



# ATmega8A

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## ATmega8A Silicon Errata and Data Sheet Clarification

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### Introduction

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The ATmega8A devices you have received conform functionally to the current device data sheet (<http://www.microchip.com/DS40001974>), except for the anomalies described in this document. The errata described in this document will likely be addressed in future revisions of the ATmega8A devices.

**Note:**

- This document summarizes all the silicon errata issues from all revisions of silicon, previous as well as current

### 1. Silicon Issue Summary

#### Legend

- Erratum is not applicable.
- X** Erratum is applicable.
- \* This silicon revision was never released to production.

Peripheral	Short Description	Valid for Silicon Revision			
		Rev. A-K	Rev. L	Rev. M	Rev. N
AC	Analog Comparator Initial Operation May Be Slow	*	X	*	X
TC2	Interrupts May Be Lost When Writing the Timer Registers in the Asynchronous Timer	*	X	*	X
Device	Signature May Be Erased in Serial Programming Mode	*	X	*	X
	Reading EEPROM by Using ST or STS to Set EERE Bit Triggers an Unexpected Interrupt Request	*	X	*	X

## 2. Silicon Errata Issues

### 2.1 Errata Details

- Erratum is not applicable.
- X** Erratum is applicable.
- \* This silicon revision was never released to production.

### 2.2 AC - Analog Comparator

#### 2.2.1 Analog Comparator Initial Operation May Be Slow

If the device is powered by a slow rising  $V_{CC}$ , the Analog Comparator initial operation may be slower than expected on some devices.

**Work around**

When the device has been powered or reset, disable and then enable the Analog Comparator before the first operation.

**Affected Silicon Revisions**

Rev. A - K	Rev. L	Rev. M	Rev. N
*	X	*	X

### 2.3 TC2 - Timer/Counter2

#### 2.3.1 Interrupts May Be Lost When Writing the Timer Registers in the Asynchronous Timer

The interrupts will be lost if a timer register that is a synchronous timer clock is written when the asynchronous Timer/Counter register (TCNTx) is 0x00.

**Work around**

Always check that the asynchronous Timer/Counter register neither has the value 0xFF nor 0x00 before writing to the asynchronous Timer Control Register (TCCRx), asynchronous Timer Counter Register (TCNTx), or asynchronous Output Compare Register (OCRx).

**Affected Silicon Revisions**

Rev. A - K	Rev. L	Rev. M	Rev. N
*	X	*	X

### 2.4 Device

#### 2.4.1 Signature May Be Erased in Serial Programming Mode

If the signature bytes are read before a chiperase command is completed, the signature may be erased, causing the device ID and calibration bytes to disappear. This is critical, especially if the part is running on an internal RC oscillator.

**Work around**

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Ensure that the chiperase command has exceeded before applying the next command.

### Affected Silicon Revisions

Rev. A - K	Rev. L	Rev. M	Rev. N
*	X	*	X

### 2.4.2 Reading EEPROM by Using ST or STS to Set EERE Bit Triggers an Unexpected Interrupt Request

Reading EEPROM by using the ST or STS command to set the EERE bit in the EECR register triggers an unexpected EEPROM interrupt request.

#### Work around

Always use OUT or SBI to set EERE in EECR.

### Affected Silicon Revisions

Rev. A - K	Rev. L	Rev. M	Rev. N
*	X	*	X

### **3. Data Sheet Clarifications**

The following typographic corrections and clarifications are to be noted for the latest version of the device data sheet (<http://microchip.com/DS40001974>).

**Note:** Corrections are shown in **bold**. Where possible, the original bold text formatting has been removed for clarity.

#### **3.1 None**

There are no known data sheet clarifications as of this publication date.

### 4. Document Revision History

**Note:** The data sheet clarification document revision is independent of the die revision and the device variant (last letter of the ordering number).

#### 4.1 Revision History

Doc Rev.	Date	Comments
A	03/2020	Initial release of this document. <ul style="list-style-type: none"><li>• Content moved from the data sheet and restructured to the new document template</li><li>• Updated the die revision list to reflect die revisions in production</li></ul>

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