The intention of this errata technical note is to give a detailed description of known functional or electrical issues with the FTDI FT4222H series device. The current revision of the FT4222H series is Revision D, released April 2018.
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1 FT4222H Revision

FT4222H part numbers are listed in Table 1.1. The letter at the end of the date code identifies the device revision.

The current revision of the FT4222H series is revision D, released April 2018.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>32 pin VQFN</td>
</tr>
</tbody>
</table>

Table 1.1 FT4222H Part Numbers

This errata technical note covers the revisions of FT4222H listed in Table 1.2.

<table>
<thead>
<tr>
<th>Revision</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>First device revision. Launched Sep 2014</td>
</tr>
<tr>
<td>B</td>
<td>Second device revision. Launched Sep 2015</td>
</tr>
<tr>
<td>C</td>
<td>Third device revision. Launched Oct 2016</td>
</tr>
<tr>
<td>D</td>
<td>Forth device revision. Launched Apr 2018</td>
</tr>
</tbody>
</table>

Table 1.2 FT4222H Series Revisions
2 Errata History Table – Functional Errata

<table>
<thead>
<tr>
<th>Functional Errata</th>
<th>Short description</th>
<th>Errata occurs in device revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222H</td>
<td>Android issues</td>
<td>A</td>
</tr>
<tr>
<td>FT4222H</td>
<td>CPU usage too high</td>
<td>A</td>
</tr>
<tr>
<td>FT4222H</td>
<td>I²C combined message support</td>
<td>A</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Default pin status change</td>
<td>A</td>
</tr>
<tr>
<td>FT4222H</td>
<td>More suspend setting support</td>
<td>A</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Custom PID settings are ignored</td>
<td>B</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Slow response after the host restarts</td>
<td>B</td>
</tr>
<tr>
<td>FT4222H</td>
<td>SPI master in single mode</td>
<td>B</td>
</tr>
<tr>
<td>FT4222H</td>
<td>I²C Data path is not fully reset</td>
<td>A,B,C</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Not Response STALL to Get BOS Descriptor defined in USB3.0</td>
<td>A,B,C</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Flash operation mode support</td>
<td>A,B,C</td>
</tr>
<tr>
<td>FT4222H</td>
<td>SPI slave data lost</td>
<td>C</td>
</tr>
<tr>
<td>FT4222H</td>
<td>Error handling : writes over the range of the data buffer</td>
<td>A,B,C,D</td>
</tr>
</tbody>
</table>

Table 2.1 Functional Errata

2.1 Errata History Table – Electrical & 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>No known issues</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2.2 Electrical and Timing Errata
3 Functional Errata of FT4222H

3.1 Revision A

3.1.1 Android issues

Introduction:
FT4222H supports Android devices. With J2XX, it is possible to develop an app utilizing the FT4222H.

Issue:
The following issues may happen when the FT4222H connects to an Android device.
1. The FT4222H works as an SPI master, it may reset during transferring data.
2. The FT4222H works as I²C slave, the last byte may be lost when the receiving buffer is full.

Workaround:
There are no known workarounds available. This issue is corrected at revision B.

Package specific:
The effected packages are listed in Table 3.1.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.1 Affected Packages

3.1.2 CPU usage and latency timer issue

Introduction:
In USB, data is received from the device to the PC by a polling method. The driver will request a certain amount of data from the USB scheduler. The latency timer is provided to allow efficient polling and flushing short data packets.

Issue:
The FT4222H doesn’t support the latency timer feature and causes the USB scheduler to be busy and uses too much CPU resource.

Workaround:
There are no known workarounds available. This issue is corrected at revision B.

Package specific:
The effected packages are listed in Table 3.2.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.2 Affected Packages

3.1.3 I²C combined message issue

Introduction:
A master issues at least two reads and/or writes to one or more slaves. In a combined message, each read or write begins with a START and the slave address. After the first START, the subsequent starts are referred to as repeated START bits; repeated START bits are not preceded by STOP bits, which indicate to the slave the next transfer is part of the same message.
Issue:

Some I²C devices need to communicate with a combined message format. However, the FT4222H doesn’t support this feature.

Workaround:

There are no known workarounds available. The feature of I²C combined messages will be supported at revision B.

