



## Product Change Notification - SYST-07YGCW636

---

**Date:**

08 Aug 2019

**Product Category:**

Development Tools; 32-bit Microcontrollers

**Affected CPNs:**



**Notification subject:**

ERRATA - SAM G55 Series Family Silicon Errata and Data Sheet Clarifications

**Notification text:**

SYST-07YGCW636

Microchip has released a new DeviceDoc for the SAM G55 Series Family Silicon Errata and Data Sheet Clarifications of devices. If you are using one of these devices please read the document located at [SAM G55 Series Family Silicon Errata and Data Sheet Clarifications](#).

**Notification Status:** Final

**Description of Change:**

1) This is the initial released version of this document.

**Impacts to Data Sheet:** None

**Reason for Change:** To Improve Productivity

**Change Implementation Status:** Complete

**Date Document Changes Effective:** 08 Aug 2019

**NOTE:** Please be advised that this is a change to the document only the product has not been changed.

**Markings to Distinguish Revised from Unrevised Devices:** N/A

**Attachment(s):**

[SAM G55 Series Family Silicon Errata and Data Sheet Clarifications](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

**Terms and Conditions:**

If you wish to [receive Microchip PCNs via email](#) please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

If you wish to [change your PCN profile, including opt out](#), please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

---

---

## SAM G55 Series Family Silicon Errata and Data Sheet Clarification

---

---

The SAM G55 Series family of devices that you have received conform functionally to the current Device Data Sheet (Atmel-11289F-ATARM-SAM-G55G-SAM-G55J-Datasheet\_27-May-16), except for the anomalies described in this document.

### New Silicon Errata Issues

**Note:** This document provides information on new errata issues for the SAM G55 Series of devices. Please refer to the current device data sheet for all pre-existing silicon errata issues.

There are no new silicon errata to report at this time.

# SAM G55 SERIES

---

## Data Sheet Clarifications

The following typographic corrections and clarifications are to be noted for the latest version of the Device Data Sheet (Atmel-11289F-ATARM-SAM-G55G-SAM-G55J-Datasheet\_27-May-16).

Corrections in tables and paragraphs are shown in **bold**. Where possible, the original bold text formatting has been removed for the clarity.

### 1. Module: Bootloader

Chapter 7 “Bootloader” has new verbiage for the NRST line. The newly added text is shown in bold.

The SAM G55 devices ship with a factory-programmed bootoader in Flash. The Flash loader downloads code either through the SPI or through the TWI0.

The Bootloader mode is entered automatically on power-up if no valid firmware is detected in the Flash. A valid firmware is detected by performing a CRC on the content of the Flash. If the CRC is correct, the application is started. Otherwise, the Bootloader mode is entered.

**Alternatively, the Bootloader mode can be forced by applying 10 low pulses of 1 ms on the NRST line (with a period of 10 ms max). When the bootloader detects this sequence, it asserts the pin PA01 (NCHG) low as an acknowledge.**

The Bootloader mode initializes the TWI0 in Slave Mode with the I<sup>2</sup>C address 0x26 and the SPI in Slave Mode, 8-bit data length, SPI Mode 1.

### 2. Module: CCFG\_USBMR Register

In the current data sheet section 15.9.7, the PLLFREQADJUST bit is missing from the register description. This bit occupies a bit offset of 4 as shown below.

**PLLFREQADJUST: USB PLL output automatic synchronization**

**0:USB PLL clock is not adjust**

**1:USB PLL output is automatically adjust at 48 MHz +/-0.25% whatever the internal 32 KHz accuracy.**

### 3. Module: CKGR\_PLLAR Register

In the current data sheet section 18.20.9, the MULA bit field for the CKGR\_PLLAR register extends from bit 16 to bit 27. The corrected bit field extends from bit 16 to bit 28.

### 4. Module: CKGR\_PLLBR Register

In the current data sheet, the MULB bit field for the CKGR\_PLLBR register extends from bit field 16 to 26. The corrected bit field extended from 16 to 27.

### 5. Module: PMC\_PMMR Register

In the current data sheet Section 18.20.32, the PLLA\_MMAX bit field for the PMC\_PMMR register extends from bit 0 to bit 10. The corrected bit field extends from bit 0 to bit 12.

