHA250	32-bit floating point Fuser Core	BSX Sensor Fusion Library	BSX Sensor Fusion + Custom Algorithms	I ² C	A): ±2, ±4, ±8, ±16	A): 1600 (Full Data Fusion): 200	0.6 (eCompass) 0.01 (Standby)	1.71 to 3.6	2.2 x 2.2 x 0.95
BN0055	32-bit Cortex M0+ MCU (Atmel)	BSX Fusion Lite	BSX Sensor Fusion	I ² C, UART	A): ±2g, ±4g, ±8g, ±16g G): ±125, ±250, ±500, ±1000, ±2000°/s M): ±1300 (x,y), ±2500 (z)µT	A) 7.8 to 1000 G): 32 to 523 M): 2 to 30 (Full Data Fusion): 100	12.3 (9-DoF Fusion) 2.7 (Low-power mode) 0.04 (Suspend mode)	2.4 to 3.6	5.2 x 3.8 x 1.1
BMF055	32-bit Cortex M0+ MCU (Atmel)	BSX Fusion Lite	Custom using Atmel Studio	I ² C, UART	A): ±2g, ±4g, ±8g, ±16g G): ±125, ±250, ±500, ±1000, ±2000°/s M): ±1300 (x,y), ±2500 (z)µT	A): 7.8 to 1000 G): 32 to 523 M): 2 to 30 (Full Data Fusion): depending on custom specific firmware	12.3 (9-DoF Fusion) 2.7 (Low-power mode) 0.04 (Suspend mode)	2.4 to 3.6	5.2 x 3.8 x 1.1

A= Accelerometer; M= Magnetometer; G= Gyroscope



Little big things


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MEMS sensors

for smart industry 4.0

IIS2DH, I3G4250D, IIS328DQ, ISM330DLC, IIS3DHHC,
IIS2MDC, ISM303DAC



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KEY APPLICATION

- Predictive maintenance and early failure detection
- Industrial IoT and connected devices
- Robotics, automation and drones
- Power saving and motion-activated functions
- Appliances
- Inertial navigational systems and motion tracking
- Antenna and platform pointing, leveling and stabilization
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- Precision inclinometer and leveling instruments
- Positional and distance sensor
- Presence detection, magnetic switch
- Variable magnetic field monitoring
- Asset and parcel tracking, monitoring and shock detection and logging
- Building and structure monitoring





LIGHT - COLOR

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Part Number	Sensing Range (Lux)	Output Type	Output Range (μA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BH1603FVC	0 to 100,000	Current (Sourced)	0 to 600	2.4 to 5.5	0.074	-40 to +85	WSOF6 (6-pin) 3.0 x 1.6 x 0.75
BH1620FVC	0 to 100,000	Current (Sourced)	0 to 570	2.4 to 5.5	0.071	-40 to +85	WSOF5 (5-pin) 1.6 x 1.6 x 0.6
BH1680FVC	0 to 50,000	Current (Sourced)	0 to 610	2.4 to 5.5	0.075	-40 to +85	WSOF5 (5-pin) 1.6 x 1.6 x 0.6



Part Number	Sensing Range (Lux)	Output Type	Output Range (μA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TEPT4400	0.01 to 167000	Analog	15 to 70	0.5 to 5.0	—	-40 to +85	T1, Ø 3
TEPT5600	0.01 to 167000	Analog	25 to 226	0.5 to 5.0	—	-40 to +85	T1¾, Ø 5
TEPT5700	0.01 to 167000	Analog	5.2 to 24	0.5 to 5.0	—	-40 to +85	T1¾, Ø 5, flat
TEMT6000X01	0.01 to 167000	Analog	3.5 to 16	0.5 to 5.0	—	-40 to +100	2 x 4 x 1
TEMT6200FX01	0.01 to 167000	Analog	7.5 to 39	0.5 to 5.0	—	-40 to +100	1.2 x 2 x 0.85
TEMD6010FX01	0.01 to 167000	Analog	0.03 to 0.09	0.5 to 5.0	—	-40 to +100	2 x 4 x 1
TEMD5510FX01	0.01 to 167000	Analog	0.8 to 1.4	0.5 to 5.0	—	-40 to +100	4.2 x 5 x 1

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Part Number	Sensing Range (Lux)	Output Type	Output Range (μA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LA0151C	100 k	Analog	0 to 80	2.2	0.08	-30 to +85	ODCSP-4
LV0111CF	100 k	Analog	0 to 30	2.3	0.021	-30 to +85	ODCSP-4J



Part Number	Sensing Range (Lux)	Output Type	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TSL12T	–	Voltage	up to 4.9 V	2.7 to 5.5	1.1	-25 to +85	T-3
TSL13	–	Voltage	up to 4.9 V	2.7 to 5.5	1.1	-25 to +85	3-pin TH Sidelooker, 3/4-pin SMT Sidelooker
TSL13T	–	Voltage	up to 4.9 V	2.7 to 5.5	1.1	-25 to +85	T-3
TSL14	–	Voltage	up to 4.9 V	2.7 to 5.5	1.1	-25 to +85	3-pin TH Sidelooker, 3/4-pin SMT Sidelooker
TSL230RD	–	Frequency	1 MHz	2.7 to 5.5	2.0	-25 to +70	SOIC-8 5.3 x 6.2 x 1.75
TSL237S	–	Frequency	0.6 MHz	2.7 to 5.5	2.0	-40 to +85	3-pin TH or SMT 19.46 x 4.6 x 2.6
TSL237T	–	Frequency	0.6 MHz	2.7 to 5.5	2	-40 to +85	4-lead Low Profile SMT
TSL238T	–	Frequency	0.6 MHz	2.7 to 5.5	2	-40 to +85	4-lead Low Profile SMT
TSL250R	–	Voltage	0 to 3.3V	2.7 to 5.5	1.1	-25 to +85	SOIC-8, 3-pin TH or SMT 19.46 x 4.6 x 2.6
TSL251R	–	Voltage	0 to 3.3V	2.7 to 5.5	1.1	-25 to +85	SOIC-8, 3-pin TH or SMT 19.46 x 4.6 x 2.6
TSL252R	–	Voltage	0 to 3.3V	2.7 to 5.5	1.1	-25 to +85	SOIC-8, 3-pin TH or SMT 19.46 x 4.6 x 2.6
TSL257	–	Voltage	0 to 4.5 V	2.7 to 5.5	1.1	-25 to +85	3-pin TH Sidelooker 19.46 x 4.6 x 2.6
TSL257SM	–	Voltage	0 to 4.5 V	2.7 to 5.5	1.1	-25 to +85	3-pin SMT Sidelooker 19.46 x 4.6 x 2.6

LIGHT - COLOR / Ambient Light Sensor - Digital



Part Number	Sensing Range (Lux)	Output Interface	Peak Wave Length (nm)	Power-Down Current (mA)	Supply Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
BH1721FVC	0 to 65,000	I ² C	560	0.001	0.140	2.4 to 3.6	-40 to +85	WSOF5 (5-pin) 1.6 x 1.6 x 0.6
BH1751FVI	0 to 65,000	I ² C	560	0.0015	0.120	2.4 to 3.6	-40 to +85	WSOF6I (6-pin) 3.0 x 1.6 x 0.75
BH1780GLI	0 to 65,000	I ² C	600	0.0025	0.120	2.3 to 3.0	-40 to +85	WLG04IW02 (LGA-4) 2.0 x 2.0 x 0.8
BH1730FVC	0 to 100,000	I ² C	600 (White) 800 (Infrared)	0.0015	0.150	2.4 to 3.6	-40 to +85	WSOF6 (6-pin) 3.0 x 1.6 x 0.75



Part Number	Sensing Range (Lux)	Output Interface	Peak Wave Length (nm)	Power-Down Current (mA)	Supply Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
VEML6030	0 to 120000	I ² C Bus	530	0.0005	0.045	2.5 to 3.6	-25 to +85	2.0 x 2.0 x 0.87
VEML7700-TR	0 to 120000	I ² C Bus	530	0.0005	0.045	2.5 to 3.6	-25 to +85	6.8 x 2.35 x 3.0



Part Number	Sensing Range (Lux)	Output Interface	Peak Wave Length (nm)	Power-Down Current (mA)	Supply Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
LV0104CS	65k	I ² C	550	0.001	0.07	2.3	-30 to +85	ODCSP-4



Part Number	Sensing Range (Lux)	Output Interface	Peak Wave Length (nm)	Power-Down Current (mA)	Supply Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
TSL25721	—	16-bit I ² C	700	0.002	0.2	2.4 to 3.6	-40 to +85	Dual Flat no-lead
TSL25723	—	16-bit I ² C	700	0.002	0.2	2.7 to 3.6	-40 to +85	Dual Flat no-lead
TSL25911	—	16-bit I ² C	650	0.0023	0.275	2.7 to 3.6	-30 to +70	ODFN-6
TSL25711	—	16-bit I ² C	626 / 850	0.0025	0.175	2.6 to 3.6	-30 to +70	DFN-6
TSL45315	—	16-bit I ² C	550	0.0022	0.11	2.3 to 3.3	-40 to +85	ChipLED

LIGHT - COLOR / Color Sensor



Part Number	Output Channel	Output Interface	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BH1745NUC	R, G, B, Clear	I ² C	0 lx to 40,000 lx (0.005 lx/step)	2.3 to 3.6	0.190	-40 to +85	WS0N008X2120 (WS0N 8-pin) 2.1 x 2.0 x 0.6
BH1747NUC	R, G, B, Clear, IR	I ² C	0 lx to 80,000 lx (0.0125 lx/step)	2.3 to 3.6	0.190	-40 to +85	WS0N008X2120 (WS0N 8-pin) 2.1 x 2.0 x 0.6



Part Number	Output Channel	Output Interface	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
VEML6040A30G	R, B, G, W	I ² C Bus	0.0056 lx to 11796 lx	2.5 to 3.6	0.2	-40 to +85	2.0 x 1.25 x 1.0



Part Number	Output Channel	Output Interface	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TCS37727	RGB, Clear	I ² C	16-bit	2.7 to 3.6	0.235	-30 to +70	FN-6
TCS3103/4	RGB	Voltage	0 to 4.8 V	4.5 to 5.5	0.27	-30 to +70	DFN-6



Part Number	Photo Current (μA)	Dark Current (μA)	Rise Time (ms)	Fall Time (ms)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
RPT-34PB3F	2000	0.5	0.01	0.01	0.4 to 14	-25 to +85	TH 3.8 (ø) x 29.2
RPT-37PB3F	2000	0.5	0.01	0.01	0.4 to 14	-25 to +85	TH 3.8 (ø) x 29.2
RPT-38PB3F	2000	0.5	0.01	0.01	0.4 to 14	-25 to +85	TH 3.8 (ø) x 29.2
SML-810TB	2300	0.5	0.007	0.007	0.4 to 20	-30 to +85	SMT 3.4 x 1.25 x 1.1
SCM-014TB	300	0.5	0.005	0.005	0.4 to 10	-30 to +85	SMT 3.0 x 1.5 x 2.2
RPM-20PB	500	0.5	0.01	0.01	0.4 to 25	-25 to +85	TH, 4.3 x 3.2 x 18.4
RPM-22PB	480	0.5	0.01	0.01	0.4 to 14	-25 to +85	TH, 4.6 x 2.54 x 16.7



Part Number	Photo Current (μA)	Dark Current (μA)	Rise Time (ms)	Fall Time (ms)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
VEMD5010X01	48	2	100	430 to 1100	1	-40 to +110	5 x 4 x 0.9, SMT
VEMD5110X01	48	2	100	790 to 1050	1	-40 to +110	5 x 4 x 0.9, SMT
VEMD5060X01	26	0.2	30	350 to 1070	0.8	-40 to +110	5 x 4 x 0.9, SMT
VEMD5160X01	26	0.2	30	700 to 1050	0.8	-40 to +110	5 x 4 x 0.9, SMT
VEMD5080X01	45	0.2	70	350 to 1100	0.9	-40 to +110	5 x 4 x 0.9, SMT
VEMD5510C	0.6	0.2	70	440 to 700	0.9	-40 to +110	5 x 4 x 0.9, SMT
VEMD2023SLX01	10	1	100	750 to 1050	1	-40 to +100	2.3 x 2.5 x 2.3, Side View, SMT
VEMD2523SLX01	10	1	100	350 to 1120	1	-40 to +100	2.3 x 2.5 x 2.3, Side View, SMT

LIGHT - COLOR / UV Sensor



Part Number	Output Interface	Functional Description	Supply Voltage (V)	Maximum-Sensitivity Wave Length (nm)	Sensitivity Region (nm)	Supply Current (μA)	Operating Temperature (°C)	Package Type / Size (mm)
VEML6070	I ² C Bus	UV-A sensor	2.7 to 5.5	355	280 to 400	100	-40 to +85	2.35 x 1.8 x 1.0
VEML6075	I ² C Bus	UV-A/B sensor	1.7 to 3.6	365 (A), 330 (B)	280 to 400	480	-40 to +85	2.35 x 1.8 x 1.0



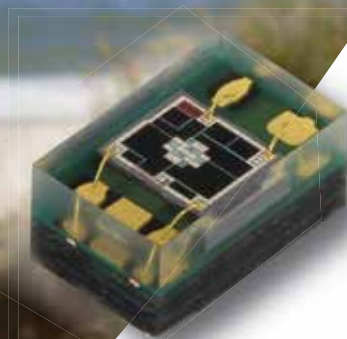
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The **VEML6075** is an advanced ultraviolet light sensor. It measures both UVA and UVB light which is essential to calculating a true UV Index value. Easily operated via a simple I²C command, the **VEML6075** incorporates a photodiode, amplifiers, and analog / digital circuits into a single chip. It has 16-bit resolution and has a package height of only 1 mm.



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Part Number	Output Interface	Sensing Range (A)	Sensing Accuracy (%)	Bandwidth (kHz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TLI4970D025T4XUMA1	16-bit digital SPI output	25A primary current range	1.60	18	3.3	12	-40 to +85	TISON-8; 7 x 7
TLI4970D050T4XUMA1	16-bit digital SPI output	50A primary current range	1.60	18	3.3	12	-40 to +85	TISON-8; 7 x 7
TLI4970D025T5XUMA1	16-bit digital SPI output	25A primary current range	3.50	18	3.3	12	-40 to +85	TISON-8; 7 x 7
TLI4970D050T5XUMA1	16-bit digital SPI output	50A primary current range	3.50	18	3.3	12	-40 to +85	TISON-8; 7 x 7

Part Number	Output Interface	Sensing Range (A)	Sensing Accuracy (%)	Bandwidth (kHz)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX91205KDC-AAL-003	Analog - Diff.	0 to ±100	1%	100	4.5 to 5.5	11	-40 to +125	SOIC-8
MLX91205KDC-AAH-003	Analog - Diff.	0 to ±500	1%	100	4.5 to 5.5	11	-40 to +125	SOIC-8
MLX91206LDC-CAL-001	Analog	0 to ±100	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAL-002	Analog	0 to ±100	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAL-003	Analog	0 to ±100	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-001	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-002	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-003	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-004	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-005	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-021	Analog	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91206LDC-CAH-104	PWM	0 to ±500	1%	70	4.5 to 5.5	8	-40 to +150	SOIC-8
MLX91208LDC-CAL-000	Analog	0 to ±100	1%	250	4.5 to 5.5	12	-40 to +150	SOIC-8
MLX91208LDC-CAH-000	Analog	0 to ±500	1%	250	4.5 to 5.5	12	-40 to +150	SOIC-8
MLX91208LDC-CAV-000	Analog	0 to ±2000	1%	250	4.5 to 5.5	12	-40 to +150	SOIC-8
MLX91208LDC-CAV-001	Analog	0 to ±2000	1%	250	4.5 to 5.5	12	-40 to +150	SOIC-8
MLX91207LDC-CAA-005	Analog	0 to ±1000	1%	70	4.5 to 5.5	9	-40 to +150	SOIC-8
MLX91207LDC-CAA-007	Analog	0 to ±2000	1%	70	4.5 to 5.5	9	-40 to +150	SOIC-8
MLX91207LDC-CAA-015	Analog	0 to ±2000	1%	70	4.5 to 5.5	9	-40 to +150	SOIC-8
MLX91209LVA-CAA-000	Analog	0 to ±500	1%	250	4.5 to 5.5	12	-40 to +150	SIP-4 VA
MLX91209LVA-CAA-001	Analog	0 to ±500	1%	250	4.5 to 5.5	12	-40 to +150	SIP-4 VA
MLX91209LVA-CAA-002	Analog	0 to ±500	1%	250	4.5 to 5.5	12	-40 to +150	SIP-4 VA
MLX91209LVA-CAA-003	Analog	0 to ±500	1%	250	4.5 to 5.5	12	-40 to +150	SIP-4 VA
MLX91210KDC-CAS-101	Analog	0 to ±25	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-8
MLX91210KDC-CAS-102	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-8
MLX91210KDC-CAS-104	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-8
MLX91210KDC-CAS-105	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-8
MLX91210KDC-CAS-106	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-8
MLX91210KDF-CAS-101	Analog	0 to ±25	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-16 WB
MLX91210KDF-CAS-102	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-16 WB
MLX91210KDF-CAS-103	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-16 WB
MLX91210KDF-CAS-104	Analog	0 to ±50	1%	100	4.5 to 5.5	12	-40 to +125	SOIC-16 WB



Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
TLE4913HTSA1	Switch	3.5	2.7	0 to 2	2.4 to 5.5	-40 to +150	SC59
TLE49215UHALA1	Switch	0	0	0 to 50	4.5 to 24	-40 to +170	SSO-4
TLE49462KHTSA1	Switch	2.0	-2.0	0 to 20	2.7 to 24	-40 to +150	SC59
TLE49611MXTMA1	Latch	2.0	-2.0	0 to 25	3 to 32	-40 to +170	SOT23-3
TLE49612MXTSA1	Latch	5.0	-5.0	0 to 25	3 to 32	-40 to +170	SOT23-3
TLE49613MXTMA1	Latch	7.5	-7.5	0 to 25	3 to 32	-40 to +170	SOT23-3
TLE49614MXTSA1	Latch	10.0	-10.0	0 to 25	3 to 32	-40 to +170	SOT23-3
TLE49615MXTMA1	Latch	15.0	-15.0	0 to 25	3 to 32	-40 to +170	SOT23-3
TLE49643KXTSA1	Switch	12.5	9.5	0 to 25	3 to 42	-40 to +170	SC59
TLI4906KHTSA1	Switch	10.0	8.5	0 to 20	2.7 to 18	-40 to +125	SC59
TLI4906LHALA1	Switch	10.0	8.5	0 to 20	2.7 to 18	-40 to +125	SSO-3
TLI49611MXTSA1	Latch	2.0	-2.0	0 to 25	3 to 32	-40 to +125	SOT23-3
TLI49631MXTMA1	Latch	2.0	-2.0	0 to 5	3 to 5.5	-40 to +125	SOT23-3
TL49611TBXALA1	Latch	2.0	-2.0	0 to 25	3 to 26	-40 to +125	T092S
TL49645TBXALA1	Switch	7.5	5.0	0 to 25	3 to 26	-40 to +125	T092S



Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
AH3772	Latch	2.5	-2.5	30	3.0 to 28	-40 to +125	SOT23, SIP-3
AH3774	Latch	4.0	-4.0	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3775	Latch	7.0	-7.0	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3776	Latch	11	-11	30	3.0 to 28	-40 to +125	SOT23, SIP-3
AH3777	Latch	14	-14	30	3.0 to 28	-40 to +125	SOT23, SIP-3
AH3781	Latch	2.5	-2.5	30	3.0 to 28	-40 to +125	SOT23, SIP-3
AH3782	Latch	4.0	-4.0	30	3.0 to 28	-40 to +125	SOT23, SIP-3
AH3762Q	Automotive Latch	2.5	-2.5	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3763Q	Automotive Latch	3.0	-3.0	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3764Q	Automotive Latch	4.0	-4.0	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3765Q	Automotive Latch	7.0	-7.0	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3766Q	Automotive Latch	11.0	-11.0	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3767Q	Automotive Latch	14	-14	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3768Q	Automotive Latch	17.5	-17.5	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3769Q	Automotive Latch	22	-22	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH1389	Dual Unipolar Switch	+2.5 and -2.5	+2.0 and -2.0	2.5	1.60 to 3.6	-40 to +85	X1-DFN14102-4
AH1887	Dual Unipolar Switch	+3.5 and -3.5	+2.0 and -2.0	1	1.65 to 3.3	-40 to +85	SOT553
AH3360	Unipolar Switch	3.0	2.0	30	1.60 to 3.6	-40 to +85	X1-DFN1216-4, DFN2015-6
AH3372	Unipolar Switch	3.0	2.0	30	3.0 to 28.0	-40 to +125	SOT23, SC59, SIP-3



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- Rotation Detect
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Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
AH3373	Unipolar Switch	5.5	3.5	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3376	Unipolar Switch	10	8.5	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3377	Unipolar Switch	11.5	7.0	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3382	Unipolar Switch	5.5	3.5	30	3.0 to 28	-40 to +125	SOT23, SC59, SIP-3
AH3362Q	Automotive Unipolar Switch	3.0	2.0	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3363Q	Automotive Unipolar Switch	5.5	3.5	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3364Q	Automotive Unipolar Switch	8.0	6.0	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3365Q	Automotive Unipolar Switch	10.0	8.0	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3366Q	Automotive Unipolar Switch	10.0	8.5	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3367Q	Automotive Unipolar Switch	11.5	9.0	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3368Q	Automotive Unipolar Switch	15.0	12.5	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3369Q	Automotive Unipolar Switch	17.5	15.0	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH3390Q	Automotive Unipolar Switch	21.0	18.5	30	3.0 to 28	-40 to +150	SOT23, SC59, SIP-3
AH3391Q	Automotive Unipolar Switch	27.5	25.0	30	3.0 to 28	-40 to +150	SOT23, SIP-3
AH1806	Omnipolar	±3.0	±2.0	2.5	2.5 to 5.5	-40 to +85	SC59, SOT553
AH1807	Omnipolar	±8.0	±6.5	2.5	2.5 to 5.5	-40 to +125	SC59, SOT553, SIP-3
AH1808	Omnipolar	±4.0	±3.0	2.5	2.5 to 3.6	-40 to +85	SC59, SOT553
AH1809	Omnipolar	±13	±11.5	2.5	2.5 to 5.5	-40 to +125	SC59, SOT553, SIP-3
AH1815	Omnipolar	±38	±33.5	2.5	2.5 to 5.5	-40 to +125	SC59, SOT553, SIP-3
AH9246	Omnipolar	±1.8	±1.2	2	2.5 to 5.5	-40 to +85	SC59, SIP-3
AH9251	Omnipolar	±6.0	±5.0	2	2.5 to 5.5	-40 to +85	SC59, SIP-3
AH1893	Omnipolar	±3.0	±2.0	3	1.6 to 3.6	-40 to +85	SOT553, X1-DFN1216-4
AH1894	Omnipolar Switch, Selectable Threshold	±3.0 or ±4.0	±2.0 to ±3.0	3	1.6 to 3.6	-40 to +85	SOT553, X1-DFN1216-4
AH1895	Omnipolar	±6.0	±5.0	3	1.6 to 3.6	-40 to +85	SOT553, X1-DFN1216-4
AH1898	Omnipolar Switch, Selectable Threshold	±3.5 or ±6.0	±2.5 to ±5.0	2.5	1.6 to 3.6	-40 to +85	CSP 0.08 x 0.08
AH1902	Omnipolar	±3.3 or +3.3	±2.3 or +2.3	3	1.6 to 3.6	-40 to +85	X1-DFN1216-4
AH1903	Programmable Omnipolar or Unipolar Switch	±3.3	±2.3	3	1.6 to 3.6	-40 to +85	X1-DFN1216-4

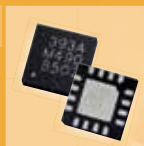
Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90248ELD-EBA-000	omnipolar switch	3.5	3	0.003	1.5 to 3.6	-40 to +85	UTQFN
MLX90248ESE-EBA-000	omnipolar switch	3.5	2.5	0.003	1.5 to 3.6	-40 to +85	TSOT
MLX92211LSE-AAA-000	3-wire latch	3	-3	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-ACA-000	3-wire latch	3	-3	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-ADA-000	3-wire latch	14	-14	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-AEA-000	3-wire latch	3	-3	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-BAA-003	3-wire latch	0.5	-0.5	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-BAA-006	3-wire latch	1.5	-1.5	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-BAA-008	3-wire latch	7	-7	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-BAA-024	3-wire latch	5	-5	3	2.7 to 24	-40 to +150	TSOT
MLX92211LSE-BAA-202	3-wire latch	1.5	-1.5	3	2.7 to 24	-40 to +150	TSOT
MLX92211LUA-AAA-000	3-wire latch	3	-3	3	2.7 to 24	-40 to +150	T0-92
MLX92211LUA-ADA-000	3-wire latch	14	-14	3	2.7 to 24	-40 to +150	T0-92
MLX92211LUA-BAA-015	3-wire latch	0.5	-0.5	3	2.7 to 24	-40 to +150	T0-92
MLX92212LSE-AAA-000	3-wire latch	2	-2	2.2	2.5 to 5.5	-40 to +150	TSOT
MLX92212LSE-ABA-000	3-wire switch	12	10.5	2.2	2.5 to 5.5	-40 to +150	TSOT
MLX92213ELD-AAA-000	3-wire latch	2	-2.0	0.036	1.6 to 3.6	-20 to +85	UTQFN
MLX92215LSE-AAA-000	3-wire latch	3	-3.0	3	2.7 to 24	-40 to +150	TSOT
MLX92215LSE-ACA-000	3-wire latch	3	-3	3	2.7 to 24	-40 to +150	TSOT
MLX92215LUA-AAA-000	3-wire latch	3	-3.0	3	2.7 to 24	-40 to +150	T0-92
MLX92221LSE-AAA-001	2-wire latch	12	-12.0	6	2.7 to 24	-40 to +150	TSOT
MLX92221LSE-AAA-002	2-wire latch	6	-6.0	6	2.7 to 24	-40 to +150	TSOT
MLX92221LSE-AAA-003	2-wire latch	1.75	-1.8	6	2.7 to 24	-40 to +150	TSOT
MLX92221LSE-BAA-008	2-wire latch	4	-4	3.3	2.7 to 24	-40 to +150	TSOT
MLX92221LUA-AAA-004	2-wire latch	6	-6.0	6	2.7 to 24	-40 to +150	T0-92
MLX92221LUA-AAA-005	2-wire latch	1.75	-1.8	6	2.7 to 24	-40 to +150	T0-92
MLX92221LUA-AAA-006	2-wire latch	0.8	-0.8	6	2.7 to 24	-40 to +150	T0-92
MLX92221LUA-AAA-007	2-wire latch	12	-12	6	2.7 to 24	-40 to +150	T0-92
MLX92221LUA-BAA-102	2-wire latch	6	-6	6	2.7 to 24	-40 to +150	T0-92
MLX92221LUA-BAA-105	2-wire latch	1.8	-1.8	6	2.7 to 24	-40 to +150	T0-92
MLX92231LSE-AAA-007	3-wire switch	26	20	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-009	3-wire switch	3.5	2.5	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-010	3-wire switch	10	8.5	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-019	3-wire switch	23	21	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-023	3-wire switch	43	41	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-025	3-wire switch	50	48	3	2.7 to 24	-40 to +150	TSOT
MLX92231LSE-AAA-026	3-wire switch	23	21	3	2.7 to 24	-40 to +150	TSOT
MLX92231LUA-AAA-020	3-wire switch	3.5	2.5	3	2.7 to 24	-40 to +150	T0-92
MLX92232LSE-AAA-000	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	TSOT

Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
MLX92232LSE-AAA-001	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	TSOT
MLX92232LSE-AAA-002	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	TSOT
MLX92232LSE-AAA-003	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	TSOT
MLX92232LUA-AAA-000	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	T0-92
MLX92232LUA-AAA-001	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	T0-92
MLX92232LUA-AAA-002	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	T0-92
MLX92232LUA-AAA-003	progr. 3-wire latch/switch	-80	80	3	2.7 to 24	-40 to +150	T0-92
MLX92241LSE-AAA-008	2-wire switch	17	15	6	2.7 to 24	-40 to +150	TSOT
MLX92241LSE-AAA-012	2-wire switch	5.5	3.5	6	2.7 to 24	-40 to +150	TSOT
MLX92241LSE-AAA-013	2-wire switch	9.2	7.2	6	2.7 to 24	-40 to +150	TSOT
MLX92241LSE-AAA-014	2-wire switch	9.2	7.2	3.3	2.7 to 24	-40 to +150	TSOT
MLX92241LSE-AAA-015	2-wire switch	9.2	7.2	6	2.7 to 24	-40 to +150	TSOT
MLX92241LSE-AAA-017	2-wire switch	9.2	7.2	3.3	2.7 to 24	-40 to +150	TSOT
MLX92241LUA-AAA-003	2-wire switch	8	5	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-AAA-004	2-wire switch	9.2	7.2	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-AAA-005	2-wire switch	9.2	7.2	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-AAA-006	2-wire switch	8	5	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-AAA-007	2-wire switch	5.5	3.5	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-101	2-wire switch	16	15	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-102	2-wire switch	3.2	2.8	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-103	2-wire switch	6	4	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-104	2-wire switch	8	7	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-106	2-wire switch	4	2.7	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-108	2-wire switch	7.9	5.3	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-109	2-wire switch	16	12	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-110	2-wire switch	7.9	5.3	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-111	2-wire switch	3.8	2.6	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-112	2-wire switch	-3.8	2.6	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-113	2-wire switch	7.9	5.3	3.3	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-114	2-wire switch	7.9	5.3	6	2.7 to 24	-40 to +150	T0-92
MLX92241LUA-BAA-115	2-wire switch	11	10.0	3.3	2.7 to 24	-40 to +150	T0-92
MLX92242LSE-AAA-000	progr. 2-wire latch/switch	-100	100	3.3	2.7 to 24	-40 to +150	TSOT
MLX92242LUA-AAA-000	progr. 2-wire latch/switch	-100	100	3.3	2.7 to 24	-40 to +150	T0-92
MLX92242LUA-AAA-100	progr. 2-wire latch/switch	-100	100	3.3	2.7 to 24	-40 to +150	T0-92
MLX92251LSE-AAA-000	dual hall latch	7.5	-7.5	4.5	2.7 to 24	-40 to +150	TSOT
MLX92251LSE-ABA-000	dual hall latch	2.5	-2.5	4.5	2.7 to 24	-40 to +150	TSOT
MLX92292LSE-AAA-000	progr. 3-wire latch/switch	-90	90	PROGR	3.3 to 18	-40 to +150	TSOT
MLX92292LSE-AAA-200	progr. 3-wire latch/switch	-40	40	PROGR	3.3 to 18	-40 to +150	TSOT
MLX92292LUA-AAA-000	progr. 3-wire latch/switch	-90	90	PROGR	3.3 to 18	-40 to +150	T0-92

Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
US1881ESE-AAA-000	3-wire latch	5	-5	3	3.5 to 24	-40 to +85	TSOT
US1881EUA-AAA-000	3-wire latch	5	-5	3	3.5 to 24	-40 to +85	T0-92
US1881LSE-AAA-000	3-wire latch	5	-5	3	3.5 to 24	-40 to +150	TSOT
US1881LUA-AAA-000	3-wire latch	5	-5	3	3.5 to 24	-40 to +150	T0-92
US1883LUA-AAA-000	3-wire latch	14	-14	3	3.5 to 24	-40 to +150	T0-92
US2881ESE-AAA-000	3-wire latch	3	-3	3	3.5 to 24	-40 to +85	TSOT
US2881EUA-AAA-000	3-wire latch	3	-3	3	3.5 to 24	-40 to +85	T0-92
US2881LSE-AAA-000	3-wire latch	3	-3	3	3.5 to 24	-40 to +150	TSOT
US2881LUA-AAA-000	3-wire latch	3	-3	3	3.5 to 24	-40 to +150	T0-92
US2882ESE-AAA-000	3-wire latch	3	-3.0	3	3.5 to 24	-40 to +85	TSOT
US2882EUA-AAA-000	3-wire latch	3	-3.0	3	3.5 to 24	-40 to +85	T0-92
US2882LSE-AAA-000	3-wire latch	3	-3.0	3	3.5 to 24	-40 to +150	TSOT
US2882LUA-AAA-000	3-wire latch	3	-3.0	3	3.5 to 24	-40 to +150	T0-92
US2884LSE-AAA-000	3-wire latch	3	-3.0	3	3.5 to 24	-40 to +150	TSOT
US3881ESE-AAA-000	3-wire latch	5	-5	3	2.2 to 18	-40 to +85	TSOT
US3881EUA-AAA-000	3-wire latch	5	-5.0	3	2.2 to 18	-40 to +85	T0-92
US3881LSE-AAA-000	3-wire latch	5	-5.0	3	2.2 to 18	-40 to +150	TSOT
US3881LUA-AAA-000	3-wire latch	5	-5.0	3	2.2 to 18	-40 to +150	T0-92
US4881ESE-AAA-000	3-wire latch	3	-3.0	3	2.2 to 18	-40 to +85	TSOT
US4881EUA-AAA-000	3-wire latch	3	-3.0	3	2.2 to 18	-40 to +85	T0-92
US4881LSE-AAA-000	3-wire latch	3	-3.0	3	2.2 to 18	-40 to +150	TSOT
US4881LUA-AAA-000	3-wire latch	3	-3.0	3	2.2 to 18	-40 to +150	T0-92
US5681ESE-AAA-000	3-wire switch	3.5	5.5	3	3.5 to 24	-40 to +85	TSOT
US5681KSE-AAA-000	3-wire switch	3.5	5.5	3	3.5 to 24	-40 to +125	TSOT
US5682ESE-AAA-000	3-wire switch	3.5	5.5	3	3.5 to 24	-40 to +85	TSOT
US5682KSE-AAA-000	3-wire switch	3.5	5.5	3	3.5 to 24	-40 to +125	TSOT
US5683ESE-AAA-000	3-wire switch	3.5	5.5	3	3.5 to 24	-40 to +85	TSOT
US5683KSE-AAA-000	3-wire switch	3.5	6	3	3.5 to 24	-40 to +125	TSOT
US5781ESE-AAA-000	3-wire switch	7.5	12	3	3.5 to 24	-40 to +85	TSOT
US5781EUA-AAA-000	3-wire switch	7.5	12.0	3	3.5 to 24	-40 to +85	T0-92
US5781LSE-AAA-000	3-wire switch	7.5	12.0	3	3.5 to 24	-40 to +150	TSOT
US5781LUA-AAA-000	3-wire switch	7.5	12	3	3.5 to 24	-40 to +150	T0-92

MLX90393

MICROPOWER TRIAXIS®
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Melexis
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Part Number	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
US5782ESE-AAA-000	3-wire switch	7.5	12.0	3	3.5 to 24	-40 to +85	TSOT
US5782LSE-AAA-000	3-wire switch	7.5	12	3	3.5 to 24	-40 to +150	TSOT
US5881ESE-AAA-000	3-wire switch	20	25.0	3	3.5 to 24	-40 to +85	TSOT
US5881EUA-AAA-000	3-wire switch	20	25.0	3	3.5 to 24	-40 to +85	TO-92
US5881KSE-AAA-000	3-wire switch	20	25.0	3	3.5 to 24	-40 to +125	TSOT
US5881LSE-AAA-000	3-wire switch	20	25	3	3.5 to 24	-40 to +150	TSOT
US5881LUA-AAA-000	3-wire switch	20	25.0	3	3.5 to 24	-40 to +150	TO-92



Part Number / Series	Type	Operating Point Bop (mT)	Release Point Brp (mT)	Output Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
BU52011HFV	Omnipolar	±3.0	±2.1	0.005	1.65 to 3.30	-40 to +85	HVSOF5 (5-pin) / 1.6 x 1.6 x 0.6
BU52015GUL	Omnipolar	±3.0	±2.1	0.005	1.65 to 3.30	-40 to +85	VCSP50L1 (CSP 4-Ball) / 1.1 x 1.1 x 0.5
BU52061NVX	Omnipolar	±3.3	±2.4	0.004	1.65 to 3.60	-40 to +85	SSON004X1216 (SSON 4-pin) / 1.2 x 1.6 x 0.6
BD7411G	Omnipolar	±3.4	±3.0	2.000	4.50 to 5.50	-40 to +85	SSOP5 (5-pin) / 2.9 x 2.8 x 1.25
BU52025G	Omnipolar	±3.7	±2.9	0.008	2.40 to 3.60	-40 to +85	SSOP5 (5-pin) / 2.9 x 2.8 x 1.25
BU52055GWZ	Omnipolar	±4.1	±3.3	0.005	1.65 to 3.60	-40 to +85	UCSP35L1 (CSP 4-Ball) / 0.8 x 0.8 x 0.35
BU52054GWZ	Omnipolar	±6.3	±5.4	0.005	1.65 to 3.60	-40 to +85	UCSP35L1 (CSP 4-Ball) / 0.8 x 0.8 x 0.35
BU52012HFV	Unipolar (S)	+3.0	+2.1	0.0035	1.65 to 3.30	-40 to +85	HVSOF5 (5-pin) / 1.6 x 1.6 x 0.6
BU52012NVX	Unipolar (S)	+3.0	+2.1	0.0035	1.65 to 3.60	-40 to +85	SSON004X1216 (SSON 4-pin) / 1.2 x 1.6 x 0.6



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Part Number	Output Voltage Range (V)	Sensitivity (mV/mT)	Magnetic Field Range (mT)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TLE4997E2XALA1	5% to 95% of Vdd	60 (typical)	-200 to +200	4.5 to 5.5	7.5	-40 to +150	SSO-3
TLE4998P3XALA1	5% to 95% of Vdd	60 (typical)	-200 to +200	4.5 to 5.5	6	-40 to +150	SSO-3
TLE4997A8DXUMA1	5% to 95% of Vdd	±12.5 to ±300 (programmable)	±50 to ±200 (programmable)	4.5 to 5.5	7.5	-40 to +125	TDSO-8
TLE4997A8XUMA1	5% to 95% of Vdd	±12.5 to ±300 (programmable)	±50 to ±200 (programmable)	4.5 to 5.5	7.5	-40 to +125	TDSO-8
TLE4998C3XALA1	5% to 95% of Vdd	±8.2 to ±245 (programmable)	±50 to ±200 (programmable)	4.5 to 5.5	8	-40 to +150	SSO-3-10



Part Number	Output Voltage Range (V)	Sensitivity (mV/mT)	Magnetic Field Range (mT)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90251EVA-FAA-000-BU	0 to 5	Programmable: 2.6 to 15	±800	5	7	-40 to +85	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251EVA-FAA-100-BU	0 to 5	Programmable: 10 to 35	±800	5	7	-40 to +85	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251EVA-FAA-200-BU	0 to 5	Programmable: 18 to 90	±800	5	7	-40 to +85	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251EVA-FAA-300-BU	0 to 5	Programmable: 50 to 210	±800	5	7	-40 to +85	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251LVA-FAA-000-BU	0 to 5	Programmable: 2.6 to 15	±800	5	7	-40 to +150	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251LVA-FAA-100-BU	0 to 5	Programmable: 10 to 35	±800	5	7	-40 to +150	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251LVA-FAA-200-BU	0 to 5	Programmable: 18 to 90	±800	5	7	-40 to +150	Single inline plastic 5.33 x 3.71 x 1.10
MLX90251LVA-FAA-300-BU	0 to 5	Programmable: 50 to 210	±800	5	7	-40 to +150	Single inline plastic 5.33 x 3.71 x 1.10
MLX90288LDC-CAB-000-RE	0 to 5	6 to 650	±650	5	8.8	-40 to +150	SOIC-8 / 6.0 x 4.9 x 1.62
MLX90290LSE-AAA-310-RE	0 to 3.3	16.5	±100	3.3	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-320-RE	0 to 3.3	20.625	±80	3.3	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-332-RE	0 to 3.3	33	±50	3.3	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-510-RE	0 to 5	25	±100	5	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-511-RE	0 to 5	25	±100	5	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-530-RE	0 to 5	50	±50	5	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LSE-AAA-540-RE	0 to 5	100	±25	5	5	-40 to +150	TSOT-3L / 2.90 x 2.75 x 1.00
MLX90290LUA-AAA-500-BU	0 to 5	18.8	±133	5	5	-40 to +150	TO92-3L / 4.10 x 3.00 x 1.50

MLX90393

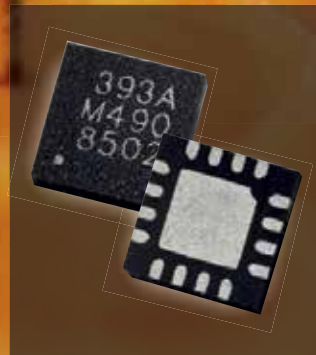
MICROPOWER TRIAXIS[®] MAGNETOMETER

MLX90393 MAGNETIC FIELD SENSOR

The MLX90393 is the newest addition to the Melexis position sensing portfolio, bringing the highest flexibility in the portfolio's smallest assembly. Complementing this, the magnetic field sensor is designed for micropower applications, with programmable duty cycles in the range of 0.1% to 100%.

KEY FEATURES

- ✓ Micropower (2.2V - 3.6V, 2µA IDLE current)
- ✓ Low-voltage I/O (1.8V - Vdd)
- ✓ SPI (3+4-wire) & I2C interface, slave node
- ✓ 16-bit XYZ magnetic and T thermal measurement
- ✓ QFN3x3 package, 16 leads
- ✓ In-application programmable (gain, mode, axes, ...)
- ✓ Ta = -40 .. 85degC



Part Number	Output Voltage Range (V)	Sensitivity (mV/mT)	Magnetic Field Range (mT)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90290LUA-AAA-500-RE	0 to 5	18.8	±133	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-510-BU	0 to 5	25	±100	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-510-RE	0 to 5	25	±100	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-511-BU	0 to 5	25	±100	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-520-BU	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-521-BU	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-522-BU	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-530-BU	0 to 5	50	±50	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-531-BU	0 to 5	50	±50	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-532-BU	0 to 5	50	±50	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-540-BU	0 to 5	100	±25	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-542-BU	0 to 5	100	±25	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-620-CR	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-621-CR	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-622-CR	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-622-CA	0 to 5	31.25	±80	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50
MLX90290LUA-AAA-631-CA	0 to 5	50	±50	5	5	-40 to +150	T092-3L / 4.10 x 3.00 x 1.50

Part Number	Output Voltage Range (V)	Sensitivity (mV/mT)	Magnetic Field Range (mT)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
AS5304	0 to 5	–	5 to 60	5.0	35.0	-40 to +125	TSSOP-20 6.5 x 6.4 x 1.2
AS5306	0 to 5	–	5 to 60	5.0	30.0	-40 to +125	TSSOP-20 6.5 x 6.4 x 1.2
AS5311	0 to 5	–	10 to 40	3.3 or 5.0	21.0	-40 to +125	TSSOP-20 300 x 10 x 1.3
AS5510	0 to 3.6	-50 to +50	10 to 50	3.0	3.5	-30 to +85	TSSOP-20 6.5 x 6.4 x 1.2



Part Number	Sensing Range (Gauss)	Sensing Axis	Sensitivity (LSB / Gauss)	Output Interface	Output Noise (mGauss RMS)	Supply Voltage (V)	Supply Current (µA Max)	Operating Temperature (°C)	Package Type / Size (mm)
MAG3110FCR1	±10	X, Y, Z	1000	I ² C	0.25	1.95 to 3.6	900	-40 to +85	DFN-10 2 x 2 x 0.95



Part Number	Sensing Range (Gauss)	Sensing Axis	Sensitivity (LSB / Gauss)	Output Interface	Output Noise (mGauss RMS)	Supply Voltage (V)	Supply Current (µA Max)	Operating Temperature (°C)	Package Type / Size (mm)
LIS3MDLTR	±4, ±8, ±12, ±16	X, Y, Z	6842, 3421, 2281, 1711	I ² C, SPI	3.5	1.9 to 3.6	270	-40 to +85	LGA-12 2 x 2 x 1
LIS2MDLTR	±50	X, Y, Z	666	I ² C, SPI	3	1.71 to 3.6	200	-40 to +85	LGA-12 2 x 2 x 0.7

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OCCUPANCY - MOTION

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Part Number / Series	Output Type	Detection Range (m)	Current Consumption (μA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
EKMB119311x	Digital	Standard & Slight Motion, 3 m Max	1	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMB129311x	Digital	Standard & Slight Motion, 3 m Max	2	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMB139311xK	Digital	Standard & Slight Motion, 3 m Max	6	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMC169311x	Digital	Standard & Slight Motion, 3 m Max	170	3.0 to 6.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMB130511xK	Digital	Horizontally Wide Detection, 7 m Max	6	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMC160511x	Digital	Horizontally Wide Detection, 7 m Max	170	3.0 to 6.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens)
EKMB1101xxx	Digital	Standard, 5 m Max	1	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1104xxx	Digital	Wall Installation, 12 m Max	1	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1201xxx	Digital	Standard, 5 m Max	2	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1204xxx	Digital	Wall Installation, 12 m Max	2	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1301xxxK	Digital	Standard, 5 m Max	6	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1304xxxK	Digital	Wall Installation, 12 m Max	6	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1103xxx	Digital	Long, 12 m Max	1	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1203xxx	Digital	Long, 12 m Max	2	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMB1303xxxK	Digital	Long, 12 m Max	6	2.3 to 4.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMC1601xxx	Digital	Standard, 5 m Max	170	3.0 to 6.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMC1603xxx	Digital	Long, 12 m Max	170	3.0 to 6.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
EKMC1604xxx	Digital	Wall Installation, 12 m Max	170	3.0 to 6.0	-20 to +60	TO-5 Mounting, (White, Black & Pearl White Lens & Lens-Less available)
AMN11xxx	Digital	Standard 5 m	100	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN12xxx	Digital	Slight Motion 2 m	100	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN13xxx	Digital	Spot 5 m	100	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN14xxx	Digital	10 m	100	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN21xxx	Analog	Standard 5 m	170	4.5 to 5.5	-20 to +60	Black/White Lens available
AMN22xxx	Analog	Slight Motion 2 m	170	4.5 to 5.5	-20 to +60	Black/White Lens available
AMN23xxx	Analog	Spot 5 m	170	4.5 to 5.5	-20 to +60	Black/White Lens available
AMN24xxx	Analog	10m	170	4.5 to 5.5	-20 to +60	Black/White Lens available
AMN31xxx	Digital	Standard 5 m	170	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN32xxx	Digital	Slight Motion 2 m	170	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN33xxx	Digital	Spot 5 m	170	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN34xxx	Digital	10 m	170	3.0 to 6.0	-20 to +60	Black/White Lens available
AMN41xxx	Digital	Standard 5 m	46	2.2 to 3.0	-20 to +60	Black/White Lens available
AMN42xxx	Digital	Slight Motion 2 m	46	2.2 to 3.0	-20 to +60	Black/White Lens available

Panasonic

Part Number / Series	Output Type	Detection Range (m)	Current Consumption (μ A)	Supply Voltage (V)	Operating Temperature ($^{\circ}$ C)	Package Type / Size (mm)
AMN43xxx	Digital	Spot 5 m	46	2.2 to 3.0	-20 to +60	Black/White Lens available
AMN44xxx	Digital	10 m	46	2.2 to 3.0	-20 to +60	Black/White Lens available

OCCUPANCY – MOTION / IR Thermal Sensor Array

Melexis

Part Number	Pixel Array	Output Interface	Detection Range (m)	Field of View (deg)	Object Temperature Range ($^{\circ}$ C)	Current Consumption (mA)	Supply Voltage (V)	Operating Temperature ($^{\circ}$ C)	Package Type / Size (mm)
MLX90621ESF-BAA-000	16 x 4	I ² C	0.05 to >7 m	120 x 25	-20 to +300	7	2.5 to 3.3	-40 to +85	T0-39; 9.3 x 5.5
MLX90621ESF-BAB-000	16 x 4	I ² C	0.05 to >10 m	60 x 16	-20 to +300	7	2.5 to 3.4	-40 to +85	T0-39; 9.3 x 11.15
MLX90621ESF-BAD-000	16 x 4	I ² C	0.05 to >10 m	40 x 10	-20 to +300	7	2.5 to 3.5	-40 to +85	T0-39; 9.3 x 14.15
MLX90640ESF-BAA-000	32 x 24	I ² C	0.05 to >10 m	110 x 75	-40 to +300	14	2.9 to 3.6	-40 to +85	T0-39; 9.3 x 5.7
MLX90640ESF-BAB-000	32 x 24	I ² C	0.05 to >10 m	55 x 35	-40 to +300	14	2.9 to 3.6	-40 to +85	T0-39; 9.3 x 11.25

Panasonic

Part Number	Pixel Array	Output Interface	Detection Range (m)	Field of View (deg)	Object Temperature Range ($^{\circ}$ C)	Current Consumption (mA)	Supply Voltage (V)	Operating Temperature ($^{\circ}$ C)	Package Type / Size (mm)
AMG8833	64 (8 x 8)	I ² C	7	60 x 60	0 to +80	4.5	3.3	-20 to +80	11.6 x 8.0 x 4.3
AMG8834	64 (8 x 8)	I ² C	7	60 x 60	-20 to +100	4.5	3.3	-20 to +80	11.6 x 8.0 x 4.3
AMG8853	64 (8 x 8)	I ² C	7	60 x 60	0 to +80	4.5	5	-20 to +80	11.6 x 8.0 x 4.3
AMG8854	64 (8 x 8)	I ² C	7	60 x 60	-20 to +100	4.5	5	-20 to +80	11.6 x 8.0 x 4.3

OCCUPANCY – MOTION / Radar

Infineon

Part Number	Detection Range (m)	Operating Frequency (GHz)	Output Current (mA)	Supply Voltage (V)	Operating Temperature ($^{\circ}$ C)	Package Type / Size (mm)
BGT24AR2E6433XUMA1	80-100 m @ 400 mW	24.00 to 24.25	90	3.3	-40 to +125	VQFN-32
BGT24AR4E6433XUMA1	80-100 m @ 730 mW	24.00 to 24.25	220	3.3	-40 to +125	VQFN-32
BGT24AT2E6433XUMA1	80-100 m @ 1000 mW	24.00 to 24.25	280	3.3	-40 to +125	VQFN-32
BGT24ATR11E6433XUMA1	80-100 m @ 630 mW	24.00 to 24.25	150	3.3	-40 to +125	VQFN-32
BGT24ATR12E6433XUMA1	80-100 m @ 900 mW	24.00 to 24.25	210	3.3	-40 to +125	VQFN-32
BGT24LTR11N16E6327XTSA1	20 m @ 180 mW	24.00 to 24.25	45	3.3	-40 to +85	TSNP-16-9
BGT24MR2E6327XUMA1	40 m @ 500 mW	24.00 to 24.25	90	3.3	-40 to +105	VQFN-32
BGT24MTR11E6327XUMA1	40 m @ 500 mW	24.00 to 26.00	150	3.3	-40 to +105	VQFN-32
BGT24MTR12E6327XUMA1	40 m @ 500 mW	24.00 to 24.25	210	3.3	-40 to +105	VQFN-32

RCS= 1m² for MR, MTR and LTR products; RCS= 10m² for ATR, AT, and AR products; Power rated at continuous wave operation

Panasonic

The New Wall Mount Type PIR Motion Sensor



EKMB and EKMC Series Wall Mount Passive Infrared Motion Sensors Optimized for Pet Immunity

Panasonic, a worldwide leader in Sensors technology, is pleased to introduce the New “Wall Mount Installation” PIR Motion Sensor Line Extension to the existing EKMB and EKMC Series line ups. Named for their unique capabilities, these New PIR Sensors are designed to allow wall mounting as opposed to top mounting. Wall Mount Installation applications for Panasonic PIR Sensors include designing in a field of view optimized for pet immunity installed in a room.

Features and Benefits

- Wall Mount Capability
- Limited Field of View
- Optimized to Provide Pet Immunity
- Available In 1 Micro, 2 Micro, 6 Micro and 170 Micro Amperes to Accommodate Line Voltage Users and Battery Operated Users
- One Plug and Play Solution Saves Design Time
- RoHS and REACH Compliant



Visit na.industrial.panasonic.com today for details.



SENSORS



Product	Description	Resolution	Pixel Size (µm)	Frame Rate (fps)	Optical Format (inch)	Output Interface	Temperature (°C)	Sunlight Robustness (lux)	Modulation Frequency (MHz)	Package Type
MLX75023RTF-BAA-000	Automotive ToF Sensor, without cover tape	QVGA	15 x 15	150 max.	1/3	analog	-40 to +105	120K	12 to 40	GBGA
MLX75023STF-BAA-000	ToF Sensor, without cover tape	QVGA	15 x 15	150 max.	1/3	analog	-20 to +85	120K	12 to 40	GBGA
MLX75023RTF-BAA-001	Automotive ToF Sensor, with cover tape	QVGA	15 x 15	150 max.	1/3	analog	-40 to +105	120K	12 to 40	GBGA
MLX75023STF-BAA-001	ToF Sensor, with cover tape	QVGA	15 x 15	150 max.	1/3	analog	-20 to +85	120K	12 to 40	GBGA
MLX75123RLA-ABA-000	Automotive ToF Companion Chip	QVGA	n/a	150 max.	1/3	12-bit Parallel with I ² C for control	-40 to +105	120K	12 to 40	AGFN
MLX75123SLA-ABA-000	ToF Companion Chip	QVGA	n/a	150 max.	1/3	12-bit Parallel with I ² C for control	-20 to +85	120K	12 to 40	AGFN

*Note: MLX7502x and MLX7512x must be used together
ToF= Time of Flight



ams AS726x Multi-Spectral Sensing Solutions

ams’ AS726x family of multi-spectral sensors have opened the door to an entirely new set of spectral sensing solutions. Available technology includes tri-stimulus color matching, 6-channel visible, 6-channel near-IR and 18-channel vis+NIR, all at price points that enable spectral sensing that brings the lab to the sample. Whether it is color matching and calibration, identification or authentication, ams’ AS726x family delivers the answer.

