

Opto-Digital Links

Long-distance with cost effectiveness

High-speed

Securities (Electrical isolation)

High-quality (No signal loss)

Stretch DVI™

Stretch HDMI™

Stretch USB™

Stretch FireWire™

Stretch Multimedia™

Gigabit VCSEL Transceiver



Opticis HQ **Opticis Co., Ltd.**

Opticis NA **Opticis North America, Inc.**

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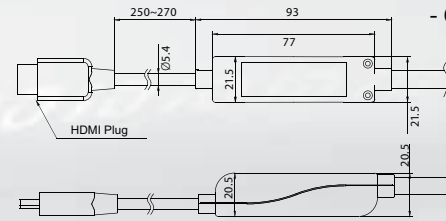


Stretch HDMI™ : Point to Point Cable



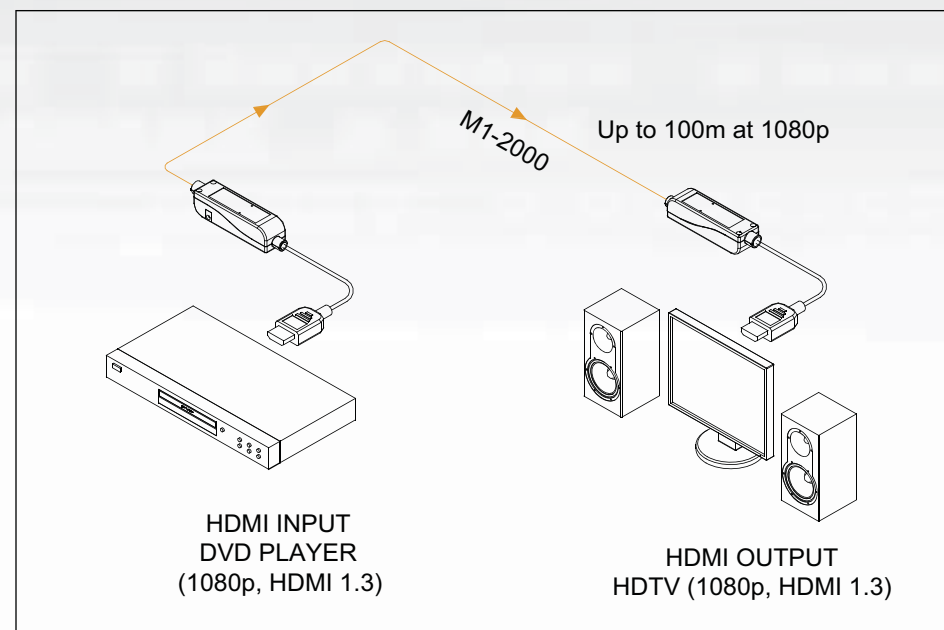
M1-2000; Slim and Compact sized modules

- Supports HDMI 1.3 standard up to 1080p with 36bit color depth - 12 color bits per each channel.
- Supports all VESA resolutions up to WUXGA (1920x1200).
- Plug and play: directly replaces copper cables without any change in installation.
- Hybrid cable with four (4) multi-mode fibers for video/audio transmission and copper wires for DDC/HDCP.
- Extends up to 100 meters (326 feet).
- Uses HDMI +5V source or external DC +5V adapter.
- Compact design of end connectors allows direct connection to HDTV source and TV set.
- Certifies FCC and CE standards for EMI/RFI emission.



Ordering information : M1-2000-xxx,
 where xxx = Length in meters.
 Standard lengths are 10, 20, 30, 50, 70 and 100 meters.

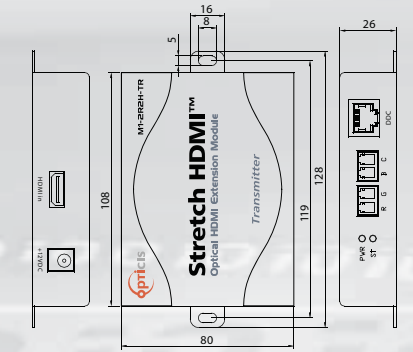
Drawing Dimension [mm]