Package specific:

The effected packages are listed in Table 3.3.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.3 Affected Packages

3.1.4 Default pin status

Introduction:

By default, the FT4222H will be initialized as an SPI master after power on. When the FT4222H is ready, i.e. finishes USB enumeration, the status of the pins of the Rev. A device is as shown in Table 3.4:

<table>
<thead>
<tr>
<th>Pin num</th>
<th>Pin name</th>
<th>Mode 0</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SCK</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
</tr>
<tr>
<td>9</td>
<td>MISO</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
</tr>
<tr>
<td>10</td>
<td>MOSI</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
</tr>
<tr>
<td>11</td>
<td>IO2</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
</tr>
<tr>
<td>12</td>
<td>IO3</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
</tr>
<tr>
<td>13</td>
<td>GPIO0</td>
<td>GPIO0 (OUT, low)</td>
<td>SS10 (OUT, low)</td>
<td>SS10 (OUT, low)</td>
<td>GPIO0 (OUT, low)</td>
</tr>
<tr>
<td>14</td>
<td>GPIO1</td>
<td>GPIO1 (OUT, low)</td>
<td>SS20 (OUT, low)</td>
<td>SS20 (OUT, low)</td>
<td>GPIO1 (OUT, low)</td>
</tr>
<tr>
<td>15</td>
<td>GPIO2</td>
<td>suspend out (OUT, low)</td>
<td>suspend out (OUT, low)</td>
<td>SS30 (OUT, low)</td>
<td>suspend out (OUT, low)</td>
</tr>
<tr>
<td>16</td>
<td>GPIO3</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
</tr>
<tr>
<td>17</td>
<td>SS00</td>
<td>SS00 (OUT, low)</td>
<td>SS00 (OUT, low)</td>
<td>SS00 (OUT, low)</td>
<td>SS00 (OUT, low)</td>
</tr>
<tr>
<td>32</td>
<td>SS</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
</tr>
</tbody>
</table>

Table 3.4 Rev. A FT4222H ready

In the Rev. B, the pin status will be changed as per Table 3.5 below:

<table>
<thead>
<tr>
<th>Pin num</th>
<th>Pin name</th>
<th>Mode 0</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SCK</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
</tr>
<tr>
<td>9</td>
<td>MISO</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
</tr>
<tr>
<td>10</td>
<td>MOSI</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
<td>MOSI (OUT, high)</td>
</tr>
</tbody>
</table>
Table 3.5 Rev. B FT4222H ready

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.6 Affected Packages

**3.1.5 Additional Suspend Settings Supported**

**Introduction:**
The FT4222H provides flexible settings for suspend behavior via FT_Prog. The rev. B of the FT4222H device provides additional options for customers to configure the pin status during suspend.

- **SUSPEND_OUT_POL**
  - **Suspend output is High active. (default)**
  - **Suspend output is Low active.**

- **SPI_SUSPEND_MODE**
  - **Disable SPI IP and make SPI pins input (tri-state). (default)**
  - **Keep SPI pin status when the FT4222H suspends.**
  - **Enable SPI pin control. Refer to SPI_SUSPEND for detail settings.**

- **SPI_SUSPEND (enable by SPI_SUSPEND_MODE )**
  - **miso_suspend**
    - push low when suspend
    - push high when suspend
  - **mosi_suspend**
    - push low when suspend
    - push high when suspend
  - **io2_io3_suspend**
    - push low when suspend
    - push high when suspend
  - **ss00_suspend**
    - **No change (default)**
    - push low when suspend
    - push high when suspend

- **GPIO_SUSPEND**
  - **gpio0_suspend**
    - **No change (default)**
    - **input (tri-state)**
    - push low when suspend
    - push high when suspend
  - **gpio1_suspend**
    - **No change (default)**
    - **input (tri-state)**
    - push low when suspend
    - push high when suspend
  - **gpio2_suspend**
    - **No change (default)**
- input (tri-state)
- push low when suspend
- push high when suspend

- gpio3_suspend
  - No change (default)
  - input (tri-state)
  - push low when suspend
  - push high when suspend

The default pin status of the Rev. A device during suspend is shown in Table 3.7 below:

