USB Type-C HDD With USB Power Delivery Reference Design

(ACTIVE) TIDA-00882

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Key Document

- TIDA-00882 Test Results (PDF 668 KB)
  18 Dec 2015 104 views

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TIDA-00882 USB Type-C HDD With USB Power Delivery Reference Design Board Top View

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Description

This reference design uses Texas Instrument's SuperSpeed USB 3.0 to SATA bridge, USB Type-CTM and USB PD controller with integrated power switch and High-Speed USB mux, and SuperSpeed USB 3.1 mux to demonstrate the subsystems required to implement a Type-C external hard disk drive capable of delivering power to a Type-C host (laptop, tablet, phone, and more).

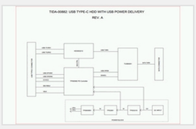
Features

- USB-IF certified Power Delivery silicon
- 5V @ 3A or 12V @ 3A power source with optional 5A support
- SuperSpeed USB 3.0 data transfer rates
- Serial ATA revision 2.0 (6 Gbps)
- TRIM support

TI's Standard Terms and Conditions for Evaluation Modules apply.

Schematic/Block Diagram

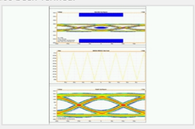
Quickly understand overall system functionality.



Download Schematic

Test Data

Get results faster with test and simulation data that's been verified.



Download Test Data

Design Files

Download ready-to-use system files to speed your design process. Get Viewer.

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

TI Devices (9)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
CSD87501L	CSD87501L 30-V Dual N-Channel Common Drain NexFET™ Power MOSFET	Power MOSFET	Sample & Buy	Not Available
HD3SS3212	Two Channel Differential 2:1/1:2 USB3.1 Mux/Demux	USB	Sample & Buy	Not Available
TLV3012	Nanopower, 1.8V, SOT23 Push-Pull Comparator with Voltage Reference	Amplifiers and Linear	Sample & Buy	Not Available

Show More

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TLV3012	SOT (DBV) | 6	Download	Download
	SOT (DCK) | 6	Download	Download
TPD4E05U06	USON (DQA) | 10	Download	-
TPS2561	VSON (DRC) | 10	Download	-
TPS650061	WQFN (RUK) | 20	Download	-
TUSB9261	HTQFP (PVP) | 64	Download	-

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

Step 1: Download and install the Ultra Librarian software ZIP: 62MB

Step 2: Download the Symbol and Footprint .bxl file.

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Technical Documents

User guides (1)

Title	Abstract	Type	Size (KB)	Date	Views	TI Recommends
TIDA-00882 Test Results		PDF	668	18 Dec 2015	104	✓

Design files (6)

Title	Abstract	Type	Size (KB)	Date	Views
TIDA-00882 Gerber		ZIP	435	18 Dec 2015	21
TIDA-00882 CAD Files		ZIP	755	18 Dec 2015	56
TIDA-00882 PCB		PDF	1516	18 Dec 2015	58
TIDA-00882 Assembly Drawing		PDF	266	18 Dec 2015	49
TIDA-00882 BOM		PDF	103	18 Dec 2015	60
TIDA-00882 Schematic and Block Diagram		PDF	70	18 Dec 2015	236

Related Tools & Software

Software (3)

Name	Part Number	Software Type
TPS6598x Configuration Tool	TPS6598X-CONFIG	Application Software & Frameworks

TUSB926x Default Firmware, U1/U2 Disabled (Rev. L)
(ZIP, 446 KB) 04 Dec 2014

TUSB926x FlashBurner Utility (Rev. E)
(ZIP, 4549 KB) 181 views, 24 Oct 2013

Applications

- Desktop PC
- Notebook PC

Support & Community

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