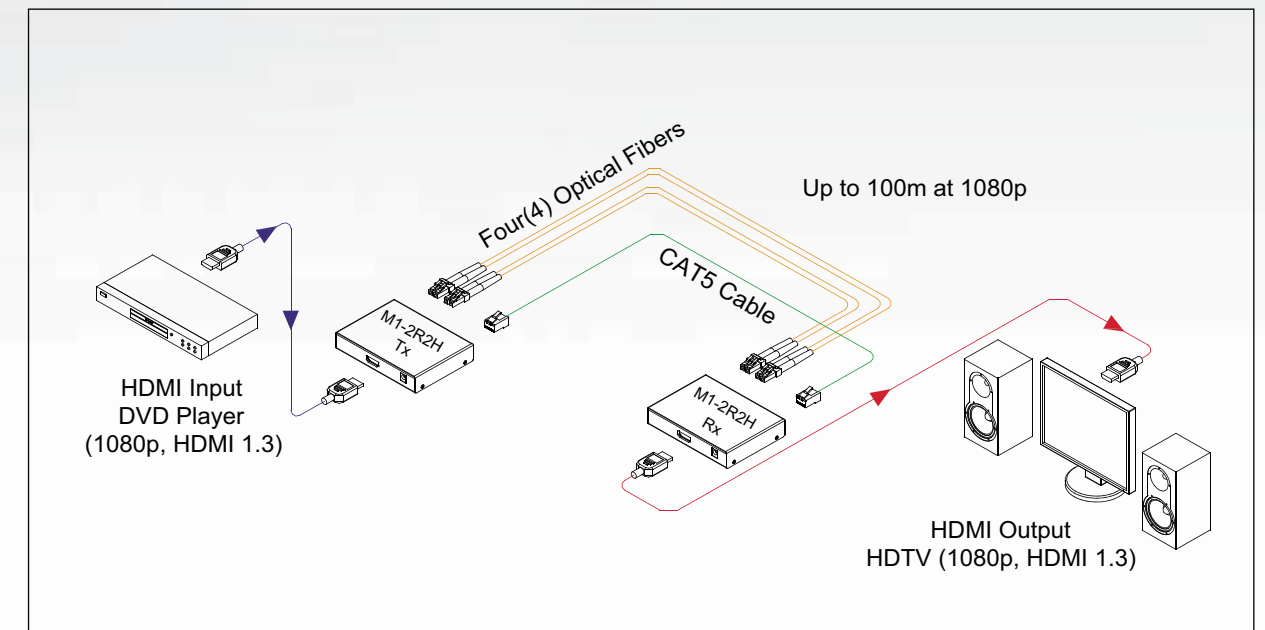
Stretch HDMI™ : Detachable Fiber Module

M1-2R2H ; Detachable HDMI Transmitter / Receiver

- Supports HDMI 1.3 standard up to 1080p with 36bit color depth - 12 color bits per each channel.
- Supports all VESA resolutions up to WUXGA (1920x1200).
- Complies with HDMI standard and D DWG, specifying DVI.
- No software to install: plug and play.
- HDMI receptacles are applied to connect to HDTV sources and displays through HDMI male-to-male cables (1.0m).
- Extends up to 100 meters (326 feet).
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Transmits TMDS over a pair of duplex LC multi-mode fibers.
- Performs DDC/HDCP interconnection over CAT5 with RJ-45 connector.
- Includes one +12V power adapter, plugged to either module to supply to the other over CAT5.
- Provides the mountable housing with two ear wings to be easily mounted by screws.



Drawing Dimension [mm]



Stretch DVI™ : Point to Point Cables

- Plug and play: directly replaces copper cables without any change in installation.
- Supports all VESA resolutions up to WUXGA (1920x1200) and HDTV up to the maximum resolution, 1080p.
- Certifies FCC and CE standards for EMI/RFI emission.

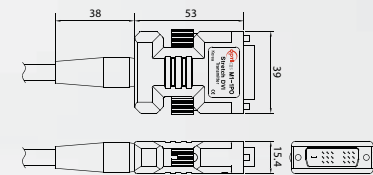


M1-1POE ; Metallic small sized connector

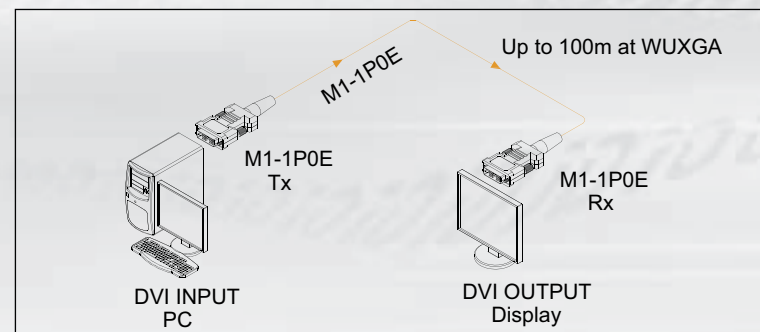
- Hybrid cable with four (4) multi-mode fibers for TMDS transmission and copper wires for DDC/HDCP.
- Extends up to 100 meters (326 feet).
- Uses PC host +5V source from video sources or plugs +5V power adapter in the shipping group.
- Offers Auto-power function to protect circuit from conflict of power supply between the external DC power adapter and video source power.
- Compact design of end connector allows direct connection to the host video card and display.

Ordering information : M1-1POE-xxx,
where xxx=Length in meters.

Standard lengths are 10, 20, 30, 50, 70 and 100 meters.



Drawing Dimension [mm]



M1-100x ; All-fiber cable for electrical isolation

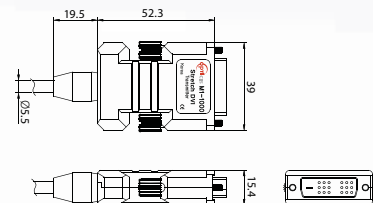
- Employs a bundled cable of multi-mode fibers.
- : 50/125 or 62.5/125um, Riser jacket of non-flammable PVC.
- Extends up to 500 meters (1640 feet).
- Offers perfect electrical galvanic isolation.
- Supports fiber-optic DDC or Virtual DDC feature.

Ordering Information : M1-100y-xxx,
where y = 0: Optical DDC connection.

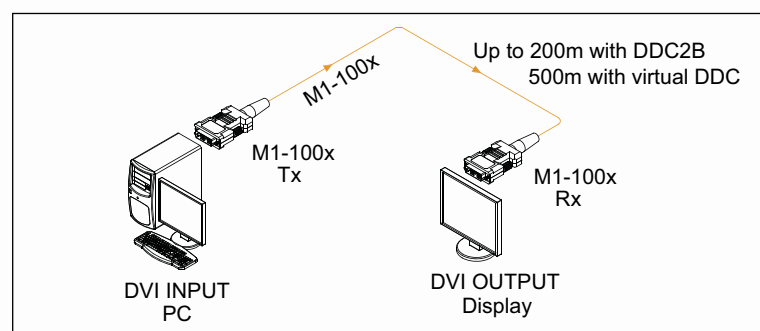
= A : Virtual DDC connection.

xxx = Length in meters.

Standard lengths are 10, 20, 30, 50 and 100 meters.



