CrystalView Micro LT

Single-Mode / Multi-Mode Optical DVI Extender

INSTALLATION
AND
OPERATIONS MANUAL

ROSE ELECTRONICS

LIMITED WARRANTY

Rose Electronics warrants the CrystalView Micro LT to be in good working order for one year from the date of purchase from Rose Electronics or an authorized dealer. Should this product fail to be in good working order at any time during this one-year warranty period, Rose Electronics will, at its option, repair or replace the Unit as set forth below. Repair parts and replacement units will be either reconditioned or new. All replaced parts become the property of Rose Electronics. This limited warranty does not include service to repair damage to the Unit resulting from accident, disaster, abuse, or unauthorized modification of the Unit, including static discharge and power surges.

Limited Warranty service may be obtained by delivering this unit during the one-year warranty period to Rose Electronics or an authorized repair center providing a proof of purchase date. If this Unit is delivered by mail, you agree to insure the Unit or assume the risk of loss or damage in transit, to prepay shipping charges to the warranty service location, and to use the original shipping container or its equivalent. You must call for a return authorization number first. Under no circumstances will a unit be accepted without a return authorization number. Contact an authorized repair center or Rose Electronics for further information.

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INTRODUCTION

Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, circuitry of the product, and manual content at any time without notice.
The manufacturer cannot accept liability for damages due to misuse of the product or other circumstances outside the manufacturer's control. The manufacturer will not be responsible for any loss, damage, or injury arising directly or indirectly from the use of this product (See limited warranty).

Introduction

Thank you for choosing Rose Electronics CrystalView Micro LT extender. Utilizing both single-mode and multi-mode optical fiber, the product transmits DVI signals over long distances. The built-in EDID technology provides ease of installation and flexible compatibility with any display, regardless of resolution. In addition, the front-panel placement of the EDID button, power supply input, and status indicators allows for the convenient operation and monitoring of the module.

About This Manual

This manual covers the installation and operation of the CrystalView Micro LT. The Installation section describes the proper setup of the unit, and the operation section describes the active functioning of the product

Features

- Compact Size (H x W x D : 0.58 in x 1.54 in x 2.12 in / 14.6mm x 39.0mm x 53.9mm)
- Duplex LC fiber optic connectors
- Single-Mode or Multi-Mode Fiber
- Long distance transmission of high resolution video signals (up to 1920x1200 / 60Hz)
- Transmitter can be programmed with the EDID of any display
- Indicators for Transmitter and Receiver signal status
- Single +5V power supply for Receiver, optional +5V power supply for Transmitter
- Metal enclosure
- Low power consumption
- RoHS compliant

Compatibility

Hardware   Any device with DVI video input or output
Operating Systems   All operating systems

Package contents

- CrystalView Micro LT unit
- 1x 5V 0.85A power supply
- Manual

Additional power supply and cables can be ordered separately. If the package contents are not correct, contact Rose Electronics or your reseller so the problem can be quickly resolved.

Product registration

Register your product for future updates at: www.rose.com/htm/online-registrationform.htm