### 6. Module: PMC\_PMMR Register

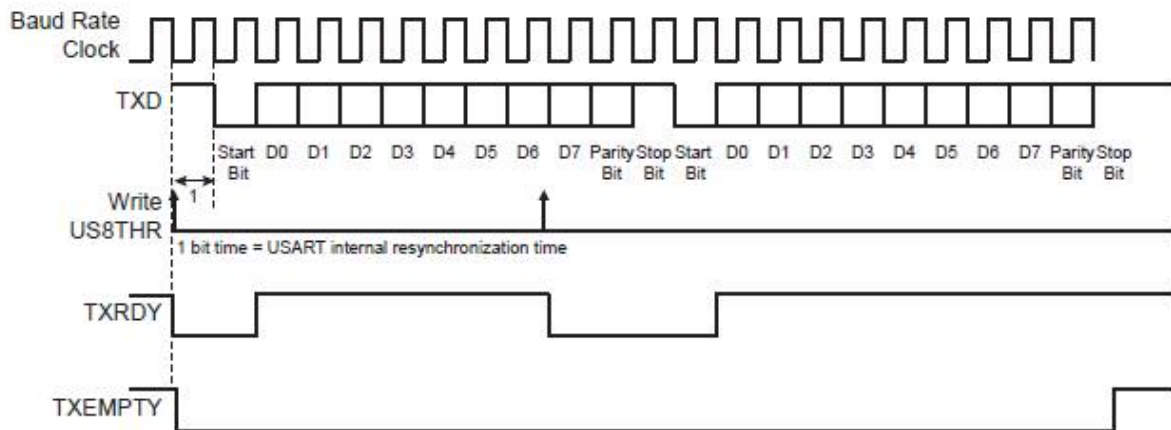
In the current data sheet Section 18.20.32, the PLLB\_MMAX bit field for the PMC\_PMMR register extends from bit 16 to bit 26. The corrected bit field extends from bit 16 to bit 27.

### 7. Module: I2SC\_MR Register

The table for the FORMAT bit in the Section 33.8.2 is incorrect and lists Left-Justified format. This format is not supported for this device.

## 8. Module: Transmitter Operations

Figure 30-6 is incorrect. The corrected figure is as follows:



## 9. Module: Multidrop Mode

In the Section 30.6.3.6, the bit name SENTA is incorrect. The corrected name is SENDA.

## 10. Module: ISO7816 Mode Overview

The last paragraph of the Section 30.6.4.1 has erroneous text. The corrected text is given in bold.

**When operating in ISO7816, either in T = 0 or T = 1 modes, the character format is fixed. The configuration is 8 data bits and 1 or 2 stop bits, regardless of the values programmed in the Mode register fields CHRL, MODE9 and CHMODE. MSBF can be used to transmit LSB or MSB first. The Parity (PAR) bit can be used to transmit in normal or inverse mode. Refer to Section 31.7.3 "USART Mode Register" and "PAR: Parity Type".**

## 11. Module: US\_RTOR Register

In the Section 30.7.20, the TimeOut (TO) bit information is incomplete, hence the following information has been added.

**TimeOut (TO) value is 17 bits for USART, which supports all modes including LIN Mode.**

**16 bits for USART which supports all modes.**

**8 bits for USART which does not support ISO7816.**

## 12. Module: US\_LINMR Register

The following sentence in the Section 30.7.25 has an error and should be disregarded:

This register can only be written if the WPEN bit is cleared in the USART Write Protection Mode Register.

# SAM G55 SERIES

---

## APPENDIX A: REVISION HISTORY

Revision A Document (07/2019)

This is the initial released version of this document.

---

**Note the following details of the code protection feature on Microchip devices:**

- Microchip products meet the specification contained in their particular Microchip Data Sheet.
- Microchip believes that its family of products is one of the most secure families of its kind on the market today, when used in the intended manner and under normal conditions.
- There are dishonest and possibly illegal methods used to breach the code protection feature. All of these methods, to our knowledge, require using the Microchip products in a manner outside the operating specifications contained in Microchip's Data Sheets. Most likely, the person doing so is engaged in theft of intellectual property.
- Microchip is willing to work with the customer who is concerned about the integrity of their code.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of their code. Code protection does not mean that we are guaranteeing the product as “unbreakable.”

Code protection is constantly evolving. We at Microchip are committed to continuously improving the code protection features of our products. Attempts to break Microchip's code protection feature may be a violation of the Digital Millennium Copyright Act. If such acts allow unauthorized access to your software or other copyrighted work, you may have a right to sue for relief under that Act.

---

Information contained in this publication regarding device applications and the like is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure that your application meets with your specifications. MICROCHIP MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, STATUTORY OR OTHERWISE, RELATED TO THE INFORMATION, INCLUDING BUT NOT LIMITED TO ITS CONDITION, QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS FOR PURPOSE. Microchip disclaims all liability arising from this information and its use. Use of Microchip devices in life support and/or safety applications is entirely at the buyer's risk, and the buyer agrees to defend, indemnify and hold harmless Microchip from any and all damages, claims, suits, or expenses resulting from such use. No licenses are conveyed, implicitly or otherwise, under any Microchip intellectual property rights unless otherwise stated.