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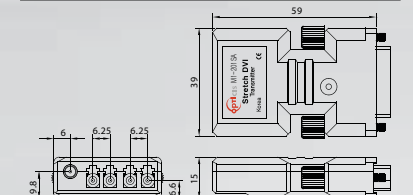


Stretch DVI™ : Detachable Fiber Modules

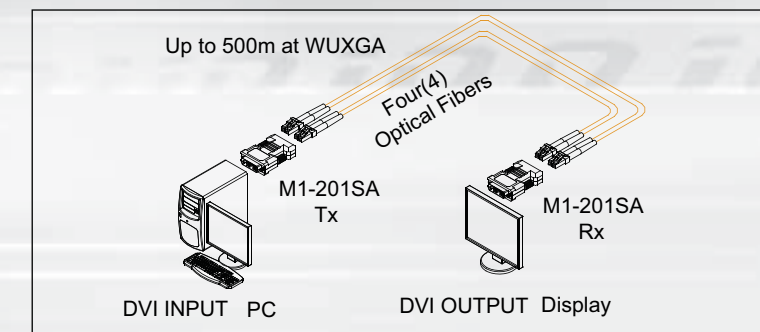
- Detachable fiber features for EASY INSTALLATION.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Certifies FCC and CE standards for EMI/RFI emission.

M1-201SA-TR ; Easy installation and four-fiber connection

- Extends WUXGA (1920x1200) 60Hz DVI data up to 500 meters (1640 feet).
- Transmits TMDS over a pair of duplex LC multi-mode fibers.
- Offers Auto EDID programming feature, detecting from display and restoring to an EEPROM in the transmitter without any physical DDC connection.
- The modules are compact enough to directly plug to graphic sources and displays by adopting DVI-plugs at the ends .
- Certifies Medical device directive 93/42/EEC.
- Includes two (2) +5V DC power adapters for the transmitter and receiver.

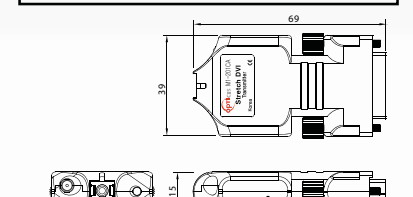


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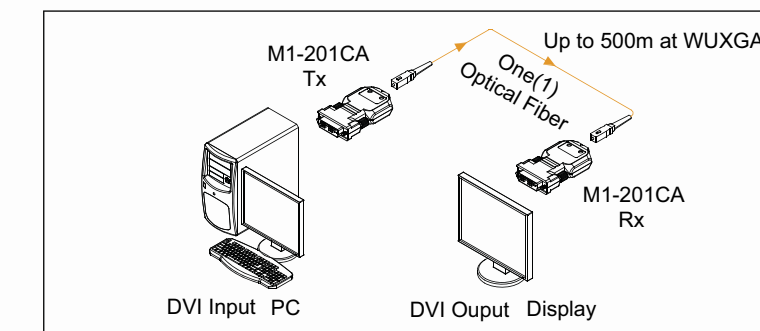


M1-201CA-TR ; Easy installation and only one-fiber connection

- Extends WUXGA (1920x1200) 60Hz DVI data up to 500 meters (1640 feet).
- Transmits TMDS over one(1) SC multi-mode fiber.
- Offers Auto EDID programming feature, detecting from display and restoring to an EEPROM in the transmitter without any physical DDC connection.
- The modules are compact enough to directly plug to graphic sources and displays by adopting DVI-plugs at the ends .
- Includes two (2) +5V DC power adapters for the transmitter and receiver.



Drawing Dimension [mm]



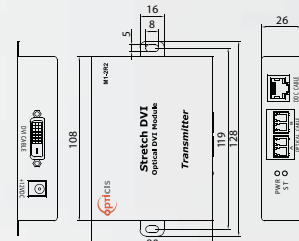
Stretch DVI™ : Detachable Fiber Modules

- Detachable fiber features for EASY INSTALLATION.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Certifies FCC and CE standards for EMI/RFI emission.

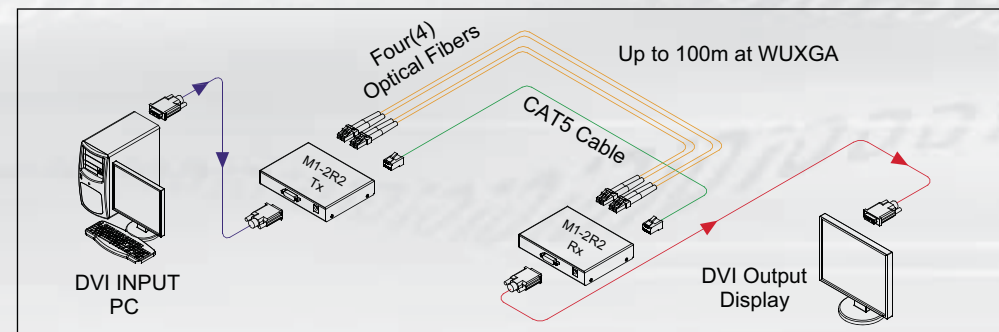


M1-2R2-TR ; DVI Transmitter / Receiver

- Extends WUXGA (1920x1200) 60Hz DVI data up to 100 meters (326 feet).
- Transmits TMDS (R, G, B, Clock) over a pair of duplex LC multi-mode fibers and interconnects DDC/HDCP over CAT5 with RJ45.
- Adopts DVI-I receptacles to connect to sources and displays through DVI male-to-male cables (1.0m).
- Provides the mountable housing with two ear wings to be easily mounted by screws.
- Includes a +12V power adapter, plugged either module, to supply to the other over CAT5.
- Optionally, offers manual EDID programming feature in place of using CAT5 connection.

