VCSELs inside Home and Office

Optical DVI Dual Link Extension Module

Stretch DVI Dual Link (M1-3R2VI-DU) Ver. 1.0

Description

The M1-3R2VI-DU DVI Module is a new member of the Opticis family of products that stretches your DVI connectivity. It offers a fiber-optic long-distance extension of dual link DVI connectors. DDC connection is implemented over a CAT5e cable with RJ-45C.

The reality of high-speed digital graphic interconnections mandates products to maintain video quality and cost effectiveness of integrated display systems. Optical technology for gigabit digital transmission makes it simple to extend digital graphic data above the extension limits of copper wires providing pure signal integrity for an ideal visual experience, no EMI/RFI emissions, light weight, rugged cabling and connectors, low power consumption and installation ease.

The extension system consists of transmitter and receiver module boxes with female dual link DVI-D plugs, being able to connect PCs (Media Receiver) and displays (Monitor or HDTV) by dual link DVI-D copper cables respectively. Two (2) duplex LC patch cord fiber cables enable to transmit graphic data, 7 channels including a clock.

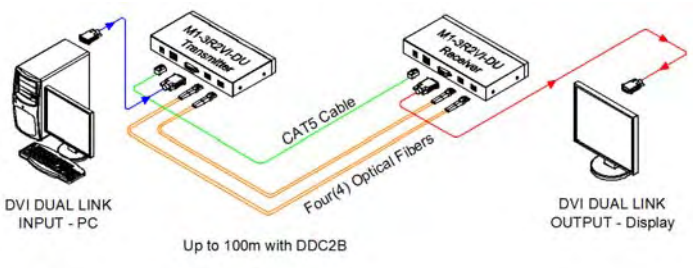
The module also provides self-EDID programming feature that makes pure optical interconnection realized. It makes installation of M1-3R2VI-DU much easier and more flexible at any displays of various resolution types. The module extends DVI dual link data of WQXGA (2,560x1,600) resolution up to 2km (6, 600 feet) with virtual DDC.

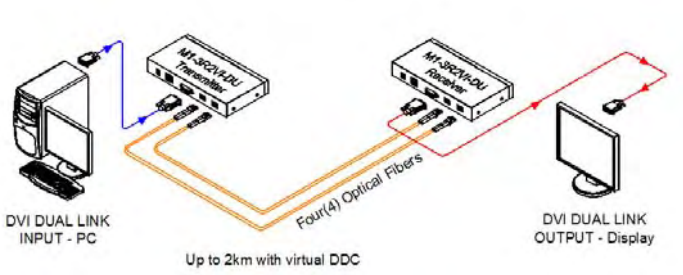
Features

- Supports up to 2,560x1,600 resolution at 60Hz refresh rate.
- Extends up to 100 m (328 feet) with DDC2B.
  2 km (6600 feet) with virtual DDC.
- Fiber-optic cables with four (4) LC or two (2) duplex LC fiber connectors are required.
- Offers DVI single link DVI connection through two (2) LC or one (1) duplex LC LC fibers
- Light weight detachable cables with secure connectors for fiber and copper.
- Applicable to both single and multi-mode fiber.
- Low EMI/RFI emissions and inherent fiber data security.

Applications

- Power Mac G5 with graphic cards supporting Dual Link DVI and 30” Cinema Display
- Medical, military, aerospace, factory, and traffic control integrated digital display systems
- Digital TFT-LCD and plasma flat panel displays and projectors for conference room, auditorium, airports, stadium and kiosk systems.





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AC/DC Power Supply for Modules

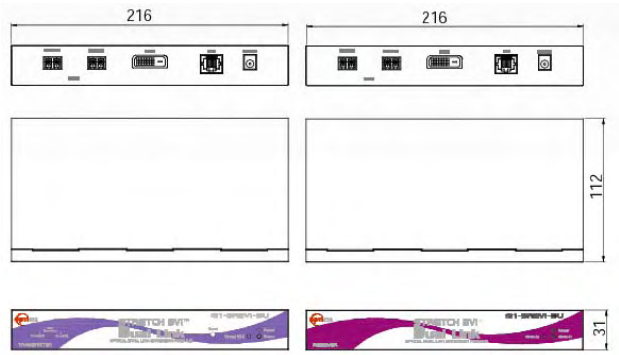
M1-3R2VI-DU offers a +24V external power adapter to supply both modules with the power over CAT5e cable. One more AC/DC power adapters is required for virtual DDC.

Compliance with International Standards

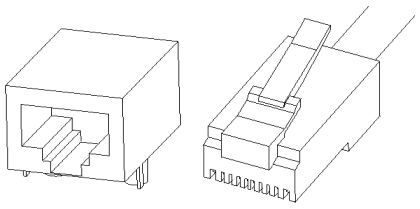
M1-3R2VI-DU is designed and tested to meet the requirements of the world product standards for material specifications, RFI/EMI emissions, and electrical safety.

Drawings

Dimension [mm]



Connector types of DDC cable



(Receptacle and plug of RJ-45C)

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
Ambient Operating Temperature	T_A	0	25	+ 50	°C
Storage Temperature	T_S	-10		+ 85	°C
Storage Humidity	H_S	5		85	RH%

Electrical Power Supply Characteristics

(T_A = 0 °C to +50 °C, unless otherwise noted)

Parameter		Symbol	Min	Typ	Max	Units
Supply Voltage		V_{CC}	22	24	26	V
Supply Current	TX	I_{TCC}	180	220	270	mA
	RX	I_{RCC}	270	330	380	mA
Power Dissipation	TX	P_{TX}	3.8	5.0	7.2	W
	RX	P_{RX}	5.8	8.0	10.0	W

Terminology;

VESA Video Electronics Standards Association

DDC Display Data Channel. Latest specification is DDC2B

EDID Extended Display Identification Data. EDID parameters are sent over the DDC link.

DVI-D Digital Visual Interface. Digital connection only – no analog.

HDMI High Definition Multimedia Interface. Support High-Definition Video and Multi-channel Audio.

HDCP High-bandwidth Digital Content Protection. These parameters are part of the 2002 High Definition Multimedia Interface (HDMI) specification for Consumer Electronics.

Shipping Group;

- 1ea x DVI Dual link Transmitter Module
- 1ea x DVI Dual link Receiver Module
- 2ea x DVI Dual link Copper Cable (1.8m)
- 1ea x 24V Power Supply Adapter (AC 85-264V, 50/60Hz)
- 1ea x AC Cord (US Type or EU type)
- 1ea x User Manual
- Option : 2 duplex LC Patch Cord Cable, CAT5e Cable, One more +24V Power Adapter for virtual DDC

Headquarter

Opticis Co., Ltd.
304, ByusanTechnopia, 434-6
Sangdaewon-Dong, Chungwon-Ku,
Sungnam City, Kyungki-Do, 463-120
South Korea
Tel: +82 (31) 737-8033~9
Fax: +82 (31) 707-8079
www.opticis.com

North American Office

Opticis North America Inc.
330 Richmond Street, Suite 100, Chatham,
Ontario N7M 1P7
Canada
Tel: +1 (519) 355-0819
Fax: +1 (519) 355-0502