6.25G AUDIO & PERIPHERAL EXTENSION

thinklogical®

Velocity Audio & Peripherals

Thinklogical's Velocity Audio & Peripheral systems offer best-in-class fiber optic performance with advanced audio and peripheral capabilities. Velocity Audio & Peripheral extenders offer 6.25Gbps bandwidth, to provide high-speed audio and peripheral data *with no latency or jitter*. Systems are simple plug and play designs, utilizing either multi-mode or single mode fiber. For routing applications, Velocity Audio & Peripheral systems are compatible with Thinklogical's MX and VX Series Routers, scalable from 5 to 640 ports. NOTE: USB 3.0 extenders cannot be routed by MX, VX or TLX switches.

Powered by MRTS Technology

Velocity Audio & Peripheral systems are powered by **Thinklogical's patented Multi-Rate Transmission System (MRTS) technology**, which enables multiple data streams (audio and peripheral) to be transmitted up to 80km, over a single data stream. MRTS completely reconstructs the data clock at the destination, to offer perfect synchronization with each transmitted stream.

Velocity Audio & Peripheral systems offer support for:

Audio Signals
· Bidirectional unbalanced analog stereo audio

Peripheral Signals
· USB HID
· USB 2.0
· USB 3.0 (Point-to-point only)
· PS/2
· Serial (RS-232 or RS-422)
· 10/100 Network

Velocity Audio & Peripheral systems enable users to send audio and peripiheral signals independently of the video, for enhanced system flexibility. Systems are also compatible with any VelocityDVI and VelocityKVM system, offering breakout audio and peripheral signals at the destination.

Modular Chassis

Q-Series 1300 Chassis & Q-Series 2300 Chassis
Space Saving at the Desktop & Wall
The compact design of the ¼RU Q-1300 Chassis is ideal for surface mounting applications. The modular design is **configurable with a single Q-Series transmitter or receiver module**. The ½RU Q-2300 Chassis is **configurable with up to two Q-Series transmitter or receiver modules**, in any combination.

Q-Series 4300 Chassis
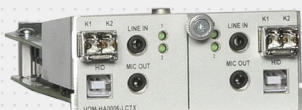*Space Saving at the Rack & Desktop*
The rack mountable Q-4300 chassis is ideal for high density applications, where space may be limited. The 1RU, modular design is **configurable with up to four Q-Series transmitter or receiver modules**, in any combination - as a dual transmitter, dual receiver or transceiver.

T-Series Q-4200 Chassis
T- and Q-Series in a Single Chassis
The rack mountable T-Q4200 chassis offers increased flexibility, for systems utilzing both T-Series and Q-Series extender modules. The 1RU, modular design is **configurable with a single T-Series transmitter or receiver module and up to two Q-Series modules**, in any combination.

Redundant Power Supplies

The Q-4300 and T-Q4200 Chassis are ideal for 24/7 environments, where minimal downtime is critical. The system is designed with redundant, current-sharing and hot-swappable power supplies. In the unlikely event that one power module fails, the second automatically switches over to power the unit with no delay or data loss. The failed module may be swapped out, without ever powering down the unit or interrupting operations.

Modular Extenders
enhance system

flexibility, customization, scalability, and space-savings.

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Q-Series 1300 Chassis

T-Series Q-4200 Chassis

Hot-Swappable Extender Modules
complete with
Hot-Swappable Optical Modules
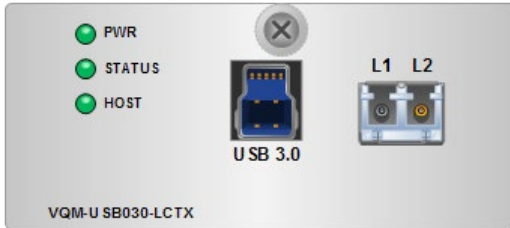
Q-Series 2300 Chassis