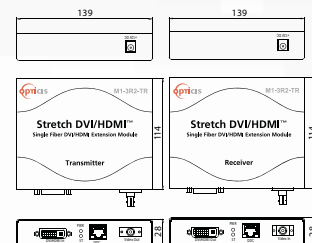


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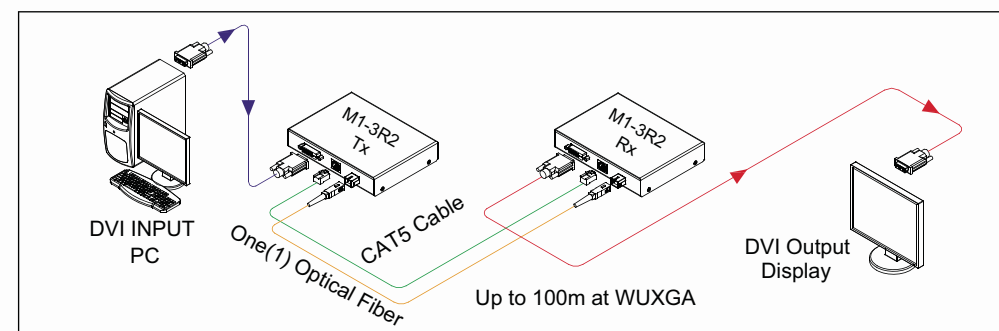


M1-3R2-TR ; One fiber DVI Extender

- Extends up to 100 meters (326feet).
- Supports up to WUXGA (1920X1200) 60Hz DVI or Full HD 1080P resolution.
- Transmits TMDS (R, G, B, Clock) over one multi-mode fiber and interconnects DDC/HDCP over CAT5 with RJ45.
- Adopts DVI-I receptacle to connect to sources and displays through DVI male to male cables (1.0m).
- Includes one +12V DC power adapter, plugged to either module, to supply to the other over CAT5.



Drawing Dimension [mm]

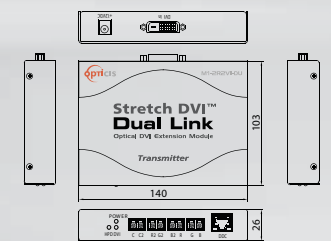


Stretch DVI™ : Detachable Dual link Fiber Modules

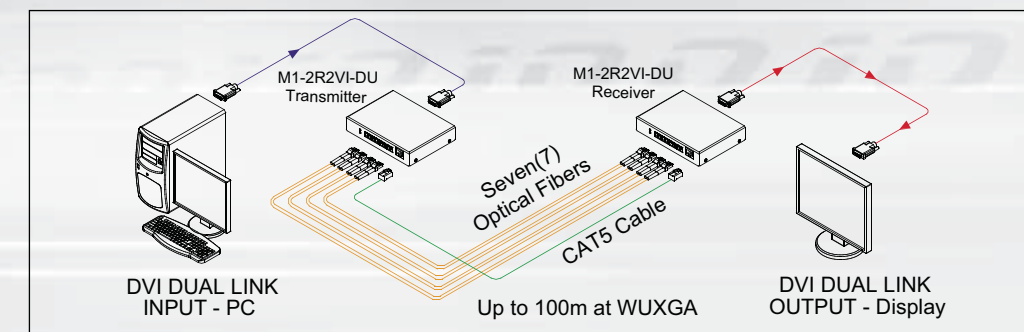
- Detachable fiber features for EASY INSTALLATION.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Certifies FCC and CE standards for EMI/RFI emission.

M1-2R2VI-DU ; Dual link DVI Optical Extender

- Extends up to 100 meters (326 feet).
- Supports up to 2560x1600 resolution at 60Hz refresh rate.
- Transmits R, G, B; 3 channels for each link and one clock over fiber cables with 7 LC or 4 duplex LC multi-mode fiber interconnection.
- Performs DDC/HDCP interconnection over CAT5 with RJ45 connector.
- Adopts DVI-I receptacles to connect to graphic sources and displays through dual DVI male-to-male cables (1.0m).
- Includes one +12V DC power adapter, plugged to either module, to supply to the other over CAT5.

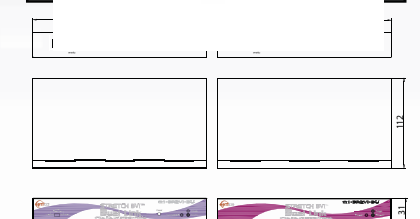


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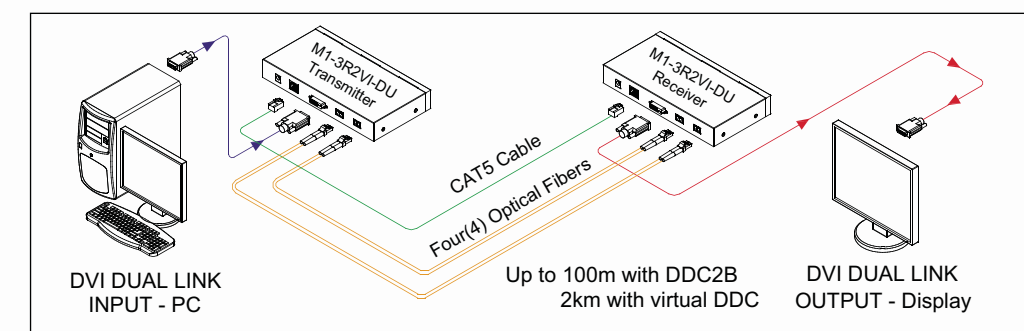


M1-3R2VI-DU ; Dual link DVI Optical Extender

- Extends up to 100 meters (326 feet) with DDC.
- 2 Km (6,560 feet) with Auto EDID function.
- Supports up to 2560x1600 resolution at 60Hz refresh rate.
- Transmits R, G, B; 3 channels for each link and one clock over fiber cables with 4 LC or 2 duplex LC multi-mode fiber interconnection.
- Performs DDC/HDCP interconnection over CAT5 with RJ45 connector.
- Offers Auto EDID programming features, detecting from display and restoring to an EEPROM in the transmitter without any physical DDC connection.
- Includes one +24V DC power adapter, plugged to either module, to supply to the other over CAT5.



