

## Active Errata List

- During UART reception, clearing REN may generate unexpected IT
- Timer 2 – Baud rate generator – Long start time
- Flash – Frequency limitation for flash programming sequence
- Flash - Bank1 or bank2 corruption while programming bank0
- Crystal - Determine the correct capacitors on Xtal1 and Xtal2

## Errata History

Lot Number	Errata List
All	1, 2, 3, 4, 5
Lot 5T7244 and above	1, 2, 4, 5

## Errata Descriptions

### 1. During UART reception, clearing REN may generate unexpected IT

During UART reception, if the REN bit is cleared between start bit detection and the end of reception, the UART will not discard the data (RI is set).

#### Workaround

Test REN at the beginning of Interrupt routine directly after CLR RI, and run the Interrupt routine code only if REN is set.

### 2. Timer 2 – Baud rate generator – Long start time

When Timer 2 is used as a baud rate generator, TH2 is not loaded with RCAP2H at the beginning, then UART is not operational before 10,000 machine cycles.

#### Workaround

Add the initialization of TH2 and TL2 in the initialization of Timer 2.

### 3. Flash – Frequency limitation for flash programming sequence

When a flash programming sequence is launched from the application or the boot-loader, at a very slow frequency, the program is frozen until a new reset.

#### Workaround

Consequently, the product limitation if the application wants store data in the flash, is a minimum external frequency of 7 MHz.

### 4. Crystal – Determine the correct capacitors on Xtal1 and Xtal2

Due to new characteristics of the internal oscillator and to ensure a good start-up of this oscillator, we advise customer to look the application note “Analyzing the Behavior of an Oscillator and Ensuring Good startup” available on the web site.



80C51 MCUs

AT89C51RE2

Errata Sheet



### 5. Flash – Bank1 or bank2 corruption while programming bank0 or common bank

When the bank1 or the bank2 is mapped in the upper 32K, if the application running in the common bank wants to program data in common bank or bank0, the same data are duplicated in bank1 or bank2.

MCU configuration		with upper 32K mapped with ...					
		Bank0		Bank1		Bank2	
If data is written in ...	<b>Common bank</b>	then the data read from ...	is ...	then the data read from ...	is ...	then the data read from ...	is ...
		Common Bank	OK	Common Bank	OK	Common Bank	OK
		Bank0	OK	Bank0	OK	Bank0	OK
		Bank1	OK	Bank1	<b>Corrupted</b>	Bank1	<b>Corrupted</b>
		Bank2	OK	Bank2	OK	Bank2	OK
	<b>Bank0</b>	then the data read from ...	is ...	then the data read from ...	is ...	then the data read from ...	is ...
		Common Bank	OK	Common Bank	OK	Common Bank	OK
		Bank0	OK	Bank0	OK	Bank0	OK
		Bank1	OK	Bank1	OK	Bank1	OK
		Bank2	OK	Bank2	<b>Corrupted</b>	Bank2	<b>Corrupted</b>
	<b>Bank1</b>	then the data read from ...	is ...	then the data read from ...	is ...	then the data read from ...	is ...
		Common Bank	OK	Common Bank	OK	Common Bank	OK
		Bank0	OK	Bank0	OK	Bank0	OK
		Bank1	OK	Bank1	OK	Bank1	OK
		Bank2	OK	Bank2	OK	Bank2	OK
	<b>Bank2</b>	then the data read from ...	is ...	then the data read from ...	is ...	then the data read from ...	is ...
Common Bank		OK	Common Bank	OK	Common Bank	OK	
Bank0		OK	Bank0	OK	Bank0	OK	
Bank1		OK	Bank1	OK	Bank1	OK	

#### Workaround

When the application requires program data in a specific bank, set the MBO2 bit at 0 in BMSEL register for flash programming operations. This means it is not possible to program common bank or bank0 from bank1 or bank2.



## Atmel Corporation

2325 Orchard Parkway  
San Jose, CA 95131, USA  
Tel: 1(408) 441-0311  
Fax: 1(408) 487-2600

## Regional Headquarters

### Europe

Atmel Sarl  
Route des Arsenalux 41  
Case Postale 80  
CH-1705 Fribourg  
Switzerland  
Tel: (41) 26-426-5555  
Fax: (41) 26-426-5500

### Asia

Room 1219  
Chinachem Golden Plaza  
77 Mody Road Tsimshatsui  
East Kowloon  
Hong Kong  
Tel: (852) 2721-9778  
Fax: (852) 2722-1369

### Japan

9F, Tonetsu Shinkawa Bldg.  
1-24-8 Shinkawa  
Chuo-ku, Tokyo 104-0033  
Japan  
Tel: (81) 3-3523-3551  
Fax: (81) 3-3523-7581

## Atmel Operations

### Memory

2325 Orchard Parkway  
San Jose, CA 95131, USA  
Tel: 1(408) 441-0311  
Fax: 1(408) 436-4314

### Microcontrollers

2325 Orchard Parkway  
San Jose, CA 95131, USA  
Tel: 1(408) 441-0311  
Fax: 1(408) 436-4314

La Chantrerie  
BP 70602  
44306 Nantes Cedex 3, France  
Tel: (33) 2-40-18-18-18  
Fax: (33) 2-40-18-19-60

### ASIC/ASSP/Smart Cards

Zone Industrielle  
13106 Rousset Cedex, France  
Tel: (33) 4-42-53-60-00  
Fax: (33) 4-42-53-60-01

1150 East Cheyenne Mtn. Blvd.  
Colorado Springs, CO 80906, USA  
Tel: 1(719) 576-3300  
Fax: 1(719) 540-1759

Scottish Enterprise Technology Park  
Maxwell Building  
East Kilbride G75 0QR, Scotland  
Tel: (44) 1355-803-000  
Fax: (44) 1355-242-743

### RF/Automotive

Theresienstrasse 2  
Postfach 3535  
74025 Heilbronn, Germany  
Tel: (49) 71-31-67-0  
Fax: (49) 71-31-67-2340

1150 East Cheyenne Mtn. Blvd.  
Colorado Springs, CO 80906, USA  
Tel: 1(719) 576-3300  
Fax: 1(719) 540-1759

### Biometrics/Imaging/Hi-Rel MPU/ High Speed Converters/RF Datacom

Avenue de Rochepleine  
BP 123  
38521 Saint-Egreve Cedex, France  
Tel: (33) 4-76-58-30-00  
Fax: (33) 4-76-58-34-80

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