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DLP® LightCrafter™ 4500

(ACTIVE) DLPLCR4500EVM

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Key Document


[DLP® LightCrafter™ 4500 Evaluation Module User's Guide \(Rev. D\)](#) (PDF 5158 KB)
 07 Aug 2014 2,760 views

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Description

The DLP® LightCrafter™ 4500 development module provides a flexible light steering solution with high brightness and resolution for industrial, medical and scientific applications. DLP LightCrafter 4500 features the 0.45 WXGA chipset and offers a compelling combination of resolution, brightness, and programmability in a small form factor.

Developers can easily create, store, and display high-speed pattern sequences through DLP LightCrafter 4500's USB-based application programming interface (API) and easy-to-use graphical user interface (GUI). Two configurable input/output triggers allow for convenient synchronization with cameras, sensors, or other peripheral devices. The DLP LightCrafter 4500's feature set makes it an ideal platform for powering industrial 3D machine vision scanners, medical imaging devices, spectrometers, and much more.

Included with DLP LightCrafter 4500 Development Module:

- DLP 0.45 WXGA chipset
- RGB LED light engine
- DMD controller board

Cables and power supply sold separately. Click [here](#) to order power supply.

Features

- RGB LED light engine with 150L light output
- Onboard LED Driver with 0-5A LED Driver
- Simultaneous RGB LED operation
- High speed pattern display with native DLP4500 resolution (912x1140)
 - Up to 4225 Hz binary pattern rate
 - Up to 120 Hz 8-bit grayscale pattern rate
- Image or video display up to WXGA resolution (1280x800)
- Two configurable I/O triggers with programmable polarity and rising & falling edge delay control
- 32MB flash memory for pattern storage
- USB, Mini HDMI, UART, FPD Link interfaces
- USB-based API and host GUI
- Compact size: 122mm x 115mm x 48mm

What's Included

- [DLPR350, DLPC350 Configuration and Support Firmware](#)
- [DLP4500-C350REF, High Resolution, Portable Light Steering Reference Design using DLP Technology](#)
- [DLP4500, DLP 0.45 WXGA DMD](#)
- [DLPC350, Digital Controller for the DLP4500 DMD](#)

Available Versions



exas Instruments provides free software and firmware downloads to give developers flexibility and advanced control of the DLP LightCrafter 4500 EVM. In addition, the software and design documentation allows customers to develop custom products based on the 0.45 WXGA chipset included in DLP LightCrafter 4500 faster.

DLP LightCrafter 4500 EVM GUI: This software bundle includes the executable and source files for the PC-based Graphical User Interface (GUI) for easy communication with DLP LightCrafter 4500. The source files were developed using the [QT Library](#) and the [QT Creator](#).

DLP LightCrafter 4500 JTAG Flash Programmer: The JTAG Flash Programmer gives developers the ability to load the DLPR350 configuration firmware into flash memory attached to a DLPC350 controller. JTAG boundary scan programming allows developers to install the DLPR350 firmware in the absence of standard USB connectivity due to corrupt or missing firmware.

Description	Status	Version	Version Date	Download
▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼
DLP LightCrafter 4500 EVM GUI - Windows	Active	2.0	7/29/2014	Windows
DLP LightCrafter 4500 EVM GUI - Windows	NRND	1.2	10/1/2013	Windows
DLP LightCrafter 4500 JTAG Flash Programmer	Active	1.0	04/01/2014	Windows

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Part Number	Buy from Texas Instruments or Third Party	Buy from Authorized Distributor	Status	Lead-Free	RoHS	REACH	WEEE	HI-V (>50VRMS/75 VDC)	CE	CE-EMC	CE-RTTE/LVD	FCC
DLPLCR4500EVM: DLP® LIGHTCRAFTER™ 4500	\$1299.00(USD) In Stock Typically Ships in 1 to 3 Business Days Buy from TI	Pricing may vary. Buy from distributor	ACTIVE	Yes	Yes	Yes	NA	NA	NA	NA	NA	NA
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TI's [Standard Terms and Conditions for Evaluation Modules](#) apply.

Technical Documents

Errata (1)

Title	Abstract	Type	Size (KB)	Date	Views
LightCrafter 4500 Evaluation Module (EVM) Errata (Rev. A)		PDF	27	15 Jul 2014	686

Application Notes (1)

Title	Abstract	Type	Size (KB)	Date	Views
Using DLP® LightCrafter 4500 Triggers to Synchronize Cameras to Patterns (Rev. A)		PDF	3056	10 Jun 2014	796

User Guides (3)

Title	Abstract	Type	Size (KB)	Date	Views	TI Recommends
DLP 3D Printer User's Guide		PDF	10085	08 Sep 2014	1,762	
DLP LightCrafter 4500 Flash Programmer's Guide (Rev. A)		PDF	2331	04 Sep 2014	533	
DLP® LightCrafter™ 4500 Evaluation Module User's Guide (Rev. D)		PDF	5158	07 Aug 2014	2,760	✓

More Literature (1)

Title	Abstract	Type	Size (KB)	Date	Views
DLP Point Cloud Generation and 3D Machine Vision Reference Design		PDF	531	22 Jul 2014	674

Related Products

Software (1)

Name	Part Number	Software Type
DLPC350 Configuration and Support Firmware	DLPR350	Application Software & Frameworks

Reference Designs (3)

