Active Errata List

- **CAN – Sporadic Errors**
- **PCA – Incorect Behavior with CPU X2 Mode Bit of HSB**
- **Timer0/1 – Extra Interrupt**

Errata History

Lot Number	Errata List
all lots from A02543	1, 2, 3

Errata Description

1. CAN – Sporadic Errors

When BRP = 0 or when BRP > 0 and SMP = 0, the CAN controller may desynchronize and send one error frame to ask for the retransmission of the incoming frame, even though it had no error.

This is likely to occur with BRP = 0 or after long inter frame periods without synchronization (low bus load). The CAN macro can still properly synchronize on frames following the error.

Workaround

Setting BRP greater than 0 in CANBT1 and SMP equals 1 in CANBT3 allows resynchronization with the majority vote, and thus fixes the issue.
The sampling point might have to be slightly advanced for the majority vote to take place within the bit. Therefore, at maximum speed of 1Mbit/s, the sampling point should be at less than 80% (e.g. 75%) for XTAL = 16 MHz or less than 85% (e.g. 80%) for XTAL = 20 MHz.

2. PCA – Incorect Behavior with CPU X2 Mode Bit of HSB

When starting the microcontroller in X2 mode upon reset with the X2 fuse bit of the HSB, the PCA may not work properly when configured with Timer0 in X1 mode as clock input.

Workaround

Set the CPU in X2 mode by software by writing CKCON register at the begin of the application.

3. Timer0/1 – Extra Interrupt

When Timer0 is in X1 mode and Timer1 in X2 mode and vice versa, extra interrupt may randomly occur for Timer0 or Timer1.

Workaround

Use the same mode for the two timers.

CAN Microcontrollers

AT89C51CC03
AT89C51CC03C
AT89C51CC03U
Errata Sheet

4293C–CAN–09/04

Active CAN Bootloader Errata List

- **Boot process - SBV > 0x7F00h leads to Atmel bootloader execution**
- **The CAN is Not Stopped**
- **Watchdog and Flash API Starting the Bootloader Execution**
- **Flash API '__api_wr_code_page' with 0 Data in Length Parameter Field**
- **Problem to program a hex file less than 16 bytes**
- **Unexpected Echo After Start Application Command**
- **CRIS Modification not Applicable for In-application Usage**

CAN Bootloader Errata History

Version Number	Errata List
1.0.0	1, 2, 3, 4, 5, 6, 7
1.0.2	**3**

CAN Bootloader Errata Description

1. Boot Process - SBV > 0x7F00 leads to Atmel bootloader execution

When BLJB bit is active and SBV > 0x7F00 the Atmel bootlader is executed instead of a custom bootloader.

Workaround

Update to bootloader revision 1.0.2

2. The CAN is Not Stopped

When the bootloader receives the command 'Start Application' (LJMP 0), the CAN is not stopped.

Workaround

The application must have in its setup function a reset of CAN macro.

```
mov CANGCON, #00h
```

3. Watchdog and Flash API Starting the Bootloader Execution

When an application call '__api_start_bootloader' or'__api_start_isp' routines while the watchdog is enabled, when the watchdog overflow it will restart the application instead of the bootloader

Workaround

Set BLJB(=0) before calling the '__api_start_bootloader' or '__api_start_isp' if the watchdog is used.

4. Flash API '__api_wr_code_page' with 0 Data in Length Parameter Field

When the Flash API '__api_wr_code_page' is called with the field 'nb_data' equals 0 then 255 data are written in Flash.

Workaround

Include a test on 'nb_data' before executing '__api_wr_code_page' routine.

5. Problem to program a hex file less than 16 bytes

When we try to program a hex file with a size size less than 16 bytes, some errors appear depending of the start address.

Workaround

Program with a range address higher than 16 bytes.

6. Unexpected Echo After Start Application Command

When the command start application (with reset) is received by the CAN bootloader; the bootloader answers with a ramdom CAN frame before starting the application.

Workaround

The FLIP software is not impacted by this CAN frame.

7. Start of the Bootloader from Application Using api_start_isp Doesn't Work

The API to start the bootloader directly in CAN communication open does not work.

Workaround

Start the bootloader using api_start_bootloader and send the CAN command to open the communication with the CAN bootloader.

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4293C–CAN–09/04 0M