Features:

- 6- to 18-channel configurations covering 410 to 940nm
- Calibrated-for-life normalized channel responses
- I²C and smart UART interface options
- Low power consumption <5mA

Applications:

- Paint or fabric color matching
- Fluid and material color detection and calibration
- Ambient light and color analysis
- Authentication and spectral signature detection
- Display management



Melexis

INSPIRED ENGINEERING

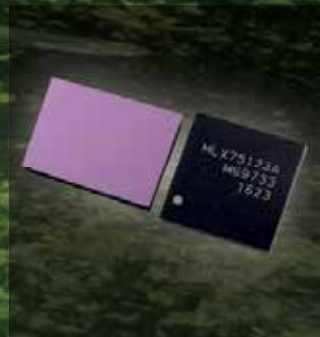
MELEXIS' INTEGRATED TIME-OF-FLIGHT CHIPSET ENABLES 3D VISION SOLUTIONS.

QVGA TIME-OF-FLIGHT CHIPSET

The MLX75023 time-of-flight (TOF) sensor together with MLX75123 companion chip provides a complete time-of-flight sensing solution. The MLX75023 time-of-flight sensor supports up to QVGA resolution with unparalleled sunlight robustness. The MLX75123 controls the time-of-flight sensor, the illumination unit and streams data to the host processor. The chipset offers performance, flexibility, simplifies the design and allows a very compact 3D camera.

KEY FEATURES

- ✓ TOF chipset for robust & compact 3D vision solutions at QVGA resolution
- ✓ World's smallest automotive grade TOF pixel
- ✓ 63 dB linear dynamic range with excellent sunlight robustness
- ✓ Architecture compatible with future TOF sensor upgrades
- ✓ Fully functional and Modular development kit (EVK75123) available now to enable rapid development





OPTICAL COMBO

Ambient Light and Proximity 79

Gesture, Color, Proximity and Ambient Light 80





Part Number	Detection Range (mm)	Output Type	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
RPR-0521RS	1 to 100	I ² C	0 lx to 43,000 lx	2.5 to 3.6	0.090	-25 to +85	RPR-0521RS (8-pin) 3.94 x 2.36 x 1.35



Part Number	Detection Range (mm)	Output Type	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
VCNL4010	200	I ² C	16-bit	2.5 to 3.6	0.005	-25 to +85	SMD 3.9 x 3.9 x 0.7
VCNL4020	200	I ² C	16-bit	2.5 to 3.6	0.005	-25 to +85	SMD 4.9 x 2.4 x 0.8
VCNL4020X01	200	I ² C	16-bit	2.5 to 3.6	0.005	-40 to +105	SMD 4.9 x 2.4 x 0.8
VCNL4040M30E	200	I ² C	16-bit	2.5 to 3.6	0.3	-40 to +85	SMD 4.0 x 2.0 x 1.1
VCNL4200	1500	I ² C	12 or 16-bit	2.5 to 3.6	0.35	-40 to +85	SMD 8.0 x 3.0 x 1.8



Part Number	Detection Range (mm)	Output Type	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
VL6180X	100	I ² C	16-bit	2.6 to 3.0	0.3	-20 to +70	LGA-12 4.8 x 2.8 x 1.0 optical



Part Number	Detection Range (mm)	Output Type	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
TSL27721	46	I ² C	16-bit	2.6 to 3.6	0.2	-30 to +70	DFN-6
TSL27723	46	I ² C	16-bit	2.6 to 3.6	0.2	-30 to +70	DFN-6



Part Number	Integrated Gesture Control	Maximum Proximity Range (cm)	ALS Dynamic Range (Lux)	Integrated Color Sensing	Output Interface	Supply Voltage (V)	Temperature Range (°C)	Package Type / Size (mm)
VCNL4035X01	Yes, drives up to 3 external emitters	60	16-bit Selectable: 262, 524, 1048, 2096, 4192	No	I ² C	2.5 to 3.6	-40 to +105	4.0 x 2.36 x 0.75



Part Number	Integrated Gesture Control	Maximum Proximity Range (cm)	ALS Dynamic Range (Lux)	Integrated Color Sensing	Output Interface	Supply Voltage (V)	Temperature Range (°C)	Package Type / Size (mm)
VL6180X	Time of Flight	10	0 to 100 k	—	I ² C	2.6 to 3.0	-40 to +85	LGA-12 4.8 x 2.8 x 1.0 Optical
VL53L0X	Time of Flight	200	—	—	I ² C	2.6 to 3.0	-40 to +85	LGA-12 4.8 x 2.8 x 1.0 Optical



Part Number	Integrated Gesture Control	Maximum Proximity Range (cm)	ALS Dynamic Range (Lux)	Integrated Color Sensing	Output Interface	Supply Voltage (V)	Temperature Range (°C)	Package Type / Size (mm)
TMG39921	Integrated four directional photodiodes	<20	0 to 60 k	Yes	I ² C, Vbus	2.4 to 3.8	-30 to +85	8-pin optical module
TMG39923	Integrated four directional photodiodes	<20	0 to 60 k	Yes	I ² C, Vbus	2.4 to 3.8	-30 to +85	8-pin optical module
TMG39931	Integrated four directional photodiodes	<25	0 to 60 k	Yes	I ² C, Vbus	2.4 to 3.8	-30 to +85	8-pin optical module
TMG39933	Integrated four directional photodiodes	<25	0 to 60 k	Yes	I ² C, Vbus	2.4 to 3.8	-30 to +85	8-pin optical module
TMG4903	Integrated four directional photodiodes	<20	0 to 100 k	Yes	I ² C, Vbus	1.7 to 2.0	-30 to +85	8-pin module
TCS37727	—	<100	—	Yes	I ² C, Vbus	2.7 to 3.6	-30 to +70	FN, Pin Count 6
TMD4903	—	<20	—	Yes	I ² C, Vbus	1.7 to 2.0	-30 to +85	8-pin module

Shaping the world
with sensor solutions





INSPIRED ENGINEERING

MLX90640

MELEXIS NEW **ADVANCED SENSOR TECHNOLOGY FOR NEXT-GENERATION TEMPERATURE MEASUREMENT**

MLX90640 32X24 PIXEL INFRARED (IR) ARRAY

Addresses growing demands seen across numerous applications for thermal analysis and capable of providing enhanced resolution while still occupying an attractive price point. Primary applications for this device include people detection, fire prevention, building automation, lighting control, surveillance and air conditioning systems.

KEY FEATURES

- ✓ -40°C to 85°C operational temperature range
- ✓ Measures object temperatures between -40°C and 300°C
- ✓ A typical target object temperature accuracy of $\pm 1^\circ\text{C}$
- ✓ No recalibration needs
- ✓ 2 different field of view (FoV) options
- ✓ 4-pin TO39 package
- ✓ I2C compatible digital interface





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NXP

VISHAY



Part Number	Output Channel	Output Type	Magnetic Field Range (mT)	Output Resolution ($\mu\text{T}/\text{LSB}$)	Output Current (mA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature ($^{\circ}\text{C}$)	Package Type / Size (mm)
TLV493DA1B6HTSA2	3D Magnetic	Digital	± 130	98	3.7	2.7 to 3.5	0.08	-40 to +125	TSOP-6



Part Number	Output Channel	Output Type	Magnetic Field Range (mT)	Output Resolution ($\%V_{\text{DD}}/\text{LSB}$)	Output Current (mA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature ($^{\circ}\text{C}$)	Package Type / Size (mm)
MLX90333SDC-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-20 to +85	SOIC-8
MLX90333EDC-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	SOIC-8
MLX90333EDC-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	SOIC-8
MLX90333EDC-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	SOIC-8
MLX90333KDC-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	SOIC-8
MLX90333KDC-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	SOIC-8
MLX90333KDC-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	SOIC-8
MLX90333LDC-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	SOIC-8
MLX90333LDC-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	SOIC-8
MLX90333LDC-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	SOIC-8
MLX90333EG0-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	TSSOP-16
MLX90333EG0-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	TSSOP-16
MLX90333EG0-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +85	TSSOP-16
MLX90333KG0-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	TSSOP-16
MLX90333KG0-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	TSSOP-16
MLX90333KG0-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +125	TSSOP-16
MLX90333LG0-BCH-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	TSSOP-16
MLX90333LG0-BCH-100	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	TSSOP-16
MLX90333LG0-BCT-000	–	Analog, PWM, SPI	20 to 70	–	–	4.5 to 5.5	13.5	-40 to +150	TSSOP-16
MLX90363EDC-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +85	SOIC-8
MLX90363EG0-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +85	TSSOP-16



Part Number	Output Channel	Output Type	Magnetic Field Range (mT)	Output Resolution (%Vdd/LSB)	Output Current (mA)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90363KDC-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +125	SOIC-8
MLX90363KGO-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +125	TSSOP-16
MLX90363LDC-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +150	SOIC-8
MLX90363LGO-ABB-000	–	SPI	20 to 70	–	–	3.15 to 5.5	12.5	-40 to +150	TSSOP-16
MLX90393SLW-ABA-011	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-20 to +85	QFN-16
MLX90393ELW-ABA-011	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-40 to +85	QFN-16
MLX90393SLW-ABA-012	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-20 to +85	QFN-16
MLX90393ELW-ABA-012	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-40 to +85	QFN-16
MLX90393SLW-ABA-013	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-20 to +85	QFN-16
MLX90393ELW-ABA-013	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-40 to +85	QFN-16
MLX90393SLW-ABA-014	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-20 to +85	QFN-16
MLX90393ELW-ABA-014	–	SPI, I2C	5 to 50	–	–	2.2 to 3.6	3	-40 to +85	QFN-16

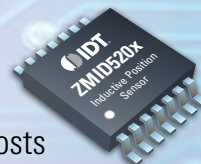
POSITION – SPEED / Magnetic Rotational Speed Sensor



Part Number	Typ. Sensing Distance (mm)	Tooth Frequency (Hz)	Target	Output Type	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
KMI17/4	0.5 to 2.8	0 to 20,000	Ferromagnetic gear wheel (passive)	Current	4.5 to 16	-40 to +150	SIP2, SOT453E
KMI23/2	2.4 to 3.2	0 to 2,500	Multipole wheel (active)	Current	6.8 to 16	-40 to +150	SIP2, SOT453E
KMI23/4	2.4 to 3.2	0 to 2,500	Ferromagnetic gear wheel (passive)	Current	6.8 to 16	-40 to +150	SIP2, SOT453E
KMI25/2	2.4 to 3.2	0 to 2,500	Multipole wheel (active)	Digital protocol	6.8 to 16	-40 to +150	SIP3, SOT477A
KMI25/4	2.4 to 3.2	0 to 2,500	Ferromagnetic gear wheel (passive)	Digital protocol	6.8 to 16	-40 to +150	SIP3, SOT477A
KMI16/1	2.4 to 3.2	0 to 25,000	Ferromagnetic gear wheel (passive)	Voltage	4.5 to 16	-40 to +150	SIP3, SOT477A

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Part Number	Pre-Induction (mT)	Output Type	Differential Induction (mT)	Supply Current (mA)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
TLE49215UHALA1	-500 to +500	Voltage	-80 to +80	3.8 to 8.8	4.5 to 24	-40 to +170	SSO-4
TLE4922XANFHALA1	-400 to +400	Voltage	-400 to +400	3.5 to 7.0	4.5 to 16	-40 to +155	SSO-4

POSITION – SPEED / Optical Switch



Part Number	Slot Width (mm)	Forward Voltage (V)	Peak Wave Length (nm)	Collector Current (ON State) (mA)	Dark Current Max (na)	Operating Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
TCPT1300X01	3	1.2 V at IF=15 mA	950	0.60	100	2.5 to 5.0	-40 to +105	SMD, 5.5 x 4 x 4
TCUT1300X01	3	1.2 V at IF=15 mA	950	0.6 x 2	100	2.5 to 5.0	-40 to +105	SMD, 5.5 x 4 x 4
TCPT1350X01	3	1.2 V at IF=15 mA	950	1.60	100	2.5 to 5.0	-40 to +125	SMD, 5.5 x 4 x 4
TCUT1350X01	3	1.2 V at IF=15 mA	950	1.6 x 2	100	2.5 to 5.0	-40 to +125	SMD, 5.5 x 4 x 4
TCPT1600X01	3	1.2 V at IF=15 mA	950	1.60	100	2.5 to 5.0	-40 to +105	SMD, 5.5 x 4 x 5.7
TCUT1600X01	3	1.2 V at IF=15 mA	950	1.6 x 2.0	100	2.5 to 5.0	-40 to +105	SMD, 5.5 x 4 x 5.7

POSITION – SPEED / Industrial Magnetic Rotary Encoder



Part Number	Maximum Rotational Angle	Output Type / Interface*	Magnetic Field Range (mT)	Output Resolution (deg)	RPM (Max)	Hysteresis (Degree)	Supply Voltage (V)	Supply Current Max (mA)	Operating Temperature (°C)	Package Type / Size (mm)
AS5172A/B	360	PSI5	10 to 90	0.09 (12-bit)	–	0	4.0 to 16.5	19	-40 to +150	TSSOP-14 5 x 4.4 x 1.2
AS5030	360	SSI, PWM	20 to 80	1,4 (8-bit)	30 K	1.4	5.0	22	-40 to +125	TSSOP-16
AS5035	360	ABI	45 to 75	1,4 (8-bit)	30 K	0.7	3.3 or 5.0	25	-40 to +125	SSOP-16
AS5040	360	SSI, PWM, ABI, UVW	45 to 75	0.35 (10-bit)	30 K	0.7	3.3 or 5.0	21	-40 to +125	SSOP-16
AS5043	360	SSI, Analog	45 to 75	0.35 (10-bit)	–	0.7	3.3 or 5.0	21	-40 to +125	SSOP-16
AS5045	360	SSI, PWM	45 to 75	0.09 (12-bit)	30 K	0.7	3.3 or 5.0	21	-40 to +125	SSOP-16
AS5045B	360	SSI, PWM, ABI	45 to 75	0.09 (12-bit)	30 K	0.7	3.3 to 5.0	16	-40 to +125	SSOP-16
AS5047D	360	ABI, UVW, PWM, SPI	35 to 70	0.022 (14-bit)	14.5 K	0.7	3.3 to 5.0	15	-40 to +125	TSOP-14
AS5048A	360	SPI, PWM	30 to 70	0.022 (14-bit)	–	0	3.3 or 5.0	15	-40 to +150	TSSOP-14
AS5048B	360	I ² C, PWM	30 to 70	0.022 (14-bit)	–	0	3.3 or 5.0	15	-40 to +150	TSSOP-14
AS5050	360	SPI	30 to 80	0.35 (10-bit)	–	0	3.3	8.5	-40 to +85	QFN-16 4 x 4 x 0.85
AS5055	360	SPI	30 to 80	0.09 (12-bit)	–	0	3.3	8.5	-40 to +85	QFN-16 4 x 4 x 0.85

* NOTE: SSI= Synchronized Serial Interface
ABI= A/B Quadrature
UVW= BLDC Commutation
PWM= Pulse Width Modulator

POSITION – SPEED / Automotive Certified Magnetic Rotary Encoder



Part Number	Maximum Rotational Angle	Output Type / Interface*	Magnetic Field Range (mT)	Output Resolution	RPM (Max)	Hysteresis (Degree)	Supply Voltage (V)	Supply Current Max (mA)	Operating Temperature (°C)	Package Type / Size (mm)
AS5115	360	Sine / Cosine	32 to 160	—	30 K	—	5.0	28	-40 to +150	SSOP-16
AS5130	360	SSI, PWM	32 to 75	8-bit	30 K	1.4	5.0	24	-40 to +125	SSOP-16
AS5132	360	SSI, ABI, UVW, PWM	20 to 80	8-bit	72.9 K	—	5.0	22	-40 to +150	SSOP-20
AS5134	360	SSI, PWM, ABI, UVW	20 to 80	8.5-bit	75 K	2.0	5.0	22	-40 to +140	SSOP-20
AS5140H	360	SSI, PWM, ABI, UVW	45 to 75	10-bit	30 K	0.7	3.3 to 5.0	21	-40 to +150	SSOP-16
AS5145A	360	SSI, PWM, ABI	45 to 75	10-bit	15 K	0.35	3.3 to 5.0	21	-40 to +150	SSOP-16
AS5145B	360	SSI, PWM, ABI	45 to 75	12-bit	15 K	0.35	3.3 to 5.0	21	-40 to +150	SSOP-16
AS5145H	360	SSI, PWM, (ABI)	45 to 75	12-bit	15 K	0.35	3.3 to 5.0	21	-40 to +150	SSOP-16
AS5147	360	SPI, ABI, UVW, PWM	35 to 70	14-bit	14.5 K	—	3.3 to 5.0	15	-40 to +150	TSSOP-14
AS5161	360	PWM	30 to 70	12-bit	—	—	5.0	10	-40 to +150	SOIC-8
AS5162	360	Linear Analog	30 to 70	12-bit	—	—	5.0	12	-40 to +150	SOIC-8
AS5163	360	PWM or Analog	30 to 70	12-bit	—	0	5.0	20	-40 to +150	TSSOP-14
AS5215	360	2x Sine & Cosine	20 to 80	—	30 K	—	5.0	2 x 28	-40 to +150	MLF-32
AS5245	360	2x SSI, 2x PWM	45 to 75	12-bit	30 K	0.35	3.3 to 5.0	2 x 21	-40 to +150	MLF-32
AS5247	360	SPI, ABI, UVW, PWM	35 to 70	14-bit	14.5 K	—	3.3 to 5.0	15	-40 to +150	MLF-40
AS5261	360	PWM	30 to 70	12-bit	—	—	5.0	10	-40 to +150	MLF-16
AS5262	360	Linear	30 to 70	12-bit	—	—	5.0	12	-40 to +150	MLF-16
AS5263	360	2x PWM or Analog	30 to 70	12-bit	—	0	5.0	20	-40 to +150	MLF-32
AS5600	360	I ² C, Analog, PWM	30 to 90	12-bit	—	—	3.0 to 3.6 & 4.5 to 5.5	6.5	-40 to +125	SOIC-8

* NOTE: SSI= Synchronized Serial Interface
 ABI= A/B Quadrature
 UVW= BLDC Commutation
 PWM= Pulse Width Modulator

POSITION – SPEED / Industrial Magnetic Linear Encoder



Part number	Output Type*	Magnetic Field Range (mT)	Linear Resolution	Speed (Max)	Hysteresis (lsb)	Supply Voltage nom. (V)	Supply Current Max (mA)	Operating Temperature (°C)	Package
AS5304	ABI	5 to 60	25 (µm)	20 meter/sec	1.5	5.0	35	-40 to +125	TSSOP-20
AS5306	ABI	5 to 60	15 (µm)	12 meter/sec	1.5	5.0	30	-40 to +125	TSSOP-20
AS5311	SSI, PWM, ABI	10 to 40	0.488 (µm)	0.65 meter/sec	2	3.3 or 5.0	21	-40 to +125	TSSOP-20
AS5510	I ² C	10 to 50	10-bit	—	0	3.0	3.5	-30 to +85	WLCSP

* NOTE: SSI= Synchronized Serial Interface
 ABI= A/B Quadrature
 UVW= BLDC Commutation
 PWM= Pulse Width Modulator



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Part Number	Supply Voltage (V)	Maximum Rotational Angle	Output Range	Output Type	Temperature Range (°C)	Package Type / Size (mm)
TLE5009E1000FUMA1	3.3	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5009E1010FUMA1	3.3	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5009E2000FUMA1	5	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5009E2010FUMA1	5	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5012BE1000XUMA1	5	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5012BE3005XUMA1	5	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5012BE5000XUMA1	5.0	360°	0 to 360°	voltage	-40 to +150	DSO-8
TLE5012BE9000XUMA1	5.0	360°	0 to 360°	voltage	-40 to +150	DSO-8



Part Number	Supply Voltage (V)	Maximum Rotational Angle	Output Range	Output Type	Temperature Range (°C)	Package Type / Size (mm)
MLX90316SDC-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-20 to +85	SOIC-8
MLX90316EDC-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +85	SOIC-8
MLX90316KDC-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	SOIC-8
MLX90316LDC-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +150	SOIC-8
MLX90316EG0-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +85	TSSOP-16
MLX90316KG0-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90316LG0-BCG-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +150	TSSOP-16
MLX90316KDC-BCG-200	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	SOIC-8
MLX90316KG0-BCG-200	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90316KDC-BCG-300	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	SOIC-8
MLX90316KG0-BCG-300	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90316EDC-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +85	SOIC-8
MLX90316KDC-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +125	SOIC-8
MLX90316LDC-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +150	SOIC-8
MLX90316EG0-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +85	TSSOP-16
MLX90316KG0-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +125	TSSOP-16
MLX90316LG0-BDG-100	4.5 to 5.5	360°	—	SPI	-40 to +150	TSSOP-16
MLX90316LDC-BDG-102	4.5 to 5.5	360°	—	SPI	-40 to +150	SOIC-8
MLX90316LDC-BCS-000	4.5 to 5.5	360°	—	Analog (2x), PWM (2x)	-40 to +150	SOIC-8
MLX90324LDC-DB0-000	4.5 to 5.5	360°	—	Analog, PWM, SENT	-40 to +150	SOIC-8
MLX90324LDC-DB0-100	4.5 to 5.5	360°	—	Analog, PWM, SENT	-40 to +150	SOIC-8
MLX90324LG0-DB0-000	4.5 to 5.5	360°	—	Analog, PWM, SENT	-40 to +150	TSSOP-16
MLX90333SDC-BCH-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-20 to +85	SOIC-8
MLX90333EDC-BCH-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +85	SOIC-8
MLX90333EDC-BCH-100	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +85	SOIC-8
MLX90333EDC-BCT-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +85	SOIC-8
MLX90333KDC-BCH-000	4.5 to 5.5	360°	—	Analog, PWM, SPI	-40 to +125	SOIC-8



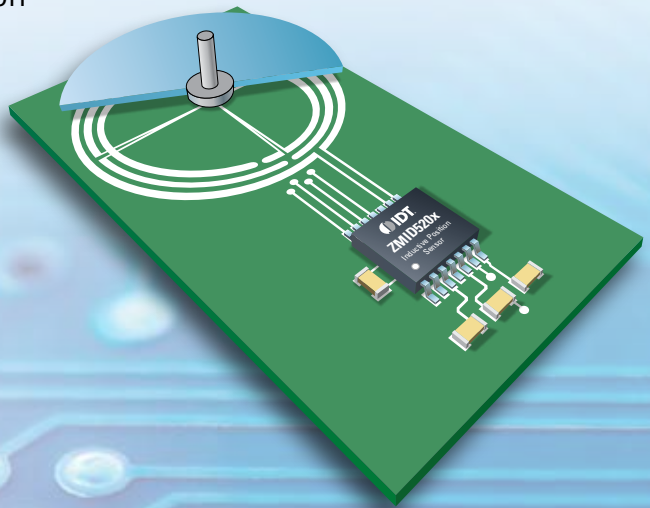
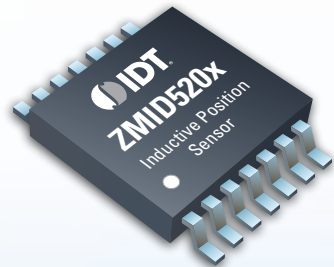
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Part Number	Supply Voltage (V)	Maximum Rotational Angle	Output Range	Output Type	Temperature Range (°C)	Package Type / Size (mm)
MLX90333KDC-BCH-100	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +125	SOIC-8
MLX90333KDC-BCT-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +125	SOIC-8
MLX90333LDC-BCH-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	SOIC-8
MLX90333LDC-BCH-100	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	SOIC-8
MLX90333LDC-BCT-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	SOIC-8
MLX90333EG0-BCH-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +85	TSSOP-16
MLX90333EG0-BCH-100	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +85	TSSOP-16
MLX90333EG0-BCT-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +85	TSSOP-16
MLX90333KG0-BCH-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90333KG0-BCH-100	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90333KG0-BCT-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +125	TSSOP-16
MLX90333LG0-BCH-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	TSSOP-16
MLX90333LG0-BCH-100	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	TSSOP-16
MLX90333LG0-BCT-000	4.5 to 5.5	360°	–	Analog, PWM, SPI	-40 to +150	TSSOP-16
MLX90363EDC-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +85	SOIC-8
MLX90363EG0-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +85	TSSOP-16
MLX90363KDC-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +125	SOIC-8
MLX90363KG0-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +125	TSSOP-16
MLX90363LDC-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +150	SOIC-8
MLX90363LG0-ABB-000	3.15 to 5.5	360°	–	SPI	-40 to +150	TSSOP-16
MLX90364LVS-ADD-200	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	DMP4
MLX90364LVS-ADD-251	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	DMP4
MLX90364LVS-ADD-203	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	DMP4
MLX90364LVS-ADE-201	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	DMP4
MLX90365EDC-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +85	SOIC-8
MLX90365EG0-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +85	TSSOP-16
MLX90365KDC-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +125	SOIC-8
MLX90365KG0-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +125	TSSOP-16
MLX90365LDC-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	SOIC-8
MLX90365LG0-ABD-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	TSSOP-16
MLX90365LG0-ABE-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	TSSOP-16
MLX90365LDC-ABD-200	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	SOIC-8
MLX90365LDC-ABE-000	4.5 to 5.5	360°	–	Analog, PWM	-40 to +150	SOIC-8
MLX90366LVS-ADU-250	4.5 to 5.5	360°	–	SENT	-40 to +150	DMP4
MLX90366LVS-ADU-251	4.5 to 5.5	360°	–	SENT	-40 to +150	DMP4
MLX90366LVS-ADU-253	4.5 to 5.5	360°	–	SENT	-40 to +150	DMP4
MLX90367EDC-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +85	SOIC-8
MLX90367EG0-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +85	TSSOP-16
MLX90367KDC-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +125	SOIC-8

