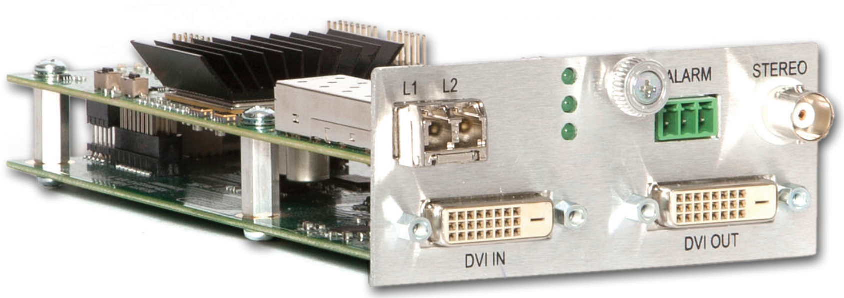
Velocitydvi Q-Series Velocitydvi System 3 Modules

Powered by MRTS Technology



Velocitydvi Q-Series Module 3 (transmitter shown)

Module 3
One single link DVI display

Module 3R
One single link DVI display with redundant fiber path

Module 3V
Two independent single link DVI displays

Module 3HV
Two independent single link DVI displays

Module 3 A/V+
One single link DVI display
- **full duplex audio**
- **serial (RS-232)**

Module 3R A/V+
One single link DVI display with redundant fiber path
- **full duplex audio**
- **serial (RS-232)**

Module 3V A/V+
Two independent single link DVI displays
- **full duplex audio**
- **serial (RS-232)**

Fiber options include:
- **single-mode**
- **multi-mode**

HDCP Compliant

Extend One or Two Single Link DVI Sources, plus Audio and Serial up to 40 Kilometers

The Velocitydvi Q-Series Modules 3, 3R, 3V, 3HV, 3 A/V+, 3R A/V+, and 3V A/V+ are interface options designed for use in the Q-Series 4300 modular chassis (sold separately). These modules support one or two single link DVI displays, full duplex stereo audio, and serial (RS-232). Using multi-mode or single-mode fiber, these modules allow users to locate a DVI monitor from just a few meters up to 40 kilometers (24 miles) away from the controlling computer securely and without the loss of resolution.

Powered by Thinklogical's cutting edge, patent-pending MRTS (Multi Rate Transmission System) technology, these modules transport every frame of a DVI video stream seamlessly, with no compression or dropped frames. In addition, all high speed peripherals function with no latency, making these modules ideally suited for a wide range of applications in the broadcast and post-production fields, as well as command and control centers, universities, large scale digital signage, air traffic control, energy production and exploration, and any other commercial video applications.

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Module Features

The modules leverage standard SFP+ transceivers and allow for the usage of either multi-mode or single-mode fiber optic cable.

- Module 3 requires only one fiber (L1) for video only transmission (TX to RX). Module 3 requires two fibers (L1 and L2) for two-way communication where one fiber is for video transmission (TX to RX) and one fiber is for DDC (RX to TX).
- Module 3 A/V+ requires two fibers: one fiber (L1) for video, audio line out, serial, and DDC (TX to RX), and the second fiber (L2) for the microphone, serial, and DDC (RX to TX).
- Module 3R requires two fibers, (L1 and L1') for video only transmission (TX to RX) where L1' is redundant or four fibers (L1, L1', L2, and L2') for two-way communication where one fiber (L1) is for video transmission (TX to RX), one fiber (L2) is for DDC (RX to TX), and L1' and L2' are redundant to L1 and L2.
- Module 3R A/V+ requires four fibers (L1, L1', L2, and L2'): one fiber (L1) for video, audio line out, serial, and DDC (TX to RX), one fiber (L2) is for the microphone, serial, and DDC (RX to TX), and L1' and L2' are redundant to L1 and L2.
- Module 3V requires two fibers: one fiber (L1) for video (TX to RX) and one fiber (L3) for a second video feed or four fibers (L1, L2, L3, and L4) for two-way communication where two fibers (L1 and L3) are for video transmission (TX to RX), and two fibers (L2 and L4) are for DDC (RX to TX).
- Module 3HV requires two fibers: one fiber (L1) for video (TX to RX) and one fiber (L3) for a second video feed or four fibers (L1, L2, L3, and L4) for two-way communication where two fibers (L1 and L3) are for video transmission (TX to RX), and two fibers (L2 and L4) are for DDC (RX to TX). 3HV module is HDCP compliant.
- Module 3V A/V+ requires four fibers (L1, L2, L3, and L4): two fibers (L1 and L3) for video, audio line out, serial, and DDC (TX to RX), and two fibers (L2 and L4) for the microphone, serial, and DDC (RX to TX).