Drawing Dimension [mm]

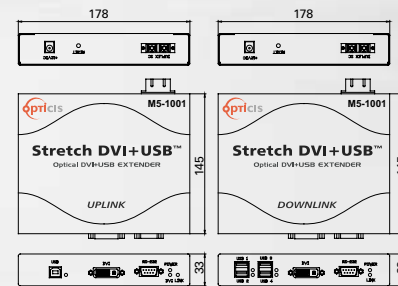


Stretch DVI™ : Multimedia Extension Modules

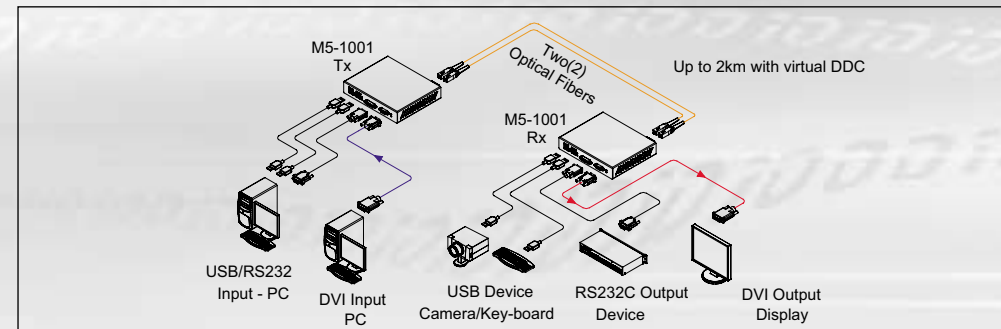


M5-1001; Digital KVM extension

- Extends DVI, USB and RS232 up to 2Km (6520 feet) over a duplex SC single-mode fiber.
- The DDC connection limit depends on DDC clock; e.g. 360m for 100KHz and 2Km for 20KHz.
- Supports DVI up to SXGA (1280 X 1024) 24bit color and 60Hz.
- Supports DDC communication over the same fiber.
- Complies with USB 1.1 (12Mbps).
- Offers 4 ch USB 1.1 hub in the downlink module.
- RS232 with 9 pin D-sub female connector.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Complies with the limits for class A of FCC and CE.
- Two (2) +12V DC adapters are applied to each module.



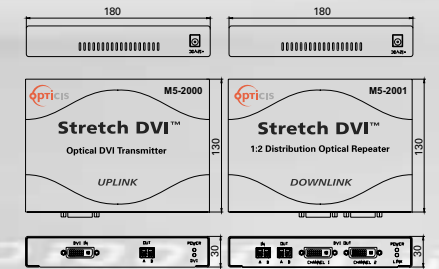
Drawing Dimension [mm]



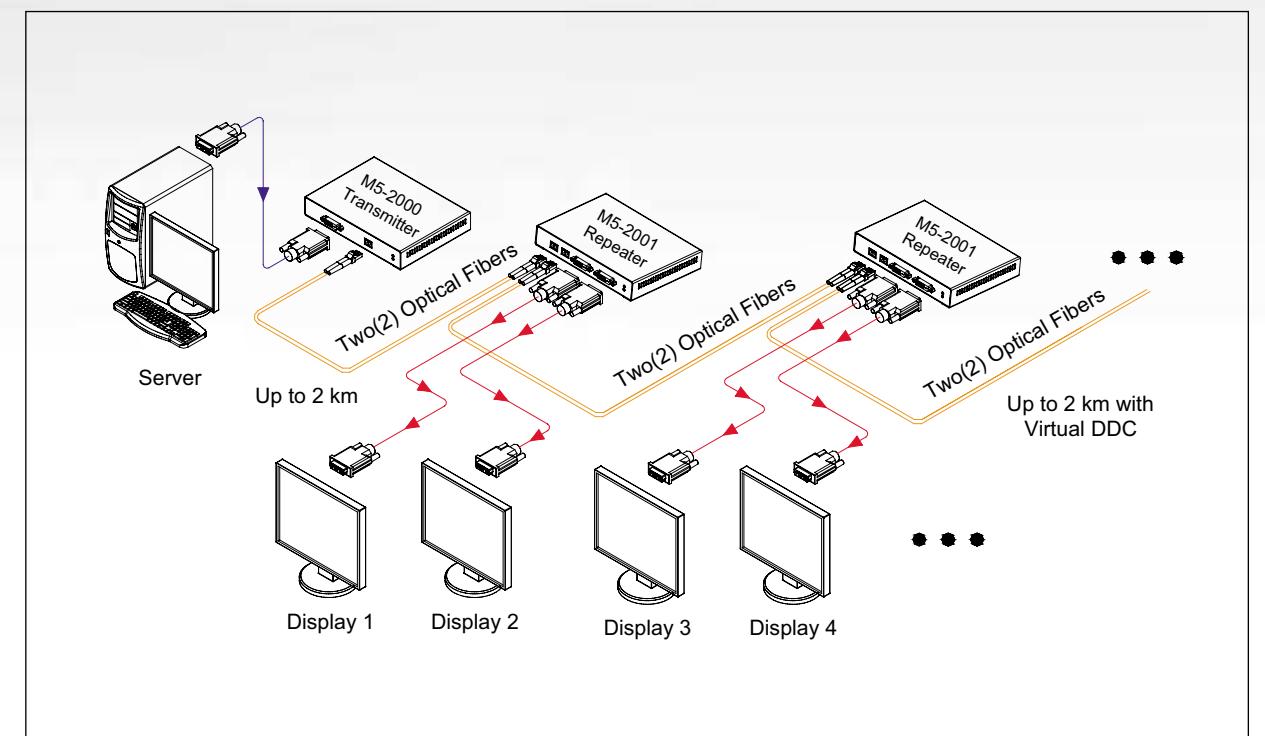
Stretch DVI™ : Optical DVI Extension Modules

