TN_122 FT232BL/BQ/BM Errata Technical Note

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The intention of this errata technical note is to give a detailed description of any known functional or electrical issues with the FTDI FT232BL/BQ/BM devices.
The current revision of the FT232BL is revision A, released Jan 2005.
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1 FT232B Revision

FT232B part numbers are listed in **Table 1**. The letter at the end of date code identifies the device revision.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT232BM</td>
<td>32 Pin LQFP</td>
</tr>
<tr>
<td>FT232BL</td>
<td>32 Pin LQFP</td>
</tr>
<tr>
<td>FT232BQ</td>
<td>32 Pin QFN</td>
</tr>
</tbody>
</table>

**Table 1 FT232B Part Numbers**

This errata technical note covers the revisions of FT232B listed in **Table 2**.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Revision</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT232BM</td>
<td>1</td>
<td>First device revision has no number after the part number</td>
</tr>
<tr>
<td>FT232BM</td>
<td>2</td>
<td>Second Device revision has a -1 after the part number</td>
</tr>
<tr>
<td>FT232BL</td>
<td>1</td>
<td>First device revision has no number after the part number</td>
</tr>
</tbody>
</table>

**Table 2 FT232B Revisions**
## 2 Errata History Table – Functional Problems

<table>
<thead>
<tr>
<th>Functional Problem</th>
<th>Short description</th>
<th>Errata occurs in device revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT232BM/BQ/BL</td>
<td>Bitbang pulse width not stable</td>
<td>-,-1</td>
</tr>
</tbody>
</table>

### 2.1 Errata History Table – Electrical and Timing Specification Deviations.

<table>
<thead>
<tr>
<th>Deviations</th>
<th>Short description</th>
<th>Errata occurs in device revision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3 Functional Problems of FT232BM/BL/BQ

3.1 First Revision

3.1.1 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 3

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT232BM</td>
<td>Y</td>
</tr>
<tr>
<td>FT232BL</td>
<td>Y</td>
</tr>
<tr>
<td>FT232BQ</td>
<td>Y</td>
</tr>
</tbody>
</table>

Table 3
4 Electrical and Timing specification deviations of FT232BM/BQ/BL

4.1 First Revision

There are no known electrical or timing problems with any revision of silicon.
5 FT232B Package Markings

FT232BM is available in a non-RoHS Compliant package, 32 pin LQFP. An example of the markings on the package is shown in Figure 5-1.

Note that there are two date code formats used - XXYY = Date Code where XX = 2 digit year number, YY = 2 digit week number; or XYY-N where X = 1 digit year. Number, YY = 2 digit week number, and -N is an integer.

Figure 5-1 Package Markings – FT232BM

FT232B is available in two RoHS Compliant packages, 32 pin LQFP and 32 pin QFN. An example of the markings on each package is shown in Figure 5-2.

Note that there are two date code formats used - XXYY = Date Code where XX = 2 digit year number, YY = 2 digit week number; or XYY-N where X = 1 digit year. Number, YY = 2 digit week number, and -N is an integer.

Figure 5-2 Package Markings – FT232BL/FT232BQ
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Appendix C – Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Draft</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>First Draft</td>
<td>04/05/2010</td>
</tr>
<tr>
<td>Version 1.0</td>
<td>First Release</td>
<td>19/11/2010</td>
</tr>
</tbody>
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