<table>
<thead>
<tr>
<th>Pin num</th>
<th>Pin name</th>
<th>Mode 0</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SCK</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
<td>SCK (OUT, low)</td>
</tr>
<tr>
<td>9</td>
<td>MISO</td>
<td>MISO (OUT, low)</td>
<td>MISO (OUT, low)</td>
<td>MISO (OUT, low)</td>
<td>MISO (OUT, low)</td>
</tr>
<tr>
<td>10</td>
<td>MOSI</td>
<td>MOSI (OUT, low)</td>
<td>MOSI (OUT, low)</td>
<td>MOSI (OUT, low)</td>
<td>MOSI (OUT, low)</td>
</tr>
<tr>
<td>11</td>
<td>IO2</td>
<td>IO2 (OUT, low)</td>
<td>IO2 (OUT, low)</td>
<td>IO2 (OUT, low)</td>
<td>IO2 (OUT, low)</td>
</tr>
<tr>
<td>12</td>
<td>IO3</td>
<td>IO3 (OUT, low)</td>
<td>IO3 (OUT, low)</td>
<td>IO3 (OUT, low)</td>
<td>IO3 (OUT, low)</td>
</tr>
<tr>
<td>13</td>
<td>GPIO0</td>
<td>GPIO0 (OUT, low)</td>
<td>SS1O (OUT, no change)</td>
<td>SS1O (OUT, no change)</td>
<td>GPIO0 (OUT, low)</td>
</tr>
<tr>
<td>14</td>
<td>GPIO1</td>
<td>GPIO1 (OUT, low)</td>
<td>SS2O (OUT, no change)</td>
<td>SS2O (OUT, no change)</td>
<td>GPIO1 (OUT, low)</td>
</tr>
<tr>
<td>15</td>
<td>GPIO2</td>
<td>suspend out (OUT, high)</td>
<td>suspend out (OUT, high)</td>
<td>SS3O (OUT, no change)</td>
<td>suspend out (OUT, high)</td>
</tr>
<tr>
<td>16</td>
<td>GPIO3</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
</tr>
<tr>
<td>17</td>
<td>SS0O</td>
<td>SS0O (OUT, no change)</td>
<td>SS0O (OUT, no change)</td>
<td>SS0O (OUT, no change)</td>
<td>SS0O (OUT, no change)</td>
</tr>
<tr>
<td>32</td>
<td>SS</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
</tr>
</tbody>
</table>

Table 3.7 Rev. A FT4222H suspend
In the Rev. B device, the default suspend setting is changed as per Table 3.8 below:

<table>
<thead>
<tr>
<th>Pin num</th>
<th>Pin name</th>
<th>Mode 0</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SCK</td>
<td>SCK (tri-state)</td>
<td>SCK (tri-state)</td>
<td>SCK (tri-state)</td>
<td>SCK (tri-state)</td>
</tr>
<tr>
<td>9</td>
<td>MISO</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
<td>MISO (IN)</td>
</tr>
<tr>
<td>10</td>
<td>MOSI</td>
<td>MOSI (IN)</td>
<td>MOSI (IN)</td>
<td>MOSI (IN)</td>
<td>MOSI (IN)</td>
</tr>
<tr>
<td>11</td>
<td>IO2</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
<td>IO2 (IN)</td>
</tr>
<tr>
<td>12</td>
<td>IO3</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
<td>IO3 (IN)</td>
</tr>
<tr>
<td>13</td>
<td>GPIO0</td>
<td>GPIO0 (no change)</td>
<td>SS1O (OUT, no change)</td>
<td>SS1O (OUT, no change)</td>
<td>GPIO0 (no change)</td>
</tr>
<tr>
<td>14</td>
<td>GPIO1</td>
<td>GPIO1 (no change)</td>
<td>SS2O (OUT, no change)</td>
<td>SS2O (OUT, no change)</td>
<td>GPIO1 (no change)</td>
</tr>
<tr>
<td>15</td>
<td>GPIO2</td>
<td>suspend out (OUT, high)</td>
<td>suspend out (OUT, high)</td>
<td>SS3O (OUT, no change)</td>
<td>suspend out (OUT, high)</td>
</tr>
<tr>
<td>16</td>
<td>GPIO3</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
<td>remote wakeup (IN)</td>
</tr>
<tr>
<td>17</td>
<td>SS00</td>
<td>SS00 (OUT, no change)</td>
<td>SS00 (OUT, no change)</td>
<td>SS00 (OUT, no change)</td>
<td>SS00 (OUT, no change)</td>
</tr>
<tr>
<td>32</td>
<td>SS</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
<td>SS (IN)</td>
</tr>
</tbody>
</table>

Table 3.8 Rev. B FT4222H suspend

Package specific:
The effected packages are listed in Table 3.9.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.9 Affected Packages

### 3.2 Revision B

#### 3.2.1 Custom PID Settings are ignored

**Introduction**

It is not possible to change the PID on the FT4222H from our default value of 601C to a custom value. Note, there are no problems changing the VID.

