Application Note

AN_449

FT4233HP_FT2233HP_FT233HP_FT4232HP_FT2232HP_FT232HP_DCDC_Power Delivery Application Note

Version 1.1

Issue Date: 12-08-2020

This application note acts as a user’s guide for FT4233HP / FT2233HP / FT233HP / FT4232HP / FT2232HP / FT232HP DCDC power delivery application users. FT4233HP/FT2233HP supports Power Delivery (PD) standards enabling support for power negotiation with the ability to sink or source current to a USB host device. It can support 9V3A, 12V3A, 15V3A, 20V3A power delivery. More details please check datasheet FT4233HP/FT2233HP/FT233HP and FT4232HP/FT2232HP/FT232HP.

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Future Technology Devices International Limited (FTDI)
Unit 1, 2 Seaward Place, Glasgow G41 1HH, United Kingdom
Tel.: +44 (0) 141 429 2777   Fax: + 44 (0) 141 429 2758
Web Site: http://ftdichip.com

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1 Introduction

1.1 DCDC Power Delivery Diagram

![Power Delivery Diagram](image)

**Figure 1 - Power Delivery Diagram**

1.2 Power Delivery Design

Refer to Appendix A – References for design schematics.

1.3 Configuration Parameters

Please refer to AN_448_FT4233HP_FT2233HP_FT233HP_Configuration_Guide for details.

1.4 EEPROM Settings

Based on the configuration above, and set through programming an external EEPROM using FT_PROG, an FTx233HP/FT233HP will execute power delivery from PD2 (SNK only) to PD1 (SNK/SOURCE).
1.5 GPIO Indicator

<table>
<thead>
<tr>
<th>EEPROM Setting</th>
<th>GPIO Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>9V3A</td>
<td>GPIO0 = GPIO1 = High</td>
</tr>
<tr>
<td></td>
<td>Other GPIO pins are low</td>
</tr>
<tr>
<td>12V3A</td>
<td>GPIO0 = GPIO7* = High</td>
</tr>
<tr>
<td></td>
<td>Other GPIO pins are low</td>
</tr>
<tr>
<td>15V3A</td>
<td>GPIO0 = GPIO6* = High</td>
</tr>
<tr>
<td></td>
<td>Other GPIO pins are low</td>
</tr>
<tr>
<td>20V3A</td>
<td>GPIO0 = GPIO3 = High</td>
</tr>
<tr>
<td></td>
<td>Other GPIO pins are low</td>
</tr>
</tbody>
</table>

**Table 1 - GPIO Indicator**

**Note:** Since GPIO6/7 does not exist in FTx232HP/FT232HP, user can use GPIO1-3 to configure with board design.
2 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 97223-8160
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 (0) 2 8797 1330
Fax: +886 (0) 2 8751 9737
E-mail (Sales) tw.sales1@ftdichip.com
E-mail (Support) tw.support1@ftdichip.com
E-mail (General Enquiries) tw.admin1@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

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Appendix A – References

Document References

AN_448_FT4233HP_FT2233HP_FT233HP_Configuration_Guide
DS_FT4233HP
DS_FT2233HP
DS_FT233HP
FT_PROG EEPROM Programming Utility

Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Terms</th>
<th>Description</th>
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<tbody>
<tr>
<td>EEPROM</td>
<td>Electrically Erasable Programmable Read-Only Memory</td>
</tr>
<tr>
<td>GPIO</td>
<td>General Purpose Input Output</td>
</tr>
<tr>
<td>USB</td>
<td>Universal Serial Bus</td>
</tr>
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<table>
<thead>
<tr>
<th>Revision</th>
<th>Changes</th>
<th>Date</th>
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<tbody>
<tr>
<td>1.0</td>
<td>Initial Release</td>
<td>30-04-2020</td>
</tr>
<tr>
<td>1.1</td>
<td>Updated Release (Updated for FT4233HP support / Updated Figure 1 / Updated Table 1 and added a note)</td>
<td>12-08-2020</td>
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