### Trademarks

The Microchip name and logo, the Microchip logo, Adaptec, AnyRate, AVR, AVR logo, AVR Freaks, BesTime, BitCloud, chipKIT, chipKIT logo, CryptoMemory, CryptoRF, dsPIC, FlashFlex, flexPWR, HELDO, IGLOO, JukeBlox, KeeLoq, Klear, LANCheck, LinkMD, maXStylus, maXTouch, MediaLB, megaAVR, Microsemi, Microsemi logo, MOST, MOST logo, MPLAB, OptoLyzer, PackeTime, PIC, picoPower, PICSTART, PIC32 logo, PolarFire, Prochip Designer, QTouch, SAM-BA, SenGenuity, SpyNIC, SST, SST Logo, SuperFlash, Symmetricom, SyncServer, Tachyon, TempTracker, TimeSource, tinyAVR, UNI/O, Vectron, and XMEGA are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

APT, ClockWorks, The Embedded Control Solutions Company, EtherSynch, FlashTec, Hyper Speed Control, HyperLight Load, IntelliMOS, Libero, motorBench, mTouch, Powermite 3, Precision Edge, ProASIC, ProASIC Plus, ProASIC Plus logo, Quiet-Wire, SmartFusion, SyncWorld, Temux, TimeCesium, TimeHub, TimePictra, TimeProvider, Vite, WinPath, and ZL are registered trademarks of Microchip Technology Incorporated in the U.S.A.

Adjacent Key Suppression, AKS, Analog-for-the-Digital Age, Any Capacitor, AnyIn, AnyOut, BlueSky, BodyCom, CodeGuard, CryptoAuthentication, CryptoAutomotive, CryptoCompanion, CryptoController, dsPICDEM, dsPICDEM.net, Dynamic Average Matching, DAM, ECAN, EtherGREEN, In-Circuit Serial Programming, ICSP, INICnet, Inter-Chip Connectivity, JitterBlocker, KlearNet, KlearNet logo, memBrain, Mindi, MiWi, MPASM, MPF, MPLAB Certified logo, MPLIB, MPLINK, MultiTRAK, NetDetach, Omniscient Code Generation, PICDEM, PICDEM.net, PICkit, PICtail, PowerSmart, PureSilicon, QMatrix, REAL ICE, Ripple Blocker, SAM-ICE, Serial Quad I/O, SMART-I.S., SQI, SuperSwitcher, SuperSwitcher II, Total Endurance, TSHARC, USBCheck, VariSense, ViewSpan, WiperLock, Wireless DNA, and ZENA are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

SQTP is a service mark of Microchip Technology Incorporated in the U.S.A.

The Adaptec logo, Frequency on Demand, Silicon Storage Technology, and Symmcom are registered trademarks of Microchip Technology Inc. in other countries.

GestIC is a registered trademark of Microchip Technology Germany II GmbH & Co. KG, a subsidiary of Microchip Technology Inc., in other countries.

All other trademarks mentioned herein are property of their respective companies.

© 2019, Microchip Technology Incorporated, All Rights Reserved.

ISBN: 978-1-5224-4794-8

For information regarding Microchip's Quality Management Systems, please visit [www.microchip.com/quality](http://www.microchip.com/quality).



# MICROCHIP

## Worldwide Sales and Service

### AMERICAS

**Corporate Office**  
2355 West Chandler Blvd.  
Chandler, AZ 85224-6199  
Tel: 480-792-7200  
Fax: 480-792-7277  
Technical Support:  
<http://www.microchip.com/support>  
Web Address:  
[www.microchip.com](http://www.microchip.com)