EDID (Extended Display Identification Data) information is provided to the CPU by either a generic table stored inside the transmitter, or from a display connected to the transmitter's local port.* Also, the added capability of active DDC allows the remote monitor to send its display capabilities to the CPU.

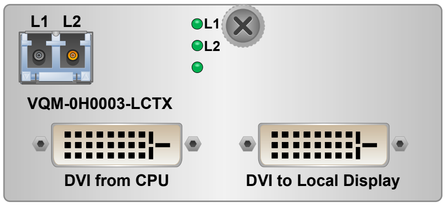
* The local port of the transmitter is not available on modules 3V and 3V A/V+.

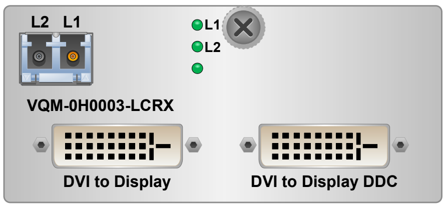
HDCP Compliant TX and RX

HDCP transmitters and receivers are compatible with all Velocitydvi transmitters and receivers, but will only provide HDCP operation with DDC mode in pass-thru. In addition, all destinations must be HDCP compliant (displays, video wall processors, dual viewers, etc). HDCP connections do not need to be point to point and may be multicast. Additionally, HDCP does not require use of L1 and L2 as it may be a single fiber connection.

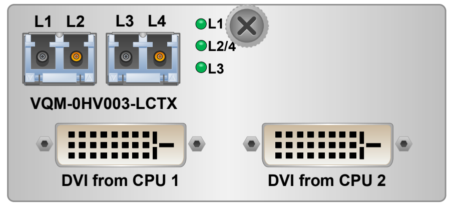
Back View of Modules

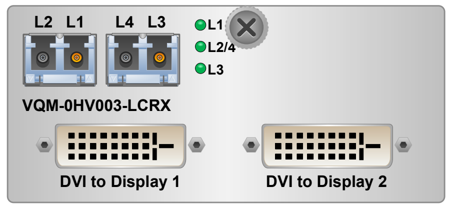
VQM-0H0003-LCTX/RX
(**H**=HDCP capability)



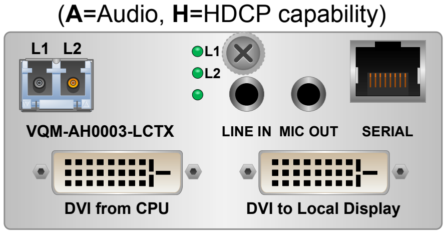


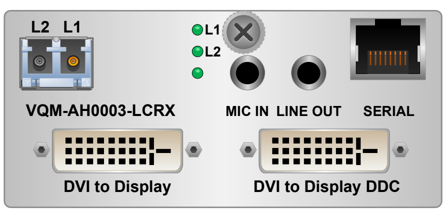
VQM-0HV003-LCTX/RX
(**H**=HDCP, **V**=Dual Video capability)