System Overview

The CrystalView Micro LT comes in a single model. The following figures show the buttons and connectors on the unit.
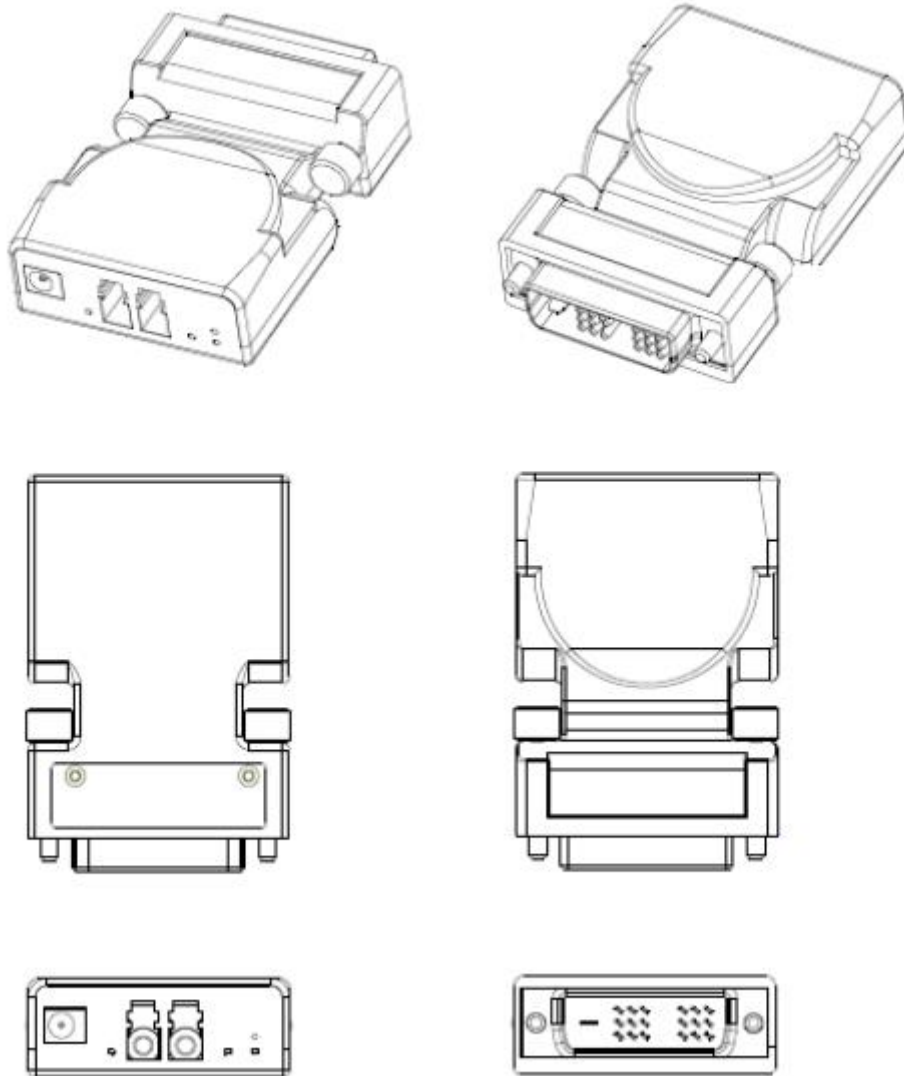

Figure 1. Unit, Front & Back Composite
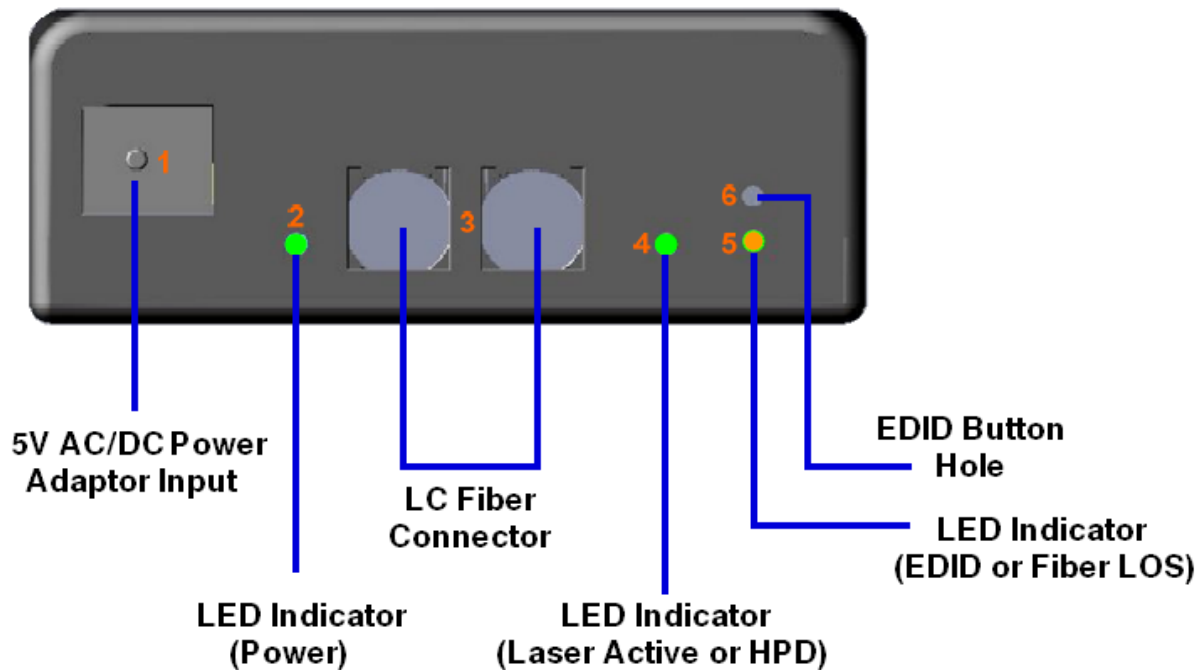
DVI Panel Layout