M5-2000 & M5-2001; Daisy-chained Optical DVI

- Designed for digital signage and multiple information displays.
- Extends up to 500 meters (1,640 feet) between each module over a duplex LC multi-mode fiber.
- Supports DVI data up to SXGA (1280 X 1024) 24bit color and 60Hz refresh rate with DVI-I receptacle.
- Makes daisy-chain connection of displays with a combination of M5-2000 and multiple M5-2001 with no limit;
 - * M5-2000 converts TMDS (R, G, B, Clock) of the graphic cards into optical two (2) channels data and transmits over a duplex LC multi-mode fiber.
 - * M5-2001 repeats optical data and distributes two DVI data to each monitor.
- One +12V DC adapter is applied to each module.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Complies with the limits for class A digital device, pursuant to part 15 and 2 of FCC and CE.
- Offers Virtual DDC feature by programming user's EDID in EEPROM of transmitter without any physical DDC connection.

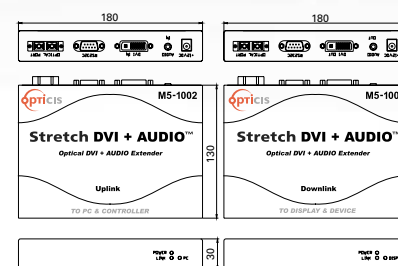


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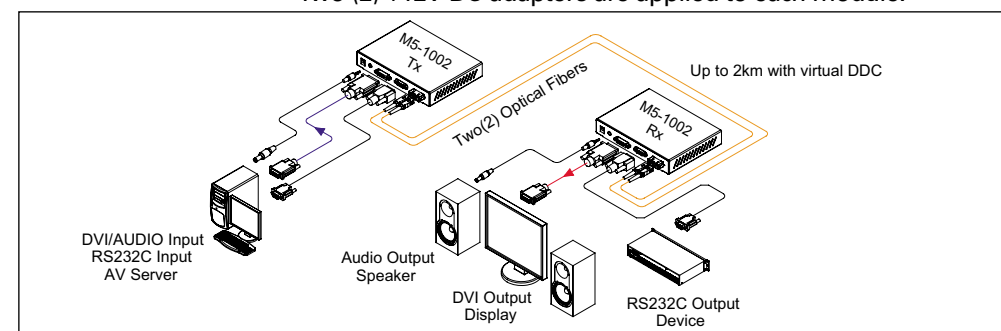


M5-1002 ; DVI, Audio and RS232 extension

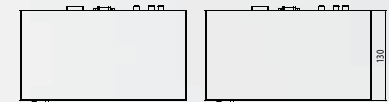
- Extends DVI, Audio and RS232 up to 2Km (6520 feet) over a duplex SC single-mode fiber.
- The DDC connection limit depends on DDC clock; e.g. 360m for 100KHz and 2Km for 20KHz.
- Supports DVI up to SXGA (1280 X 1024) 24bit color and 60Hz.
- Supports DDC communication over the same fiber.
- Optionally, provides Virtual DDC feature.
- RS232 with 9 pin D-sub female connector.
- 3.5mm diameter stereo jack audio interface.
- Offers Class 1 Laser Eye Safety in compliance with FDA/CDRH and IEC 60825-1.
- Complies with the limit for class A of FCC and CE.
- Two (2) +12V DC adapters are applied to each module.



Drawing Dimension [mm]



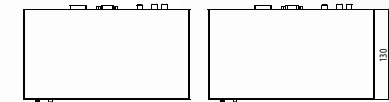
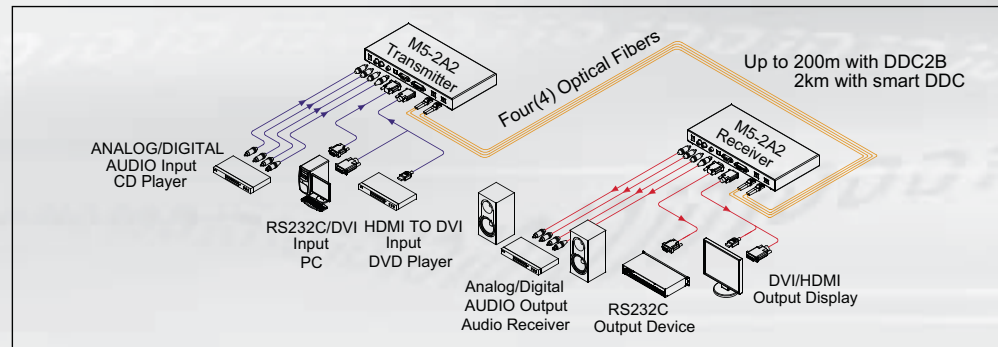
Stretch DVI™/ HDMI™ : Multimedia Extension Modules



Drawing Dimension [mm]