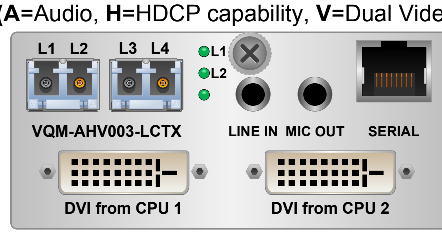


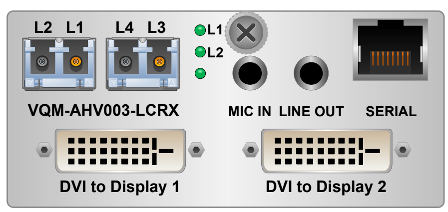
VQM-AH0003-LCTX/RX
(**A**=Audio, **H**=HDCP capability)



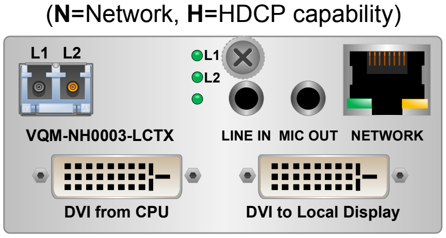


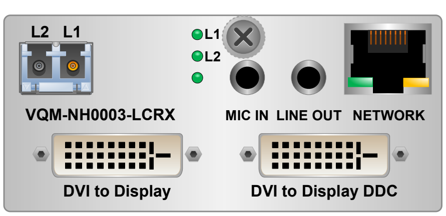
VQM-AHV003-LCTX/RX
(**A**=Audio, **H**=HDCP capability, **V**=Dual Video)



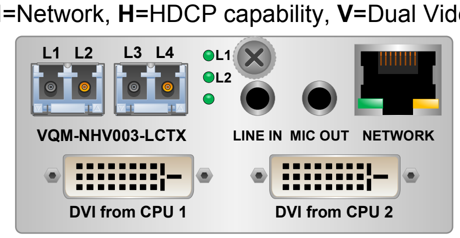


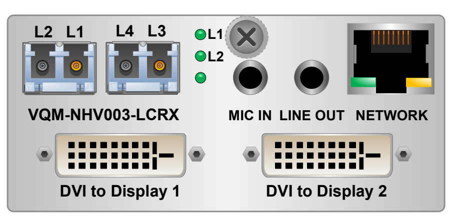
VQM-NH0003-LCTX/RX
(**N**=Network, **H**=HDCP capability)





VQM-NHV003-LCTX/RX
(**N**=Network, **H**=HDCP capability, **V**=Dual Video)