**Issue**

Any changes made to the PID using the OTP are ignored and the value returns to its default state.

**Workaround**

There are no known workarounds available. This issue is corrected at revision C.

**Package specific:**
The effected packages are listed in Table 3.10.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.10 Affected Packages
3.2.2 Slow Response after the Host Restarts

Issue

After the host restarts, the FT4222H may have slow response or outputs unexpected bytes from its USB interface.

Workaround

There are no known workarounds available. This issue is corrected at revision C.

Package specific:

The effected packages are listed in Table 3.11.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.11 Affected Packages

3.2.3 SPI master in single mode loses data and no response

Issue

The SPI master in single mode may lose the last byte and then no response. This issue may be observed easily in the following configurations:

- 48M/128, 48M/256, 48M/512
- 24M/64, 24M/128, 24M/256, 24M/512

When this issue happens, the support lib function FT4222_SPIMaster_SingleReadWrite may not return, or return FT_FAILED_TO_WRITE_DEVICE.

This issue can be observed with the rev A also.

Workaround

There are no known workarounds available. This issue is corrected at revision C.

Package specific:

The effected packages are listed in Table 3.12.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.12 Affected Packages
3.3 Revision C

3.3.1 Data path is not fully reset when a reset on I2C is executed

Issue
When the I²C bus encounters errors or works abnormally, users can use the reset APIs to reset the I²C function. When a reset command is received, only the I²C controller is reset. The transferring data may still be left in the related USB pipe. The USB pipe associated to I²C functions should be also reset as the initial status for the next transfer.

Workaround
There are no known workarounds available. This issue is corrected at revision D.

Package specific:
The affected packages are listed in Table 3.13.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.13 Affected Packages

3.3.2 No Response STALL to Get BOS Descriptor defined in USB3.0

Issue
BOS (Binary device Object Store) descriptor is a new defined descriptor in the USB3.0 specification. Since the FT4222H is a USB2.0 compliant USB device, getting a BOS descriptor command is not supported. A STALL should be returned, but the FT4222H returns NAKs.

Workaround
There are no known workarounds available. This issue is corrected at revision D.

Package specific:
The affected packages are listed in Table 3.14.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.14 Affected Packages

3.3.3 Flash Operating Mode Support

Issue
When accessing Toshiba flash with SPI Master Quad mode, FT4222H will hang without giving any responses.

FT4222H operates as master with supporting Dual or Quad SPI with three phases as illustrated in Figure 3.1.
As shown in Figure 1 ‘C’, ‘W’ and ‘R’, correspond to “Command Phase”, “Write Phase” and “Read Phase”, where there are information/data in all three phases that are to be exchanged.

Some flash devices operate with single write and multi read protocol but without the multi write phase as illustrated in Figure 3.2:

**Workaround**

In SPI Master Quad mode, the operation of single write with quad read was not supported. No workaround was provided, this feature is implemented with Revision D.

**Package specific:**

The affected packages are listed in Table 3.15.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Table 3.15 Affected Packages**
3.3.4 SPI Slave Data Lost

Issue

When operating in SPI Slave mode, the FT4222H would occasionally lose data packets.

Workaround

Verified that the latency Timer configuration was not correct, hence causing no full packet responses, instead all packets responded with short packets. This results in packet drops with D2XX driver. No workaround was provided, this issue is corrected at revision D.

Package specific:

The effected packages are listed in Table 3.16.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.16 Affected Packages

3.4 Bus Error condition in USB Device Controller

3.4.1 The USB Device Controller writes past the range of the data buffer when a babble error occurs

Introduction:

A babble error occurs when USB device receives more data than the maximum packet size.

Issue:

If the data packet comes with the correct CRC16, the USB Device Controller accepts it and responds with ACK. It then writes the data over the address boundary of the data buffer for the endpoint.

If the data packet comes with the incorrect CRC16, the USB Device Controller discards it and times out. However, it still writes the data over the address boundary of the data buffer for the endpoint.

Workaround:

Currently, there is no workaround for this issue.