Part Number	Supply Voltage (V)	Maximum Rotational Angle	Output Range	Output Type	Temperature Range (°C)	Package Type / Size (mm)
MLX90367KGO-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +125	TSSOP-16
MLX90367LDC-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +150	SOIC-8
MLX90367LGO-ABU-000	4.5 to 5.5	360°	–	SENT	-40 to +150	TSSOP-16
MLX90367EDC-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +85	SOIC-8
MLX90367EGO-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +85	TSSOP-16
MLX90367KDC-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +125	SOIC-8
MLX90367KGO-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +125	TSSOP-16
MLX90367LDC-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +150	SOIC-8
MLX90367LDC-ABX-000	4.5 to 5.5	360°	–	SENT	-40 to +150	SOIC-8
MLX90367LGO-ABV-000	4.5 to 5.5	360°	–	SENT	-40 to +150	TSSOP-16
MLX90367LGO-ABX-000	4.5 to 5.5	360°	–	SENT	-40 to +150	TSSOP-16
MLX90367LGO-ACU-000	4.5 to 5.5	360°	–	SENT	-40 to +150	TSSOP-16
MLX90393SLW-ABA-011	2.2 to 3.6	360°	–	SPI, I2C	-20 to +85	QFN-16
MLX90393ELW-ABA-011	2.2 to 3.6	360°	–	SPI, I2C	-40 to +85	QFN-16
MLX90393SLW-ABA-012	2.2 to 3.6	360°	–	SPI, I2C	-20 to +85	QFN-16
MLX90393ELW-ABA-012	2.2 to 3.6	360°	–	SPI, I2C	-40 to +85	QFN-16
MLX90393SLW-ABA-013	2.2 to 3.6	360°	–	SPI, I2C	-20 to +85	QFN-16
MLX90393ELW-ABA-013	2.2 to 3.6	360°	–	SPI, I2C	-40 to +85	QFN-16
MLX90393SLW-ABA-014	2.2 to 3.6	360°	–	SPI, I2C	-20 to +85	QFN-16
MLX90393ELW-ABA-014	2.2 to 3.6	360°	–	SPI, I2C	-40 to +85	QFN-16
MLX90380LGO-BAB-103	4.5 to 5.5	360°	–	Sine/cosine	-40 to +150	TSSOP-16
MLX90380LGO-BAB-023	3.1 to 3.6	360°	–	Sine/cosine	-40 to +150	TSSOP-16
MLX90380LDC-BAB-100	4.5 to 5.5	360°	–	Sine/cosine	-40 to +150	SOIC-8
MLX90380LDC-BAB-120	4.5 to 5.5	360°	–	Sine/cosine	-40 to +150	SOIC-8
MLX90380LDC-BAB-010	3.1 to 3.6	360°	–	Sine/cosine	-40 to +150	SOIC-8

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Part Number	Supply Voltage (V)	Maximum Rotational Angle	Output Range	Output Type	Temperature Range (°C)	Package Type / Size (mm)
KMA210	4.5 to 5.5	180°	~0 to ~5.0 V	1 analog output linear	-40 to +160	SIP-3; SOT-1288
KMA215	4.5 to 5.25	180°	~0 to ~5.0 V	1 digital output SAE J2716 SENT	-40 to +160	SIP-3; SOT-1288
KMA220	4.5 to 5.5	180°	~0 to ~5.0 V	2 analog outputs; 1 per channel	-40 to +160	SIL-4; SOT-1188-1
KMA221	4.5 to 5.5	180°	~0 to ~5.0 V	1 analog output linear	-40 to +160	SIL-4; SOT-1188-1
KMZ60	2.7 to 5.5	180°	0.07 to 0.93 Vcc	Amplified sine / cosine	up to +150	SO-8; SOT-96-1
KMZ41	Max. 9	180°	0.081 peak voltage	Sine / cosine	up to +150	SO-8; SOT96-1
KMZ49	Max. 9	180°	0.067 peak voltage	Sine / cosine	up to +150	SO-8; SOT-96-1
X3G-0H047	Max. 9	180°	0.067 peak voltage	Sine / cosine	up to +150	Double die; sawn wafer on foil
X3G-0H048	Max. 9	180°	0.067 peak voltage	Sine / cosine	up to +150	Single die; sawn wafer on foil
X3T-0H047	Max. 9	180°	0.067 peak voltage	Sine / cosine	up to +150	Double die; taped on reel
X3T-0H048	Max. 9	180°	0.067 peak voltage	Sine / cosine	up to +150	Single die; taped on reel

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Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
KP215F1701XTMA1	10 to 115	Manifold Air	0.1 to 4.85	±1.4	5	8	-40 to +140	DSOF-8
KP236N6165XTMA1	60 to 165	B	0.1 to 4.85	±1.0	5	8	-40 to +125	DSOF-8
KP236XTMA1	40 to 115	B	0.1 to 4.85	±1.0	5	8	-40 to +125	DSOF-8

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

Amphenol
Advanced Sensors

Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
NPP-301A	100, 200, 700	A	0.06	±0.2	3	—	-40 to +125	SOIC-8
NPA-100	0.5 to 207	A, D, G	0.04 to 0.166	±0.1	—	1.5	-40 to +125	SOIC-14
NPA-300	0.5 to 207	A, D, G	3	±0.1	3.3	—	-40 to +125	SOIC-14
NPA-500	0.5 to 207	A, D, G	4.5	±0.1	5	—	-40 to +125	SOIC-14
NPC-1210	2.5 to 690	A, D, G	0.05 or 0.1	±0.1 or ±0.5	—	1.5	-40 to +125	8-pin PCB
NPC-1220	34 to 690	A, D, G	0.05	±0.1	—	1.5	-40 to +125	8-pin PCB
NPH-8	100 to 700	A, D, G	0.1	±0.1	—	1.5	-40 to +125	TO-8
NPI-19	100, 200, 700, 1700	A, G	0.1	±0.1	—	1	-40 to +125	Stainless Steel

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90809LXG-EAD-000	5 to -105	G	0.5 to 4.5	1.5	5.0	10	-40 to +150	SO16
MLX90809LXG-EAD-003	0 to +100	G	0.5 to 4.5	1.5	5.0	10	-40 to +150	SO16

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

Panasonic

Part Number	Pressure Range**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
ADP527*	145.04 psi, 1000 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP526*	72.52 psi, 500 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP525*	29.008 psi, 200 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP524*	14.5038 psi, 100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP523*	7.252 psi, 50 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP522*	3.626 psi, 25 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP521*	-100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP520*	±100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	SMD
ADP51B63	0.870228 psi, 6 kPa	G	4 (Typical)	±2.50	5±0.25	Max 10	0 to +50	DIP-8
ADP51B62	0.870228 psi, 6 kPa	G	4 (Typical)	±2.50	5±0.25	Max 10	0 to +50	DIP-8
ADP51B61	0.870228 psi, 6 kPa	G	4 (Typical)	±2.50	5±0.25	Max 10	0 to +50	DIP-8
ADP51A11	5.80152 psi, 40 kPa	G	2.4, ±0.03	±4	5±0.25	Max 3	0 to +50	DIP-6
ADP517*	145.04 psi, 1000 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

Part Number	Pressure Range**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
ADP516*	72.519 psi, 500 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP515*	29.0076 psi, 200 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP514*	14.5038 psi, 100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP513*	7.2519 psi, 50 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP512*	3.62595 psi, 25 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP511*	-100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP510*	±100 kPa	G	4.5, ±0.05	±1.25	5±0.25	Max 10	0 to +50	DIP-6
ADP4*A23	5.80152 psi, 40 kPa	G	43.5 mV, ±22.5 mV	±0.3	5±0.25	1.5	-5 to +50	DIP-6
ADP4*913	142.238767 psi, 980.7 kPa	G	65 mV, ±25 mV	±1.0	5±0.25	1	-20 to +100	DIP-6
ADP4*910	142.238767 psi, 980.7 kPa	G	65 mV, ±25 mV	±1.0	5±0.25	1.5	-20 to +100	DIP-6
ADP4*810	120.903677 psi, 833.6 kPa	G	100 mV, ±40 mV	±0.6	5±0.25	1.5	-20 to +100	DIP-6
ADP4*710	71.112131 psi, 490.3 kPa	G	100 mV, ±40 mV	±0.5	5±0.25	1.5	-20 to +100	DIP-6
ADP4*610	49.777042 psi, 343.2 kPa	G	100 mV, ±40 mV	±0.3	5±0.25	1.5	-20 to +100	DIP-6
ADP4*413	14.228228 psi, 98.1 kPa	G	65 mV, ±25 mV	±1.0	5±0.25	1	-20 to +100	DIP-6
ADP4*320	7.106862 psi, 49 kPa	G	100 mV, ±40 mV	±0.3	5±0.25	1.5	-20 to +100	DIP-6
ADP4*210	4.974803 psi, 34.3 kPa	G	100 mV, ±40 mV	±0.3	5±0.25	1.5	-20 to +100	DIP-6
ADP4*010	0.710686 psi, 4.9 kPa	G	40 mV, ±20 mV	±0.7	5±0.25	1.5	-20 to +100	DIP-6

* Note: A: Absolute B: Barometric D: Differential G: Gauge

** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

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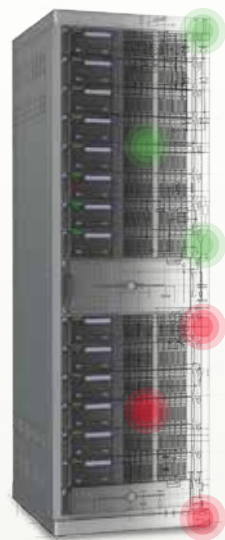
Part Number	Pressure Range (Pa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
SDP806-500Pa	500	D	10 to 90% VDD	0.02 (±3% of reading)	3.0 to 5.5	3.8	-40 to +85	29 x 12.6 x 18
SDP816-500Pa	500	D	10 to 90% VDD	0.02 (±3% of reading)	3.0 to 5.5	3.8	-40 to +85	29 x 12.6 x 18
SDP806-125Pa	125	D	10 to 90% VDD	0.064 (±3% of reading)	3.0 to 5.5	3.8	-40 to +85	29 x 12.6 x 18
SDP816-125Pa	125	D	10 to 90% VDD	0.064 (±3% of reading)	3.0 to 5.5	3.8	-40 to +85	29 x 12.6 x 18
SDP36	500	D	10 to 90% VDD	0.02 (±3% of reading)	3.0 to 3.6	3.8	-20 to +85	8.5 x 5.4 x 3.5
SDP37	125	D	10 to 90% VDD	0.064 (±3% of reading)	3.0 to 3.6	3.8	-20 to +85	8.5 x 5.4 x 3.5
SDP2000	3500	D	0.25 to 4.5	0.2 (±1.5% of reading)	4.75 to 5.25	5.2	-10 to +60	30.5 x 22.1 x 30

* Note: A: Absolute B: Barometric D: Differential G: Gauge

** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

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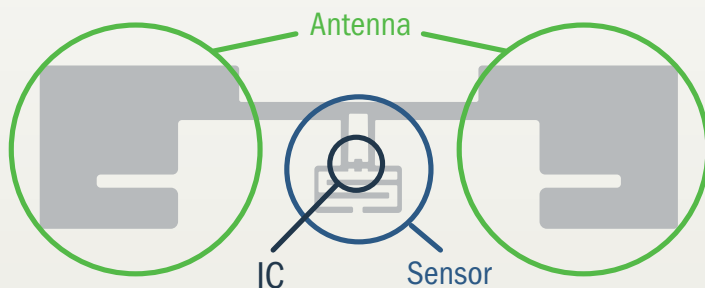
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Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
1210A-001D-3L	6.9	D	100 mV	±0.3% Span Non-Linearity	—	1.5	-40 to +125	16.2 x 16.8
1210A-001D-3S	6.9	D	100 mV	±0.3% Span Non-Linearity	—	1.5	-40 to +125	16.2 x 16.8
1210A-001G-3S	6.9	G	100 mV	±0.3% Span Non-Linearity	—	1.5	-40 to +125	16.2 x 16.8
1210A-002D-3L	13.79	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-002D-3N	13.79	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-002D-3S	13.79	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-005D-3L	34.48	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-005D-3S	34.48	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-005G-3S	34.48	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015A-3L	103.45	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015A-3N	103.45	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015A-3S	103.45	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015D-3L	103.45	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015D-3S	103.45	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015G-3L	103.45	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-015G-3S	103.45	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-030A-3L	206.9	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-030D-3L	206.9	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-030D-3S	206.9	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-100D-3L	689.66	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-100D-3S	689.66	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-100G-1S	689.66	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-100G-3L	689.66	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2
1210A-100G-3N	689.66	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	14.7 x 15.2

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



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Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
1210A-100G-3S	689.66	G	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1210A-10WD-3S	2.49	D	40 mV	±0.3% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1220A-002D-3S	13.79	D	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-005D-3L	34.48	D	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-005D-3S	34.48	D	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-005G-3N	34.48	G	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-005G-3S	34.48	G	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-015A-3L	103.45	A	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-015A-3S	103.45	A	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-015D-3L	103.45	D	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-030G-3N	206.9	G	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1220A-030G-3S	206.9	G	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
1230-002D-3N	13.79	D	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-015A-3L	103.45	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-015A-3S	103.45	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-015D-3L	103.45	D	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-015D-3S	103.45	D	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-030A-3S	206.9	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-030D-3S	206.9	D	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1230-100D-3S	689.66	D	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	14.7 x 15.2
1240-015A-3S	103.45	A	50 mV	±0.1% Span Non-Linearity	–	–	-40 to +125	14.7 x 15.2
13A-002G	13.79	G	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4
13A-005G	34.48	G	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4
13A-010G	68.97	G	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
13A-015A	103.45	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
13A-015G	103.45	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
13A-030G	206.9	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
13A-100G	689.66	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
1451-005G-T	34.48	G	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
1451-015A-N	103.45	A	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
1451-015A-T	103.45	A	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
1451-030A-T	206.9	A	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
1451-100G-T	689.66	G	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
1471-015A-T	103.45	A	60 mV	±0.25% Non-Linearity	3	—	-40 to +125	7.6 x 7.6
17-015A	103.45	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
17-015G	103.45	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
17-030A	206.9	A	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
17-030G	206.9	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
17-050G	344.83	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
17-100G	68.97	G	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
325401000-00	100	A	—	±0.05% or ±0.2% Non-Linearity	5	—	-40 to +125	6.2 x 6.4
325407000-00	700	A	—	±0.05% or ±0.2% Non-Linearity	5	—	-40 to +125	6.2 x 6.4
325412000-00	1200	A	—	±0.05% or ±0.2% Non-Linearity	5	—	-40 to +125	6.2 x 6.4
33A-001D	6.9	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
33A-002D	13.79	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
33A-005D	34.48	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4
33A-015D	103.45	D	100 mV	±0.1% Span Non-Linearity	—	1.5	-40 to +125	φ11.4

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



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Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
43A-015A	103.45	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4
4425-001D	6.9	D	100 mV	±0.15% Span Non-Linearity	12	–	-40 to +125	15.2 x 13.7
4425-005D	34.48	D	100 mV	±0.15% Span Non-Linearity	12	–	-40 to +125	15.2 x 13.7
4425-015D	103.45	D	100 mV	±0.15% Span Non-Linearity	12	–	-40 to +125	15.2 x 13.7
4425-100D	689.66	D	100 mV	±0.15% Span Non-Linearity	12	–	-40 to +125	15.2 x 13.7
47-015A	103.45	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4
47-030A	206.9	A	100 mV	±0.1% Span Non-Linearity	–	1.5	-40 to +125	φ11.4

* Note: A: Absolute B: Barometric D: Differential G: Gauge

** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MPXV10GCxx	0 to 10	D & G	0.5 VDD + 0.035	1.00	3.0 to 6.0	6	-40 to +125	SOP & ported SOP
MPXV12xx	0 to 10	D & G	0.5 VDD + 0.055	5.00	3.0 to 6.0	6	-40 to +125	SOP; SOP dual port; MPAK; SOP ported
MPXM2051G	0 to 50	A	0.5 VDD + 0.040	1.50	10 to 16	6	-40 to +125	MPAK
MPXx2053	0 to 50	D & G	0.5 VDD + 0.040	1.50	10 to 16	6	-40 to +125	x=V SOP & ported SOP; x=M MPAK
MPXx2102	0 to 100	A, D & G	0.5 VDD + 0.040	1.50	10 to 16	6	-40 to +125	x=V SOP & ported SOP; x=M MPAK
MPXx2202	0 to 200	A, D & G	0.5 VDD + 0.040	1.50	10 to 16	6	-40 to +125	x=V SOP & ported SOP; x=M MPAK
MPX2300DT1	0 to 40	D & G	0.5 VDD + 0.003	1.50	6.0 to 10	1	+15 to +40	ChipPak package
MPXV(Z)4006	0 to 6	D & G	4.9	2.50	4.75 to 5.25	10	+10 to +60	SOP; SOP dual port; SOP ported
MPXV(Z)5004	0 to 3.92	D & G	4.9	1.50	4.75 to 5.25	10	0 to +85	SOP; SOP dual port; SOP ported
MP3V5004	0 to 3.92	D & G	2.9	1.50	2.7 to 3.3	10	+10 to +60	SOP; SOP dual port; SOP ported
MPXV5010	0 to 10	D & G	4.7	5.00	4.75 to 5.25	5	-40 to +125	SOP; SOP dual port; SOP ported
MPV5010	0 to 10	D & G	4.7	5.00	4.75 to 5.25	5	-40 to +125	SOP; SOP dual port; SOP ported
MP3V5010	0 to 10	D & G	2.9	5.00	2.7 to 3.3	7	-40 to +125	SOP; SOP dual port; SOP ported

* Note: A: Absolute B: Barometric D: Differential G: Gauge

** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type*	Full Scale Output (V)	Accuracy (%FSO)	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MPXV5050VC6U	-50 to 50	V	4.7	2.50	4.75 to 5.25	7	-40 to +125	SOP ported
MPXV5050	0 to 50	D & G	4.7	2.50	4.75 to 5.25	7	-40 to +125	SOP ported & dual port
MPVZ5050	0 to 50	D & G	4.7	2.50	4.75 to 5.25	7	-40 to +125	SOP ported
MP3V5050	0 to 50	V	2.8	2.50	2.7 to 3.3	7	-40 to +125	SOP ported; SOP dual port
MPXV5100	0 to 100	A, D & G	4.7	2.50	4.75 to 5.25	7	-40 to +125	SOP ported & dual port
MPX5500	0 to 500	D	4.7	2.50	4.75 to 5.25	7	-40 to +125	Unibody Packages
MPX5700	0 to 700	A, D & G	4.7	2.50	4.75 to 5.25	7	-40 to +125	Unibody Packages
MPX5700A	15 to 700	A	4.7	2.50	4.75 to 5.25	7	-40 to +125	Unibody Packages
MPX5999	0 to 1000	D	4.7	2.50	4.75 to 5.25	7	-40 to +125	Unibody Packages
MPXHZ6250A	20 to 250	A	4.8	1.50	4.75 to 5.25	6	-40 to +125	SSOP & ported SSOP
MPXH6300A	20 to 304	A	4.9	1.50	4.74 to 5.46	6	-40 to +125	SSOP & ported SSOP
MPXHZ6400A	20 to 400	A	4.8	1.50	4.64 to 5.36	6	-40 to +125	SOP & ported SOP // SSOP & Ported SOP
MPXHV6115 V	-115 to 0	V	4.6	1.50	4.75 to 5.25	6	-40 to +125	SOP & SOP ported
MPXV7002	-2 to 2	V	4.5	6.25	4.75 to 5.25	10	+10 to +60	SOP ported; dual port
MPXV7025	-25 to 25	V	4.7	5.00	4.75 to 5.25	7	-40 to +125	SOP ported; SOP dual port

* Note: A: Absolute B: Barometric D: Differential G: Gauge V: Vacuum

** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

*** Note: x refers port size and direction

Pressure/MEMS

Temperature

Humidity

CO₂

DUST

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Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
NPA-600	0.5 to 207 (2inH ₂ O to 100 psi)	A, D, G	Serial	5.0	—	-40 to +125	SOIC-14
NPA-700	0.5 to 207 (2inH ₂ O to 100 psi)	A, D, G	I ² C	5.0	—	-40 to +125	SOIC-14

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



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Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BMP280	300 to 1100 hPa	B	I ² C, SPI	1.71 to 3.6	2.74 µA, typical (ultra-low-power mode) sleep mode: 0.1 µA	-40 to +85	LGA-8 (w/metal lid) 2.0 x 2.5 x 0.95
BMP388	300 to 1250 hPa	B	I ² C, SPI	1.65 to 3.6	3.4 µA @ 1 Hz	-40 to +85	LGA-10 (w/metal lid) 2.0 x 2.0 x 0.75

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
KP253XTMA1	60 to 165	B	SPI	3.135 to 5.25	10	-40 to +125	DSOF-8
KP254XTMA2	40 to 115	B	SPI	3.135 to 5.25	10	-40 to +125	DSOF-8

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type*	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90809LXG-EAD-100	5 to -120	G	SENT	5	10	-40 to +150	S0-16

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (Pa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
SDP800-500Pa	±500	D	I ² C	3.0 to 5.5	3.8	-20 to +80	29 x 12.6 x 18
SDP810-500Pa	±500	D	I ² C	3.0 to 5.5	3.8	-20 to +80	29 x 12.6 x 18
SDP800-125Pa	±125	D	I ² C	3.0 to 5.5	3.8	-20 to +80	29 x 12.6 x 18
SDP810-125Pa	±125	D	I ² C	3.0 to 5.5	3.8	-20 to +80	29 x 12.6 x 18
SDP31	±500	D	I ² C	3.3	3.8	-40 to +85	8.5 x 5.4 x 3.5
SDP32	±125	D	I ² C	3.3	3.8	-40 to +85	8.5 x 5.4 x 3.5



AUTHORIZED DISTRIBUTOR

Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
325534008-00	100	A	I ² C	2.2 to 3.6	—	-40 to +125	9 x 9
325534009-00	100	A	I ² C	2.2 to 3.6	—	-40 to +125	9 x 9
325534009-50	100	A	I ² C	2.2 to 3.6	—	-40 to +125	9 x 9
325535009-00	1400	A	I ² C	2.2 to 3.6	—	-40 to +125	9 x 9
325536008-00	100	G	I ² C	2.2 to 3.6	—	-40 to +85	13 x 10.16
325536009-00	-100	G	I ² C	2.2 to 3.6	—	-40 to +85	13 x 10.16
325540009-00	100	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325540009-50	100	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325541009-00	1400	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325541009-50	1400	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325541010-00	3000	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325541030-00	3000	A	I ² C	2.2 to 3.6	—	-40 to +85	6.2 x 6.4
325561000-00	100	A	I ² C	—	—	-40 to +85	4.75 x 4.25
325561000-50	100	A	I ² C	—	—	-40 to +85	4.75 x 4.25
4515-DS5A002DP	2068.96	D	I ² C	5.0	—	-10 to +85	12.5 x 9.9
4515-DS5B002DP	2068.96	D	I ² C	5.0	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK002DPL	2068.96	D	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK004DP	2068.96	D	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK004GP	2068.96	G	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK005DP	2068.96	D	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK005GP	2068.96	G	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK020DPL	2068.96	D	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS3BK030DPL	2068.96	D	I ² C	3.3	—	-10 to +85	12.5 x 9.9
4515D0-DS5BS002DS	2068.96	D	SPI	5.0	—	-10 to +85	12.5 x 9.9
4525D0-DS5AI001DP	2068.96	D	I ² C	5.0	—	-10 to +85	12.5 x 9.9
5525DS0-DB001DS	6.89	D	I ² C	1.8 to 3.6	—	-40 to +125	12.5 x 7.9
5525DS0-SB001GS	6.89	G	I ² C	1.8 to 3.6	—	-40 to +125	12.5 x 7.9
5525DS0-SB005GS	34.48	G	I ² C	1.8 to 3.6	—	-40 to +125	12.5 x 7.9
MS560702BA03-00	200	A	I ² C	1.5 to 3.6	—	-40 to +85	3 x 3 x 0.9
MS560702BA03-50	200	A	I ² C	1.5 to 3.6	—	-40 to +85	3 x 3 x 0.9
MS561101BA03-00	100	A	I ² C	1.8 to 3.6	—	-40 to +85	5 x 3 x 1
MS561101BA03-50	100	A	I ² C	1.8 to 3.6	—	-40 to +85	5 x 3 x 1
MS563702BA03-50	200	A	I ² C	1.5 to 3.6	—	-40 to +85	3 x 3 x 0.9
MS563730BA03-50	3000	A	I ² C	1.5 to 3.6	—	-20 to +85	14.7 x 15.2
MS580301BA01-00	100	A	I ² C	1.8 to 3.6	—	-40 to +125	6.2 x 6.4
MS580302BA01-00	200	A	I ² C	1.8 to 3.6	—	-40 to +85	6.2 x 6.4
MS580305BA01-00	500	A	I ² C	1.8 to 3.6	—	-40 to +85	6.2 x 6.4
MS580314BA01-00	1400	A	I ² C	1.8 to 3.6	—	-40 to +85	6.2 x 6.4

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MS580330BA01-00	1400	A	I ² C	1.8 to 3.6	—	-40 to +85	6.2 x 6.4
MS580502BA01-50	200	A	I ² C	1.8 to 3.6	—	-40 to +85	4.5 x 4.5
MS583702BA01-50	500	A	I ² C	1.5 to 3.6	—	-20 to +85	3.3 x 3.3 x 2.75
MS583730BA01-50	3000	A	I ² C	1.5 to 3.6	—	-20 to +85	3 x 3 x 0.9
MS860702BA01-50	200	A	I ² C	1.5 to 3.6	—	-40 to +85	5 x 3 x 1

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (μA)	Operating Temperature (°C)	Package Type / Size (mm)
LPS22HBTR	260 to 1260	A, B	SPI / I ² C	1.7 to 3.6	3	-40 to +85	HLGA-10L 2 x 2 x 0.8
LPS33HWTR	260 to 1260	A, B	SPI / I ² C	1.7 to 3.6	3	-40 to +85	CCLGA-10L 3.3x3.3

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O

PRESSURE / Barometer



Part Number	Pressure Range**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BM1383AGLV	300 hPa to 1100 hPa	A	I ² C	1.7 to 3.6	0.005	-40 to +85	CLGA12V025M (LGA-12-pin) 2.5 x 2.5 x 1.0
BM1386GLV	300 hPa to 1100 hPa	A	I ² C	1.7 to 3.6	0.005	-40 to +85	CLGA12V025A (LGA-12-pin) 2.5 x 2.5 x 1.0

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



Part Number	Pressure Range (kPa)**	Pressure Type *	Digital Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
FXPQ3115BV	20 to 115	A	I ² C	1.95 to 3.6	—	-40 to +85	LGA 3 x 5
MPL3115A2	20 to 115	A	I ² C	1.95 to 3.6	—	-40 to +85	LGA 3 x 5
MPXH6101Axx	15 to 105	A	Analog	4.75 to 5.25	7	-40 to +125	SSOP & ported SSOP
MPXHZ6116A6	20 to 115	A	Analog	4.75 to 5.25	6	-40 to +125	SSOP
MPXHZ6130Axx	15 to 130	A	Analog	4.75 to 5.25	6	-40 to +125	SSOP & ported SSOP
MPXHZ6115Axx	15 to 115	A	Analog	4.75 to 5.25	6	-40 to +125	SOP & ported SOP / SSOP & ported SOP
MP3H6115AC6	15 to 115	A	Analog	2.7 to 3.3	4	-40 to +125	Ported SSOP

* Note: A: Absolute B: Barometric D: Differential G: Gauge ** Note: 1kPa = 10 mbar = 10 hPa = 0.145 psi = 4.015 in H₂O