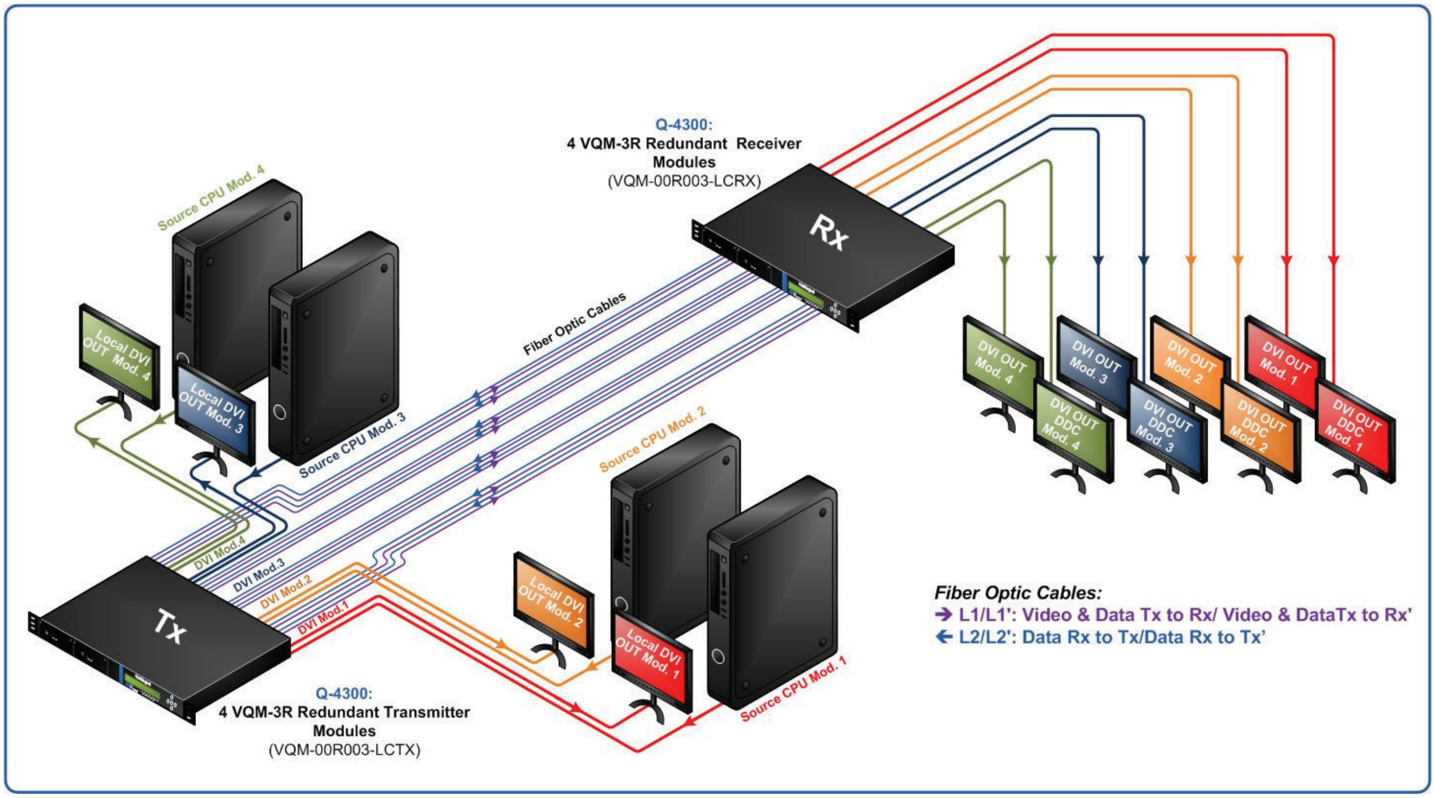
- Designed for use in the Q-4300 chassis (sold separately)
- Supports all single link DVI video resolutions
- Extends one or two DVI displays
- MRTS technology 6.22 Gbps allows for full frame rate transmission of uncompressed DVI
- Requires one, two, or four fiber optic cables
- Flawless image quality with no frame dropping
- Single-mode or multi-mode fiber options with LC type fiber connectors extend signals up to:
  - 350 meters using multi-mode fiber type OM2
  - 750 meters using multi-mode fiber type OM3
  - 1000 meters using multi-mode fiber type OM4
  - 40 kilometers (24 miles) using single-mode fiber
- HDCP Compliant
- Stereo emitter for active 3D applications
- Supports full duplex audio and serial RS-232
- A dry contact annunciator provides an alarm warning in the event of a power failure or a unit overheating
- DDC2B/EDID compliant
- Simple plug and play
- Fully compatible with Thinklogical's Velocitydvi (stand alone) extension system
- Fully compatible with Thinklogical's VX router line of products

The Modular DVI, SDI, Audio, Serial and Network Extension System: Ideal Rack Space Savind Solution

The Q-4300 chassis has a versatile modular design that is equipped with four (quad) hot-swappable interface modules. The flexible design of the chassis makes it an ideal solution for a variety of applications, serving as a transmitter, reciever or even a tranceiver.