Q-Series 4300 Chassis

Specifications

	Q-1300	Q-2300	Q-4300	T-Q4200
Environmental	Operating Temperature: 0°C-50°C; Humidity: 5-95% RH, non-con densing			
Compliance	Approvals for United States of America, Cana da, and European Union			
Warranty	12 months from date of shipment · Extended warranties available for purchase			
Mounting Brackets	Surface Mounting Brackets Included — Call for Rack Mounting Brackets and Chassis	Surface Mounting Brackets Included — 19" Rack Mounting Hardware, order (2) ENC-001541-R	19" Rack Mounting Brackets Included — Surface Mounting Hardware, order (2) ENC-001598-R	19" Rack Mounting Brackets Included — Surface Mounting Hardware, order (2) ENC-001598-R
Power Consumption	0 Watts (10 Watts Loaded)	5 Watts (25 Watts Loaded)	5 Watts (45 Watts Loaded)	5 Watts (40 Watts Loaded)
Supply Voltage	Universal AC Power Supply, 100-240VAC, 47-63Hz (1)		Universal AC Power Supply, 100-240VAC, 47-63Hz (2)	
Weight	1.00lb (0.45kg) 1.50lbs (0.68kg) Loaded	3.00lbs (1.36kg) 4.00lbs (1.81kg) Loaded	10.00lbs (4.54kg) 12.00lbs (5.44kg) Loaded	8.00lbs (3.63kg) 10.00lbs (4.54kg) Loaded
Dimensions				
Rack Size (w/ mounting hardware)	5.48" (139.17mm)	11.98" (304.24mm)	EIA 19" (483.36mm)	EIA 19" (483.36mm)
Width (w/o mounting hardware)	4.31" (109.50mm)	10.74" (272.75mm)	17.49" (444.25mm)	17.49" (444.25mm)
Height	1RU · 1.72" (43.69mm)	1RU · 1.72" (43.69mm)	1RU · 1.72" (43.69mm)	1RU · 1.72" (43.69mm)
Depth	11.44" (290.64mm)	11.11" (282.27mm)	14.62" (371.37mm)	15.56" (395.22mm)
Tolerance	± 0.039" (1.00mm)	± 0.039" (1.00mm)	± 0.039" (1.00mm)	± 0.039" (1.00mm)
Connectors				
Software Updates	See Extender Module	See Extender Module	See Extender Module	See Extender Module
Cables Included				
	AC Power Cable (1)	AC Power Cable (1)	AC Power Cable (2)	AC Power Cable (2)

**For use with Q-Series Modules.
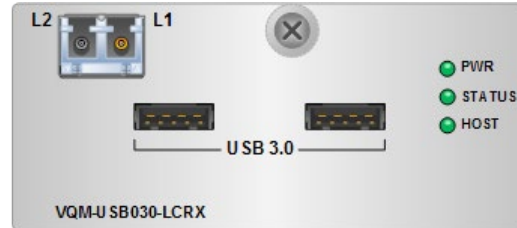Modules will not operate without a chassis.**

Ordering Information

Part Number	VQS-001300	VQS-002300	VQS-004300	VTS-Q04200
Description	Q-Series 1300 Modular Chassis — Configure with a single Q-Series Module	Q-Series 2300 Modular Chassis — Configure with up to two Q-Series Modules	Q-Series 4300 Modular Chassis — Configure with up to four Q-Series Modules — Redundant power supplies	T-Series Q-4200 Modular Chassis — Configure with a single T-Series Module and up to two Q-Series Modules — Redundant power supplies

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VelocityPeripheral · USB 3.0

Modular Transmitter
VQM-USB030-LCTX

Modular Receiver
VQM-USB030-LCRX

The System

Velocity Peripheral systems have a simple transmit and receive design. The Velocity Peripheral Transmitter connects to the source to receive peripheral data. The data is transmitted over 6.25Gbps SFP+ technology for up to 100 meters. Fiber provides a secure connection from the transmitter to the receiver, where peripheral data is delivered to the destination.

A Velocity USB 3.0 system requires two fibers. The forward channel is dedicated to transmitting peripheral data from the source to t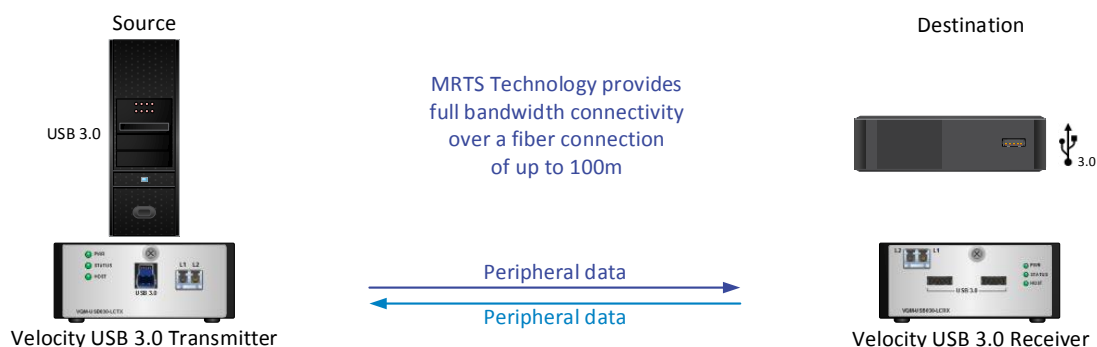he destination. The return channel is dedicated to transmitting peripheral data from the destination to the source. All Thinklogical Velocity Peripheral systems are configurable with multi-mode or single mode fiber.