Figure 2. DVI Panel Layout

1. Power adaptor DC jack.

2. Power Indicator - Illuminated when 5V power is supplied from either the Transmitter DVI connector or the 5V external power supply.

3. LC fiber optic connector.

4. Data Indicator- displays signal transmission status:

    Transmitter status - Green light indicates that a valid video signal has been received by the Transmitter and the transmission laser is active.

    Receiver status - Orange light indicates that Receiver is not detecting a transmitted signal. This may be caused by loss of power at the Transmitter, or by an unplugged fiber cable.

5. EDID Programming Status Indicator on Transmitter unit, Display Connect LED on Receiver unit.

    Transmitter EDID Status - LED will flash orange when a display's EDID is being programmed into the Transmitter.

    Receiver Display LED - green light indicates the receiver is connected to a display.

6. EDID button (Transmitter) - Allows the user to manually program a display's EDID data into the Transmitter's EEPROM. The button must be pressed and held down using a pin or paper clip.

CrystalView Micro LT Installation and Operations Manual

Pin Designations

Pin	Transmitter Designation	Pin	Designation
1	T.M.D.S Data 2-	1	T.M.D.S Data 2-
2	T.M.D.S Data 2+	2	T.M.D.S Data 2+
3	T.M.D.S Data 2 Shield	3	T.M.D.S Data 2 Shield
6	DDC Clock	6	DDC Clock
7	DDC Data	7	DDC Data
8	No Connect	8	No Connect
9	T.M.D.S Data 1-	9	T.M.D.S Data 1-
10	T.M.D.S Data 1+	10	T.M.D.S Data 1+
11	T.M.D.S Data 1 Shield	11	T.M.D.S Data 1 Shield
14	+5V	14	+5V
15	Ground	15	Ground
16	Hot Plug Detect	16	Hot Plug Detect
17	T.M.D.S Data 0-	17	T.M.D.S Data 0-
18	T.M.D.S Data 0+	18	T.M.D.S Data 0+
19	T.M.D.S Data 0 Shield	19	T.M.D.S Data 0 Shield
22	T.M.D.S Clock Shield	22	T.M.D.S Clock Shield
23	T.M.D.S Data Clock+	23	T.M.D.S Data Clock+
24	T.M.D.S Data Clock-	24	T.M.D.S Data Clock-

Figure 3 DVI-D Male (18+1) Connector PIN Definitions

INSTALLATION

Installation

This section describes the process of connecting the CrystalView Micro LT to a video source and a display.

AC/DC Power Adaptor

Transmitter: There are two power input options for the CrystalView Micro LT Transmitter unit. Power is normally supplied from the graphic card through PIN14 (+5V) of the DVI connector. However, if the power output of the graphic card is insufficient for the operation of the Transmitter module, the AC/DC power adaptor may be used to power the unit. Built-in protection circuits are used to accommodate dual power inputs. The power indicator LED will be illuminated when sufficient power is applied.

Figure 4. Active Power LED

Receiver: The CrystalView Micro LT receiver module requires the external AC/DC power adaptor to operate.

LC Fiber

Plug the duplex LC fiber into the LC connectors on the CrystalView Micro LT Transmitter and Receiver. When the fiber is connected properly, the "Fiber LOS" LED will be blinking. Depending on the requirement of the host devices, the optical extender will utilize either single-mode or multi-mode fiber.