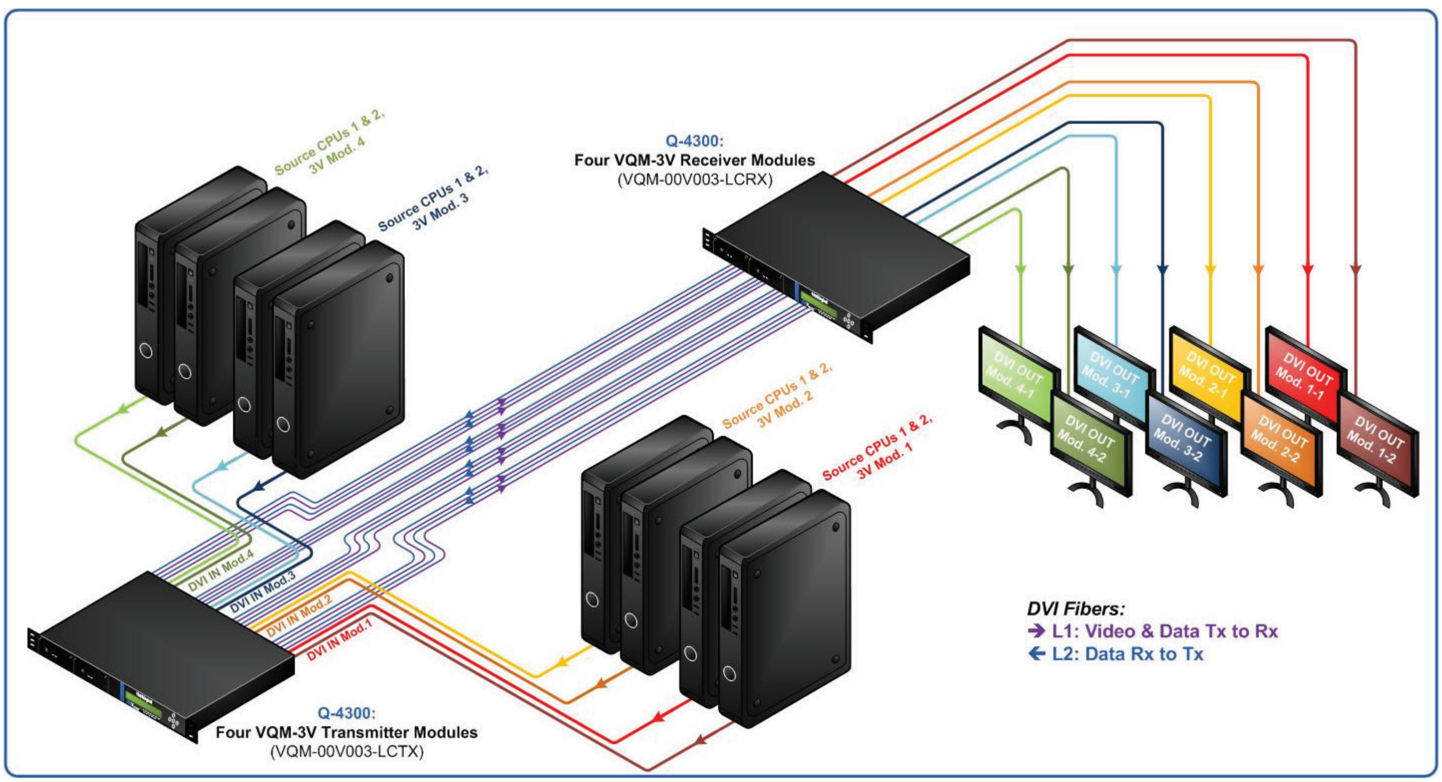
Application Description: Four functional source computers connected to a Q-4300 chassis equipped with four Velocitydvi Module 3 transmitter interface components, which extends DVI video signals to one Q-4300 receiver chassis equipped with four Velocitydvi Module 3 receiver interface components. Signals are routed through the Thinklogical VX320 router. As this configuration shows, up to 4 single link DVI video signals can be extended in 1 RU.