Name	Part Number	Tool Type
Accurate Point Cloud Generation for 3D Machine Vision Applications using DLP® Technology	TIDA-00254	TI Designs
Best-in-class Combination Stereolithography 3D Printer Development Using DLP® Technology	TIDA-00293	TI Designs
High Resolution, Portable Light Steering Reference Design using DLP Technology	DLP4500-C350REF	TI Designs

TI Devices (31)

Part Number	Name	Product Family
DLP4500	DLP 0.45 WXGA DMD	Advanced Light Control
DLPC350	Digital Controller for the DLP4500 DMD	Advanced Light Control
MAX3232	3-V to 5.5-V Multichannel RS-232 Line Driver/Receiver	Interface
SN74AHC1G09	Single 2-Input Positive-AND Gate with Open Drain Output	Logic
SN74AVC1T45	Single-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation and 3-State Outputs	Logic
SN74AVC2T45	Dual-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation and 3-State Outputs	Logic
SN74AVC32T245	32-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation and 3-State Outputs	Voltage Level Translation
SN74AVC8T245	8-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation and 3-State Outputs	Voltage Level Translation
SN74HC21	Dual 4-Input Positive-AND Gates	Gate
SN74LVC1G04	Single Inverter	Logic
SN74LVC1G07	Single Buffer/Driver With Open-Drain Output	Logic
SN74LVC1G125	Single Bus Buffer Gate With 3-State Outputs	Logic
SN74LVC1G17	Single Schmitt-Trigger Buffer	Logic
SN74LVC2G157	Single 2-Line to 1-Line Data Selector/Multiplexer	Logic
TFP401	PanelBus DVI Receiver 165MHz	Display & Imaging SerDes
TL7712A	Single SVS For 12V Systems W/Pgmmable Time Delay	Power Management
TLV62130	4-17V 3A Step-Down Converter in 3x3 QFN Package	Converter (Integrated Switch)
TPD2E001	Low-Capacitance 2-Channel +/-15 kV ESD-Protection Array for High-Speed Data Interfaces	ESD Protection Diodes
TPD8S009	8-Channel ESD Solution for HDMI/DisplayPort	ESD Protection Diodes
TPS3838K33	220nA Supervisor with 10ms/200ms selectable delay time	Power Management
TPS54620	4.5V to 17V Input, 6A Synchronous Step-Down SWIFT™ Converter	Converter (Integrated Switch)
TPS65145	4-CH LCD Bias w/ Fully Int. Pos. Charge Pump, 3.3V LDO Contr., 0.96A Min. Boost Ilim & Fault Detect	Power Management
TPS65251	4.5-V TO 18-V input, 3A/2A/2A output, synchronous triple buck converter	Converter (Integrated Switch)
TPS65251-1	4.5-V to 18-V input, 3A/2A/2A output, Synchronous triple buck converter	Converter (Integrated Switch)
TPS65251-2	4.5-V to 18-V input, 3A/2A/2A output, Synchronous triple buck converter	Converter (Integrated Switch)
TPS65251-3	4.5-V to 18-V input, 3A/2A/2A output, Synchronous triple buck converter	Converter (Integrated Switch)
TPS730	Low-Noise, High PSRR, RF 200-mA Low-Dropout Linear Regulators	Linear Regulator (LDO)
TPS79318	Single Output LDO, 200mA, Fixed(1.8V), High PSRR, Low Noise	Linear Regulator (LDO)
TPS79718	Single Output LDO, 50mA, Fixed (1.8V), Low Quiescent Current, Power Good (PG) Output	Linear Regulator (LDO)
TS3USB221	High-Speed USB 2.0 (480 Mbps) 1:2 Multiplexer/Demultiplexer Switch With Single Enable	USB
TXS0102	2-Bit Bidirectional Voltage-Level Translator for Open-Drain and Push-Pull Application	Logic


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Videos

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NEW DLP® 0.45 WXGA Chipset & LightCrafter™ 4500

Learn all about the features and benefits available to developers with the DLP 0.45 WXGA chipset and DLP LightCrafter 4500 toolkit. The chipset and toolkit are the next evolution of development tools from TI.


Posted: 13-May-2013
Duration: 03:22
Views: 3902


Tags: chemical analysis, dmd, intelligent display, LightCrafter, light steering, spectral analysis, ti, Optical Sensing, English, WXGA, medical, industrial,

Related Videos

Introducing The DLP® 0.45 WXGA Chipset and DLP® LightCrafter™ 4500


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NEW DLP® 0.45 WXGA Chipset & LightCrafter™ 4500

DLP® LightCrafter™ 4500

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Training & events

Name	Type	Available During
Georgia Tech MOOC: Control of Mobile Robots Learn how to make mobile robots move in effective, safe, predictable, and collaborative ways using modern control theory.	On-Line Training	On Demand
SimpleLink™ Wi-Fi CC3100 and CC3200 Project 0 Series - 5 Part Series Learn about using Software Tools for SimpleLink™ Wi-Fi CC3100 Boosterpack and CC3200 Launchpad	On-Line Training	On Demand
TI-RTOS Update Learn about the latest TI-RTOS features and more in-depth understanding of this TI software tool.	On-Line Training	On Demand
Designing with Ultra Low Power Segmented Displays Learn about designing Ultra-low Power Segmented Displays and MSP430	On-Line Training	On Demand

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