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Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
LC717A30UJ	8	I ² C/SPI	2.6 to 5.5	0.8	-45 to +105	8.0 x 6.4 x 1.6
LC717A00AJ	8	I ² C / SPI / 8-bit Channel State Output	2.6 to 5.5	0.74	-40 to +105	8.0 x 6.4 x 1.6
LC717A00AR	8	I ² C / SPI / 8-bit Channel State Output	2.6 to 5.5	0.74	-40 to +105	3.5 x 3.5 x 0.8
LC717A10AJ	16	I ² C, SPI	2.6 to 5.5	1.3	-40 to +105	8.0 x 6.4 x 1.6
LC717A10AR	16	I ² C, SPI	2.6 to 5.5	1.3	-40 to +105	3.5 x 3.5 x 0.8



Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
PCAP02AE	8	I ² C, SPI	2.1 to 3.6	0.0025 @ 2.5 Hz	-40 to +125	QFN-32; 5 x 5
PCAP04	6	I ² C, SPI	3.0 to 3.6	0.0023 @ 2.5 Hz	-40 to +85	QFN-24; 4 x 4



Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
CY8C4124AZI-S413	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4124AZI-S413T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4124AZI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4124FNI-443T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S403	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S403T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S413	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S413T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S433	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124FNI-S433T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4124LQI-S412	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S412T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S413	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S413T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S432	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S432T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S433	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4124LQI-S433T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125AXI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4125AXI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4125AZI-S413	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP



Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
CY8C4125AZI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4125AZI-S423T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4125AZI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4125FNI-S413	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125FNI-S413T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125FNI-S423	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125FNI-S423T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125FNI-S433	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125FNI-S433T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4125LQI-S412	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S412T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S413	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S413T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S422	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S422T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S423	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S423T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S432	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S432T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S433	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4125LQI-S433T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4126AXI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4126AXI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4126AZI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4126AZI-S423T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4126AZI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4126AZI-S433T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4145AXI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4145AXI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4145AZI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4145AZI-S423T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4145LQI-S423	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146AXI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4146AXI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4146AZI-S423	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4146AZI-S433	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	TQFP
CY8C4146FNI-S423	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4146FNI-S423T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4146FNI-S433	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP

Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
CY8C4146FNI-S433T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4146FNI-S443T	31	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	WLCSP
CY8C4146LQI-S422	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S422T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S423	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S423T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S432	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S432T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S433	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4146LQI-S433T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 6.85	-40 to +85	QFN
CY8C4024AZI-S403	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4024AZI-S403T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4024AZI-S413	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4024AZI-S413T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4024FNI-S402	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4024FNI-S402T	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4024FNI-S412	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4024FNI-S412T	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4024LQI-S401	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S402	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S403	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S403T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S411	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S412	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S412T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S413	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024LQI-S413T	34	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4024PVS-S412ES	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	SSOP
CY8C4025AZI-S403	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4025AZI-S403T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4025AZI-S413	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4025AZI-S413T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4025FNI-S402	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4025FNI-S402T	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4025FNI-S412	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4025FNI-S412T	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4025LQI-S401	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4025LQI-S402	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4025LQI-S402T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN



Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
CY8C4025LQI-S411	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4025LQI-S412	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4025LQI-S412T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4045AZI-S413	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4045AZI-S413T	36	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	TQFP
CY8C4045FNI-S412	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4045FNI-S412T	21	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	WLCSP
CY8C4045LQI-S411	19	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4045LQI-S412	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8C4045LQI-S412T	27	I ² C, SPI, UART, GPO	1.71 to 5.5	0.0025 to 5.9	-40 to +85	QFN
CY8CMBR3106S2-LQXI	16	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3106S-LQXIT	16	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3110-SX2IT	10	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3102-SX1IT	2	I ² C	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3108-LQXIT	8	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3116-LQXIT	16	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3002-SX1IT	2	GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3110-SX2I	10	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3102-SX1I	2	I ² C	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3106S-LQXI	16	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3002-SX1I	2	GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	SOIC
CY8CMBR3108-LQXI	8	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN
CY8CMBR3116-LQXI	16	I ² C, GPO	1.71 to 5.5	0.0025 to 4.5	-40 to +85	QFN



Part Number	Number of Sensing Channels	Output Interface	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
BU21072MUV	10	I ² C	3.0 to 5.5	3.5	-20 to +85	VQFN (24-pin) 4.0 x 4.0 x 1.0
BU21077MUV	8	I ² C	2.7 to 5.5	3.5	-20 to +85	VQFN (20-pin) 4.0 x 4.0 x 1.0
BU21078MUV	12	I ² C	3.0 to 5.5	3.5	-20 to +85	VQFN (28-pin) 5.0 x 5.0 x 1.0
BU21079F	8	I ² C	3.0 to 5.5	2.5	-20 to +85	SOP16 (16-pin) 10.0 x 6.2 x 1.71



Part Number	Touch Panel	Resolution	Output Interface	Power Consumption (μA)	Multi-Touch	Proximity Sensing	Package Type / Size (mm)
BU21029GUL	4-wire	12-bit	I ² C	100	Yes	Yes	VCSP50L2 (CSP 16-Ball) 2.00 x 2.00 x 0.55
BU21029MUV	4-wire	12-bit	I ² C	100	Yes	Yes	VQFN (20-pin) 4.00 x 4.00 x 1.00
BU21021GUL	4-wire	12-bit	I ² C, SPI	60	Yes	Yes	VCSP50L2 (CSP 25-Ball) 2.70 x 2.65 x 0.55
BU21023GUL	4-wire	10-bit	I ² C, SPI	60	Yes	Yes	VCSP50L2 (CSP 25-Ball) 2.60 x 2.60 x 0.55
BU21023MUV	4-wire	10-bit	I ² C, SPI	60	Yes	Yes	VQFN (28-pin) 5.00 x 5.00 x 1.00
BU21025GUL	4-wire	12-bit	I ² C	0.8	Yes	Yes	VCSP50L2 (CSP 12-Ball) 2.00 x 1.50 x 0.55

PROXIMITY / IR Reflective Proximity Sensor



Part Number	Detection Range Max (cm)	Output Interface	Output Range	Supply Voltage (V)	Supply Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
VCNL3020	20	I ² C	16-bit	2.5 to 3.6	0.002	-25 to +85	SMD-10
TSSP4038	200	Analog	High or Low	2.5 to 5.5	0.8	-25 to +85	Through-hole

PROXIMITY / Optical Sensor



Part Number	Detection Range (mm)	Forward Voltage (V)	Reverse Voltage (V)	Peak Wave Length (nm)	Maximum Dark Current (nA)	Output Current (μA)	Operating Temperature (°C)	Package Type / Size (mm)
VCNT2020	0.2 to 2.5	1.25 to 1.7	5	940	30	1.6 mA (typical)	-25 to +85	SMD 2.5 x 2 x 0.8
TCND5000	2 to 25	1.2	1.2	940	1	0.12 (typical)	-40 to +85	SMD 6 x 4.3 x 3.75



Part Number	Detection Range (mm)	Forward Voltage (V)	Reverse Voltage (V)	Peak Wave Length (nm)	Maximum Dark Current (nA)	Output Current (μA)	Operating Temperature (°C)	Package Type / Size (mm)
RPR-220	3 to 15	1.34	5	940	500	300	-25 to +85	Through-hole 6.4 x 4.9 x 6.5
RPR-220PC30N	5 to 12	3.5	5	470	10000	800	-25 to +85	Through-hole 6.4 x 4.9 x 6.5



Part Number	Transmitting Channels	Receive Channel	Frequency Range (GHz)	TX Output Power (dBm)	RX LNA Gain (dB)	Supply Voltage (V)	Supply Current (mA)	Package Type / Size (mm)
BGT24MTR11E6327XUMA1	1	1	24.00 to 24.25	5 to 15	26	3.3	150	VQFN-32
BGT24MTR12E6327XUMA1	1	2	24.00 to 24.25	6 to 15	26	3.3	210	VQFN-32
BGT24MR2E6327XUMA1	0	2	24.00 to 24.25	–	26	3.3	90	VQFN-32
BGT24AR2E6433XUMA1	0	2	24.00 to 24.25	–	26	3.3	90	VQFN-32
BGT24AR4E6433XUMA1	0	4	24.00 to 24.25	–	26	3.3	220	VQFN-32
BGT24AT2E6433XUMA1	2	0	24.00 to 24.25	7 to 13	26	3.3	280	VQFN-32
BGT24ATR11E6433XUMA1	1	1	24.00 to 24.25	5 to 15	26	3.3	150	VQFN-32
BGT24ATR12E6433XUMA1	1	2	24.00 to 24.25	6 to 15	26	3.3	210	VQFN-32
BGT24LTR11N16E6327XTSA1	1	1	24.00 to 24.25	2 to 10	26	3.3	55	TSNP-16-9



Sensing the World

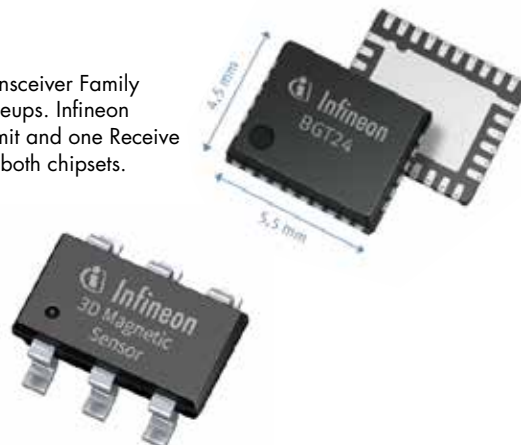
Sensor solutions for automotive, industrial and consumer applications

24GHz Radar – Industrial Applications

The BGT24Mxx family is the highest integrated 24GHz ISM Band Radar Transceiver Family currently on the market. It saves ~30% board space compared to discrete lineups. Infineon offers 3 different components, the BGT24MTR11 which combines one Transmit and one Receive channel, the BGT24MTR2, a chip with 2 receive channels, combinable with both chipsets.

3D Magnetic Sensor

Our new 3D magnetic sensor TIV493D-A1B6 was designed to perform three dimensional sensing on the lowest possible power consumption. Capable of measuring 3D, linear and rotational movement, it is perfect for a wide range of industrial and consumer applications such as e-meters, joysticks and white goods control knobs.



CYPRESS CAPSENSE® MBR3 SOLUTION

MBR = Mechanical Button Replacement



INTRODUCTION

CapSense® MBR3 is Cypress's solution for quickly and easily replacing mechanical buttons with sleek and reliable capacitive-sensing buttons. The CapSense MBR3 family is the world's easiest capacitive-sensing solution that allows you to design with the click of a mouse using our GUI-based software tool EZ-Click™. The CapSense MBR3 solution includes advanced features like SmartSense Auto-tuning, robust water tolerance and the industry's best capacitive proximity sensing enabling reliable performance under all conditions. The CapSense MBR3 family comes in four small packages that are suited for various capacitive-sensing designs.

Easiest-to-Design

- CapSense MBR3 requires no firmware development
- EZ-Click GUI-based software tool configures devices without the need to write code



SmartSense™ Auto-Tuning

- A CapSense algorithm that continuously compensates for system, manufacturing and environmental changes
- Eliminates the need for manual tuning during all product design phases

Robust Water Tolerance

- CapSense MBR3 works under water droplets, rain, mist and even other liquids
- Ensures no false touches even under streaming water



Industry's Best Capacitive Proximity Sensing

- Achieve up to 30 cm in proximity sensing distance
- Implement advanced features like wake-on-approach to support ultra-low power applications

Reliable Performance

- Advanced sensing algorithms ensure reliable performance even in noisy environments
- Implement designs with a Signal-to-Noise Ratio (SNR) > 100:1



FEATURES

- Up to 16 buttons, or 8 buttons and 8 LEDs
- Up to two 5-segment sliders
- SmartSense Auto-tuning
- Proximity sensing of up to 30 cm
- LED control
- Buzzer output
- Water tolerance
- Register-configurability using EZ-Click
- Wide operating voltage : 1.71 - 5.5 V
- Packages : 8-SOIC, 16-SOIC, 16-QFN, 24-QFN



TEMPERATURE

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Part Number	Internal Resistance (kOhm)	Resistance T.C. (% degree C)	Thermistor Resistance (kOhm)	Responsivity (V/W)	Noise Voltage (nVrms)	Diaphragm Size (mm)	Operating Temperature (°C)	Package Type / Size (mm)
ZTP-101T	200	0.10	30 ±3%	110 Typical	62	1.5 x 1.5	-20 to +100	T0-39 (T0-5)
ZTP-115	50	0.15	10 ±3%	60 Typical	30	1.0 x 1.0	-20 to +100	T0-39 (T0-5)
ZTP-135SR	60	0.12	100 ±3%	62 Typical	32	1.4 x 1.4	-20 to +100	T0-46 (T0-18)
ZTP-135SR-F1	60	0.12	100 ±3%	38 Typical	32	1.4 x 1.4	-20 to +100	T0-46 (T0-18)



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Part Number	Internal Resistance (kOhm)	Resistance T.C. (% degree C)	Thermistor Resistance (kOhm)	Responsivity (V/W)	Noise Voltage (nVrms)	Diaphragm Size (mm)	Operating Temperature (°C)	Package Type / Size (mm)
G-TPMO-101	70,000	-0.06%/K	100	7 ±2.1mV	45nV/Hz ½	0.8 x 0.8	-20 to +85	T0-5

TEMPERATURE / Digital Infrared Thermometer



AUTHORIZED DISTRIBUTOR

Part Number	Object Temperature Range (°C)	Temperature Accuracy (±) (°C)	Measurement Resolution (°C)	Output Interface	Supply Voltage (V)	Quiescent Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
G-TPMO-014	-20 to +120	± 5	± 0.1	1 hz	4 to 6	10	-10 to +85	25 X 35
G-TPMO-025	0 to +300	<4	± 0.1	1 hz	3.3	10	-10 to +85	25 X 35



Part Number	Field-of-View (degree)	Object Temperature Range (°C)	Temperature Accuracy (±) (°C)	Measurement Resolution (°C)	Output Interface	Supply Voltage (V)	Quiescent Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90614KSF-AAA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +125	T0-39; 4.1 x 9.1
MLX90614KSF-ABA-000	120	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +125	T0-39; 4.1 x 9.1
MLX90614KSF-ACC-000	35	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +125	T0-39; 8.1 x 10.2
MLX90614ESF-AAA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-ABA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-ACA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-BAA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-BBA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-BCA-000	90	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	T0-39; 4.1 x 9.1
MLX90614ESF-ACC-000	35	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	T0-39; 8.1 x 10.2
MLX90614ESF-BCC-000	35	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	T0-39; 8.1 x 10.2
MLX90614ESF-ACF-000	10	-70 to +380	0.5	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	T0-39; 17.2 x 9.1
MLX90614ESF-BCF-000	10	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	T0-39; 17.2 x 9.1

Part Number	Field-of-View (degree)	Object Temperature Range (°C)	Temperature Accuracy (±) (°C)	Measurement Resolution (°C)	Output Interface	Supply Voltage (V)	Quiescent Current (mA)	Operating Temperature (°C)	Package Type / Size (mm)
MLX90614ESF-BCH-000	12	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 8.3 x 9.1
MLX90614ESF-BCI-000	5	-70 to +380	0.5	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 20.2 x 9.1
MLX90614ESF-ACK-000	15	-70 to +380	1	0.02	SMBus/PWM	4.5 to 5.5	0.006	-40 to +85	TO-39; 8.1 x 10.2
MLX90614ESF-BCK-000	15	-70 to +380	1	0.02	SMBus/PWM	2.6 to 3.6	0.006	-20 to +85	TO-39; 8.1 x 10.2
MLX90632SLD-BCB-000	50	-20 to 200	1	0.02	I ² C	3.0 to 3.6	0.0025	-40 to +85	QFN; 1 x 3
MLX90614ESF-DAA-000	90	-70 to +380	0.2	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 4.1 x 9.1
MLX90614ESF-DCA-000	90	-70 to +380	0.2	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 4.1 x 9.1
MLX90614ESF-DCC-000	35	-70 to +380	0.2	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 8.1 x 10.2
MLX90614ESF-DCH-000	12	-70 to +380	0.2	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 8.3 x 9.1
MLX90614ESF-DCI-000	5	-70 to +380	0.2	0.02	SMBus/PWM	2.6 to 3.6	0.006	-40 to +85	TO-39; 20.2 x 9.1
MLX90615SSG-DAA-000	100	-40 to +115	0.2	0.02	SMBus/PWM	2.6 to 3.4	0.003	-40 to +85	TO-46; 2.7 x 5.4
MLX90615SSG-DAG-000	80	-40 to +115	0.2	0.02	SMBus/PWM	2.6 to 3.4	0.003	-40 to +85	TO-46; 2.7 x 5.4
MLX90621ESF-BAA-000	120 x 25	-40 to +300	1	0.02	I ² C	2.5 to 3.3	0.009	-40 to +85	TO-39; 5.51 x 9.3
MLX90621ESF-BAB-000	60 x 15	-40 to +300	1	0.02	I ² C	2.5 to 3.4	0.009	-40 to +85	TO-39; 11.15 x 9.3
MLX90621ESF-BAD-000	40 x 10	-40 to +300	1	0.02	I ² C	2.5 to 3.5	0.009	-40 to +85	TO-39; 14.15 x 9.3
MLX90640ESF-BAA-000	110 x 75	-40 to +300	1	0.02	I ² C	2.9 to 3.6	0.015	-40 to +85	TO-39; 5.7 x 9.3
MLX90640ESF-BAB-000	55 x 40	-40 to +300	1	0.02	I ² C	2.9 to 3.6	0.015	-40 to +85	TO-39; 11.25 x 9.3

LPS33HW

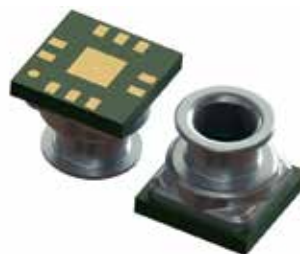
10-bar, water-resistant MEMS pressure sensor

Practice water sports with new go-anywhere water-resistant MEMS pressure sensor

LPS33HW represents the latest generation of high-performance MEMS pressure sensors specifically designed for wearables but also industrial equipment and utility meters. LPS33HW shows resistance also to chemicals like chlorine, bromine and salt water, making it the ideal sensor for swimming in pools and sea. It is also resistant to soaps and detergents used when showering or cleaning. Gel inside the IC contributes to its resistance of up to 10 bar water or air pressure and its low RMS noise level (0.8 Pa) ensures accuracy when monitoring the altitude in indoor or outdoor environments.



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KEY FEATURES

- 260 to 1260 hPa absolute pressure range
- Current consumption down to 3 μ A
- 20x full-scale overpressure capability
- Embedded temperature compensation
- Temperature range: -40 to +85 °C

- 24-bit pressure data output
- 16-bit temperature data output
- I²C/SPI digital interfaces
- Interrupt functions: data ready, FIFO flags, pressure thresholds

Part Number	Temperature Accuracy ($\pm$)(°C)	Sensor Gain (mV/°C)	Supply Voltage (V)	Quiescent Current (μ A)	Operating Temperature (°C)	Package Type / Size (mm)
DS600U+	0.3	6.45	2.7 to 5.5	140	-40 to +125	8 uSOP
MAX6605MXK+T	0.75	11.9	2.7 to 5.5	4.5	-55 to +125	SC70-5
MAX6607IXK+T	0.6	10	1.8 to 3.6	8	-20 to +85	SC70-5
MAX6608IUK+T	0.6	10	1.8 to 3.6	8	-20 to +85	SOT23-5



Part Number	Temperature Accuracy ($\pm$)(°C)	Sensor Gain (mV/°C)	Supply Voltage (V)	Quiescent Current (μ A)	Operating Temperature (°C)	Package Type / Size (mm)
BD1020HFV	$\pm$ 1.5	-8.2	2.4 to 5.5	4.0	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6
BDJ0550HFV	$\pm$ 2.5	-8.2	2.4 to 5.5	7.5	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6
BDJ0600HFV	$\pm$ 2.5	-8.2	2.4 to 5.5	7.5	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6
BDJ0650HFV	$\pm$ 2.5	-8.2	2.4 to 5.5	7.5	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6
BDJ0700HFV	$\pm$ 2.5	-8.2	2.4 to 5.5	7.5	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6
BDJ0800HFV	$\pm$ 2.5	-8.2	2.4 to 5.5	7.5	-30 to +100	HVSOF5 (5-pin), 1.6 x 1.6 x 0.6



Part Number	Temperature Accuracy ($\pm$)(°C)	Sensor Gain (mV/°C)	Supply Voltage (V)	Quiescent Current (μ A)	Operating Temperature (°C)	Package Type / Size (mm)
STLM20W87F	$\pm$ 0.5	-11.77 (typ)	2.4 to 5.5	4.8	-55 to +130	SC70-5, UDFN4
STLM20DD9F	$\pm$ 0.5	-11.77 (typ)	2.4 to 5.5	4.8	-40 to +85	UDFN-4L
LM135	$\pm$ 0.5	10	—	450	-55 to +150	TO-92, SO-8
LM235	$\pm$ 0.5	10	—	450	-40 to +120	TO-92, SO-8
LM335	$\pm$ 0.5	10	—	450	-40 to +100	TO-92, SO-8



Part Number	Temperature Accuracy ($\pm$)	Sensor Gain (mV/°C)	Supply Voltage (V)	Quiescent Current (μ A)	Operating Temperature (°C)	Package Type / Size (mm)
GA10K3D1031-UL	$\pm$ 1%	-4.40%	—	—	0 to +95	Ring lug
GA100K6D234	$\pm$ 0.2°C	-4.68%	—	—	-40 to +125	Leaded
GA10K3435DM010	$\pm$ 1%	-3.87%	—	—	-40 to +125	Overmold probe
GA10K4D25	$\pm$ 0.2°C	-4.04%	—	—	-40 to +125	Flag terminal



Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
AS6200	± 0.4 (0 to ± 65)	I ² C	6 μ A @ 4 samples/sec	12	1.8 to 3.6	-40 to +125	WL-CSP 1.5 x 1.0



Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
MAX30205MTA+T	$\pm 0.1^{\circ}\text{C}$ Accuracy (37°C to 39°C)	I ² C	0.6	16	2.7 to 3.3	0 to +50	TDFN, 8-pin 3 x 3 x 0.75
DS28EA00U+T&R	0.5	1-wire	1.5	9, 12	3.0 to 5.5	-40 to +85	uSOP; 5 x 3
DS28EA00U+	0.5	1-wire	1.5	9, 12	3.0 to 5.5	-40 to +85	uSOP; 5 x 3
MAX31875ROTZS+T	$\pm 0.5^{\circ}\text{C}$ (TYP) (+10°C to +45°C)	I ² C and SMBus Support	0.008	8, 12	1.6 to 3.6	-20 to +150	4 WLP
DS18B20+	0.2	1-wire $\oplus$ Interface	1	9, 12	3.0 to 5.5	-55 to +125	3-pin TO-92; 8-pin SO; 8-pin μ SOP;
MAX31723MUA+T	0.5	SPI/3-wire	0.16	9, 12	1.7 to 3.7	-55 to +125	8- μ MAX
MAX31725MTA+T	0.5	I ² C	0.125	16	2.5 to 3.7	-55 to +125	8-TDFN
DS75U+	0.5	2-wire serial interface	0.8	9, 12	2.7 to 5.5	-55 to +125	8- μ MAX, 8-SO



Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
LM75B	2	I ² C	0.3	11	2.8 to 5.5	-55 to +125	SOT96-1, SOT505-1, SOT996-2, SOT1069-2
PCT2075	1	I ² C	0.40	11	2.7 to 5.5	-55 to +125	SOT96-1, SOT505-1, SOT1069-2, SOT1353-1
PCT2202	1	I ² C	0.45	12	1.65 to 1.95	-40 to +125	WLCS6 (0.69 x 1.09 x 0.382)
SA56004X	2	I ² C	0.5	11	3.0 to 3.6	-40 to +125	SOT96-1, SOT505-1, SOT782-1
SE95	1	I ² C	1.00	11, 13	2.8 to 5.5	-55 to +125	SOT96-1, SOT505-1
SE97B	1	I ² C	0.40	11	3.0 to 3.6	-40 to +125	SOT1069-2
SE98A	1	I ² C	0.4	11	1.7 to 3.6	-40 to +125	SOT1069-2
NHS3100	± 0.3	NFC, I ² C, SPI	0.4	12	1.72 to 3.6	-40 to +85	HVQFN-24
NHS3100UK	± 0.3	NFC, I ² C, SPI	0,003 to 0,15	12	1.72 to 3.6	-40 to +85	WLCSP-25
NHS3100W8	± 0.3	NFC, I ² C, SPI	0,003 to 0,15	12	1.72 to 3.6	-40 to +85	W8 (gold bumps on die)
NHS3152	± 0.3	NFC, I ² C, SPI	0,003 to 0,15	12	1.72 to 3.6	-40 to +85	HVQFN-24
NHS3152UK	± 0.3	NFC, I ² C, SPI	0,003 to 0,15	12	1.72 to 3.6	-40 to +85	WLCSP-25

Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
STS30	± 0.3	I ² C	2	16	2.4 to 5.5	-40 to +85	2.5 x 2.5 x 0.9
STS31	± 0.2	I ² C	2	16	2.4 to 5.5	-40 to +85	2.5 x 2.5 x 0.9



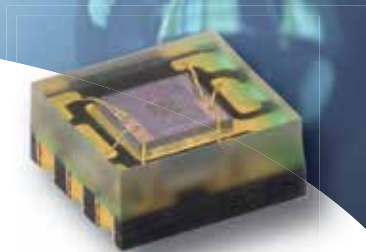
Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
STTS75	± 2	I ² C	0.001	9, 10, 11, 12	2.7 to 5.5	-55 to +125	SO-8, MSOP-8
STDS75	± 2	I ² C	0.001	9, 10, 11, 12	2.7 to 5.5	-55 to +125	SO-8, MSOP-8
STCN75	± 2	I ² C	0.001	9	2.7 to 5.5	-55 to +125	SO-8, MSOP-8
STLM75	± 2	I ² C	0.001	9	2.7 to 5.5	-55 to +125	SO-8, MSOP-8
STTS751	± 1	I ² C or SMBus	0.002	8	3.0	-40 to +125	DFN-6, SOT23-6
STTS2004	± 1	I ² C or SMBus	0.002	9	3.0	-40 to +125	TDFN-8 2.0 x 3.0 x 0.8



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Part Number	Temperature Accuracy ($\pm$)(°C)	Output Interface	Supply Current (mA)	Resolution (bit)	Supply Voltage (V)	Operating Temperature (°C)	Package Type / Size (mm)
G-NICO-018	± 0.1	SPI, I ² C	12.5 μ A	—	3.0	-40 to +125	4 X 4
G-NIMO-003	± 0.2 to 1	I ² C	18 μ A	—	3.0	-40 to +125	2.5 X 2.5

**VCNL4035X01****Sense Proximity.... Gestures.... Ambient Light....**



The **VEML6030** is an ambient light sensor that delivers on the promise of replicating the response of the human eye. With 16-bit resolution, upper and lower thresholds and ease of I²C interface, the **VEML6030** sets the standard for measuring the lux level for all different light sources.