Q-4300 Chassis Equipped with Four Module 3R Interfaces — **System Application Example**



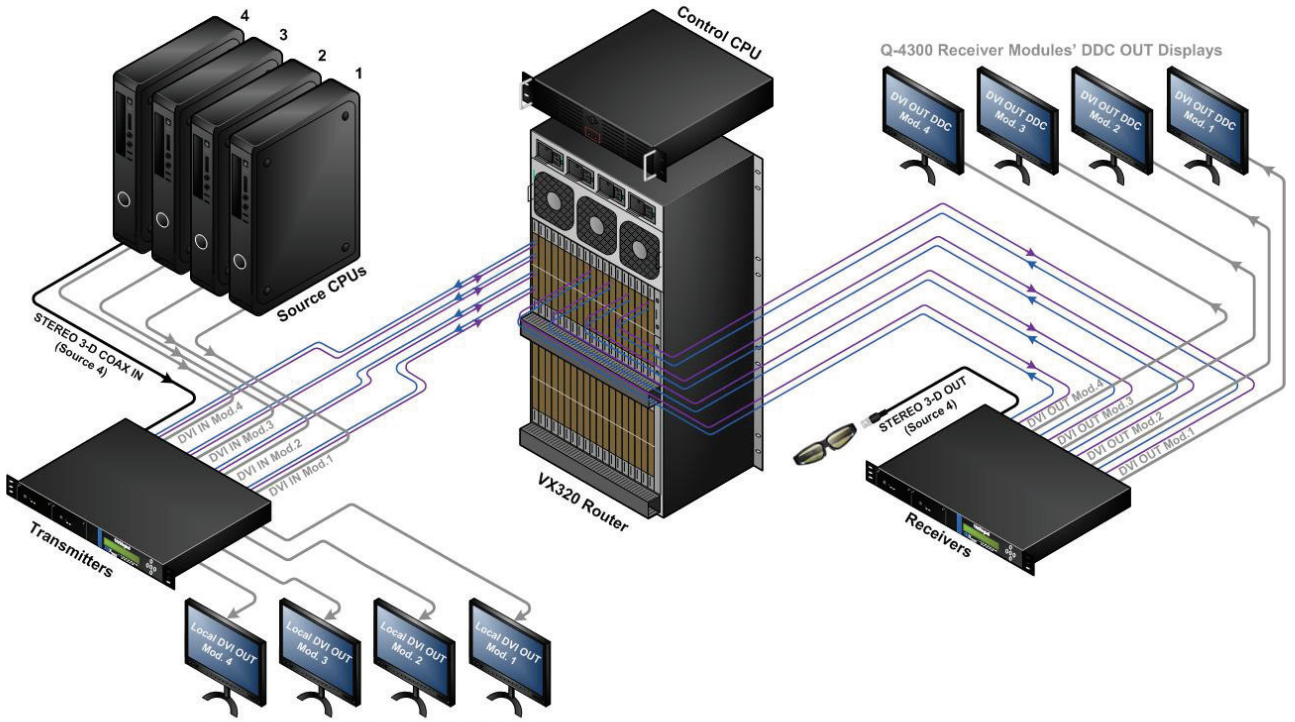
Up to 4 single link DVI video signals can be extended in 1 RU with 4 redundant fiber paths

Q-4300 Chassis Equipped with Four Module 3V (or 3HV) Interfaces — **System Application Example**

