



Application Note

AN_449

FT423xHP/FT223xHP/FT23xHP DCDC Power Delivery

Version 1.2

Issue Date: 28-11-2023

This application note acts as a user's guide for FT4233HP/FT2233HP/FT233HP and 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. For more details, please check datasheet FT4233HP/FT2233HP/FT233HP and FT4232HP/FT2232HP/FT232HP.

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1 Introduction

1.1 DCDC Power Delivery Diagram

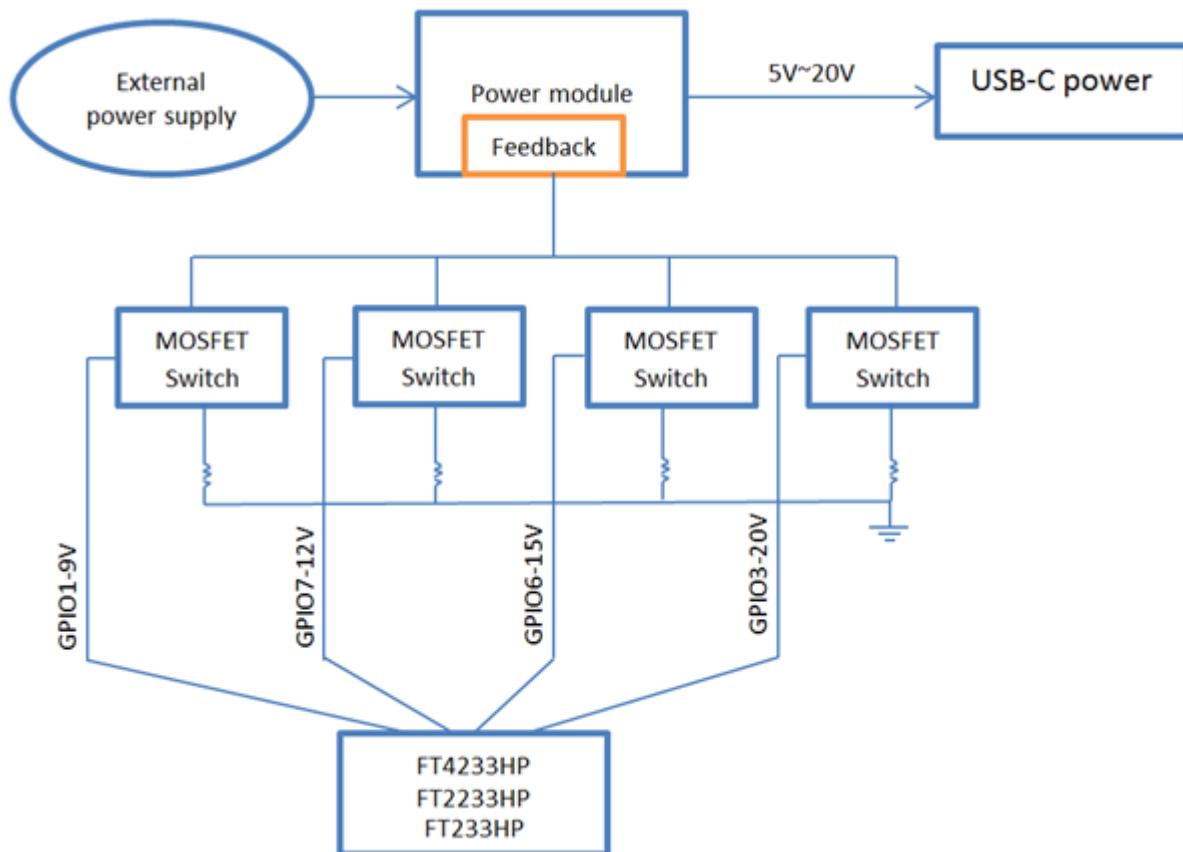


Figure 1 - Power Delivery Diagram

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

EEPROM Setting	GPIO Indicator
9V3A	GPIO0 = GPIO1 = High Other GPIO pins are low
12V3A	GPIO0 = GPIO7* = High Other GPIO pins are low
15V3A	GPIO0 = GPIO6* = High Other GPIO pins are low
20V3A	GPIO0 = GPIO3 = High Other GPIO pins are low

Table 1 - GPIO Indicator

Note: Since GPIO6/7 does not exist in FTx232HP/FT232HP, user can use GPIO1-3 to configure with board design.