Optoelectronics
Bright Ideas, Stellar Products



Part Number / Series	R25 (Ohm)	Tolerances	Temperature Coefficient (%/K)	Operating Temperature (°C)	Package Type / Size (mm)
NTCS0805	2K2 to 680K	1%, 2%, 3%, 5%	-3.69 to -4.53	-40 to +150	Surface Mount, 0805
NTCS0603	2K to 100K	1%, 2%, 3%, 5%	-3.59 to -4.52	-40 to +150	Surface Mount, 0603
NTCS0402	4K7 to 100K	1%, 2%, 3%, 5%	-3.03 to -4.48	-40 to +150	Surface Mount, 0402
NTCS...SMT	100K to 210K	1%	-3.93	-40 to +150	Surface Mount, 0402, 0603, 0805
NTCSMELF	10K to 100K	5%	-4.38	-40 to +150	Surface Mount, MELF
NTHS1206	6K to 330K	1%, 2%, 3%, 5%, 10%	-3.84 to -4.67	-40 to +125	Surface Mount, 1206
NTHS0805	4.7K to 300K	1%, 2%, 3%, 5%, 10%	-3.84 to -4.67	-40 to +125	Surface Mount, 0805
NTHS0603	6.8K to 350K	1%, 2%, 3%, 5%, 10%	-3.84 to -4.67	-40 to +125	Surface Mount, 0603
NTHS0402	10K to 350K	3%, 5%, 10%	-3.84 to -4.67	-40 to +125	Surface Mount, 0402
NTCC200/300	4.7K to 20K	1%, 2%, 3%, 5%	-3.75 to -4.22	-55 to +175	Wire Bondable Die
NTCLE100	3R3 to 470K	2%, 3%, 5%	-3.22 to -4.97	-40 to +125	Radial Thru-Hole
M, C, T	30R to 1M	1%, 5%, 10%; 0.2°C, 0.5°C, 1.0°C	-3.5 to -4.67	-40 to +125	Radial Thru-Hole
NTCLE203	2K to 470K	1%, 2%, 3%, 5%	-3.87 to -4.97	-40 to +125	Radial Thru-Hole
NTCLE203...SBO	2K06 to 30K	0.5°C	-3.87 to -4.51	-55 to +150	Radial Thru-Hole
NTCLE213	2K1 to 100K	1%, 2%, 3%, 5%	-3.85 to -4.57	-55 to +150	Radial Thru-Hole
NTCLE201	3K to 10K	0.5°C	-4.37	-40 to +125	Radial Thru-Hole
NTCLE300	3K to 10K	0.5°C	-4.37	-40 to +125	Radial Thru-Hole
NTCLE305	2K06 to 10K	0.5°C	-3.85 to -4.39	-40 to +125	Radial Thru-Hole
NTCLE400	2K2 to 100K	0.03	-4.38 to -4.47	-40 to +85	Long Lead Thru-Hole
NTCLE413	4K7 to 100K	1%, 3%, 5%	-3.75 to -4.57	-40 to +105	Radial Thru-Hole
NTCLE428	4K7 to 100K	1%, 3%, 5%	-3.75 to -4.47	-40 to +105	Radial Thru-Hole
NTCLG100	10K to 220K	0.05	-4.10 to -4.38	-40 to +200	Axial Thru-Hole
NTCALUG01	4K7 to 100K	1%, 2%, 3%, 5%	-3.75 to -4.57	-40 to +150	Assembly
NTCALUG02	4K7 to 100K	1%, 2%, 3%	-3.75 to -4.57	-55 to +125	Assembly
NTCALUG03	10K to 47K	2%, 3%	-4.10 to -4.39	-40 to +125	Assembly
NTCACAP	2K7 to 10K	1%, 2%	-4.39	-55 to +60	Assembly
NTCAFLEX	10K to 122K	1%, 3%	-3.93 to -4.41	-40 to +125	Assembly
NTCAIMME3C90373 / NTCAIMME3C90686	10K	3%	-4.39	-25 to +105	Assembly
NTCASCW	1K to 470K	1%, 2%, 5%	-3.87 to -4.95	-25 to +100	Assembly
NTCLP450	100K	3%	-4.57	-40 to +105	Assembly
TFPT1206	100R to 10K	0.5%, 1%, 5%	0.41	-55 to +150	Surface Mount, 1206
TFPT0805	100R to 5K	0.5%, 1%, 5%	0.41	-55 to +150	Surface Mount, 0805
TFPT0603	100R to 1K	0.5%, 1%, 5%	0.41	-55 to +150	Surface Mount, 0603

Amphenol

Advanced Sensors

Part Number / Series	R25 (Ohm)	Tolerances	Temperature Coefficient (%/K)	Operating Temperature (°C)	Package Type / Size (mm)
RL0503-xxx	2K to 100K	± 1°C	-3.8 to -4.9	-50 to +150	Epoxy coated with insulated leads
03006-xxx	250 to 1 M	2% to 10%	-3.34 to -5.26	-50 to +150	Glass encapsulated-MELF
AL03006-xxx	250 to 1 M	2% to 10%	-3.34 to -5.26	-50 to +204	DO-35 glass encapsulated
EC95xxx	1K to 100K	±1°C or ± 2°C	-4.04 to -4.68	-80 to +150	Epoxy coated chip with 0.008"OD leads
DC95xxx	2K to 100K	±1°C or ± 2°C	-4.04 to -4.68	-80 to +150	Epoxy coated chip with 0.012"OD leads
TK95xxx	2K to 100K	±1°C or ± 2°C	-4.04 to -4.68	-80 to +150	Epoxy coated chip with insulated leads
MC65xxx	2252 to 100K	±0.05°C or ±0.1°C or ±0.15°C	-4.04 to -4.39	-40 to +105	Epoxy coated with insulated leads
RL10xx	75 to 350K	±10%	-3.42 to -5.23	-50 to +150	Bare discs with uninsulated leads
RL20xx	25 to 100K	±10%	-3.42 to -5.23	-50 to +150	Bare discs with uninsulated leads
RL30xx	10 to 30K	±10%	-3.42 to -5.23	-50 to +150	Bare discs with uninsulated leads
RL40xx	50 to 10K	±10%	-3.83 to -5.18	-50 to +150	Bare discs with uninsulated leads
RLxxx	1K to 10K	±1°C	-4.50	-50 to +150	Interchangeable discs
DKxxx	2K to 100K	±3% or ±5% or ±10%	-3.89 to -4.36	-40 to +250	Glass encapsulated
C100xx	3K to 100K	±2% or ±5% or ±10%	-4.04 to -4.39	-80 to +150	Epoxy Coated
MA100xxx	2252 to 10K	±0.05°C or ±0.1°C or ±0.15°C	4.39	0 to +50	0.030" OD cap with insulated leads
MA300xxx	5K or 10K	±0.1°C or ±0.15°C	4.39	0 to +50	0.375" OD S/S disc with insulated leads
SCxxx	2.3K to 100K	±0.05°C or ±0.1°C or ±0.2°C	-4.04 to -4.39	-40 to +150	0.032" or 0.050" OD cap with insulated leads
NHQxxx	100 to 500K	±5% or ±10%	—	-40 to +125	1206 size
NHQMxxx	40 to 500K	±5% or ±10%	—	-40 to +125	0805 size
NHQMMxxx	30 to 200K	±5% or ±10%	—	-40 to +125	0603 size
NKAxxx	50 to 50K	±1% or ±2% or ±10%	—	-40 to +190	Insulated chip and leads
FP07xxx	2K to 270K	±25%	-3.45 to -4.50	-80 to +200	Fast tip with 0.1sec still air response
ABxxx	51 to 20M	±1% to ±25%	-3.26 to -5.47	-40 to +175	0.0125" - 0.022" OD with #38 or #40 or #44 AWG Ni/Cu leads
A-1996	2786	—	-4.5	-40 to +90	Twistlock sensor with an integral connector
A-1737	30000	±5%	4.34	-40 to +210	Radial leaded flexible sensor assembly with Molex terminal
GE-1920	2828	±1.3%	-4.39	-40 to +100	Threaded plated steel with integral connector
GE-2102	10K	±1.5%	-4.39	-40 to +120	½" hose, nylon inline sensor with integrated connector
GE-2103	10K	±1.5%	-4.39	-40 to +120	1¼" hose, nylon inline sensor with integrated connector
GE-1935	10K	±1.5%	-4.39	-40 to +120	¾" hose, nylon inline sensor with integrated connector
JS6780	2795	±2.5%	-4.46	-40 to +85	Flange mount with harness and connector
GE-1571	2820	±4.86%	-4.5	-40 to +150	Stainless steel probe with harness wires and connector
WTF083B001	2828	±1.3%	-4.39	-40 to +100	Threaded plated steel with integral sealed USCAR connector

Part Number / Series	R25 (Ohm)	Tolerances	Temperature Coefficient (%/K)	Operating Temperature (°C)	Package Type / Size (mm)
GE-1711	10K	±5%	-4.39	-40 to +180 (at housing)	Threaded brass probe with harness wires and Delphi Metri-Pack Connector
GE-1797	10K	±5%	-4.39	-40 to +180 (at housing)	Threaded stainless steel probe with harness wires and Delphi Metri-Pack Connector
GE-1711ATM	10K	±5%	-4.39	-40 to +180 (at housing)	Threaded brass probe with harness wires and Amphenol-Sine ATM Connector
GE-1797ATM	10K	±5%	-4.39	-40 to +180 (at housing)	Threaded stainless steel probe with harness wires and Amphenol-Sine ATM Connector



Part Number / Series	R25 (Ohm)	Tolerances	Temperature Coefficient (%/K)	Operating Temperature (°C)	Package Type / Size (mm)
GA100K6MBD1	100K	±0.2°C 0 to 70°C	-4.68	-40 to +125	Leaded
GA100K6MCD1	100K	±0.1°C @ 25°C	-4.68	-40 to +125	Leaded
GA10K3A1A	10K	±0.1°C 0 to 70°C	-4.4	-40 to +125	Leaded
GA10K3A1A-UL	10K	±0.1°C 0 to 70°C	-4.4	-40 to +125	Leaded
GA10K3MBD1	10K	±0.2°C 0 to 70°C	-4.4	-40 to +125	Leaded
GA10K3MCD1	10K	±0.1°C @ 25°C	-4.4	-40 to +125	Leaded
GA10K3D1217	10K	±1% 25°C to 85°C	-4.4	-40 to +125	Pipe mount

TEMPERATURE / Thermistor – Inrush Current Limiter

Part Number / Series	R25 (Ohm)	Tolerance (%)	Max Steady State Current (Amps)	Operating Temperature (°C)	Package Type / Size (mm)
CL-11	0.7	25%	12	-50 to +175	Epoxy coated disc, PCB mount
CL-21	1.3	25%	8	-50 to +175	Epoxy coated disc, PCB mount
CL-30	2.5	25%	8	-50 to +175	Epoxy coated disc, PCB mount
CL-40	5	25%	6	-50 to +175	Epoxy coated disc, PCB mount
CL-50	7	25%	5	-50 to +175	Epoxy coated disc, PCB mount
CL-60	10	25%	5	-50 to +175	Epoxy coated disc, PCB mount
CL-70	16	25%	4	-50 to +175	Epoxy coated disc, PCB mount
CL-80	47	25%	3	-50 to +175	Epoxy coated disc, PCB mount
CL-90	120	25%	2	-50 to +175	Epoxy coated disc, PCB mount
CL-101	0.5	25%	16	-50 to +175	Epoxy coated disc, PCB mount
CL-110	10	25%	3.2	-50 to +175	Epoxy coated disc, PCB mount
CL-120	10	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount

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Part Number / Series	R25 (Ohm)	Tolerance (%)	Max Steady State Current (Amps)	Operating Temperature (°C)	Package Type / Size (mm)
CL-130	50	25%	1.6	-50 to +175	Epoxy coated disc, PCB mount
CL-140	50	25%	1.1	-50 to +175	Epoxy coated disc, PCB mount
CL-150	5	25%	4.7	-50 to +175	Epoxy coated disc, PCB mount
CL-160	5	25%	2.8	-50 to +175	Epoxy coated disc, PCB mount
CL-170	16	25%	2.7	-50 to +175	Epoxy coated disc, PCB mount
CL-180	16	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount
CL-190	25	25%	2.4	-50 to +175	Epoxy coated disc, PCB mount
CL-200	25	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount
CL-210	30	25%	1.5	-50 to +175	Epoxy coated disc, PCB mount
CL-11A	0.07	25%	12	-50 to +175	Epoxy coated disc, PCB mount
CL-21A	1.3	25%	8	-50 to +175	Epoxy coated disc, PCB mount
CL-30A	2.5	25%	8	-50 to +175	Epoxy coated disc, PCB mount
CL-40A	5	25%	6	-50 to +175	Epoxy coated disc, PCB mount
CL-50A	7	25%	5	-50 to +175	Epoxy coated disc, PCB mount
CL-60A	10	25%	5	-50 to +175	Epoxy coated disc, PCB mount
CL-70A	16	25%	4	-50 to +175	Epoxy coated disc, PCB mount
CL-80A	47	25%	3	-50 to +175	Epoxy coated disc, PCB mount
CL-90A	120	25%	2	-50 to +175	Epoxy coated disc, PCB mount
CL-101A	0.5	25%	16	-50 to +175	Epoxy coated disc, PCB mount
CL-110A	10	25%	3.2	-50 to +175	Epoxy coated disc, PCB mount
CL-120A	10	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount
CL-130A	50	25%	1.6	-50 to +175	Epoxy coated disc, PCB mount
CL-140A	50	25%	1.1	-50 to +175	Epoxy coated disc, PCB mount
CL-150A	5	25%	4.7	-50 to +175	Epoxy coated disc, PCB mount
CL-160A	5	25%	2.8	-50 to +175	Epoxy coated disc, PCB mount
CL-170A	16	25%	2.7	-50 to +175	Epoxy coated disc, PCB mount
CL-180A	16	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount
CL-190A	25	25%	2.4	-50 to +175	Epoxy coated disc, PCB mount
CL-200A	25	25%	1.7	-50 to +175	Epoxy coated disc, PCB mount
CL-210A	30	25%	1.5	-50 to +175	Epoxy coated disc, PCB mount

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Part Number / Series	R0°C (Ohm)	Tolerance	Supply Current (mA)	Operating Temperature (°C)	Temperature Coefficient (ppm/K)	Package Type / Size (mm)
CTTS-186019-F02A	200	±1.5°C from 300 to 850°C & ±4.5°C from -40 to 300°C	2.7	-40 to +850	—	Stainless steel sheathed sensor with harness leads and connector



Part Number / Series	R0°C (Ohm)	Tolerance	Supply Current (mA)	Operating Temperature (°C)	Temperature Coefficient (ppm/K)	Package Type / Size (mm)
NB-PTCO-002	100	±0.3°C	1.7	-50 to +600	3850	2 X 3
NB-PTCO-006	1,000	±0.3°C	0.5	-50 to +600	3850	2 X 3



Part Number / Series	R0°C (Ohm)	Tolerance	Supply Current (mA)	Operating Temperature (°C)	Temperature Coefficient (ppm/K)	Package Type / Size (mm)
PTS1206	100R, 500R, 1K	0.3°C, 0.6°C	0.1	-55 to +175	3850	Surface Mount, 1206
PTS0805	100R, 500R	0.3°C, 0.6°C	0.1	-55 to +175	3850	Surface Mount, 0805
PTS0603	100R	0.3°C, 0.6°C	0.1	-55 to +175	3850	Surface Mount, 0603

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SENSOR EVALUATION TOOLS

Evaluation Tools..... 129

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Evaluation Board Part Number	Related Part Number / Series	Description
DEMO SENSE2GOL	BGT24LTR11	Evaluation board to perform basic measurements with BGT24LTR11. Kit contains: Application Note and Evaluation PCB.
EVAL BGT24LTR11 BOARD (SP001595152)	BGT24LTR11	Evaluation board to perform basic measurements with BGT24LTR11
DEMO DISTANCE2GO (SP001703556)	BGT24MTR11	Radar demo board based on the BGT24MTR11— FMCW & Doppler (distance, speed, and direction of movement detection)
KIT_ATV_24GHZ_RADAR	BGTA24ATR12	Development kit to facilitate testing of 24GHz radar applications (Doppler movement detectors, FSK or FMCW range/ position measurement)
KIT DPS310 2G SHV02	DPS310	Wireless Sensor Hub 2.0 can read sensor values and transmit them to a PC via Bluetooth 4.0. or USB interfaces.
EVAL SHNBV01	DPS310	DPS310 evaluation board; Bluetooth® connection to a phone or PC. One DPS310 on board. 30mm×15mm×10mm
EVAL SHSBV01-I2C	DPS310	Shuttle board DPS310 I²C
EVAL SHSBV01-SPI	DPS310	Shuttle board DPS310 SPI
SP000534838	KP215F	KP Extension Board
TLE4997X PROGRAMMER KIT	TLE4997	Includes a PGSI box (programming interface) and an evaluation board for evaluation of the linear Hall TLE 4997 family.
TLE4998X PROGRAMMER KIT	TLE4998	Includes a PGSI box (programming interface) and an evaluation board for evaluation of the linear Hall TLE 4998 family.
TLI4970050 2 GO KIT	TLI4970	The Current Sensor 2GO evaluation board is equipped with a current sensor combined with an ARM® Cortex™-M0 CPU. The Current Sensor 2GO includes a complete set of on-board devices, including an on-board debugger.
TLV493D-A1B6 2 GO KIT	TLV493D	Low cost evaluation board for three dimensional measurement, equipped with magnetic sensor, MCU and on-board de-bugger
SP001491834	TLV493D	Joystick for 3D 2 Go Eval Board
SP001504602	TLV493D	Rotate knob for 3D 2 Go Eval Board



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Evaluation Board Part Number	Related Part Number / Series	Description
Application Board 2.0		Application board 2.0 is a versatile, demonstration and evaluation environment for Bosch Sensortec sensor products. All sensor shuttle boards have identical footprints and can be plugged into the application board's shuttleboard socket.
BMA280 Shuttle Board	BMA280	BMA280 shuttle-board is a PCB with a BMA280 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMA253 Shuttle Board	BMA253	BMA253 shuttle-board is a PCB with a BMA253 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMA423 Shuttle Board	BMA423	BMA423 shuttle-board is a PCB with a BMA423 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMA456 Shuttle Board	BMA456	BMA456 shuttle-board is a PCB with a BMA456 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BME680 Shuttle Board	BME680	BME680 shuttle-board is a PCB with a BMA680 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BME280 Shuttle Board	BME280	BMA222E shuttle-board is a PCB with a BMA222E sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMP280 Shuttle Board	BMP280	BMP280 shuttle-board is a PCB with a BMP280 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMG250 Shuttle Board	BMG250	BMG250 shuttle-board is a PCB with a BMG250 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMI160 Shuttle Board	BMI160	BMI160 shuttle-board is a PCB with a BMI160 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.



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Evaluation Board Part Number	Related Part Number / Series	Description
BMI055 Shuttle Board	BMI055	BMI055 shuttle-board is a PCB with a BMI055 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BHI160 Shuttle Board	BHI160	BHI160 shuttle-board is a PCB with a BHI160 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BHA250 Shuttle Board	BHA250	BHA250 shuttle-board is a PCB with a BHA250 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BN0055 Shuttle board	BN0055	BN0055 shuttle-board is a PCB with a BN0055 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMF055 Shuttle board	BMF055	BMF055 shuttle-board is a PCB with a BMF055 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.
BMM150 Shuttle Board	BMM150	BMM150 shuttle-board is a PCB with a BMM150 sensor mounted on it, allowing for easy access to the sensors pins via a simple socket.

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Evaluation Board Part Number	Related Part Number / Series	Description
NPA-201-EV	NPA-201	I ² C Pressure Sensor Evaluation Board (0.4 x 0.29)
T6613-EVAL	T6613 Series	CO2 Sensor Evaluation Kit
T6615-EVAL	T6615 Series	Dual Channel CO2 Module Evaluation Kit
T6713-EVAL	T6713 Series	CO2 Sensor Module Evaluation Kit
T6713-5k-EVAL	T6713-5k	CO2 Module 0-5000 PPM Evaluation Kit
AAS-AQS-UNO	SM-PWM-01C	Air Quality Evaluation Board (Base & Dust)
AAS-AQS-UNO-RH-CO2	SM-PWM-01C, T9602, T6713	Air Quality Evaluation Board (Base, CO2, RH, T & Dust)



Evaluation Board Part Number	Related Part Number	Description
EVB75030-V2	MLX75030	Evaluation board for MLX75030 universal active light interface (Includes MLX75030 EvalBoard v2.0; EVB75030BB10, EVB75030LRP11, EVB75030CC95; Evaluation Software (+access to source codes)
EVK75123-60-850-1	MLX75023, MLX75123	Evaluation board for MLX75023 and MLX75123, TOF chipset; 60deg FOV, 850nm VCSELs (Includes EVK75123)
EVK75123-110-850-1	MLX75023, MLX75123	Evaluation board for MLX75023 and MLX75123, TOF chipset; 110deg FOV, 850nm VCSELs (Includes EVK75123)
DVK91205	MLX91205	MLX91205 Development kit (Includes: 1 x MLX91205LB mounted on PCB_EC01; 1 x MLX91205LB mounted on PCB_EC02; 1 x separate MLX91205LB; 3 x separate MLX91205HBs; 1 x separate PCB_EC01; 1 x separate PCB_EC02; 2 x shields U_12)
DVK91206	MLX91206	MLX91206 Development kit (Includes 1 sample each of MLX91206-CAH-001, MLX91206-CAH-002, MLX91206-CAH-003, MLX91206-CAL-001, MLX91206-CAL-002, MLX91206-CAL-003; 1 each of PCB_EC01, PCB_EC02, PCB_EC03; 3 shields U_12)
DVK91207	MLX91207	MLX91207 Development kit (Includes 2 MLX91207 mounted on PCB; 2 MLX91207; 2 PCB; 1 core for high current; 1 core for low current)
DVK91208	MLX91208	MLX91208 Development kit (Includes 3 samples each of MLX91208-CAH, MLX91208-CAL; 1 each PCB_EC01, PCB_EC02, PCB_EC03; 3 shields U_12; 2 shields R_12)
DVK91209	MLX91209	MLX91209 Development kit (Includes 5 each MLX91209-CA; 3 separated bare PCBs; 3 ferromagnetic cores (Supra 50 SP)

Evaluation Board Part Number	Related Part Number	Description
DVK91210 - SOIC8	MLX91210	MLX91210KDC-CAS-101 Evaluation board; SOIC8 [+-25A full scale] (Includes 1 board populated with sample + 3 extra samples)
DVK91210 - SOIC16	MLX91210	MLX91210KDF-CAS-101 Evaluation board; SOIC16 [+-25A full scale] (Includes 1 board populated with sample + 3 extra samples)
EVB922xx	MLX92232	MLX92232 Evaluation board (Includes 5 each of MLX92232LUA, MLX92232LSE)
PTC-04	MLX90xxx, MLX91xxx	Programmer for Melexis devices. Includes: main board in metal case; power supply 100W switching adapter; USB and RS232 cable; CD
PTC-04-19-4	MLX90xxx	19" Rack with two supply units and four PTC04 programmers; Universal implementation; Corresponding Daughter boards to be ordered additionally. (Note: When the rack is ordered together with the corresponding PTC04 daughter boards, the latter will be integrated inside the PTC04's by Melexis before shipment)
PTC-04-DB-90316	MLX90xxx	Daughter board for PTC-04 programmer for all Triaxis products
PTC-04-DB-HALL01	MLX90251; MLX90215; MLX90277; MLX90244	Daughter board for PTC-04 programmer
PTC-04-DB-HALL02	MLX90264, MLX90275	Daughter board for mounting in PTC-04 programmer
PTC-04-DB-HALL03	MLX90288, MLX90291, MLX91206, MLX91207	Daughter board for mounting in PTC-04 programmer
PTC-04-DB-HALL05	MLX91208; MLX91209	Daughter board for mounting in PTC-04 programmer
PTC-04-DB-Debug	MLX90xxx, MLX91xxx	Universal debugging daughter board
PTC-04-DB-Calib	MLX90xxx, MLX91xxx	Supporting daughter board for calibration of PTC04 programmer
PTC-04-DB-SPI01	MLX90xxx	Daughter board for PTC-04 programmer for SPI Hall sensors
PTC04-DB-Mupet	MLX90xxx, MLX91xxx	Melexis Universal Program & Test protocol daughter boards
PTC04-DB-922xx	MLX922xx	Supporting daughter board to interface with the programmable switch & latch family
PTC04_DB_Pressure01	MLX90807, MLX90808	Daughter board for mounting in PTC-04 programmer
PTC04_sensors_multi_calibration_board	MLX90xxx	Extension board for PTC-04 that allows the calibration of sensors in parallel
PTC-testbench-MLX90316	MLX90316	Testbench for MLX90316 (Includes 2 magnets; socket for MLX90316 TestBench; 1 Socket PCB; 1 Connection cable)
PTC-testbench-Magnetic	MLX90277, MLX90251, MLX90215	Testbench for magnetic devices (Includes 3 magnets; sockets for MLX90277, MLX90251, MLX90215 TestBench; 2 Socket PCB's (4SIP, S08, TSSOP16); 1 Connection cable; 3 magnets)
PTC-04-19-1	MLX90xxx, MLX91xxx	1 PTC04 in 19" Rack
PTC-04-19-2	MLX90xxx, MLX91xxx	2 PTC04 in 19" Rack
PTC-04-19-3	MLX90xxx, MLX91xxx	3 PTC04 in 19" Rack
EVB90314	MLX90314	Evaluation Board for MLX90314 (Includes Sensor Interface; Evaluation board with SOIC socket, serial interface cable; software, 5 x 90314 samples)
EVB90316-DC	MLX90316	Evaluation board for MLX90316XDC (Includes 1 sample on the board)
EVB90316-GO	MLX90316	Evaluation board for MLX90316XGO (Includes 1 sample on the board)
EVB90333-DC	MLX90333	Evaluation board for MLX90333xDC (Includes 1 sample on the board)
EVB90393	MLX90393	Evaluation Board for MLX90393xLW (Includes evaluation board; 1 sample on the board; 3 extra samples)
EVB90614	MLX90614	Evaluation Board for MLX90614 (Includes: Infrared Thermometer Module board; power supply; USB cable, manual, software)
EVB90615	MLX90615	Evaluation Board for MLX90615 (Includes: Infrared Thermometer Module board; power supply; USB cable, manual, software)
EVB90621	MLX90621	Evaluation Board for MLX90621 (Includes: Infrared Thermometer Module board; power supply; USB cable, 1 sample, software)
EVB90640-41	MLX90640	Evaluation Board for MLX90640 (Includes: Infrared Thermometer Module board; power supply; USB cable, 1 sample, software)



