:: DLP5500 ::

DLP® LightCommander™

LOGIC

DLP® TEXAS INSTRUMENTS

QuickStart Guide www.logicpd.com

DLP LightCommander

QuickStart Guide

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1 Introduction

Congratulations on your purchase of the DLP® LightCommander™ Development Kit. The DLP LightCommander is a highly versatile and easy-to-use development kit for incorporating DLP technology into light processing applications.

1.1 Development Kit Contents

DLP LightCommander Unit

Lens

+Nikon AF NIKKOR 50mm f/1.8D lens

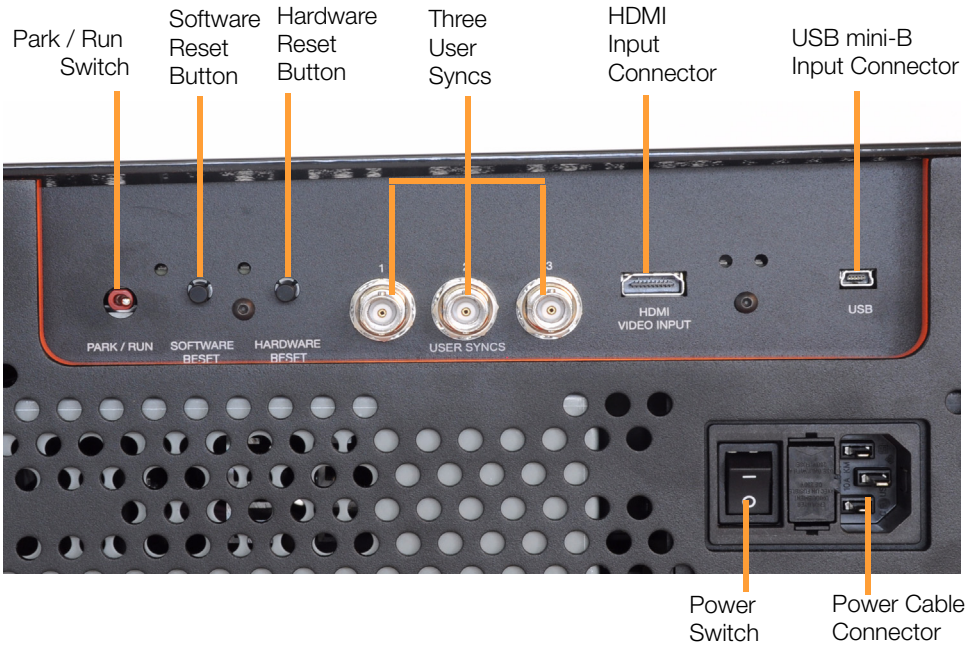
Cables and Accessories

+Power cables for US, UK, Japan, and Europe regions
+DVI to HDMI cable
+USB A to mini-B cable

Figure 1.1 – Kit Hardware Contents

1.2 External Hardware Connection Diagram

Figure 1.2 – Connection Diagram for External Hardware Interfaces



Park/Run Switch: The Park/Run Switch enables or disables the DMD; the switch must be set to Run for normal operation

Software Reset Button: Forces the DLPC200 to reconfigure; also issues a hardware reset

Hardware Reset Button: Issues a reset to the DLPC200, NOR flash, and USB

User Syncs: Connectors for synchronization with external hardware (e.g., camera)

HDMI Input Connector: Connector for an HDMI cable to receive video input from an external source

USB mini-B Input Connector: Connection used by the DLP LightCommander software to control the kit and download static patterns

Power Switch: Main ON/OFF power switch for the DLP LightCommander unit

Power Cable Connector: Connector for the power cables included with the DLP LightCommander

