

MACRONIX

IoT Solutions

IoT (Internet of Things) is a technological revolution that will change human history through innovation. It is projected that by 2025 there will have been nearly 31 billion IoT devices produced. The reason for this massive growth is due to never before seen advancements that these solutions support. With IoT, solutions across industries: in automotive, medical, industrial, etc. now possess the ability to create an ecosystem. The notion of autonomous driving, wearable devices that can autonomously track a patient's health and deliver medicine, and safer manufacturing facilities are all potentially in our future thanks to IoT.

As IoT becomes more sophisticated, system engineers are faced with challenges like key requirements for lower power consumption and smaller form factor. As well, there is an increasing concern with potential security vulnerability that comes with a data sharing ecosystem model.

With over three decades of nonvolatile memory experience, Macronix is well aligned with the IoT market and is aware of these challenges. Therefore, Macronix has developed a series of flash memory solutions that addresses these barriers and strives to support the progress of networking protocols like RoLa, SigFox, BT/BLE, NB-IoT and CAT-Mx, etc. We endeavor to demonstrate our vision of providing advanced product solutions to exceed our customer's evolving flash memory requirements.



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Macronix Flash Solutions for IoT Applications

Product	Vcc.	Density	Features	Bus Width	Form Factor
Serial NOR Flash					
MX25/66U	1.8V	512Kb-2Gb	Multi I/O	x1, x2, x4	SOP, SON, BGA, WLCSP, KGD(*)
MX25/66UM	1.8V	256Mb-2Gb	Octa Peripheral Interface (OPI)	x1, x8	SOP, BGA
MX25/66UW	1.8V	64Mb-2Gb	Octa I/O, DTR, RWW(**)	x1, x8	SOP, BGA, TFBGA KGD(*)
MX25R	1.65V-3.6V	512Kb-64Mb	Multi I/O Ultra Low Power	x1, x2, x4	SOP, SON WLCSP, KGD(*)
MX25S	1.14V-1.6V	16Mb-128Mb	Multi I/O, Ultra Low Vcc	x1,x2, x4	SOP, SON WLCSP, KGD(*)

Note: *KGD : Known Good Die

**RWW : Read-While-Write function

Wide Range Vcc Flash: MX25R Series

- ✓ Ultra-Low Power Consumption
- ✓ Ultra-Low Deep Power Down Current : 7nA
- ✓ Ultra-Low Active Current : 3.5mA
- ✓ Wide Range Vcc: 1.65V-3.6V
- ✓ Volatile bit to switch between Ultra Low Power Mode and High Performance Mode

1.2V Serial NOR Flash: MX25S Series

- ✓ Ultra-Low Deep Power Down Current : 25nA
- ✓ Ultra-Low Active Current : 0.8mA
- ✓ Support 1.14V-1.6V
- ✓ Support 120MHz/133MHz Read Frequency
- ✓ Volatile bit to switch between Ultra Low Power Mode and High Performance Mode



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