TN_121 FT245R Errata Technical Note

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The intention of this errata technical note is to give a detailed description of known functional or electrical issues with the FTDI FT245R devices.
The current revision of the FT245R is **revision B, released May 2007.** At the time of releasing this Technical Note there are no known issues with this silicon revision.

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1 FT245R Revision

FT245R part numbers are listed in **Error! Reference source not found..** The letter at the end of date code identifies the device revision.

The current revision of the FT245R is **revision B, released May 2007.** At the time of releasing this Technical Note there are no known issues with this silicon revision.

Part Number	Package
FT245RL	28 Pin SSOP
FT245RQ	32 Pin QFN

Table 1 FT245R Part Numbers

This errata technical note covers the revisions of FT245R listed in **Error! Reference source not found.**.

Revision	Notes
A	First device revision
B	Second Device revision

Table 2 FT245R Revisions

2 Errata History Table – Functional Problems

Functional Problem	Short description	Errata occurs in device revision
FT245R	PWREN# signal will not be stable during enumeration – 3 pulses.	A

2.1 Errata History Table – Electrical and Timming Specification Deviations.

Deviations	Short description	Errata occurs in device revision
FT245R	Cannot set VCCIO below 2.6V due to internal RESET# pullup	A

3 Functional Problems of FT245R

3.1 Revision A

3.1.1 PWREN# pulses during enumeration

Introduction:

PWREN# is an output to signal if the device is enumerated and awake (logic 0) or if it is in reset/suspend (logic 1)

Problem:

During enumeration the pins were configured as outputs and as a consequence of the 3 resets required during enumeration the device toggled 3 times giving a false indication that the device was ready to use.

Workaround:

There are no known workarounds available. This issue will be corrected at silicon revision B.

Package specific:

The effected packages are listed in **Table 3.**

Package	Applicable (Yes/No)
FT245RL	Y
FT245RQ	Y

Table 3

3.1.2 BitBang Mode Variable Pulse Width

Introduction:

BitBang is a mode the device may be put into to allow free running data to be clocked in/out of the device without any control bits.

Problem:

The output may be clocked out at different speeds to allow for different pulse widths. However this clocking stage is not synchronized with the incoming data and can result in the pulse widths varying unexpectedly on the output.

Workaround:

Set the clock divisor to 1 (baud rate = 3,000,000) and pad the data field with extra 1's or 0's to achieve the required pulse width for each bit.

Package specific:

The effected packages are listed in Table 4.

Package	Applicable (Yes/No)
FT245RL	Y
FT245RQ	Y

Table 4

3.1 Revision B

There are no known new functional issues specific to revision B.

4 Electrical and Timing specification deviations of FT245R

4.1 Revision A

4.1.1 VCCIO cannot be set below 2.6V

Introduction:

The FT245R device is specified to handle IO down to 1.8V.

Problem:

The FT245R device contains an internal pullup (200k) on RESET#. This is wired to VCCIO and not VCC. If VCCIO is below 2.6V the device will not come out of reset.

Workaround:

There are no known workarounds available. This issue will be corrected at silicon revision B.

Package specific:

The effected packages are listed in Table 5

Package	Applicable (Yes/No)
FT245RL	Y
FT245RQ	Y

Table 5

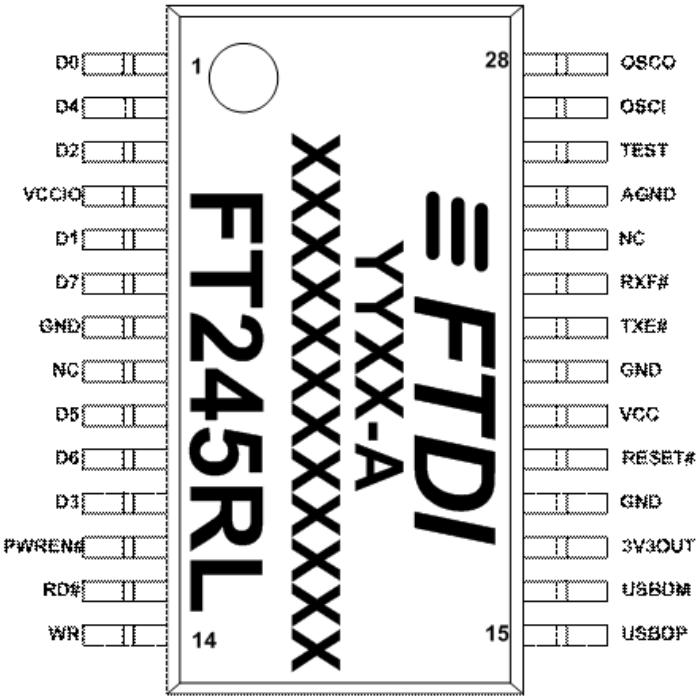
4.1 Revision B

There are no known functional problems with revision B.

5 FT245R Package Markings

FT245R is available in two RoHS Compliant packages, 32 pin QFN and 28 pin SSOP. An example of the markings on each package is shown in

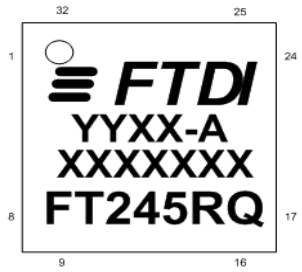
Figure 5-1..



YYXX-A Where YY is 2 digit year code, XX is 2 digit week code and -A is the revision

XXXXXXXXXXX is the manufacturing LOT code

Figure 5-1 Package Markings – 28 SSOP



YYXX-A Where YY is the 2 digit year code, XX is 2 digit week code and -A is the revision

XXXXXXXX is the manufacturing LOT code

Figure 5-2 Markings – 32 QFN

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Appendix C – Revision History

Version 1.0 First Release 05/11/2010