Evaluation Board Part Number	Related Part Number / Series	Description
KX10T-1070	KX122-1037 KMX62-1031 BM1383AGLV	IoT Evaluation Kit for KX122 (Acc), KMX62 (Acc+Mag), and BM1383AGLV (Pressure)
SENSORSHLD1-EVK-101	KX122-1037 KMX62-1031 BM1383AGLV BU52014HFV BM1422GMV RPR-0521RS BH1745NUC	Sensor shield evaluation platform; Arduino Interface; 10 featured sensors
BH1790GLC-EVK-001	BH1790GLC	Evaluation Kit for BH1790GLC Optical Sensor for Heart Rate Monitor
KXTJ3-1057-EVB0A1	KXTJ3-1057	Standalone Evaluation Kit for KXTJ3-1057 Accelerometer
KX122-1037-EVB0A0	KX122-1037	Standalone Evaluation Kit for KXT122-1037 Accelerometer
KX124-1051-EVB0B0	KX124-1051	Standalone Evaluation Kit for KXT124-1051 Accelerometer
KX126-1063-EVB0A1	KX126-1063	Standalone Evaluation Kit for KXT126-1063 Accelerometer
KX112-1042-EVB0A0	KX112-1042	Standalone Evaluation Kit for KXT112-1042 Accelerometer
KX222-1054-EVB0A0	KX222-1054	Standalone Evaluation Kit for KXT222-1054 Accelerometer
KX224-1053-EVB0B0	KX224-1053	Standalone Evaluation Kit for KXT224-1053 Accelerometer
KMX62-1031-EVB0B0	KMX62-1031	Standalone Evaluation Kit for KMX62-1031 Accelerometer



Evaluation Board Part Number	Related Part Number / Series	Description
EK-H4	SHTXX	Multiplexer box with 4 channels, 4x SHT71, 4x SHT21, 4x SHT31-DIS 4x 3-m cables with RJ45 plug, 1 USB cable and connector for PC, multi viewer software
EK-H5	SHTXX	Includes 1x USB Stick, 1x 1-m cable, 1x SHT21 on PCB, SHT31-DIS on PCB, 1x SHT31-DIS on Flex with connector, viewer software
EK-H4 Flex	SHT3x, SHTC1, SHTW2, STSxx	Multiplexer box with 4 channels, 4x SHTC1 on Flex, 4x SHTW1 on Flex, 4x SHT31-DIS on Flex 4x 3-m cables with flex connector, 1 USB cable and connector for PC, multi viewer software
EK-H5 1.8V	SHTC1, SHTW2, STSC1	Includes 1x USB Stick, 1x 1-m cable, 1x SHTC1 on Flex, SHTW1 on Flex, 1x STSC1 on Flex with connector, viewer software
SHT31 Smart Gadget Development kit	SHT31	Board with SHT31
SEK-SGP30	SGPXX	Includes 1 SEK Sensor Bridge, 4x SGP30 on FPCB, 2x SHTC1 on FPCB, 2x SHTW2 on FPCB, 2x SHT31-DIS-B on FPCB, 2x Adapter cable, 1x USB2.0 cable, type A – Micro B
EK-P3	SDPxxx	Includes 1x SDP610; works with all digital SDP's
EK-P4	SDPxx	Includes 1x SDP31; works with all digital SDP's
EK-F3x	SFM3000	Includes 1 x I ² C to USB connector, adapter cable to connect to sensor, downloadable software (sensor must be ordered separately)
EK-F4x	SFM4100	Includes 1 x I ² C to USB connector, adapter cable to connect to sensor, downloadable software (sensor must be ordered separately)

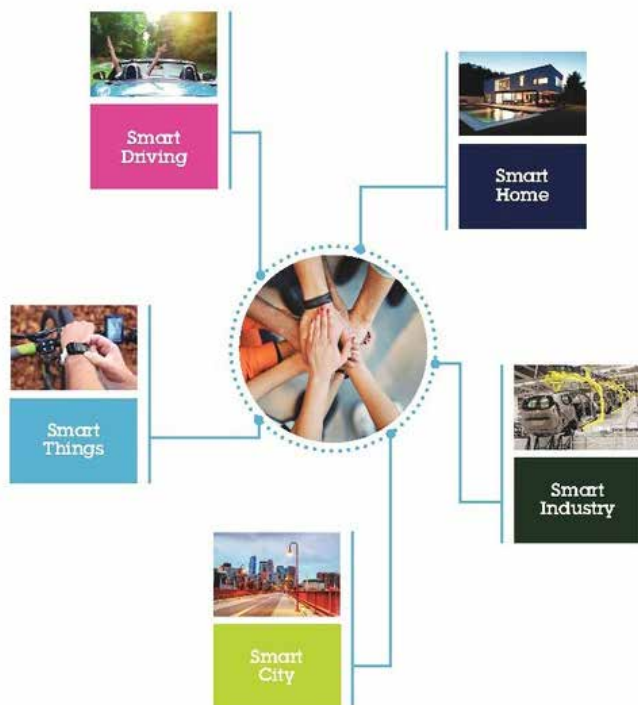
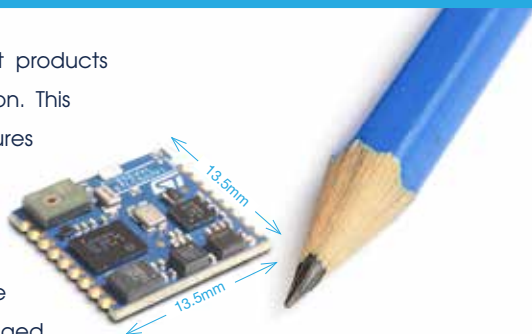
SensorTile

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SensorTile is a new development kit equipped with ST's latest products offering improved performance and lower power consumption. This reference design comes complete with HW and SW tools, features and capabilities that meet developers' needs and enable them to develop new and exciting applications. It can be used as a stand-alone sensor node to monitor, track and remotely connect to an iOS/Android Smartphone App. Supported by the STM32 Open Development Environment, it can easily be plugged into new designs to add sensing and connectivity capabilities through a SMART HUB solution. In addition, SensorTile's host board supports the Arduino expansion connector to bridge into most ecosystems from Arduino itself to the STM32ODE, and other developer communities.



STEVAL-STLKT01V1

To purchase a **SensorTile** go to:
www.futureelectronics.com/sensors



Evaluation Board Part Number	Related Part Number / Series	Description
STEVAL-MKI180V1	LIS3DHH	LIS3DHH adapter board for a standard DIL 24 socket
STEVAL-MET001V1	LPS22HB	LPS22HB adapter board for a standard DIL 24 socket
STEVAL-MKI013V1	LIS302DL	Standard DIL 24 socket-compatible adapter board for testing the LIS302DL
STEVAL-MKI015 V1	LIS344ALH	Adapter board for the LIS344ALH
STEVAL-MKI092V2	LIS331HHTR	LIS331HH adapter board for standard DIL24 socket
STEVAL-MKI105 V1	LIS3DH	LIS3DH adapter board for standard DIL 24 socket
STEVAL-MKI109V2	STM32F103	eMotion: ST MEMS adapters motherboard based on STM32F103, compatible with all ST MEMS adapter boards
STEVAL-MKI110V1	AIS328DQ	AIS328DQ adapter board for standard DIL24 socket
STEVAL-MKI125 V1	A3G4250D	A3G4250D adapter board for standard DIL 24 socket
STEVAL-MKI135 V1	LIS2DH	LIS2DH adapter board for standard DIL24 socket
STEVAL-MKI136V1	L3GD20H	L3GD20H adapter board for standard DIL 24 socket
STEVAL-MKI137V1	LIS3MDL	LIS3MDL adapter board for standard DIL24 socket
STEVAL-MKI141V2	HTS221	HTS221 humidity sensor adapter board for standard DIL24 socket (full pinout)
STEVAL-MKI151V1	LIS2DH12	LIS2DH12 3-axis accelerometer adapter board for standard DIL 24 socket, compatible with STEVAL-MKI109V2
STEVAL-MKI153V1	H3LIS331DL	H3LIS331DL 3-axis digital accelerometer adapter board for standard DIL 24 socket, compatible with STEVAL-MKI109V2
STEVAL-MKI158V1	AIS3624DQ	AIS3624DQ adapter board for a standard DIL24 socket
STEVAL-MKI159V1	LSM9DS1	LSM9DS1 adapter board for standard DIL24 socket
STEVAL-MKI160V1	LSM6DS3	LSM6DS3 adapter board for standard DIL24 socket
STEVAL-MKI164 V1	LIS2HH12	LIS2HH12 adapter board for a standard DIL24 socket
STEVAL-MKI165 V1	LPS25HB	LPS25HB adapter board for a standard DIL 24 socket
STEVAL-MKI166V1	H3LIS100DL	H3LIS100DL adapter board for a standard DIL 24 socket
STEVAL-MKI167V1	H3LIS200DL	H3LIS200DL adapter board for a standard DIL 24 socket
STEVAL-MKI168V1	IIS2DH	IIS2DH adapter board for a standard DIL 24 socket
STEVAL-MKI169V1	I3G4250D	I3G4250D adapter board for a standard DIL 24 socket
STEVAL-MKI170V1	IIS328DQ	IIS328DQ adapter board for a standard DIL 24 socket
STEVAL-MKI172V1	LSM303AGR	LSM303AGR adapter board for a standard DIL 24 socket
STEVAL-MKI173V1	LSM303AH	LSM303AH adapter board for standard DIL24 socket
STEVAL-MKI174 V1	LIS2DS12	LIS2DS12 adapter board for standard DIL24 socket
STEVAL-MKI175 V1	LIS2DE12	LIS2DE12 adapter board for standard DIL24 socket
STEVAL-MKI176V1	LSM6DS3H	LSM6DS3H adapter board for standard DIL24 socket
STEVAL-MKI177V1	LPS35HW	LPS35HW adapter board for a standard DIL24 socket
STEVAL-MKI178V1	LSM6DSL	LSM6DSL adapter board for standard DIL24 socket
X-NUCLE0-CCA02M1	MP34DT01-M	Digital MEMS microphones expansion board based on MP34DT01-M for STM32 Nucleo.
X-NUCLE0-IKS01A2	LSM6DSM, LSM303AGR, LPS22HB, HTS221	Sensors expansion board for Nucleo kit containing motion, pressure, and humidity and temperature sensors
STEVAL-STLCS01V1	BlueNRG-MS, LSM6DSM, LSM303AGR, LPS22HB, MP34DT04, BALF-NRG-01D3, LD39115J18R	Stand alone SensorTile (13mm x 13mm) connectable sensor node with plug on bottom side or solder

Evaluation Board Part Number	Related Part Number / Series	Description
STEVAL-STLCS02V1	STM32L476, LSM6DSM, LSM303AGR, LPS22HB, MP34DT04, BlueNRG-MS, BALF-NRG-01D3, LD-39115J18R	Stand alone SensorTile (13mm x 13mm) solderable sensor node (no plug)
STEVAL-STLKT01V1	STM32L4; MP34DT04; LSM6DSM; LSM303AGR; LPS22HB; BlueNRG-MS	SensorTile development kit – complete kit with the sensor tile and cradle adapters
STSW-STLKT01	Embedded Software	Embedded software samples for SensorTile
STEVAL-BCNKT01V1	BlueNRG-MS, LSM6DSM, LSM303AGR, LPS22HB, BALF-NRG-01D3, STBC03JR	BlueCoin Starter kit
STSW-BCNKT01	Embedded Software	Embedded software samples for BlueCoin: data streaming via USB and BLE, logging on SD card, gesture recognition
STEVAL-MKI139V5	MP23AB01DH	Microphone coupon board based on the MP23AB01DH fully differential analog MEMS microphone
STEVAL-MKI155 V3	MP34DT01-M	Microphone coupon board based on the MP34DT01-M digital MEMS microphone
P-NUCLEO-53LOA1	VL53LOX	VL53LOX Nucleo Pack – Includes VL53LOX Expansion board and STM32F401RE Nucleo
X-NUCLEO-53LOA1	VL53LOX	Ranging sensor expansion board based on VL53LOX for STM32 Nucleo



Evaluation Board Part Number	Related Part Number / Series	Description
SensorStarterKit	VCNL3xxx VCNL4xxx VEML6xxx	Sensor evaluation kit; includes 1 x VCNL4020 sensor board; 1 x USB connector; necessary software, license and driver files
VEML6030EvalKit	VEML6030	Ambient light sensor evaluation kit
VEML6075EvalKit	VEML6075	UV A and B sensor evaluation kit
VEML6040EvalKit	VEML6040	R,G,B,W sensor evaluation kit
VCNL4040EvalKit	VEML6040	Proximity and Ambient light sensor evaluation kit
VCNL4200EvalKit	VCNL4200	Proximity and Ambient light sensor evaluation kit
VCNL4020EvalKit	VCNL4020	Proximity and Ambient light sensor evaluation kit



Evaluation Board Part Number	Related Part Number / Series	Description
LC717A30UJGEVK	LC717A30UJ	Complete Capacitance Touch Evaluation Boards
LC717A10ARGPEVB	LC717A10AR	Converter Capacitance Touch Evaluation Board
LC717A00ARGEVK	LC717A00AR	Complete Capacitance Touch Evaluation Boards
LC717A00BS01GEVK	LC717A00AR	Proximity/Gesture Touch Evaluation Boards
ALS-GEVB	NOA1305	Ambient Light Sensor (ALS) Shield Evaluation Board
LV0111CFGEVB	LV0111CF	Micro-Sized Ambient Light Sensor Evaluation Board
LA0151CSGEVB	LA0151CS	Illumination Sensor Evaluation Board
SPS1M-EVK	SPSXF001, SPSXT001, SPSXM002	SPS Handheld Evaluation Kit (FCC & ETSI)
SPS1Mx-EVK	SPSXF001, SPSXT001, SPSXM003	SPS Board Evaluation Kit (FCC & ETSI)
AGB1N0CS-GEVK	AGB1N0CS-GEVK	Image Sensor Baseboard
AGB2N0CS-GEVK	AGB2N0CS-GEVK	Image Sensor to Baseboard Converter
AGB3N0CS-GEVK	AGB3N0CS-GEVK	Image Sensor to Baseboard Converter
AR0130CSSC00SPCAH-GEVB	AR0130CS	Image Sensor Board
AR0132AT6R00XPEAH3-GEVB	AR0132AT	Image Sensor Board
AR0134CSSM00SUEAH3-GEVB	AR0134CS	Image Sensor Board
AR0135CS2M25SUEAH3-GEVB	AR0135CS	Image Sensor Board
AR0140AT3C00XUEAH3-GEVB	AR0140AT	Image Sensor Board
AR0144CSSM20SUKAH3-GEVB	AR0144CS	Image Sensor Board
AR0230CSSC00SUEAH3-GEVB	AR0230CS	Image Sensor Board
AR0238CSSC12SHRAH3-GEVB	AR0238	Image Sensor Board
AR0330CS1C12SPKAH3-GEVB	AR0330	Image Sensor Board
AR0331SRSC00XUEAH-GEVB	AR0331SR	Image Sensor Board
AR1335CSSC32SMFAH3-GEVB	AR1335	Image Sensor Board
AR1820HSSC00SHQAH3-GEVB	AR1820HS	Image Sensor Board
ASX340AT3C00XPEDH3-GEVB	ASX340AT	Image Sensor Board
AS0260HQSC28SUKAH3-GEVB	AS0260	Image Sensor Board
MT9V024IA7XTMH-GEVB	MT9V024	Image Sensor Board
MT9V024IA7XTCH-GEVB	MT9V024	Image Sensor Board
MT9M114EBLSTCZH3-GEVB	MT9M114	Image Sensor Board
MT9P006H12STCUH-GEVB	MT9P006	Image Sensor Board
MT9P031H12STMH-GEVB	MT9P031	Image Sensor Board
MT9J003H12STMUH-GEVB	MT9J003	Image Sensor Board
MT9F002H12STCVH-GEVB	MT9F002	Image Sensor Board
NOIP1SN0480A-HEAD-BD-A-GEVK	PYTHON480	Image Sensor Board
NOIP1SE0480A-HEAD-BD-A-GEVK	PYTHON480	Image Sensor Board
NOIP1SN1300A-QDI-A-GEVK	PYTHON1300	Image Sensor Board
NOIP1SN5000A-QDI-A-GEVK	PYTHON5000	Image Sensor Board
NOIP1SN025KA-GDI-A-GEVK	PYTHON25K	Image Sensor Board

Evaluation Board Part Number	Related Part Number / Series	Description
CCS801-DF_EK_ST	CCS801	CCS801 Evaluation kit
CCS811-LG_EK_ST	CCS811	CCS811 Evaluation kit
ENS210-QF_EK_ST	ENS210	ENS210 Demo Kit
CMV12000-EVAL3	CMV12000	CMV12000 Evaluation kit
CMV20000-EVAL3	CMV2000	CMV20000 Evaluation kit
CMV20000-EVAL3	CMV20000	CMV20000 Evaluation kit
CMV300M-EVAL2	CMV300	CMV300 Evaluation board including lens holder and cables
CMV8000 EVALUATION K	CMV8000	CMV8000 Evaluation kit
EVALBOARD_DRAGSTER	DR16K	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR2K7	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR4K3.5	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR4K7	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR6K7	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR8K3.5	Dragster linescan product family demo kit
EVALBOARD_DRAGSTER	DR8K7	Dragster linescan product family demo kit
NANOUSB3_ORION_1K_2K	OR2K	NanoUSB3 Orion2K LCC evaluation board (v1)
NANOUSB3_ORION_2K_LC	OR2K	NanoUSB3 Orion 1K & 2K evaluation board (v1)
TSL4531EVM	TSL45315	TSL4531x Evaluation module
TSL4531-DB	TSL45315	TSL4531xCL Daughter board
AS5304-TS_EK_AB	AS5304	AS5304 Adapter board
AS5306-TS_EK_AB	AS5306	AS5306 Adapter board
AS5311-TS_EK_AB	AS5311	AS5311 Adapter board
AS5510-WL_EK_DB	AS5510	AS5510 Demo board
AS5510-SO_EK_AB	AS5510	AS5510 SOIC-8 Adapter board
AS5510-WL_EK_AB	AS5510	AS5510 WLCSP Adapter board
TSL2772EVM	TSL27721	TSL2772 Evaluation module
TSL2772EVM	TSL27723	TSL2772 Evaluation module
AS5115-SS_EK_AB	AS5115	AS5115 Adapter board
AS5115-SS_EK_DB	AS5115	AS5115 Demo board
AS5115-SS_EK_PB	AS5115	AS5115 Programming board
AS5130-SS_EK_DB	AS5130	AS5130 Demo board
AS5132-SS_EK_AB	AS5132	AS5132 Adapter board
AS5132-SS_EK_DB	AS5132	AS5132 Demo board
AS5132-SS_EK_PB	AS5132	AS5132 Programming board
AS5134-SS_EK_AB	AS5134	AS5134 Adapter board
AS5134-SS_EK_DB	AS5134	AS5134 Demo board
AS5134-SS_EK_PB	AS5134	AS5134 Programming board
AS5140-SS_EK_AB	AS5140H	AS5140 Adapter board
AS5140-SS_EK_DB	AS5140H	AS5140 Demo board



Evaluation Board Part Number	Related Part Number / Series	Description
AS5145A-SS_EK_AB	AS5145A	AS5145A Adapter board
AS5145B-SS_EK_AB	AS5145B	AS5145B Adapter board
AS5145B-SS_EK_MB	AS5145B	AS5145B Motorboard
AS5147-TS_EK_AB	AS5147	AS5147 Adapter board
AS5161-S0_EK_AB	AS5161	AS5161 Adapter board
AS5162-S0_EK_AB	AS5162	AS5162 Adapter board
AS5215-QF_EK_AB	AS5215	AS5215 Adapter board
AS5215-QF_EK_DB	AS5215	AS5215 Demoboard
AS5215-QF_EK_PB	AS5215	AS5215 Programming board
AS5245-QF_EK_AB	AS5245	AS5245 Adapter board
AS5245-QF_EK_DB	AS5245	AS5245 Demoboard
AS5245-QF_EK_PB	AS5245	AS5245 Programming board
AS5247-MF_EK_AB	AS5247	AS5247 Adapter board
AS5247-MF_EK_SB	AS5247	AS5247 Socket board
AS5261-MF_EK_AB	AS5261	AS5261 Adapter board
AS5262-MF_EK_AB	AS5262	AS5262 Adapter board
AS5600-S0_EK_AB	AS5600	AS5600 Adapter board
AS5600-S0_EK_ST	AS5600	AS5600 Evaluation kit
AS6200-WL_EK_AB	AS6200	AS6200 EK_AB_WLCSP
AS6200-WL_DK_ST	AS6200	AS6200 WL_DK_ST



Evaluation Board Part Number	Related Part Number / Series	Description
MAXREFDES100	MAX30003/MAX30004, MAX30101, MAX30205	Health Sensor Platform
MAXREFDES155	DS28C36 Authenticator DS2476 CoProcessor	IoT Public Key Sensor Authentication
MAXREFDES143	DS28E15 Authenticator DS2465 CoProcessor	IoT Symetric Secret Key Sensor Authentication
MAX35103EVKIT#	MAX35103EHJ+	Evaluation Kit for the MAX35103
MAX35104EVKIT#	MAX35104ETL+	Evaluation Kit for the MAX35104
MAXREFDES70#	MAX35101EHJ+	High-Precision, Long-Battery Life Heat/Flow Meter
DS28EA000EVKIT#	DS28EA000U+T&R DS28EA000U+	1-wire Digital Thermometer with Sequence Detect and PIO



Evaluation Board Part Number	Related Part Number / Series	Description
FRDM-K22F-AGM01	FXOS8700CQ, FXAS21002CQ	Demonstration Kit
FRDM-K64F-AGM01	FXOS8700CQ, FXAS21002CQ	Demonstration Kit
FRDM-STBC-AGM01	FXOS8700CQ, FXAS21002CQ	Shield Board
BRKT-STBC-AGM01	FXOS8700CQ, FXAS21002CQ	Breakout Board
FRDMKL25-A8471	FXLS8471Q	Demonstration Kit
FRDMSTBC-A8471	FXLS8471Q	Shield Board
BRKTSTBC-A8471	FXLS8471Q	Breakout Board
FRDMKL25-A8491	MMA8491Q	Demonstration Kit
FRDMSTBC-A8491	MMA8491Q	Shield Board
BRKTSTBC-A8491	MMA8491Q	Breakout Board
FRDM-FXS-MULT2-B	FXLS8471Q, FXOS8700CQ, MMA8652Q, MMA9553Q, FXAS21002CQ, MPL3115A2	Shield Board
RD-KL25-AGMP01	FXOS8700CQ	Reference Design
FRDM-KL25Z	MMA8451Q	Demonstration Kit
FRDM-KL27Z	MMA8451Q	Demonstration Kit
FRDMSTBC-A8451	MMA8451Q	Shield Board
BRKTSTBC-A8451	MMA8451Q	Breakout Board
FRDM-K64F-AGM04	MMA8652Q, FXAS21002Q, MAG3110	Demonstration Kit
FRDM-STBC-AGM04	MMA8652Q, FXAS21002Q, MAG3110	Shield Board
BRKT-STBC-AGM04	MMA8652Q, FXAS21002Q, MAG3110	Breakout Board
FRDMKL25-P3115	MPL3115A2	Demonstration Kit
FRDMSTBC-P3115	MPL3115A2	Shield Board
BRKTSTBC-P3115	MPL3115A2	Breakout Board
FRDM-K22F-AGMP03	FXLS8962AF, FXAS21002CQ, MAG3110, MPL3115A2	Demonstration Kit
FRDM-STBC-AGMP03	FXLS8962AF, FXAS21002CQ, MAG3110, MPL3115A2	Shield Board
BRKT-STBC-AGMP03	FXLS8962AF, FXAS21002CQ, MAG3110, MPL3115A2	Breakout Board
FRDMKE06DP5004	MPXV5004DP	Demonstration Kit
BRKTSTBCDP5004	MPXV5004DP	Breakout Board
FRDM-K22F-SA9500	FXLC95000CL	Demonstration Kit
FRDM-STBC-SA9500	FXLC95000CL	Shield Board
BRKT-STBC-SA9500	FXLC95000CL	Breakout Board
935308627598	935307303515; 935307749012; 935308967005	NHS3100 Starter kit for temperature monitoring (also NHS3100 general starter kit)
935308627598	935307865515; 935307926012	NHS3152 General starter kit



WIRELESS

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Part number	802.11 Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded TCP/IP Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Max Application Throughput (Mbps)	Antenna	Package Type / Size (mm)
ENW-49A01A3EF	b/g/n	Integrated Cortex M4	4MByte for Web	UART	Yes; Full IoT Stack	RX -97 dBm / TX + 16 dBm	TX ~ 300mA / RX ~100mA	—	Ceramic	29.0 x 13.5 x 2.66
ENW-49C01A3KF	b/g/n	Integrated Cortex M4	4MByte for Web	UART	Yes; Full IoT Stack	RX -97 dBm / TX + 16 dBm	TX ~ 300mA / RX ~100mA	—	Ceramic	29.0 x 13.5 x 2.66
ENW-49C02A3KF	b/g/n	Integrated Cortex M4	4MByte for Web	UART	Yes; Full IoT Stack	RX -97 dBm / TX + 16 dBm	TX ~ 300mA / RX ~100mA	—	Ceramic	29.0 x 13.5 x 2.66
ENW-49801A1JF	b/g/n	N/A	N/A	USB 2.0 / SDIO	—	RX -98 dBm / TX + 17 dBm	TX ~ 400mA / RX ~105mA	—	Ceramic	22.75 x 13.5 x 2.42



Part number	802.11 Revision	Microcontroller	Flash (MB)	Interface	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx current (mA)	Max Application throughput (Mbps)	Antenna	Package Type / Size (mm)
ATWINC1500-MR210xB1952	bgn	—	4	SPI, UART	-95/17	70/172	10	Chip or PCB or U.FL	21.7 x 14.7 x 2.1
ATWINC1510-MR210xB1952	bgn	—	8	SPI, UART	-95/17	70/172	10	Chip or PCB or U.FL	21.7 x 14.7 x 2.1

x= U, B

IoT Development Kit (IDK)