System Connection

Connect the Transmitter to the DVI source (Computer), and the Receiver to the DVI display (Monitor).
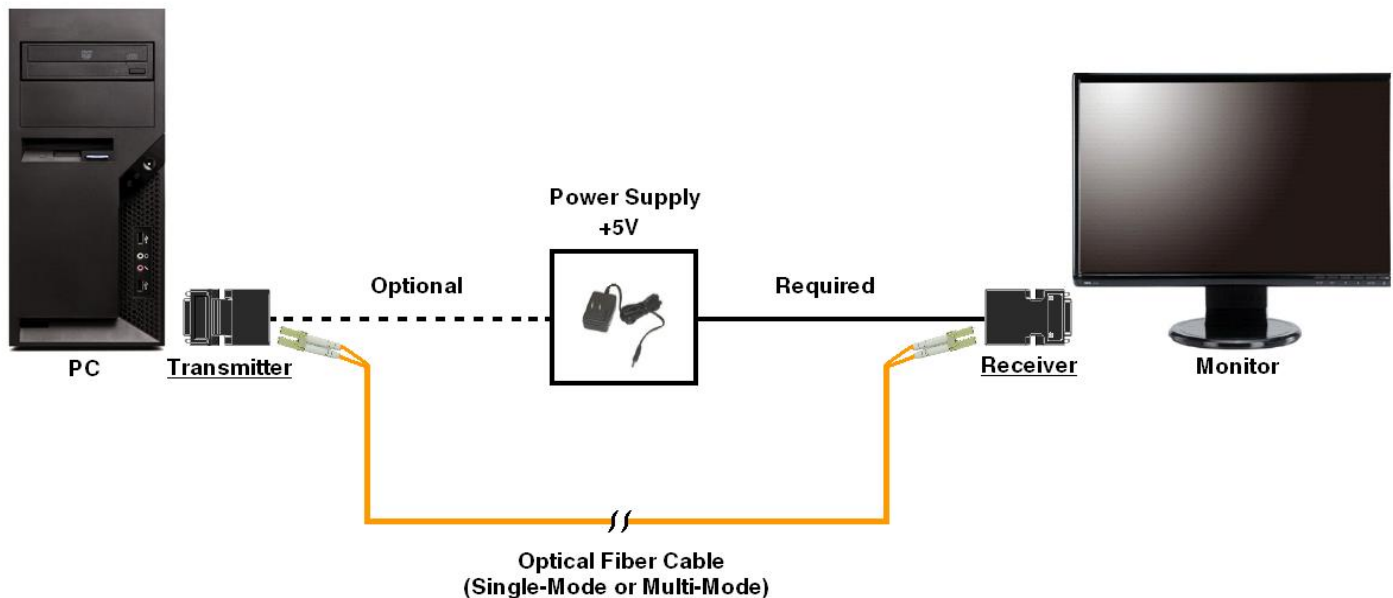

Figure 5. Connecting the computers to the CrystalView Micro LT

Status Indicators

The correct installation of the device results in a steady green signal on the Transmitter's Laser Active Indicator and a blinking orange signal on the LOS Receiver LED.

Manual Self-EDID Programming

The EDID (Extended Display Identification Data) contains information on a monitor's capabilities. A default EDID is programmed into the Transmitter unit. If this table works with a DVI source, it is not necessary to reprogram the extender. CrystalView Micro LT can also be programmed with any display's EDID table, to provide full compatibility with the display.

Device Power

Power on the display and plug the AC/DC power adaptor into the Transmitter. Check that the Power indicator and EDID indicator are illuminated.

Programming Procedure

Insert a small pin or paper clip into the EDID button hole, and press and hold down the button. Release the button once the EDID indicator begins to blink rapidly. Connect the Transmitter unit to the DVI cable of the display. When contents of display EDID are recorded, the EDID indicator will stop flashing and remain steadily illuminated.

To restore the factory default EDID information, insert the pin into the EDID button hole and press the button continuously. The EDID indicator will light up. Release the button when the indicator is again illuminated, indicating that the default EDID has been restored.

System Installation

Disconnect the power adaptor from the Transmitter, and remove the module from the monitor cable. Proceed with system setup.

