

# **TI Power Reference Design for Xilinx® Virtex®-7**

# Xilinx Virtex-7 FPGA VC709 Evaluation Kit

*These links will redirect you to Xilinx's website where you can download the design file.*

- Schematic for VC709

[link](#)

- BOM for VC709

[link](#)

- User Guide for VC709

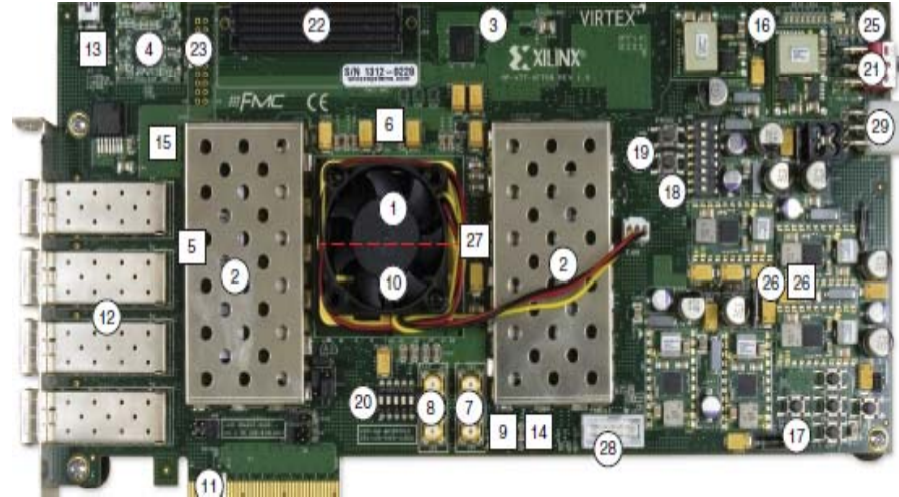
[link](#)

- Power Tree for VC709

[link](#)

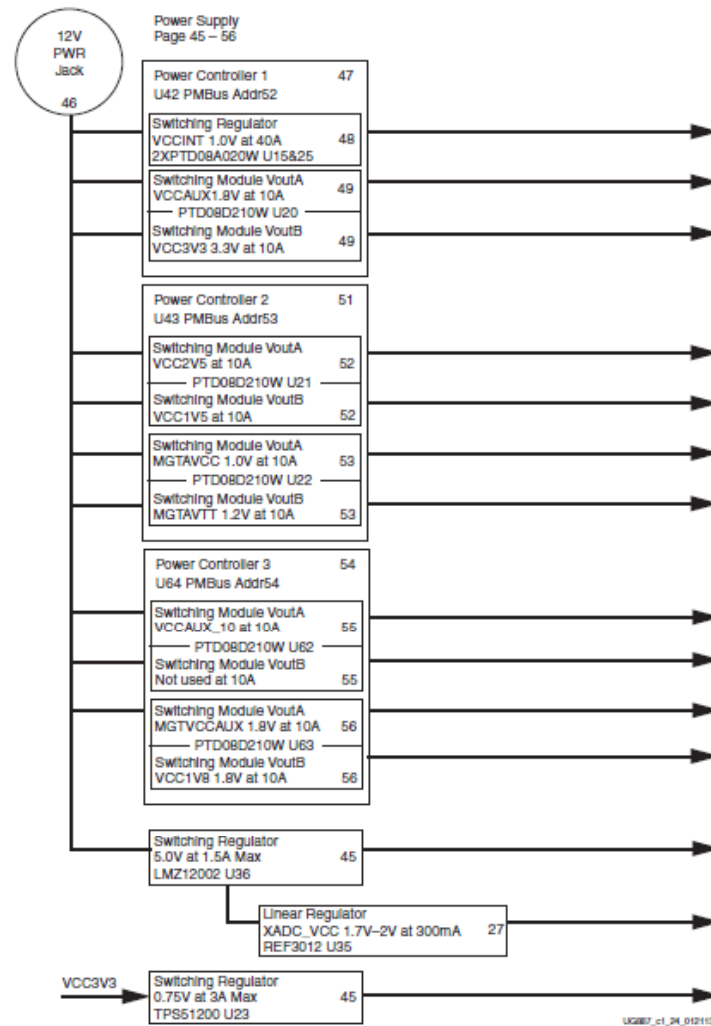
- Gerber Files for VC709

[link](#)



***User Guide P8***

# VC709 Evaluation Kit Power Tree - 1



*User Guide P57*

# VC709 Evaluation Kit Power Tree - 2

Device Type	Reference Designator	Description	Power Rail Net Name	Power Rail Voltage	Schematic Page
Core voltage controller and regulators					
UCD9248PFC <sup>(1)</sup>	U42	PMBus Controller (Addr = 52)			47
PTD08A020W	U25/U15	Dual adjustable switching regulators 40A, 0.6V to 3.6V	VCCINT_FPGA	1.00V	48
PTD08D210W (V <sub>OUT A</sub> )	U20	½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCCAUX	1.80V	49
PTD08D210W (V <sub>OUT B</sub> )		½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCC3V3	3.30V	49
Auxiliary voltage controller and regulators					
UCD9248PFC <sup>(2)</sup>	U43	PMBus Controller (Addr = 53)			51
PTD08D210W (V <sub>OUT A</sub> )	U21	½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCC2V5_FPGA	2.50V	52
PTD08D210W (V <sub>OUT B</sub> )		½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCC1V5_FPGA	1.50V	52
PTD08D210W (V <sub>OUT A</sub> )	U22	½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	MGTAVCC	1.00V	53
PTD08D210W (V <sub>OUT B</sub> )		½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	MGTAVTT	1.20V	53
UCD9248PFC <sup>(3)</sup>	U64	PMBus Controller (Addr = 54)			54
PTD08D210W (V <sub>OUT A</sub> )	U62	½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCCAUX_IO	2.00V	55
PTD08D210W (V <sub>OUT B</sub> )		½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	NOT USED	1.00V	55
PTD08D210W (V <sub>OUT A</sub> )	U63	½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	MGTVCCAUX	1.80V	56
PTD08D210W (V <sub>OUT B</sub> )		½ of adjustable switching regulator dual 10A, 0.6V to 3.6V	VCC1V8_FPGA <sup>(4)</sup>	1.80V	56
Linear regulators					
LMZ12002	U36	Fixed linear regulator 2A	VCC5V0	5.00V	45
TPS51200DR	U23	Tracking regulator, 3A	VTTDDR	0.75V	45
ADP123	U10	Fixed linear regulator, 300 mA	XADC_VCC	1.80V	27
REF3012	U35	Fixed linear voltage reference	XADC_VREF	1.25V	27

***User Guide P58&59***

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<https://www.ti.com/legal/termsofsale.html>) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2021, Texas Instruments Incorporated