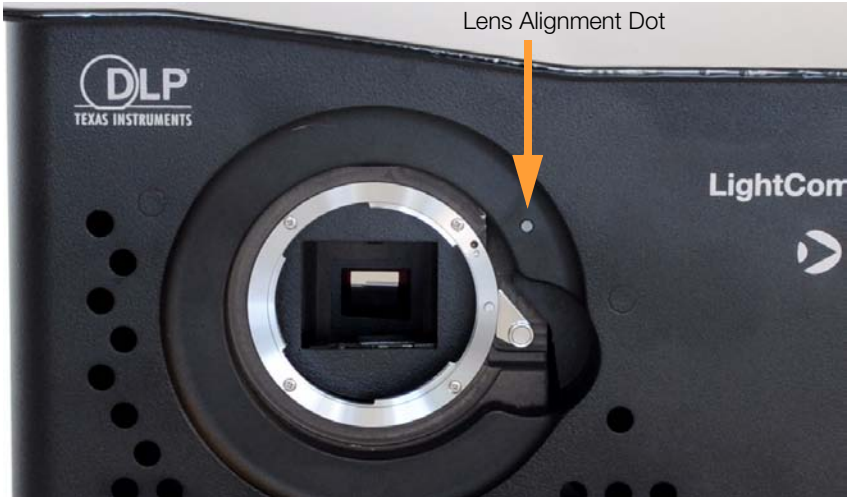
2 Development Kit Set-up

2.1 Attach Lens

1. Remove the Nikon NIKKOR lens from its box.
2. Remove the cap from the lens mount on the DLP LightCommander by turning clock-wise as indicated by the arrow on the cap.
3. Remove the white protective cover from the NIKKOR lens (see Figure 2.1).
4. Align the white dot on the NIKKOR lens (see Figure 2.1) with the dot on the lens mount (see Figure 2.2).

Figure 2.1 – Protective Cover & Lens Alignment Dot

Figure 2.2 – Lens Mount Alignment Dot



5. With the dots aligned, insert the lens into the lens mount cavity (see Figure 2.3).

Figure 2.3 – Attach Lens

6. Secure the NIKKOR lens to the lens mount by turning counter-clockwise until you hear a click (see Figure 2.4).

Figure 2.4 – Secure NIKKOR Lens to Lens Mount

2.2 Run Demo

1. Plug in the power cable for the region in which you are using the DLP LightCommander. See Figure 1.2 for power cable connector location.
2. Unlock the aperture ring on the NIKKOR lens by sliding the tab so the two orange dots **are not** aligned (see Figure 2.5).

Figure 2.5 – Unlock Aperture Lock

3. Open the aperture to its largest setting (f/1.8) by rotating the aperture ring on the lens until the 1.8 is aligned with the white line (see Figure 2.5).
4. Position the DLP LightCommander so the lens points to a target surface where a projected image can easily be viewed.
5. Remove the lens cap.
6. Make sure the Park/Run Switch is set to “Run” and then power on the DLP LightCommander. See Figure 1.2 for location of switches.
7. A sample static image will be displayed on the target surface. **NOTE:** The feet on the bottom of the DLP LightCommander can be rotated to raise, lower, and level the unit so the projected image appears as intended.

3 Next Steps

3.1 Register your Development Kit

Registration provides you access to the latest revision of this QuickStart Guide, as well as other documentation and software tools. In addition to downloads access, registration provides future notifications when Logic releases documentation and software updates for your product.

1. To register, visit the Logic Support website at www.logicpd.com/product-support and click on “Create an Account.”
2. Fill in the on-screen form and click the “Submit” button.
3. You will receive an e-mail with a URL link to confirm account creation. Click on the link to finalize account creation.
4. You will be directed to a page on Logic’s website that states “Account Activated.” At this point you can register your product. Click on the link to “register your development kit and get access to downloads.”
5. Fill in the on-screen form (all fields are required) and click the “Submit” button.
6. Your product is now registered. Click on the “Return to your Account Overview” link and you will see the list of registered products for your account.

Under the heading for “DLP LightCommander Development Kit,” click the “All Downloads” link to access the downloads associated with your DLP LightCommander Development Kit.

