# VXrouters

## The worlds first fiber optic, non-blocking, 6.25 Gbps Video and Peripheral Router!

Thinklogical's exceptionally resilient VX routers switch virtually any desktop device. Unlike traditional routing technology , the VX Routers are true non-blocking matrix switches and leverage bi-directional signal capability, and range in size from 40 x 40 up to 320 x 320. The VX Router also provides additional flexibility to meet your precise video requirements, and can be easily expandable to provide 80 duplex ports up to 640 duplex ports for directional video routing and switching. In addition, the VX series provides mission critical depenability and unrivalled signal integrity.  Being protocol agnostic, the switch supports DVI, SDI, HD-SDI, Dual-link DVI, Dual-link SDI, USB 1.1, USB 2.0, audio, the possibilities are endless.

Massive 6.25 Gbps. of bandwidth provides pristine signal integrity, allowing for uncompressed video, with no frame dropping. Designed with our user's needs in mind the router offers a variety of  interface options providing all the functions and features essential in mission critical environments.  Thinklogical's advanced fiber optic technology has a proven track record with hundreds of installations worldwide, making the VX Router Series the ideal choice for those who need  a scalable, flexible, and secure solution.

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# router
# VX40

**6.25 Gbps** Router and Non-Blocking Matrix Switch

- **Fiber Optic Non-Blocking Matrix Switch**
- **Configurations include; up to 80 x 80 directional switching or – up to 40 x 40 duplex ports for bi-directional, non-blocking switching and routing**
- **Compatible with Velocity KVM and Video Extenders from Thinklogical**
- **Each Video Connection Supports 6.25 Gbps**
- **Single-Mode and Multi-Mode Fiber Optic Capability**
- **Redundant, Hot-Swappable, and Current Sharing Power Supplies Modules**
- **Hot Swappable, 5 Port Scalability for In and Out Cards**
- **Hot Swappable SFP+ Optical Port Connections**
- **Protocol Agnostic**

## The Logical Solution - Routing Video and Peripheral Signals

The VX 40 is a compact, high performance modular router and non-blocking matrix switch for complete, end-to-end routing of video and peripheral signals over multi-mode or single-mode fiber optic cable. This highly reliable and resilient router is expandable from 5 x 5 up to 80 x 80. In addition, the switch can also be configured for bi-directional switching and routing of data and video, up to 40 x 40. This allows for flexible deployment configurations for a variety of small to medium sized computing environments.

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## The VX 40 is a 6.25 Gbps Router Designed for Mission Critical Applications

Designed to improve operational efficiency and maximize resources, the VX 40 offers unrivalled scalability, signal integrity, and control flexibility. The highly robust router design supports advanced, real time applications in environments such as broadcast, post-production, government, medical, military, and corporate. The unmatched 6.25 Gbps signal capability supports high resolution digital video formats. In addition, the VX 40 is a protocol agnostic soution, therefore it supports all high data rate signals.

### The System – Hot-Swappable and Redundant

The inspired modular approach of the VX 40 allows for all critical system components including power supplies, cooling fans and pluggable optics (SFP+) to be hot-swappable, thus minimizing business impact in the unlikely event a component should fail. The hot-swappable I/O boards also provide excellent in-service expansion capabilities in convenient steps of 5, thus allowing the VX 40 to be reconfigured without interrupting signal processing by powering down the router. In addition, the dual redundant power supplies ensure continuous, uninterrupted power.

The VX 40 is controlled via an external Linux  or Windows computer. This allows for customization as well as ease of control and administration with access provided via a network connection (browser), or a serial port for 3rd party controller integration (such as Crestron, AMX or home-spun interfaces). Moreover, the VX 40 is equipped with industry-standard LC type fiber connectors and offers unprecedented integration with Thinklogical's Velocity Series of fiber optic KVM and video transmitters and receivers.