**Atlanta**  
Duluth, GA  
Tel: 678-957-9614  
Fax: 678-957-1455

**Austin, TX**  
Tel: 512-257-3370

**Boston**  
Westborough, MA  
Tel: 774-760-0087  
Fax: 774-760-0088

**Chicago**  
Itasca, IL  
Tel: 630-285-0071  
Fax: 630-285-0075

**Dallas**  
Addison, TX  
Tel: 972-818-7423  
Fax: 972-818-2924

**Detroit**  
Novi, MI  
Tel: 248-848-4000

**Houston, TX**  
Tel: 281-894-5983

**Indianapolis**  
Noblesville, IN  
Tel: 317-773-8323  
Fax: 317-773-5453  
Tel: 317-536-2380

**Los Angeles**  
Mission Viejo, CA  
Tel: 949-462-9523  
Fax: 949-462-9608  
Tel: 951-273-7800

**Raleigh, NC**  
Tel: 919-844-7510

**New York, NY**  
Tel: 631-435-6000

**San Jose, CA**  
Tel: 408-735-9110  
Tel: 408-436-4270

**Canada - Toronto**  
Tel: 905-695-1980  
Fax: 905-695-2078

### ASIA/PACIFIC

**Australia - Sydney**  
Tel: 61-2-9868-6733

**China - Beijing**  
Tel: 86-10-8569-7000

**China - Chengdu**  
Tel: 86-28-8665-5511

**China - Chongqing**  
Tel: 86-23-8980-9588

**China - Dongguan**  
Tel: 86-769-8702-9880

**China - Guangzhou**  
Tel: 86-20-8755-8029

**China - Hangzhou**  
Tel: 86-571-8792-8115

**China - Hong Kong SAR**  
Tel: 852-2943-5100

**China - Nanjing**  
Tel: 86-25-8473-2460

**China - Qingdao**  
Tel: 86-532-8502-7355

**China - Shanghai**  
Tel: 86-21-3326-8000

**China - Shenyang**  
Tel: 86-24-2334-2829

**China - Shenzhen**  
Tel: 86-755-8864-2200

**China - Suzhou**  
Tel: 86-186-6233-1526

**China - Wuhan**  
Tel: 86-27-5980-5300

**China - Xian**  
Tel: 86-29-8833-7252

**China - Xiamen**  
Tel: 86-592-2388138

**China - Zhuhai**  
Tel: 86-756-3210040

### ASIA/PACIFIC

**India - Bangalore**  
Tel: 91-80-3090-4444

**India - New Delhi**  
Tel: 91-11-4160-8631

**India - Pune**  
Tel: 91-20-4121-0141

**Japan - Osaka**  
Tel: 81-6-6152-7160

**Japan - Tokyo**  
Tel: 81-3-6880-3770

**Korea - Daegu**  
Tel: 82-53-744-4301

**Korea - Seoul**  
Tel: 82-2-554-7200

**Malaysia - Kuala Lumpur**  
Tel: 60-3-7651-7906

**Malaysia - Penang**  
Tel: 60-4-227-8870

**Philippines - Manila**  
Tel: 63-2-634-9065

**Singapore**  
Tel: 65-6334-8870

**Taiwan - Hsin Chu**  
Tel: 886-3-577-8366

**Taiwan - Kaohsiung**  
Tel: 886-7-213-7830

**Taiwan - Taipei**  
Tel: 886-2-2508-8600

**Thailand - Bangkok**  
Tel: 66-2-694-1351

**Vietnam - Ho Chi Minh**  
Tel: 84-28-5448-2100

### EUROPE

**Austria - Wels**  
Tel: 43-7242-2244-39  
Fax: 43-7242-2244-393

**Denmark - Copenhagen**  
Tel: 45-4450-2828  
Fax: 45-4485-2829

**Finland - Espoo**  
Tel: 358-9-4520-820

**France - Paris**  
Tel: 33-1-69-53-63-20  
Fax: 33-1-69-30-90-79

**Germany - Garching**  
Tel: 49-8931-9700

**Germany - Haan**  
Tel: 49-2129-3766400

**Germany - Heilbronn**  
Tel: 49-7131-72400

**Germany - Karlsruhe**  
Tel: 49-721-625370

**Germany - Munich**  
Tel: 49-89-627-144-0  
Fax: 49-89-627-144-44

**Germany - Rosenheim**  
Tel: 49-8031-354-560

**Israel - Ra'anana**  
Tel: 972-9-744-7705

**Italy - Milan**  
Tel: 39-0331-742611  
Fax: 39-0331-466781

**Italy - Padova**  
Tel: 39-049-7625286

**Netherlands - Drunen**  
Tel: 31-416-690399  
Fax: 31-416-690340

**Norway - Trondheim**  
Tel: 47-7288-4388

**Poland - Warsaw**  
Tel: 48-22-3325737

**Romania - Bucharest**  
Tel: 40-21-407-87-50

**Spain - Madrid**  
Tel: 34-91-708-08-90  
Fax: 34-91-708-08-91

**Sweden - Gothenberg**  
Tel: 46-31-704-60-40

**Sweden - Stockholm**  
Tel: 46-8-5090-4654

**UK - Wokingham**  
Tel: 44-118-921-5800  
Fax: 44-118-921-5820

## SYST-07YGCW636 - ERRATA - SAM G55 Series Family Silicon Errata and Data Sheet Clarifications

### Affected Catalog Part Numbers(CPN)

ATSAMG55-XPRO  
ATSAMG55G19A-UUT  
ATSAMG55G19A-UUTRRC  
ATSAMG55G19B-UNT  
ATSAMG55G19B-UUT  
ATSAMG55J19A-AU  
ATSAMG55J19A-AUT  
ATSAMG55J19A-MU  
ATSAMG55J19A-MUT  
ATSAMG55J19A-MUT-836  
ATSAMG55J19A-MUTN01  
ATSAMG55J19B-AU  
ATSAMG55J19B-AUT  
ATSAMG55J19B-MU  
ATSAMG55J19B-MUT  
ATSAMG55J19B-MUT-836