The Velocity USB 3.0 extension systems are designed to support **one USB 3.0 input (5Gbps) and two USB 3.0 outputs.** As a limit of the USB 3.0 technology, 3.0 devices may only be extended up to a maximum of 100m, **point-to-point.** Please verify your device with Thinklogical for distance limitations. USB 3.0 is not backward compatible with USB 1.1 or USB 2.0. **Thinklogical USB 3.0 extenders are point-to-point only and cannot be routed through MX, Velocity or TLX matrix switches.**

FORM FACTOR

Velocity Peripheral systems are available in a modular form factor. The modular extenders are compact and hot-swappable, enabling users to field configure any modular chassis. Additionally, the optical module within the transmitter is hot-swappable. The modular systems promote system flexibility, scalability and a reduced maintenance effort. For additional information, please see Modular Chassis specifications.

Source

USB 3.0

MRTS Technology provides full bandwidth connectivity over a fiber connection of up to 100m

Destination

3.0

Velocity USB 3.0 Transmitter

Peripheral data
Peripheral data

Velocity USB 3.0 Receiver

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VelocityPeripheral · USB 3.0

Specifications	Q-Series Extender Modules (VQM)
Optical Cable	Two (2) multi-mode or single mode fiber optic cables, for fewer fibers contact Thinklogical (fiber not supplied, available for purchase)
Optical Distance	Multi-Mode up to 100m 65m: OM1 (62.5/125); 100m: OM2 (50/125), OM3 (50/125 SX+), OM4 (50/125eSX+) Single Mode up to 100m All Distances: OS2 (9/125)
Optical Wavelength	Multi-Mode: 850nm; Single Mode: 1310nm (CWDM and DWDM wavelengths available, contact Thinklogical for further information)
Data Rate	Forward channel: 6.25Gbps; Back Channel: 2Gbps
Environmental	Operating Temperature: 0°C-50°C; Humidity: 5-95% RH, non-condensing
Compliance	Approvals for United States of America, Canada, and European Union
Warranty	One year · Extended warranties available for purchase
Mounting Brackets	See Modular Chassis Specifications
Power Consumption	10 Watts
Supply Voltage	Universal AC Power Supply, 100-240VAC, 47-63Hz
Weight	0.50lb (0.23kg)
Dimensions	
Rack Size	See Modular Chassis Specifications
Height x Width x Depth	1.59" (40.42mm) x 3.69" (93.80mm) x 7.25" (184.04mm)
Tolerance	± 0.039" (1.00mm)
Connectors	
USB 3.0	TX: USB B (1); RX: USB A (2)
Fiber Connectors	LC (1)
Cables Included	
Transmitter	(1) Power Cable [See Modular Chassis Specifications] (1) USB 3.0 A-B, 2 Meters
Receiver	(1) Power Cable [See Modular Chassis Specifications]
Contact Thinklogical for additional specifications.	

Ordering Information

V Q M – U S B 0 3 0 – L C ☐ ☐

Each Extender Module requires a Modular Chassis; for further information, see Modular Chassis Specifications.

VQS-001300   Q-1300 Chassis
Supports a single Q-Series Module

VQS-002300   Q-2300 Chassis
Supports up to two Q-Series Modules

VQS-004300   Q-4300 Chassis
Supports up to four Q-Series Modules

VTS-Q04200   Q-4200 Chassis
Supports up to two Q-Series Modules
and a single T-Series Module

TX   Transmitter Module
RX   Receiver Module

For additional customization, Thinklogical utilizes a single **Optics Package (VOP)** per extender, available in Multi-Mode or Single Mode, allowing extension of up to 1000m, 10km, 40km or 80km.
Please consult Thinklogical for VOP Ordering Information.

When ordering a Velocity USB 3.0 select from the following VOP's:

VOP-M19 for Multi-Mode Extension for TX up to 100m
VOP-M04 for Multi-Mode Extension for RX up to 100m
VOP-S04 for Single Mode Extension for TX up to 100m
VOP-S11 for Single Mode Extension for RX up to 100m