### True 40 x 40 Non-Blocking Fiber Matrix Architecture

The VX Router series provides users with non-blocking switching capability. The obvious advantage to this is greater switching flexibility in one chassis, allowing for multiple input signals to be available at one output. In addition, this configuration offers even greater flexibility than a standard non-blocking switch, since the fiber optic links support bi-directional capabilities, ultimately switching up to 80 signals. The VX 40 is also configurable with a mix of multimode and single mode versions of I/O cards, which supports both short and long haul applications.

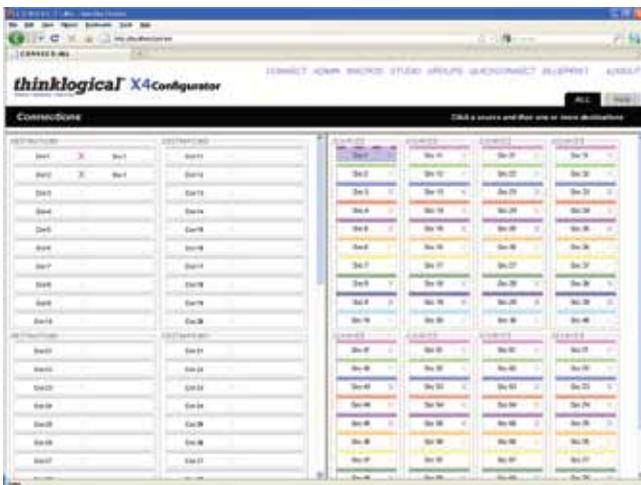### Enhanced diagnostics and alarms

The VX 40 provides extensive real-time monitoring and diagnostics of the internal product operating temperature, power supply voltages, I/O fiber links, fans, and other critical functions of the router. Redundant controllers have LED indicators to provide active and fault monitoring, while the system alarms can be configured to trigger an external control system, SNMP notifications, or generate email notifications.

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## Provides Comprehensive Control Features using Thinklogical's X4 Configurator Control Software

The VX 40 is engineered with a range of innovative Thinklogical control features designed to simplify operation in mission critical visualization environments. Thinklogical's X4 Configurator is an advanced GUI which provides convenient user interface to the router from remote locations.

The X4 Configurator allows for easy and intuitive setup and control of the switching between source computer or video entities and user display destinations such as desktops, theaters, conference rooms, editing suites, control consoles, video walls, biomedical imaging arenas, satellite mapping, etc. In addition, single video sources may be multi-cast (one to more than one) or broadcast (one to all) to desired destinations.

Macro presets may be created for saving and recalling commonly used input and output ties. A dedicated preview output option provides a view of all available input signals before switching to a live output. This eliminates the possibility of these signals being inadvertently routed to a live program during a presentation and allows for program outputs to remain available for signal distribution.