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Appendix A – References

Document References

[AN_448 FT4233HP FT2233HP FT233HP Configuration Guide](#)

[DS_FT4233HP](#)

[DS_FT2233HP](#)

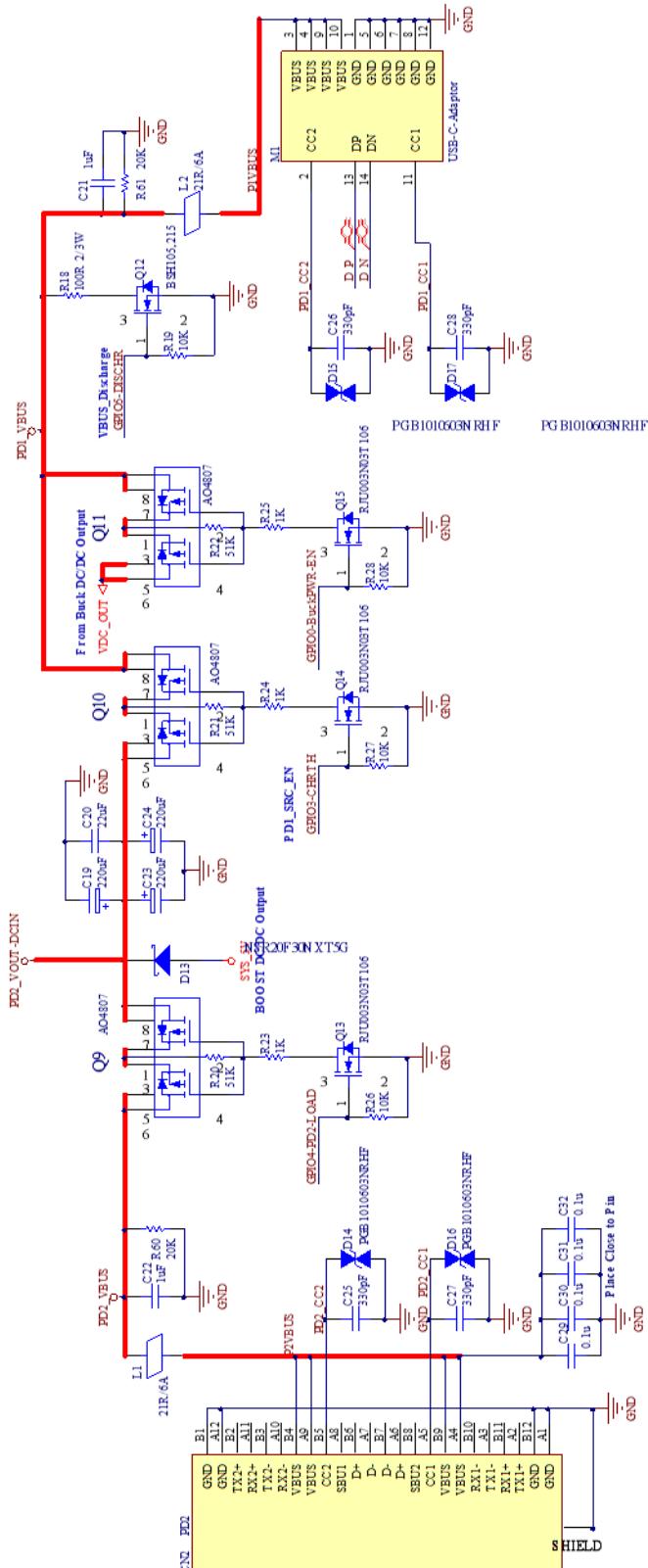
[DS_FT233HP](#)