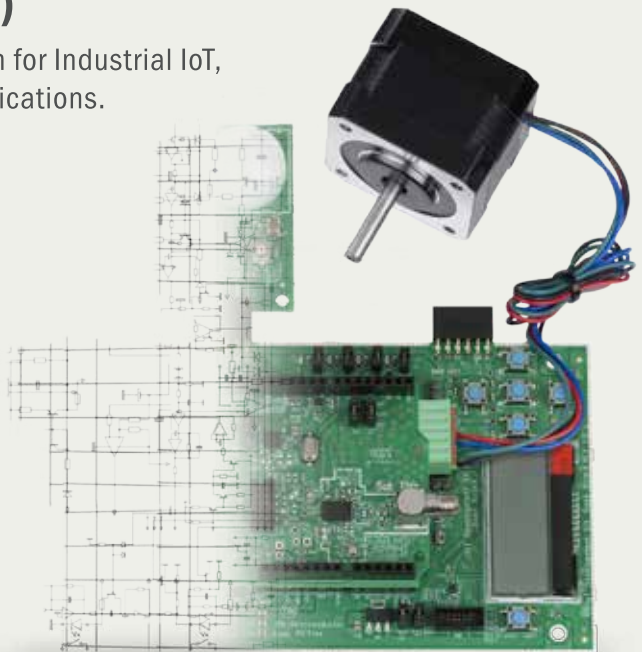
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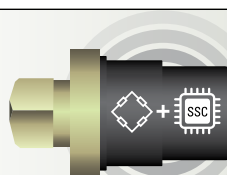
Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
BMD-300-A-R	5.0	Nordic nRF52832	512 kB Flash / 64 kB RAM	UART / I ² C / SPI / PWM / ADC / PDM / I ² S / NFC	Yes	Rx Sensitivity: -96 Tx Power: +4	Rx: 5.4mA Tx: 5.3mA @ 0 dBm	Internal	14.0 x 9.8 x 1.9
BMD-350-A-R	5.0	Nordic nRF52832	512 kB Flash / 64 kB RAM	UART / I ² C / SPI / PWM / ADC / PDM / I ² S / NFC	Yes	Rx Sensitivity: -96 Tx Power: +4	Rx: 5.4mA Tx: 5.3mA @ 0 dBm	Internal	6.4 x 8.65 x 1.5
BMD-301-A-R	5.0	Nordic nRF52832	512 kB Flash / 64 kB RAM	UART / I ² C / SPI / PWM / ADC / PDM / I ² S / NFC	Yes	Rx Sensitivity: -96 Tx Power: +4	Rx: 5.4mA Tx: 5.3mA @ 0 dBm	U.FL	14.0 x 9.8 x 1.9
R41Z-TA-R	4.2	NXP KW41Z	512 kB Flash / 128 kB RAM	UART / SPI / I ² C / PWM / TSI / ADC / DAC	Yes	Rx Sensitivity: -95 Tx Power: +3.5	Rx: 6.7mA Tx: 6.1mA @ 0 dBm	Internal	16.2 x 10.6 x 2.1

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Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
ENW-89823A4KF	4.2	N/A (HCI)	—	UART, GPIOs, PCM	HCI	RX -93/ TX +10	40	Ceramic	9.0 x 9.5 x 1.8
ENW-89837A3KF	4.1	N/A (Embedded)	—	UART, GPIOs	SPP + GATT	RX -89 / TX +4	45 (BR) / 10 (BLE)	Ceramic	15.6 x 8.7 x 1.8
ENW-89837A5KF	4.2	N/A (Embedded)	—	UART, GPIOs	SPP + GATT	RX -89 / TX +4	45 (BR) / 10 (BLE)	Ceramic	15.6 x 8.7 x 1.8
ENW-89847A3KF	4.2	ARM	83KByte RAM / 256KByte FLASH	GPIO, UART, SPI, I ² C, ADC	GATT	RX -93 / TX +0	3.3	Ceramic	15.6 x 8.7 x 1.8
ENW-89848A1KF	4.1 + NFC	ARM	32KByte RAM / 64KByte EEPROM	UART, GPIOs, I ² C, NFC	GATT	RX -93 / TX +0	5.9	Ceramic	15.6 x 8.7 x 1.8
ENW-89846A1KF	4.1	ARM	43KByte RAM / 32KB OTP	GPIO, UART, SPI, I ² C, ADC	GATT	RX -93 / TX +0	4.9	Ceramic	9.0 x 9.5 x 1.8

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 - ATWINC1510 (8 MB Flash)
- Secure IoT reference design available

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Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
SPBTLE-RF0	4.1	—	—	SPI	BLE	-88 / +4	14 / 20	Chip	13 x 11
SPBTLE-RF	4.1	—	—	SPI	BLE	-88 / +4	7.7 / 15	Chip	13 x 11
SPBTLE-1S	4.2	ARM Cortex-M0	160	I ² C/SPI / ADC / 15 GPIO	BLE	-88 / +5	7.7 / 15	Chip	13 x 11



Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
ATBTLC1000-ZR	Bluetooth 4.1	Integrated ARM Cortex-M0	128KB embedded Random Access Memory (RAM) 96 KB available for application 128 KB embedded ROM	UART/ I ² C/ SPI	Yes	-91.5 / 4	5.66 / 4.78	Ceramic Chip	40-pin IC package 5.5 x 4.5 34-pin module package 10.541 x 7.503
RN4870	Bluetooth 4.2	—	—	UART/ I ² C/ SPI	Yes	RX Sensitivity: -90 TX Power: 0	13 / 13	Ceramic Chip or u.FL	Module 12 x 22
RN4871	Bluetooth 4.2	—	—	UART/ I ² C/ SPI	Yes	RX Sensitivity: -90 TX Power: 0	13 / 13	Ceramic Chip or u.FL	Module 9 x 11.5 x 2.1

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Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
NCH-RSL10-101Q48-ABG	BLE 5	ARM® Cortex® M3 Processor	384	GPIOs, LSADs, I ² C, SPI, PCM	—	-94 / 6	3 / 4.6	Match to 50 Ohms	QFN-48



Part number	Bluetooth Version	Microcontroller	Memory: SRAM + EEPROM + FLASH (KB)	Interface	Embedded Stack	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
RFD77101	4.0	ARM Cortex MO	128K user Flash / 24K User RAM	6x ADC inputs, 4x PWM outputs, 2x SPI master/ slave, 2x I ² C, 1 x UART	Yes	-93 receiver sensitivity / +4 TX power	8mA TX @ 0 dBm 12mA TX @ +4 dBm 10mA RX	Yes	7 x 10 x 2



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For more information visit : www.maximintegrated.com/iolink

Part Number	Function	Interface	Description
MAX14819	Master Transceiver	IO-Link	Low-Power, Dual-Channel, IO-Link Master Transceiver + Supply Controllers + UART/Framer + DI
MAX14828	Device Transceiver	IO-Link	Low-Power, Ultra-Small, IO-Link Device Transceiver + DI
MAX14827A	Device Transceiver	IO-Link	Tiny, Low-Power, Dual-Channel, IO-Link Device Transceiver
MAX14838/9	Sensor Driver	Binary	24V/100mA Tiny, Pin-Configurable, Industrial Sensor Output Driver + Protection
MAX14832	Sensor Driver	Binary	24V/100mA Tiny, One-Time-Programmable (OTP), Industrial Sensor Output Driver + Protection
MAX14836	Sensor Driver	Binary	24V Dual-Output Sensor Transceiver





Part number	Bluetooth Version	Microcontroller	Memory: SRAM + FLASH (KB)	Interface	BLE Stack on-board	Rx Sensitivity/ Tx Output Power (dBm)	Rx/ Tx Current (mA)	Antenna	Package Type / Size (mm)
CYBLE-022001-00	4.1	PRoC BLE (Arm Cortex-M0)	16KB + 128KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	Chip	10 x 10
CYBLE-014008-00	4.1	PSoC 4 BLE (Arm Cortex-M0)	16KB+128KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	11 x 11
CYBLE-222005-00	4.1	PRoC BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	Chip	10 x 10
CYBLE-012011-00	4.1	PRoC BLE (Arm Cortex-M0)	16KB + 128KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	14 x 19
CYBLE-012012-10	4.1	PRoC BLE (Arm Cortex-M0)	16KB + 128KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	14 x 19
CYBLE-212019-00	4.1	PRoC BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	14 x 19
CYBLE-212023-10	4.1	PRoC BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	14 x 19
CYBLE-214009-00	4.1	PSoC 4 BLE (Arm Cortex-M0)	32KB+256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	11 x 11
CYBLE-222014-01	4.2	PRoC BLE (Arm Cortex-M0)	32KB +256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	Chip	10 x 10
CYBLE-224110-00	4.1	PSoC 4 BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-95dBm / 9.5dBm	21.9 / 35.6	Chip	9.5 x 15
CYBLE-212020-01	4.2	PRoC BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	14 x 19
CYBLE-212006-01	4.2	PRoC BLE (Arm Cortex-M0)	32KB +256KB	SPI/I2C/UART/I2S	Yes	-93dBm / 7.5dBm	24.4 / 42.6	PCB	15 x 23
CYBLE-202007-01	4.2	PRoC BLE (Arm Cortex-M0)	32KB +256KB	SPI/I2C/UART/I2S	Yes	-93dBm / 7.5dBm	24.4 / 42.6	u.FL External	15 x 23
CYBLE-202013-11	4.2	PRoC BLE (Arm Cortex-M0)	32KB +256KB	SPI/I2C/UART/I2S	Yes	-93dBm / 7.5dBm	24.4 / 42.6	Solder Pad External	15 x 23
CYBLE-224116-01	4.2	PSoC 4 BLE (Arm Cortex-M0)	32KB + 256KB	SPI/I2C/UART/I2S	Yes	-95dBm / 9.5dBm	21.9 / 36	Chip	9.5 x 15
CYBLE-214015-01	4.2	PSoC 4 BLE (Arm Cortex-M0)	32KB +256KB	SPI/I2C/UART/I2S	Yes	-87dBm / 3dBm	16.4 / 15.6	PCB	11 x 11
CYBLE-013025-00	4.1	CYW20737 (Arm Cortex-M3)	60KB + 128KB	SPI/I2C/UART	Yes	-94dBm / 4dBm	TBD / TBD	PCB	14 x 19
CYBLE-013030-00	4.1	CYW20737 (Arm Cortex-M3)	60KB + 128 kB	SPI/I2C/UART	Yes	-94dBm / 4dBm	TBD / TBD	PCB	14 x 19
CYBT-343026-01	5	CYW20706 (Arm Cortex-M3)	384KB + 512KB	SPI/I2C/UART	Yes	-93.5dBm (Classic)/ -12dBm (EDR) -96.5dBm (BLE) / -9dBm (BLE)	26.4 (EDR)/ 52.5 (EDR)	PCB	12 x 15.5
CYBT-413034-02	5	CYW20719	512KB + 1MB	SPI/I2C/UART	Yes	-93dBm / 4dBm	TBD / TBD	PCB	12 x 16
CYBT-233032-12	5	CYW20706 (Arm Cortex-M3)	384KB+256KB	SPI/I2C/UART	Yes	-93.5dBm (Classic) -96.5dBm (BLE) / 4dBm	TBD / TBD	PCB	12 x 17
CYBT-223027-02	5	CYW20706 (Arm Cortex-M3)	384KB + 256KB	SPI/I2C/UART	Yes	-93.5dBm (Classic) -96.5dBm (BLE) / 4dBm	TBD / TBD	PCB	9 x 9
CYBT-473131-02	5	CYW20719	1MB + 512KB	SPI/I2C/UART	Yes	-95dBm / 9.5dBm	TBD / TBD	PCB	12 x 16
CYBT-423028-02	5	CYW20719	512KB+ 1MB	SPI/I2C/UART	Yes	-93dBm / 4dBm	TBD / TBD	PCB	11 x 11



The PAN9420 Series Fully Embedded Stand-Alone Wi-Fi Module Specifically Designed For Highly Integrated And Cost-Effective Applications

Panasonic's PAN9420 Series is a 2.4 GHz 802.11 b/g/n Embedded Wi-Fi Module with integrated stack and API that minimizes firmware development and includes a full security suite. The PAN9420 has integrated memory which is available to the application for storing web content such as HTML pages or image data. Parallel support of access point and infrastructure mode allows easy setup of simultaneous Wi-Fi connections from the PAN9420 to smart devices and home network routers.

Features and Benefits

- Fully Embedded: Integrated Full-Featured Network Stack
- Contains All Necessary IoT Functionality (Place & Play)
- Integrated Webserver with AJAX/JSON for Web Applications
- No Stack or Software Implementation Needed on a Host MCU
- Simultaneous Support Of Access-Point and Infrastructure Mode
- Fully Automatic IP Configuration



Part number	Frequency (MHz)	Output Power (dBm)	Sensitivity (dBm)	Interface	Rx Current (mA)	Tx Current (mA)	Class	Range	Package Type / Size (mm)
MTDOT-915-X1-SMA-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-X1P-SMA-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-AU-X1-SMA-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-AU-X1P-SMA-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-X1-UFL-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-AU-X1-UFL-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-M1-UFL-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-AU-M1-UFL-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-M1-TRC-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-915-AU-M1-TRC-1	860 to 1020	19	-130	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-868-X1-SMA-1	860 to 1020	14	-137	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-868-X1P-SMA-1	860 to 1020	14	-137	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3

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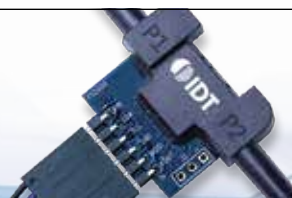
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Part number	Frequency (MHz)	Output Power (dBm)	Sensitivity (dBm)	Interface	Rx Current (mA)	Tx Current (mA)	Class	Range	Package Type / Size (mm)
MTDOT-868-X1-UFL-1	860 to 1020	14	-137	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-868-M1-UFL-1	860 to 1020	14	-137	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTDOT-868-M1-TRC-1	860 to 1020	14	-137	Up to 21 Digital I/O, Up to 11 Analog Inputs, SPI, I2C, UART (RX, TX, RTS, CTS)	43	130 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 25.5 x 37.3
MTXDOT-NA1-A00-1	860 to 1020	19	-137	Up to 19 Digital I/O, 11 Analog Inputs, 2 DAC Outputs, I2C, SPI, Wake Pin, Reset Pin, Full UART, MBED/simple UART (RX & TX only), MBED Programming Interface	26.8	120 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 23.6 x 23.6
MTXDOT-AU1-A00-1	860 to 1020	19	-137	Up to 19 Digital I/O, 11 Analog Inputs, 2 DAC Outputs, I2C, SPI, Wake Pin, Reset Pin, Full UART, MBED/simple UART (RX & TX only), MBED Programming Interface	26.8	120 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 23.6 x 23.6
MTXDOT-EU1-A00-1	860 to 1020	14	-137	Up to 19 Digital I/O, 11 Analog Inputs, 2 DAC Outputs, I2C, SPI, Wake Pin, Reset Pin, Full UART, MBED/simple UART (RX & TX only), MBED Programming Interface	26.8	120 max	A,C	Up to 10 miles / 15 km line-of-sight and 1-3 miles / 2 km into buildings	RF Module 23.6 x 23.6

Part number	Frequency (MHz)	Output Power (dBm)	Sensitivity (dBm)	Interface	Rx Current (mA)	Tx Current (mA)	Class	Range	Package Type / Size (mm)
RN2903	915	18.5	-146	UART	13.5	124	A	Up to 15 km coverage at suburban and up to 5 km coverage at urban area	17.8 x 26.7 x 3

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Developer Kit



MultiConnect®
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Developer Kits & Support

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MultiConnect® xDot™
Micro Developer Kit



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Part number	Cellular Technology	Certified Regions/ Carriers	Data Speed [DL/UL]	Interfaces	Satellite Systems	Rx Sensitivity / Tx Output Power (dBm)	Average current measured at mAx Power (A)	Operating Temperature (°C)	Package Type / Size (mm)
MTQ-LAT3-B01	4G-LTE Cat 1 w/HSPA+ 21 fallback	AT&T, T-Mobile, Aeris (Bell, Rogers: Pending)	LTE: 10 Mbps peak DL/5 Mbps peak UL HSPA+: Up to 21 Mbps downlink/5.76 Mbps uplink	2 UFL (Cellular, Rx Diversity/MIMO) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	N/A	Varies by cellular band	540 mA	-40 to +85	SoM 58.4 x 34.9
MTQ-LAT3-B02	4G-LTE Cat 1 w/HSPA+ 21 fallback	AT&T, T-Mobile, Aeris (Bell, Rogers: Pending)	LTE: 10 Mbps peak DL/5 Mbps peak UL HSPA+: Up to 21 Mbps downlink/5.76 Mbps uplink	2 UFL (Cellular, Rx Diversity/MIMO) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	N/A	Varies by cellular band	510 mA	-40 to +85	Embedded Modem 58.4 x 34.9
MTQ-LVW3-B01	4G-LTE Cat 1, no fallback	Verizon	10 Mbps peak DL/5 Mbps peak UL	2 UFL (Cellular, Rx Diversity/MIMO) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	N/A	Varies by cellular band	462 mA	-40 to +85	SoM 58.4 x 34.9
MTQ-LVW3-B02	4G-LTE Cat 1, no fallback	Verizon	10 Mbps peak DL/5 Mbps peak UL	2 UFL (Cellular, Rx Diversity/MIMO) 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	N/A	Varies by cellular band	450 mA	-40 to +85	Embedded Modem 58.4 x 34.9
MTQ-H5-B01	HSPA+	AT&T, T-Mobile, Aeris (Bell, Rogers: Pending)	Up to 21 Mbps downlink/5.76 Mbps uplink	3 UFL (Cellular, Rx Diversity & GPS), 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	GPS	Varies by cellular band	635 mA	-40 to +85	SoM 58.4 x 34.9
MTQ-H5-B02	HSPA+	AT&T, T-Mobile, Aeris (Bell, Rogers: Pending)	Up to 21 Mbps downlink/5.76 Mbps uplink	3 UFL (Cellular, Rx Diversity & GPS), 1xMicro USB, 1x 40-Pin Board-to-Board, 1xMicro SIM	GPS	Varies by cellular band	676 mA	-40 to +85	Embedded Modem 58.4 x 34.9



ARM® mbed™ Cellular SoM for IoT Applications

The MultiConnect® Dragonfly™ is a ready-to-integrate, end-device certified system-on-module with a programmable computing platform



Evaluation Board Part Number	Related Part Number	Description
MTUDK2-ST-MDOT	MTDOT-915-xx and MTDOT-868-xx	MultiConnect mDot developer kit; includes antenna and USB cable.
MTMDK-ST-MDOT	MTDOT-915-xx and MTDOT-868-xx	MultiConnect mDot Micro developer kit; includes dev board and LoRa antenna.
MTMDK-XDOT-NA1-A00	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	MultiConnect xDot Micro developer kit; includes 915 MHz xDot
MTMDK-XDOT-EU1-A00	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	MultiConnect xDot Micro developer kit; includes 868 MHz xDot
MTMDK-XDOT-AU1-A00	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	MultiConnect xDot Micro developer kit; includes AU915 MHz xDot
MTDOT-BOX-G-868-B	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	LoRa Evaluation and Site Survey Box w/GPS & Micro developer kit; includes 868 MHz mDot Box & MTMDK-ST-MDOT Micro Dev Kit & LoRa antenna
MTDOT-BOX-G-915-B	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	LoRa Evaluation and Site Survey Box w/GPS & Micro developer kit; includes 915 MHz mDot Box & MTMDK-ST-MDOT Micro Dev Kit & LoRa antenna
MTDOT-BOX-G-915-AU-B	MultiConnect Conduit LoRa Gateways (MTCDDT-xx models)	LoRa Evaluation and Site Survey Box w/GPS & Micro developer kit; includes AU915 MHz mDot Box, MTMDK-ST-MDOT Micro Dev Kit & LoRa antenna
MTUDK2-ST-CELL	MTQ-LAT3-xx, MTQ-LWV3-xx and MTQ-H5-xx	SocketModem & Dragonfly developer kit - Cellular. Accessories included, modem sold separately.
BMD-300-EVAL	BMD-300-A-R	Evaluation board for the BMD-300 module
BMD-340-EVAL	BMD-340-A-R	Evaluation board for the BMD-350 module
R41Z-EVAL	R41Z-TA-R	Evaluation board for the R41Z module

IoT Starter Kit for LoRa[®] Technology

Quickly get your proof of concept up, running and connected to the cloud – all in one box

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- Includes components for connecting edge sensors to the Cloud
- Remotely configure and optimize the Conduit through DeviceHQ[®]





Evaluation Board Part Number	Related Part Number	Description
BMD-300-EVAL	BMD-300-A-R	Evaluation board for the BMD-300 module
BMD-340-EVAL	BMD-340-A-R	Evaluation board for the BMD-350 module
R41Z-EVAL	R41Z-TA-R	Evaluation board for the R41Z module

Panasonic

Evaluation Board Part Number	Related Part Number	Description
ENW49A01AYEF	PAN9320 EMK	1x Motherboard, 1x USB-Stick, Manual, 1x USB-Cable in a large plastic case FCC Version
ENW49A01AZE	PAN9320 ETU	ETU FCC Version
ENW49C01AYKF	PAN9420 EMK	1x Motherboard, 1x USB-Stick, Manual, 1x USB-Cable in a large plastic case FCC Version
ENWF9201AYEF	PAN9026 KIT	2 x USB-Stick
ENW89819AYKF	PAN1326C EMK	1x 1326C ETU, 1x Texas Instruments Development board for PAN1326C Adapter board if needed + Launch Pad
ENW89837AVKF	PAN1026 EMK	J-Link lite Adapter USB-Cable1026 Evaluation board
ENW89837AYKF	PAN1026 KIT	2 x USB-Stick
ENW89837AWKF	PAN1026A EMK	J-Link lite Adapter USB-Cable 1026A Evaluation board
ENW89837AUKF	PAN1026A KIT	2 x USB-Stick
ENW89847AWKF	PAN1760A KIT	2 x USB-Stick
ENW89848AVKF	PAN1761 EMK	J-Link lite Adapter USB-Cable 1761 Evaluation board NFC-Antenna
ENW89846AVKF	PAN1740 EMK	1x Dialog Pro Kit (Motherboard), 3x PAN1740 Daughter board, 1x USB-Stick, 1x USB-Cable, Battery
ENW89846AWKF	PAN1740	Daughter board (Adapter board)
ENW89846AYKF	PAN1740 KIT	2 x USB-Stick
ENW89849AYKF	PAN1740 Beacon EMK	5x Beacon mit Connector, 1x Dialog Pro Kit, 1x Adapter board f. flat cable, 1x flat cable



Evaluation Board Part Number	Related Part Number	Description
ATWINC1500-XPRO	ATWINC1500	Extension board to the Xplained Pro evaluation platform



Evaluation Board Part Number	Related Part Number	Description
STEVAL-STLKT01V1	BlueNRG-MS	SensorTile kit
STEVAL-STLCS02V1	BlueNRG-MS	SensorTile board
X-NUCLEO-IDB04A1	BlueNRG-MS	STM32 Nucleo BlueNRG Expansion board
X-NUCLEO-IDB05A1	SPBTLE-RF	STM32 BTLE Module Expansion board
X-NUCLEO-IDW01M1	SPWF01SA/SC	STM32 Nucleo Board w/SPWF01
X-NUCLEO-IDW04A1	SPWF04SA/SC	STM32 Nucleo Board w/SPWF04
STEVAL-IDB007V1	BlueNRG-132/134	BlueNRG-1 evalkit
STEVAL-IDB008V1	BlueNRG-232/234	BlueNRG-2 evalkit
STEVAL-IDB007V1M	SPBTLE-1S	BlueNRG-1 Module evalkit

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Evaluation Board Part Number	Related Part Number	Description
RSL10-002GEVB	RSL10	Radio SoC Evaluation Board (QFN)
RSL10-US8001GEVK	RSL10	USB Evaluation Dongle
RSL10-002GEVK	RSL10	Board and Dongle Evaluation Kit



Evaluation Board Part Number	Related Part Number	Description
RFD77807	ENS210 / RFD77310	Simblee Connected ams ENS210 Humidity and Temperature kit
RFD77808	TMG4903 / RFD77311	Simblee Connected ams TMG4903 color and proximity kit
RFD77809	CCS811/RFD77312	Simblee Connected ams CCS811 Indoor Air Quality kit
RFD77810	AS6200/RFD77313	Simblee Connected ams AS6200 Precision temperature kit

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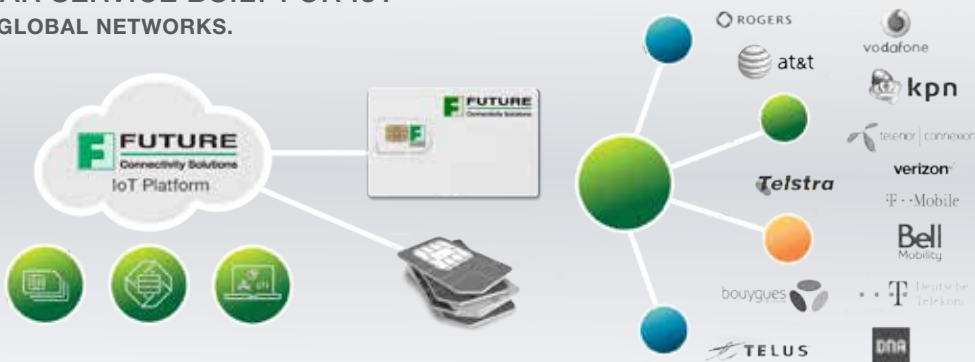
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Bosch Sensortec	✓		✓		✓		✓		
Crocus Technology									
Cypress									
DIGI									
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FLIR									✓
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Infineon		✓							
Laird									
Maxim Integrated				✓		✓		✓	
Melexis Technologies									✓
Merit Sensors									
Microchip									
Multitech									
Murata	✓	✓					✓		
NXP Semiconductors	✓						✓		
ON Semiconductor								✓	✓
Panasonic	✓								
Qualcomm									
RedPine Systems									
Renesas									
Rigado									
Rohm	✓			✓			✓		✓
Semtech									
Sensirion			✓			✓		✓	
Sierra Wireless									
Silex									
ST MicroElectronics	✓	✓					✓	✓	
TE Sensor Solutions	✓				✓	✓	✓	✓	
Truly									✓
Vishay				✓					

SOLUTION SELECTOR	
Inertial Combo	
Light / Color	
Magnetic Hall	
Occupancy / Motion	
Optical Combo	
Position / Speed	
Pressure	
Proximity	
Temperature	

WIRELESS

- WiFi
- LoRa
- Bluetooth
- Cellular

Inertial Combo	Light / Color	Magnetic Hall	Occupancy / Motion	Optical Combo	Position / Speed	Pressure	Proximity	Temperature	WiFi	LoRa	Bluetooth	Cellular
						✓		✓				
	✓	✓		✓	✓		✓	✓				
✓						✓						
		✓										
							✓		✓		✓	
		✓										✓
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✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	
	✓						✓	✓			✓	
	✓		✓			✓		✓	✓		✓	
									✓		✓	
	✓			✓							✓	
						✓	✓	✓		✓		
									✓		✓	✓
✓		✓		✓		✓	✓	✓	✓		✓	
					✓	✓		✓				
	✓	✓		✓	✓		✓	✓				



NEBULA IoT

REFERENCE DESIGN BOARD

As an innovative industry leader, Future Electronics has partnered with Cypress and Murata to develop this reference board to assist with our customers' IoT needs.

- Wireless connectivity is supported by the Murata 1DX module which houses the Cypress-based CYW4343W Wi-Fi and Bluetooth Classic (BR/EDR)/BLE chipset radio.
- Nebula contains an STM32F429, an ARM Cortex-M4, with 32 bit RISC core, 2MB Flash and up to 256kB SRAM.
- Nebula supports application development through Cypress' WICED® (Wireless Internet Connectivity for Embedded Devices) platform.
- The board is equipped with 4 different interfaces to access the STM32F429 peripherals to enable developers to create any IoT application: Arduino™ Compatible Shield, mikro BUS™ Socket, Pmod™ Type 2A, USB Device.
- Nebula explores easy hardware expandability through a large number of standardized add-on boards via these connectors.



NEB1DX-01

To purchase a **Nebula board** go to:
www.futureelectronics.com/nebula





www.FutureElectronics.com/Sensors