*Standard X4 Configurator GUI Option*
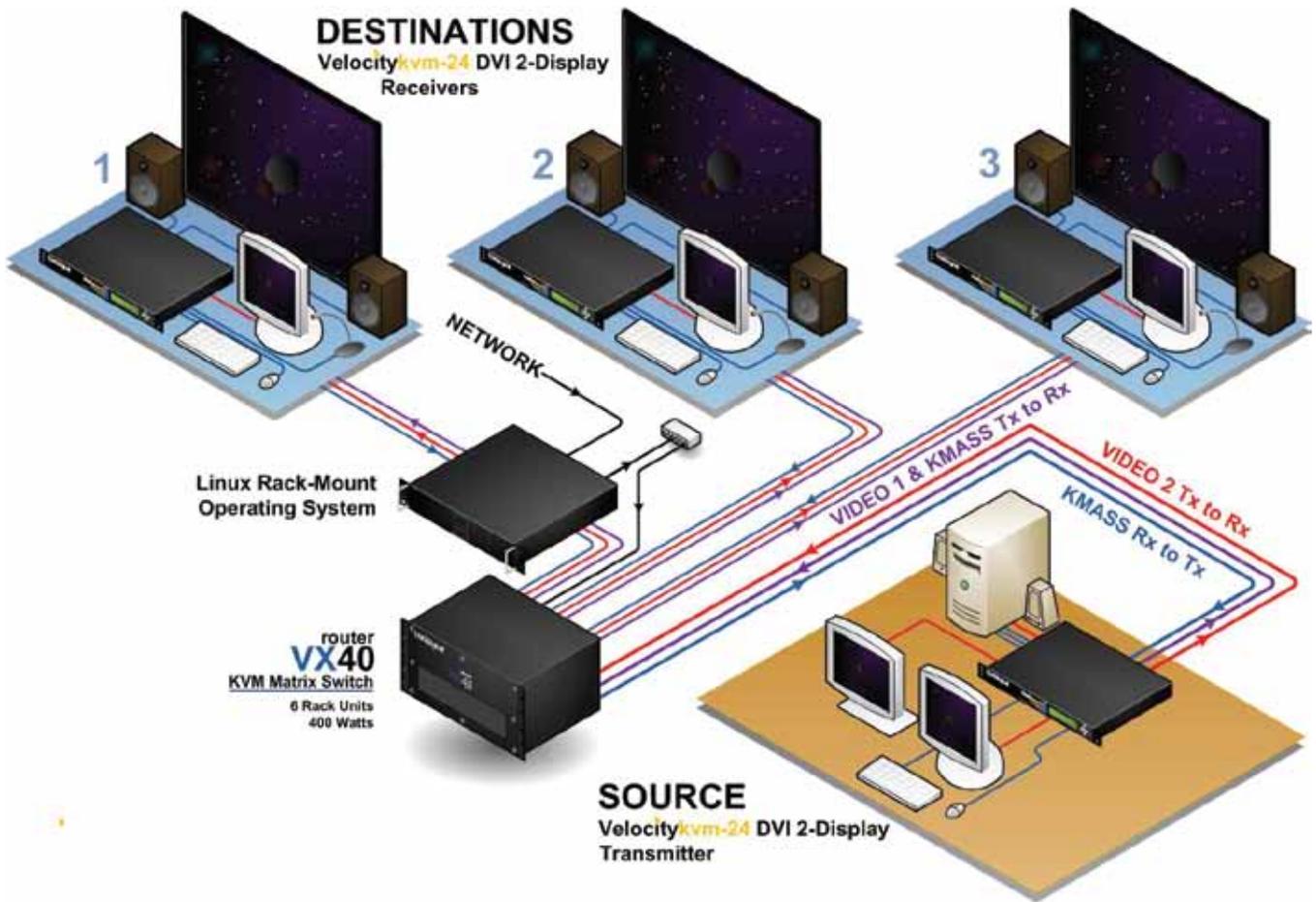
*Studio X4 Configurator GUI Option*

## Touch Panels

Thinklogical also provides users with control touch panels. With several sizes to chose from (5.7", 8.9", and 17"), they provide tremendous flexibility in external routing control. The touch panel simply connects to your network and provides the X4 Configurator interface, in a variety of locations, right at your fingertips.