Package specific:

The effected packages are listed in Table 3.17.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.17 Affected Packages

3.4.2 I2C data is corrupt when FT4222_I2CMaster_GetStatus is being called

Issue:

An error would happen when i2c master is writing data and FT4222_I2CMaster_GetStatus is being called at the same time.

Workaround:

Call FT4222_I2CMaster_GetStatus after the end of i2c transmission.
Package specific:

The effected packages are listed in Table 3.18.

<table>
<thead>
<tr>
<th>Package</th>
<th>Applicable (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT4222HQ</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.18 Affected Packages
4 FT4222H Series Package Markings

The FT4222H is supplied in a RoHS compliant leadless VQFN-32 package. The package is lead (Pb) free, and uses a 'green' compound. The package is fully compliant with European Union directive 2002/95/EC. An example of the markings on the package is shown in Figure 4.1 below.

![Figure 4.1 VQFN-32 Package Markings](image)

The date code format is **YYWW** where WW = 2 digit week number, YY = 2 digit year number. This is followed by the revision number.

The code **XXXXXXXX** is the manufacturing LOT code.
5 Contact Information

Head Office – Glasgow, UK
Future Technology Devices International Limited
Unit 1, 2 Seaward Place, Centurion Business Park
Glasgow G41 1HH
United Kingdom
Tel: +44 (0) 141 429 2777
Fax: +44 (0) 141 429 2758
E-mail (Sales) sales1@ftdichip.com
E-mail (Support) support1@ftdichip.com
E-mail (General Enquiries) admin1@ftdichip.com

Branch Office – Tigard, Oregon, USA
Future Technology Devices International Limited
(USA)
7130 SW Fir Loop
Tigard, OR 97223
USA
Tel: +1 (503) 547 0988
Fax: +1 (503) 547 0987
E-Mail (Sales) us_sales@ftdichip.com
E-Mail (Support) us_support@ftdichip.com
E-Mail (General Enquiries) us_admin@ftdichip.com

Branch Office – Taipei, Taiwan
Future Technology Devices International Limited
(Taiwan)
2F, No. 516, Sec. 1, NeiHu Road
Taipei 114
Taiwan, R.O.C.
Tel: +886-2-8797 1330
Fax: +886-2-8751-9737
E-mail (Sales) tw_sales@ftdichip.com
E-mail (Support) tw_support@ftdichip.com
E-mail (General Enquiries) tw_admin@ftdichip.com

Branch Office – Shanghai, China
Future Technology Devices International Limited
(China)
Room 1103, No.666 West Huaihai Road,
Shanghai, 200052
China
Tel: +86 21 62351596
Fax: +86 21 62351595
E-mail (Sales) cn_sales@ftdichip.com
E-mail (Support) cn_support@ftdichip.com
E-mail (General Enquiries) cn_admin@ftdichip.com

Web Site
http://ftdichip.com

Distributor and Sales Representatives
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Appendix A – References

Document References

NA

Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Terms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Central Processing Unit</td>
</tr>
<tr>
<td>GPIO</td>
<td>General Purpose Input/output</td>
</tr>
<tr>
<td>I2C</td>
<td>Inter-Integrated Circuit</td>
</tr>
<tr>
<td>MISO</td>
<td>Master In Slave Out</td>
</tr>
<tr>
<td>MOSI</td>
<td>Master Out Slave In</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>SS</td>
<td>Slave Select</td>
</tr>
<tr>
<td>SCK</td>
<td>Serial Clock</td>
</tr>
<tr>
<td>SPI</td>
<td>Serial Peripheral Interface</td>
</tr>
<tr>
<td>USB</td>
<td>Universal Serial Bus</td>
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<tr>
<td>VQFN</td>
<td>Very Thin Quad Flat Non-Leaded Package</td>
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</tbody>
</table>
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<th>Revision</th>
<th>Changes</th>
<th>Date</th>
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<tbody>
<tr>
<td>1.0</td>
<td>Initial Release</td>
<td>2015-08-31</td>
</tr>
<tr>
<td>1.1</td>
<td>Updated with custom PID issue.</td>
<td>2016-05-17</td>
</tr>
<tr>
<td>1.2</td>
<td>Updated with rev C fixes</td>
<td>2016-10-18</td>
</tr>
<tr>
<td>1.3</td>
<td>Updated with rev D fixes</td>
<td>2018-03-28</td>
</tr>
<tr>
<td>1.4</td>
<td>Updated for IO_ERROR occurs</td>
<td>2020-04-15</td>
</tr>
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