M5-2A2-TR; Digital A/V and RS232 Optical Extender

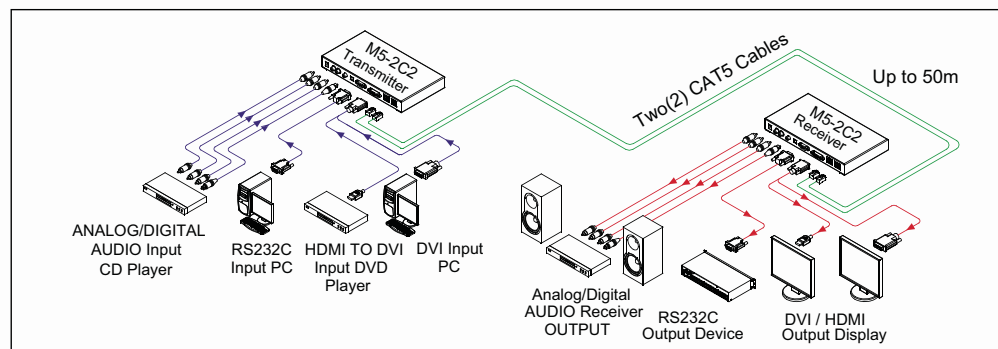
- Extends DVI, Audio and RS 232 up to 2Km (6520 feet) over two(2) duplex LC single-mode fiber if using smart DDC.
- Extends DVI/HDMI, Audio and RS 232 up to 200m (652 feet) over two(2) duplex LC single or multi-mode fiber with DDC/HDCP.
- Supports DVI up to WUXGA (1920 X 1200) 24bit color and 60Hz. HDMI up to 1080p, 36bit color depth and 60Hz.
- Audio interface: Selectable RCA, SPDIF(Optic) or SPDIF(Coaxial).
- RS 232 with 9 pin D-sub female connector in the transmitter and male connector in the receiver.
- Applicable of both single and multi-mode fiber.
- Complies with DDC2B/HDCP.
- Two (2) +12V DC adapters are applied to each module.



Drawing Dimension [mm]

M5-2C2-TR; Digital A/V and RS232 CAT5 Extender

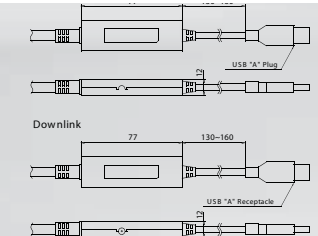
- Extends DVI/HDMI, Audio and RS 232 up to 50m (164 feet) over two(2) CAT5 cables with DDC/HDCP.
- Supports DVI up to WUXGA (1920 X 1200) 24bit color and 60Hz. HDMI up to 1080p and 60Hz.
- Audio interface: Selectable RCA, SPDIF(Optic) or SPDIF(Coaxial).
- RS 232 with 9 pin D-sub female connector in the transmitter and male connector in the receiver.
- Complies with DDC2B/HDCP.
- Two (2) +12V DC adapters are applied to each module.



Stretch USB™ : Optical USB Extension Cable

M2-100 ; USB Pure Optical Extension Cable

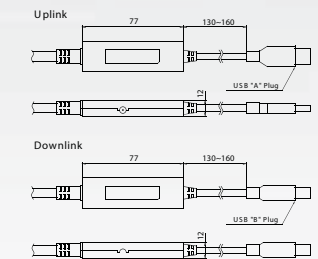
- Complies with USB 1.1 High-speed (12Mbps) standard.
- Extends up to 50 meters (164 feet).
- Offers perfect electrical galvanic isolation.
- Adopts four (4) strands multi-mode fiber between two links, not to be interfered magneto-electrically.
- No software to install, Easy to use; Plug and play; Designs in a generic hub in the downlink.
- Uses USB controller power for the uplink and +5V power adapter in shipping group for the downlink.
- Supports wide-ranged OS's Windows98, XP, 2000, Mac and SUN Solaris (Certified).
- LC detachable type is available.



Drawing Dimension [mm]

M2-210 ; USB Hybrid Extension Cable

- Complies with USB 1.1 High-speed (12Mbps) standard.
- Extends up to 45 meters (150 feet).
- Uses +9V DC power adapter in the uplink, supplying power over the hybrid cable to the downlink and devices to be connected.
- No software to install, Easy to use; Plug and play; Designs in a generic hub in the downlink.
- Supports wide-ranged OS's Windows98, XP, 2000, Mac and SUN Solaris (Certified).



Drawing Dimension [mm]

Ordering information : M2-1AB-xx for pure fiber and M2-2AB-xx for hybrid cable.

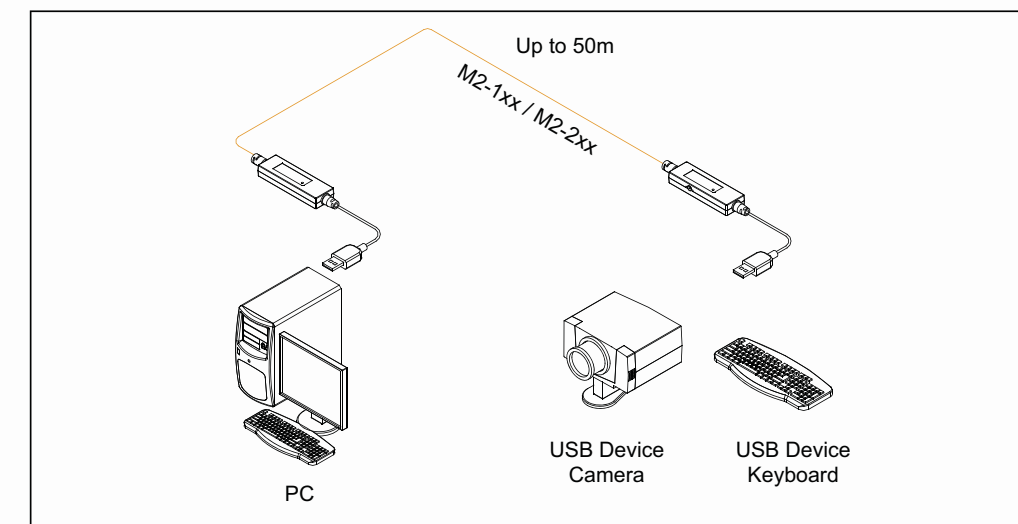
where A - 0 : A plug-in to A receptacle.