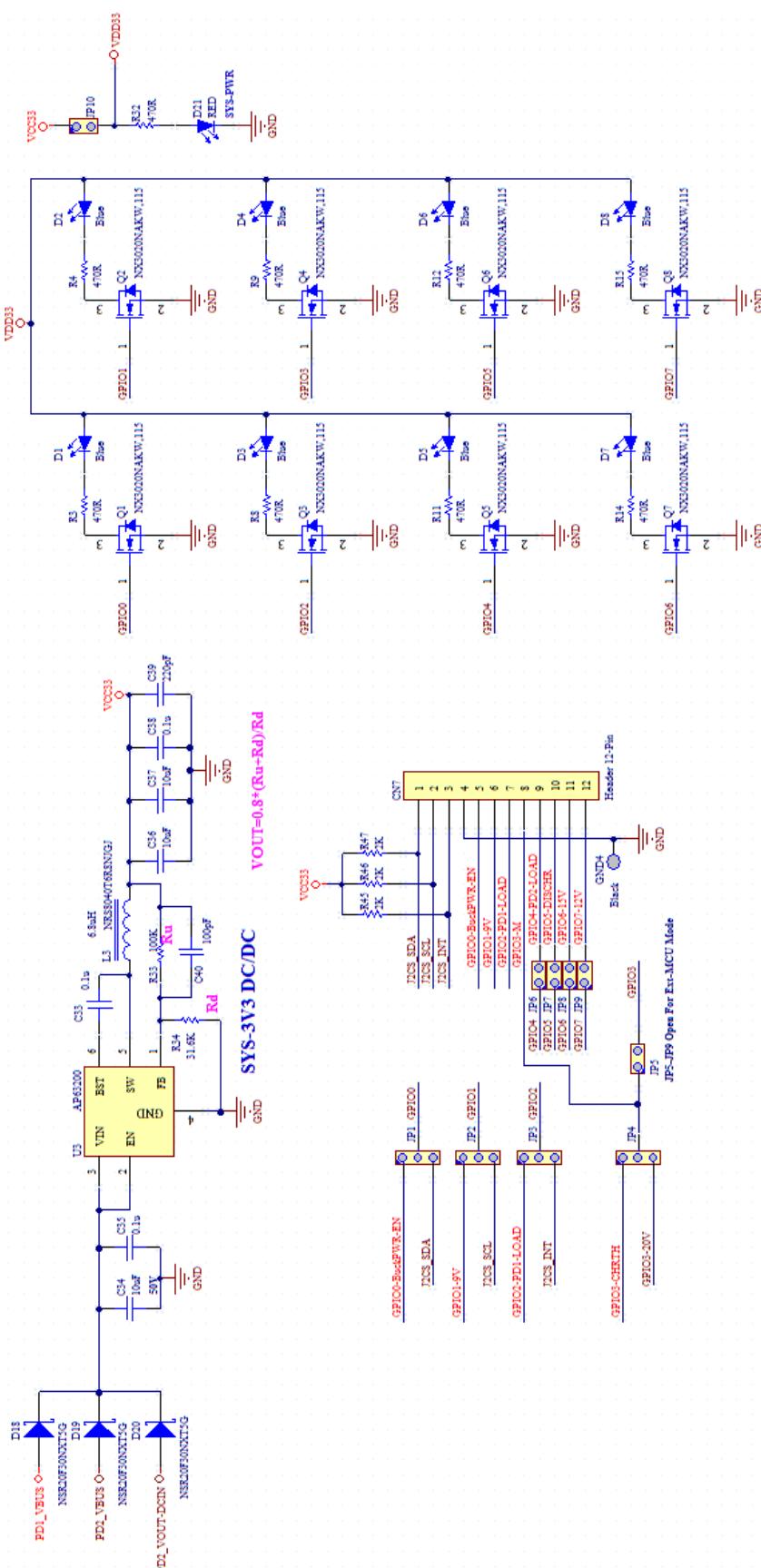
[FT_PROG](#) EEPROM Programming Utility

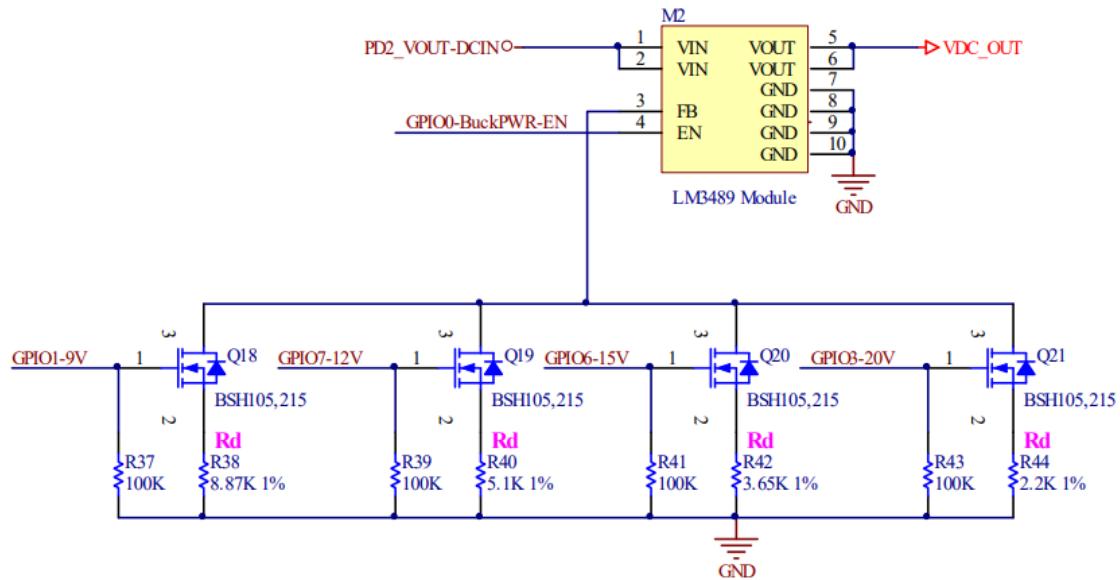
Acronyms and Abbreviations

Terms	Description
EEPROM	Electrically Erasable Programmable Read-Only Memory
GPIO	General Purpose Input Output
USB	Universal Serial Bus

Appendix B – Hardware Design Reference







Appendix C – List of Tables and Figures

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Appendix D – Revision History

Document Title: AN_449 FT423xHP/FT223xHP/FT23xHP DCDC Power Delivery

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Product Page: <http://www.ftdichip.com/FTProducts.htm>

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Revision	Changes	Date
1.0	Initial Release.	30-04-2020
1.1	Updated Release (Updated for FT4233HP support / Updated Figure 1 / Updated Table 1 and added a note).	12-08-2020
1.2	Minor editorial changes for the new release version.	28-11-2023