*Shown: 5.7" and 17"*

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## VX 40 Router System KVM Application Example -
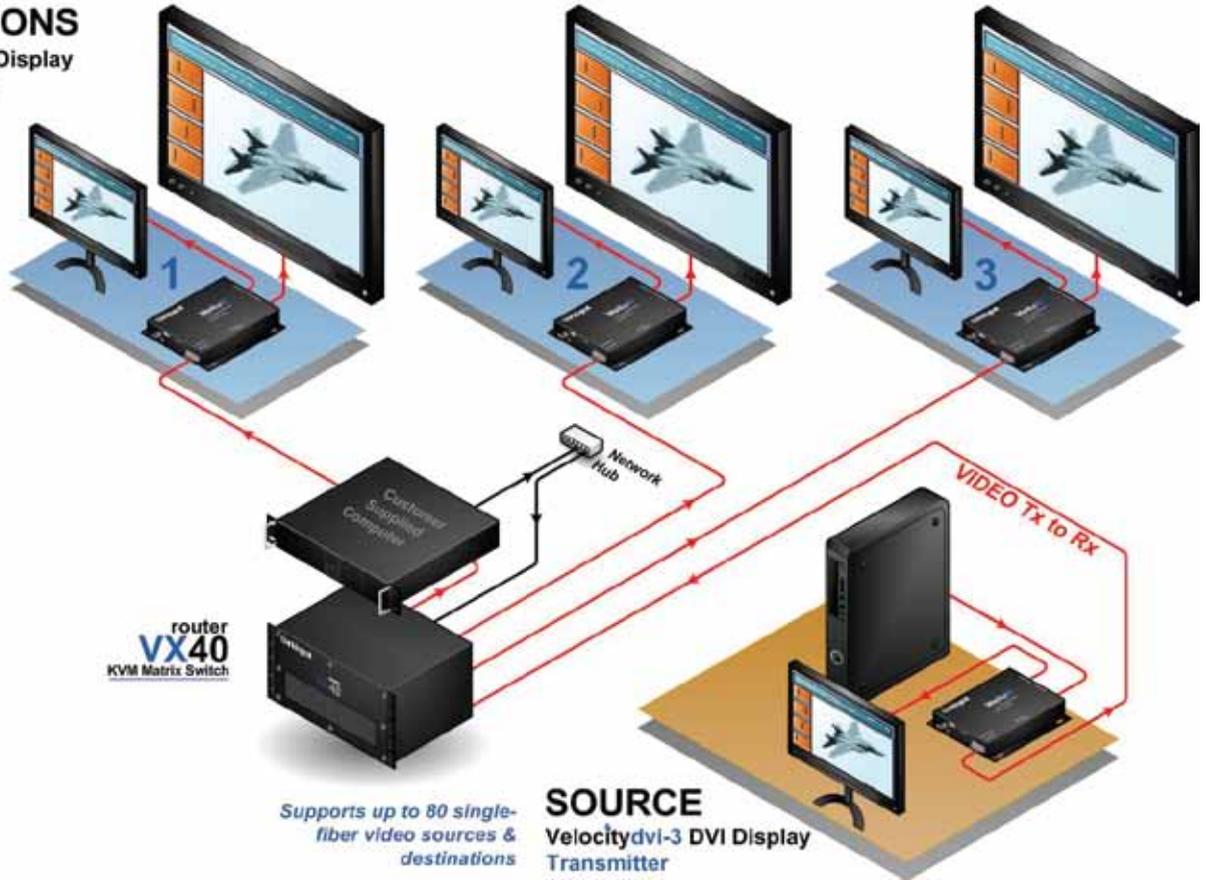## Up to a 40 x 40 Bi-Directional Configuration Routing Data and Video



*System Design: VX 40 Router, KVM Extension provided by VelocityKVM-24 (supports two DVI Displays)*