1 : A plug-in to B plug-in (use an A-to-B short cable).

B - 0 : for Windows/Mac.

S : for SUN Solaris.

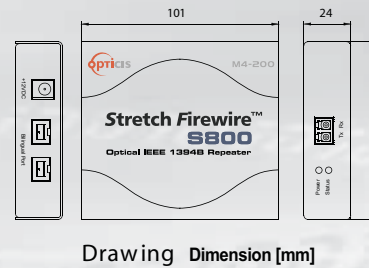
x x - Length of fiber in meter.



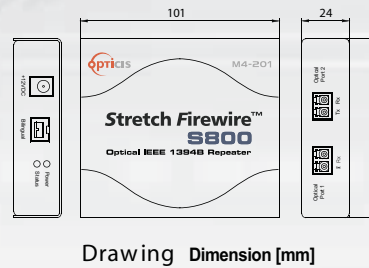
Stretch FireWire™ : Optical FireWire Repeater

- Makes optical IEEE 1394b protocol signals daisy-chain up to 500m (1,640 feet) over a duplex LC multi-mode fiber.
- Complies not only with 1394b-2002 but also backwardly 1394a-2000 & 1995.
- Supports 800 (S 800), 400 (S 400), 200 (S 200) and 100 (S 100) Mbps in full duplex data rate.
- Free RF noises and EMI from fiber.
- No software to install: Plug and play.
- Meets Class 1 eye safety, certified by FDA/CDRH and IEC60825-1.
- Complies with the limits for class A device, pursuant to Part 15 of FCC-rules and EN 55022/55024/61000-3 for CE certification.
- Dimension (W/H/D): 101/24/91 mm and Weight: 190g each.
- Low power consumption: less 6W.

M4-200 ; Two Electrical and One LC optical ports



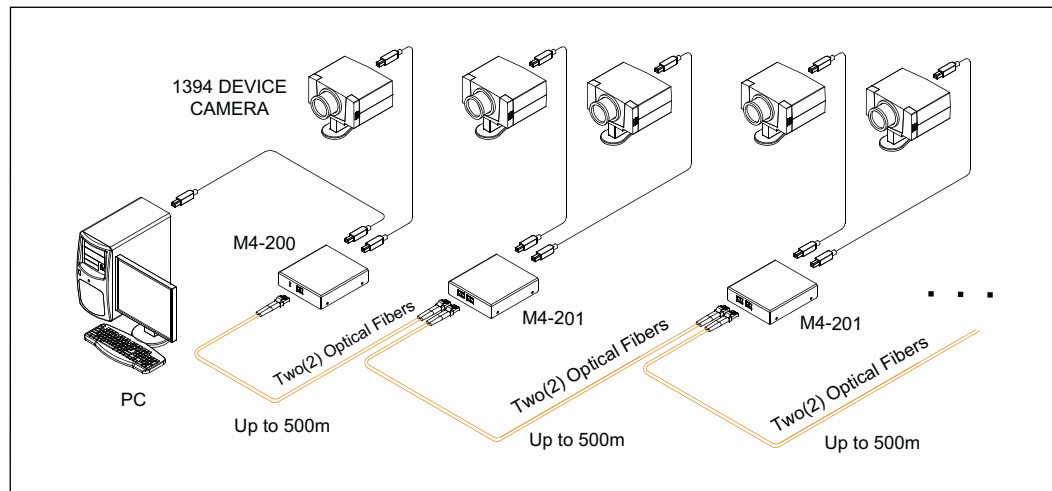
M4-201 ; One Electrical and Two LC optical ports



Ordering information

Repeater option : Two (2) repeaters are in one shipping group and any combination is available per user's applications.

Cable option : Two (2) Bilingual-to-Bilingual cables for S 800 or Two (2) Bilingual-to-DS (6pins) cables for S 400.



Gigabit VCSEL Transceivers

Opticis designs and manufactures 850nm multimode VCSEL transceivers with availability of customized design for multi-Gigabit rate short haul applications such as SAN, LAN, Blade Servers, SIP Servers, and backbone of core networks. Opticis transceivers have been designed in with highly reliable Oxide VCSELs and GaAs PIN-PDs. They are all compliant with Gbit Ethernet and 1x/2x Fiber Channel. Optionally, for harsh industrial and military applications. Extended temperature transceivers are offered with operating range of -40°C to 85°C



Small form factor pluggable (LC)

- Up to 2.5Gbps data rate.
- Hot pluggable in power-in.
- Duplex LC connector.
- Temp range: 0°C~70°C.
- Metal enclosure for low EMI.



Small form factor (LC)

- Up to 2.5Gbps data rate.
- Compliant with MSA footprint 2x5.
- Duplex LC connector.
- Temp range: 0°C~70°C.
- Metal enclosure for low EMI.



Full form factor (SC)

- Up to 1.25Gbps data rate.
- Compliant with industrial standard footprint 1x9.
- Duplex SC connector.
- Temp range: 0°C~70°C.
- Metal enclosure for low EMI.

Ordering information

Model Names: M3-xyz-ABCD

Where, "xyz" : stands 125 for 1.0625Gbps/FC and 1.25Gbps/Gbit Ethernet, 250 for 2.125Gbps/2xFC and 2.5Gbps Infiniband.

"A" : stands S for 1x9 SC, L for 2x5 LC or P for SFP.

"B" : stands A for AC termination.

"C" : stands T for TTL SD_out.

"D" : stands blank for 0°C to 70°C, and E for -40°C to 85°C.