3.2 User Manuals

Two user manuals have been created for the DLP LightCommander: a Development Kit User Manual and a Software User Manual.

DLP LightCommander Development Kit User Manual

The Development Kit User Manual provides an overview of all the subcomponents that makeup the DLP LightCommander. The Development Kit User Manual can be downloaded from Logic’s website at: http://support.logicpd.com/downloads/1301/

DLP LightCommander Software User Manual

The Software User Manual provides installation and usage instructions for the PC-based software that can be used to control the DLP LightCommander. The Software User Manual can be downloaded from Logic’s website at: http://support.logicpd.com/downloads/1302/

4 Support Information

4.1 Documentation Downloads

Logic provides additional documentation for the DLP LightCommander Development Kit. These documents are available as downloads from the "My Account" section of the Logic website. Click on the "Log In" link at the top of any www.logicpd.com web page and enter your username and password to access the downloads available for the DLP LightCommander.

Additional documentation includes:

+Controller and DMD Board Schematics (.pdf), Layout Files (.pdf), and BOM (.pdf)
+DLP LightCommander Development Kit User Manual
+DLP LightCommander Software User Manual
+Controller Board Hardware Specification
+DMD Board Hardware Specification
+White Papers, Application Notes, and Product Change Notifications (PCNs) as they become available

4.2 FAQs & Technical Discussion Group

Visit Texas Instruments' E2E Community for frequently asked questions (FAQs) and to join in on technical discussions about the DLP LightCommander. Go to http://e2e.ti.com and then click on the "DLP & MEMS" support link to locate the DLP LightCommander thread.

4.3 Warranty Statement

Refer to the Warranty document enclosed with the DLP LightCommander Development Kit for warranty information.

4.4 Additional Support Services Available from Logic

Support Packages for Dedicated Technical Support

Visit www.logicpd.com/product-support for complete descriptions, prices, and purchase options.

Product Development Services

Logic offers innovative product solutions covering every point in the product lifecycle, from product design and engineering to electronic manufacturing services. Please visit our website at www.logicpd.com for more information.

5 Product Notices

This development kit is intended for use for **ENGINEERING DEVELOPMENT, DEMONSTRATION, OR EVALUATION PURPOSES ONLY** and is not considered by TI and Logic to be a finished end-product fit for general consumer use. Persons handling the product(s) must have electronics training and observe good engineering practice standards. As such, the goods being provided are not intended to be complete in terms of required design-, marketing-, and/or manufacturing-related protective considerations, including product safety and environmental measures typically found in end products that incorporate such semiconductor components or circuit boards. This development kit does not fall within the scope of the European Union directives regarding electromagnetic compatibility, recycling (WEEE), FCC, CE or UL, and therefore may not meet the technical requirements of these directives or other related directives.

ESD

The user assumes all responsibility and liability for proper and safe handling of the goods. Further, the user indemnifies TI and Logic from all claims arising from the handling or use of the goods. Due to the open construction of the product, it is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge.

FCC Warning

This development kit is intended for use for **ENGINEERING DEVELOPMENT, DEMONSTRATION, OR EVALUATION PURPOSES ONLY** and is not considered by TI and Logic to be a finished end-product fit for general consumer use. It generates, uses, and can radiate radio frequency energy and has not been tested for compliance with the limits of computing devices pursuant to part 15 of FCC rules, which are designed to provide reasonable protection against radio frequency interference. Operation of this equipment in other environments may cause interference with radio communications, in which case the user at his own expense will be required to take whatever measures may be required to correct this interference.

Revision History

REV	EDITOR	REVISION DESCRIPTION	APPROVAL	DATE
1	JCA	+Internal release	---	03/26/10
A PN 1015647	JCA	+Initial release	KG	04/06/10

Please check www.logicpd.com for the latest revision of this manual and other documentation.

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