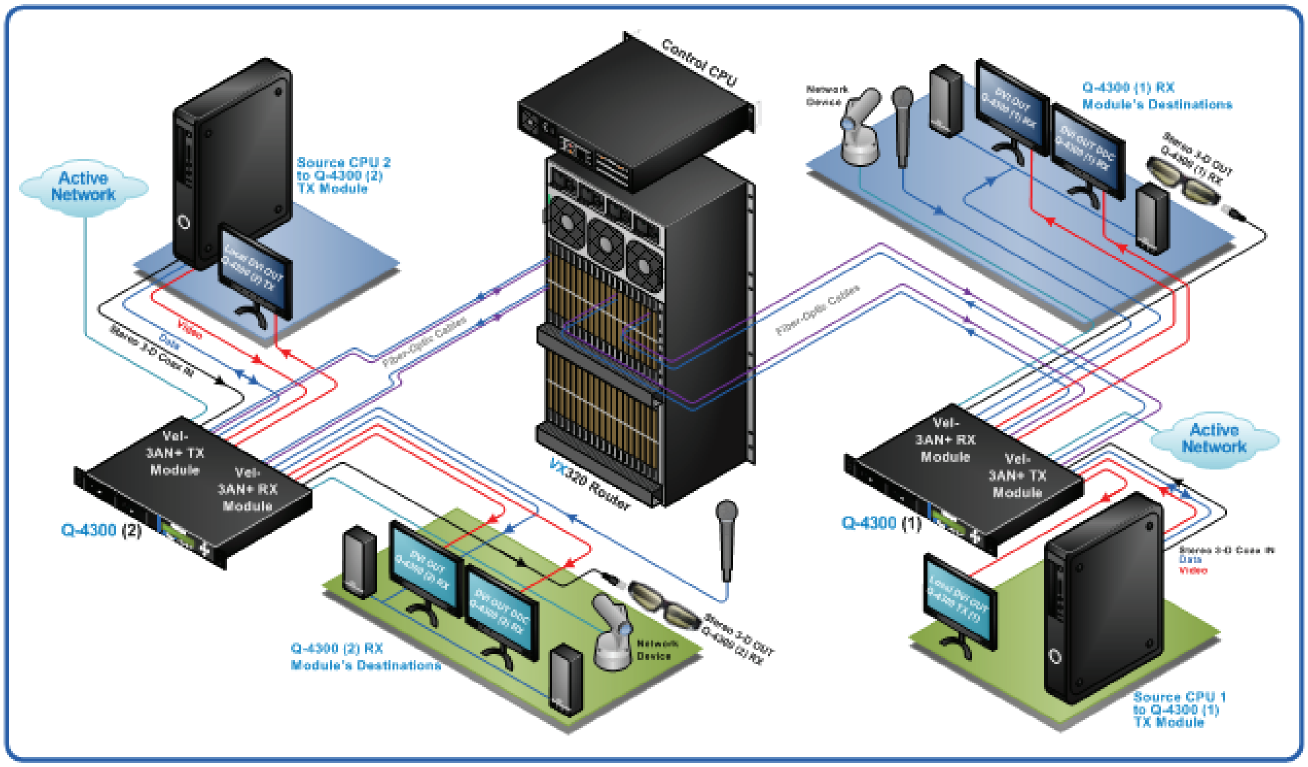


Up to 8 independent single link DVI video signals can be extended in 1 RU

Q-4300 Chassis Equipped with Four Module 3 Interfaces — **System Application Example**



Q-4300 Chassis Equipped with Six Module 3 A/V+ Interfaces — **System Application Example**



Specifications

Video Resolution	DVI-D all single link DVI resolutions	
Operating Temp.	0°-50°C; (32°-122°F)	
Humidity	5-95% RH, non-condensing	
Dimensions	Modules 3, 3R, 3V, 3HV:	Modules 3 A/V+, 3R A/V+, 3V A/V+:
Height:	1.592” (40.43 mm)	1.592” (40.43 mm)
Depth:	6.366" (161.69 mm)	6.366" (161.69 mm)
Width:	3.693” (93.80 mm)	7.406" (188.11 mm)
	(tolerance: ± .039"; .1000 mm)	
Weight:	1.5 lbs (0.68 kg) per unit	
	Shipping Weight: 9 lbs (4.08 kg)	
Power Consumption	10 watts per plug-in module	
Optical Cable	Single-mode and multi-mode over one, two, or four fibers Fiber is available, not supplied	
Optical Distance	Up to 50 meters using 62.5/125um, type OM1; Up to 350 meters using 50/125um, type OM2 Up to 750 meters using 50/125um, type OM3; Up to 1000 meters using 50/125um, type OM4; Up to 40 kilometers using 9/125um, type OS2 (single-mode)	
Compliance	Approvals for US, Canada, and European Union	
Warranty	12 months from date of shipment - extended warranties available	