SERVICE AND TECHNICAL SUPPORT

Service Information

Maintenance and Repair

This Unit does not contain any internal user-serviceable parts. In the event a Unit needs repair or maintenance, you must first obtain a Return Authorization (RA) number from Rose Electronics or an authorized repair center. This Return Authorization number must appear on the outside of the shipping container.

See Limited Warranty for more information.

When returning a Unit, it should be double-packed in the original container or equivalent, insured and shipped to:

>Rose Electronics
>Attn: RA_____
>10707 Stancliff Road
>Houston, Texas 77099 USA

Technical Support

If you are experiencing problems, or need assistance in setting up or operating your CrystalView Micro LT, consult the appropriate sections of this manual. If, however, you require additional information or assistance, please contact the Rose Electronics Technical Support Department at:

>Phone: (281) 933-7673
>E-Mail: TechSupport@rose.com
>Web: www.rose.com

Technical Support hours are from: 8:00 am to 6:00 pm CST (USA), Monday through Friday.

Please report any malfunctions in the operation of this Unit or any discrepancies in this manual to the Rose Electronics Technical Support Department.

SAFETY

Safety and EMC Regulatory Statements

The CrystalView Micro LT has been tested for conformance to safety regulations and requirements, and has been certified for international use. Like all electronic equipment, the CrystalView Micro LT should be used with care. To protect yourself from possible injury and to minimize the risk of damage to the Unit, read and follow these safety instructions.

Follow all instructions and warnings marked on this Unit.
Except where explained in this manual, do not attempt to service this unit yourself.
Do not use this unit near water.
Assure that the placement of this unit is on a stable surface or rack mounted.
Provide proper ventilation and air circulation.
Keep power cord and connection cables clear of obstructions that might cause damage to them.
Use only power cords, power adaptor and connection cables designed for this Unit.
Use only a grounded (three-wire) electrical outlet.
Use only the power adaptor provided with the unit.
Keep objects that might damage this Unit and liquids that may spill, clear from this Unit. Liquids and foreign objects might come in contact with voltage points that could create a risk of fire or electrical shock.
Operate this Unit only when the cover is in place.
Do not use liquid or aerosol cleaners to clean this Unit. Always unplug this Unit from its electrical outlet before cleaning.
Unplug this Unit from the electrical outlet and refer servicing to a qualified service center if any of the following conditions occur:
- The power cord or connection cables are damaged or frayed.
- The Unit has been exposed to any liquids.
- The Unit does not operate normally when all operating instructions have been followed.
- The Unit has been dropped or the case has been damaged.
- The Unit exhibits a distinct change in performance, indicating a need for service.

Safety information

⚠ Documentation reference symbol. If the product is marked with this symbol, refer to the product documentation to get more information about the product.

WARNING   A WARNING in the manual denotes a hazard that can cause injury or death.

CAUTION   A CAUTION in the manual denotes a hazard that can damage equipment.

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous conditions and have taken appropriate steps.

Grounding
There must be an un-interruptible safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

Servicing
There are no user-serviceable parts inside these products. Only service-trained personnel must perform any servicing, maintenance, or repair.

The user may adjust only items mentioned in this manual.

APPENDICES

Appendix A. General Specifications

Dimensions	1.535 W x 2.123 D x 0.575 H (in)
	39 W x 53.9 D x 14.6 H (cm)
Power	External Power Supply Input: 100VAC~240VAC / 50~60Hz
	Power Supply Output: +5V DC / 0.8A
Video Signal	DVI
Connector	DVI-D (18+1) Male
Resolution	1920 x 1200 @ 60Hz
EDID Table	User Programmable
Max. Distance	Single-mode G.652D[1] fiber: 4920 ft/ 1500 m
	Multi-mode OM3[2] fiber: 1640 ft / 500 m
Environmental	Operating conditions: 32–122° F / 0–50° C, 0%-80% non-condensing relative humidity
	Storage conditions: -4–158° F / -20–70° C

1. Single-Mode Fiber: Fiber Core Dimension (9/125μm)
2. Multi-Mode OM3 Fiber: Fiber Core Dimension (50/125μm), Bandwidth (1300nm : 500MHz*km)

Server Management

Solutions