Connectors

Transmitter		Receiver	
Video	DVI-D (2)	Video	DVI-D (2)
Audio MIC	3.5mm Jack	Audio MIC	3.5mm Jack
Audio LINE	3.5mm Jack	Audio LINE	3.5mm Jack
Serial Port	RJ45 Female	Serial Port	RJ45 Female
Fiber Connectors	LC for single-mode and multi-mode	Fiber Connectors	LC for single-mode and multi-mode

Cables

Module 3 and 3R Models:
- USB A to USB B cable, 1.8 meters
- Single link DVI-D, 2 meters (1)

Module 3 A/V+ and 3R A/V+ Models:
- USB A to USB B cable, 1.8 meters
- Single link DVI-D, 2 meters (1)
- 3.5 mm male to male, 1.8 meters (2)
- RJ45 cable, 2 meters (2)
- DB9M-RJ45 (ADP-000019-R) (1)
- DB9F-RJ45 (ADP-000025-R) (1)

Module 3V and 3HV Models:
- USB A to USB B cable, 1.8 meters
- Single link DVI-D, 2 meters (2)

Module 3V A/V+ Model:
- USB A to USB B cable, 1.8 meters
- Single link DVI-D, 2 meters (2)
- 3.5 mm male to male, 1.8 meters (2)
- RJ45 cable, 2 meters (2)
- DB9M-RJ45 (ADP-000019-R) (1)
- DB9F-RJ45 (ADP-000025-R) (1)

Ordering Information

VELOCITY 3

Part Number	Description
VQM-0H0003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, DDC, HDCP Compliant, RX, LC
VQM-0H0003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, DDC, HDCP Compliant, TX, LC
VQM-00R003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, Redundant Optic Paths, AUX DVI Output, DDC, LC
VQM-00R003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, Redundant Optic Paths, Local DVI Port, DDC, LC
VQM-0HV003-LCRX	Velocity Q-Series DVI, Single Link DVI, Dual Video Paths, DDC, HDCP, RX, LC
VQM-0HV003-LCTX	Velocity Q-Series DVI, Single Link DVI, Dual Video Paths, DDC, HDCP, TX, LC

VELOCITY 3 with AUDIO and SERIAL

VQM-AH0003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, DDC, Audio, Serial, HDCP Compliant, RX, LC
VQM-AH0003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, DDC, Audio, Serial, HDCP Compliant, TX, LC
VQM-AHV003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, Dual Video Path, DDC, Audio, Serial, HDCP Compliant, RX, LC
VQM-AHV003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, Dual Video Path, DDC, Audio, Serial, HDCP Compliant, TX, LC
VQM-AVR003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, AUX DVI Output, DDC, Serial, Audio, Redundant Optics, LC
VQM-AVR003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, Local DVI Port, DDC, Serial, Audio, Redundant Optics,LC

VELOCITY 3 with AUDIO and NETWORK

VQM-NH0003-LCRX	Velocity Q-Series 3 Module, Single Link DVI, DDC, Audio, Network, HDCP Compliant, RX, LC
VQM-NH0003-LCTX	Velocity Q-Series 3 Module, Single Link DVI, DDC, Audio, Network, HDCP Compliant, TX, LC
VQM-NH0003-LCRA	Velocity Q-Series 3 Module, Single Link DVI, AUX DVI Output, DDC, Network, Separate Audio, HDCP*, LC
VQM-NH0003-LCTA	Velocity Q-Series 3 Module, Single Link DVI, Local DVI Port, DDC, Network, Separate Audio, HDCP*, LC
VQM-NHR003-LCRX	Velocity 3 Q-Series Module, Single Link DVI, AUX DVI Output,DDC, Network, Audio, Redundant Optics, HDCP*, LC
VQM-NHR003-LCTX	Velocity 3 Q-Series Module, Single Link DVI, Local DVI Port, DDC, Network, Audio, Redundant Optics, HDCP*, LC
VQM-ANV003-LCRX	Velocity 3 Q-Series Module, Single Link DVI, Dual Video Paths, DDC, Network, Audio, LC
VQM-ANV003-LCTX	Velocity 3 Q-Series Module, Single Link DVI, Dual Video Paths, DDC, Network, Audio, LC

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