## VX 40 Router System Video Application Example - Up to an 80 x 80 Directional Configuration Routing Video
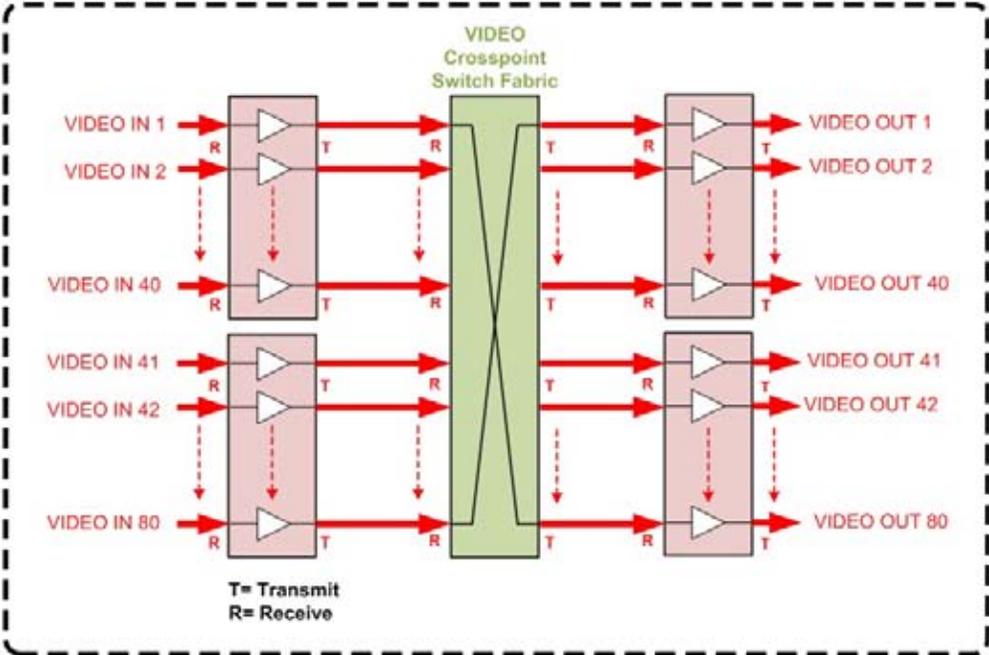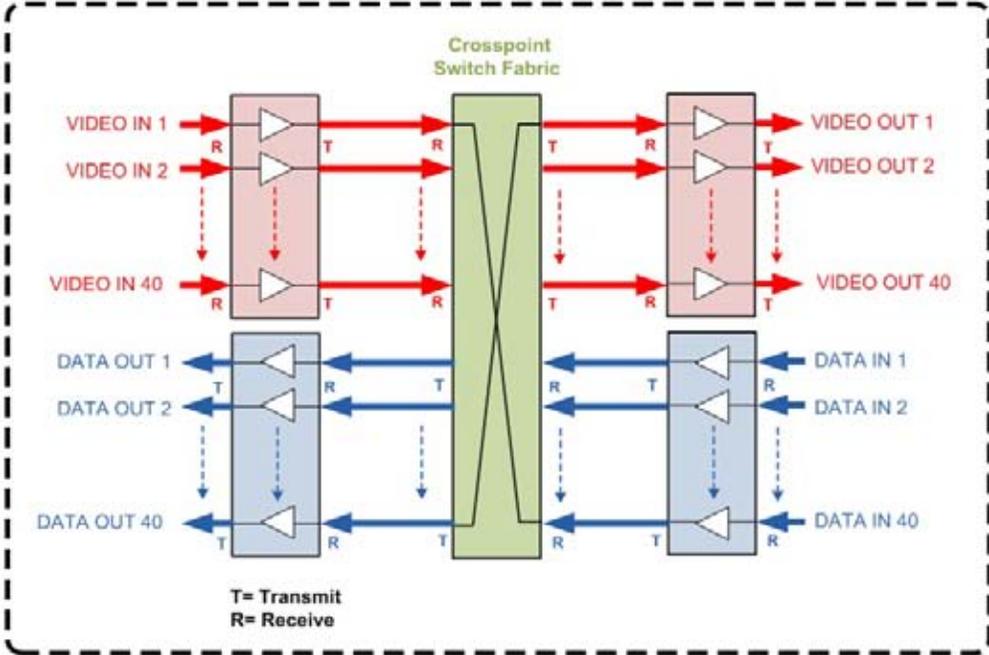


*System Design: VX 40 Router, DVI Video Extension provided by VelocityDVI 3 (DVI Display)*

# VX40 KVM Matrix Switch
## Video/Data Routing Configurations



*VX 40 Router Crosspoint and Video Crosspoint Switch Fabric*

## Key Features

- 80 Directional Fiber Matrix Switch

- Configurations include; up to 80 x 80 directional switching – or – up to 40 x 40 duplex ports for bi-directional switching

- Compatible with Velocity KVM and Video Extenders from Thinklogical

- Single-mode and Multi-mode Capability

- Each Connection is 6.25 Gbps

- Redundant, Current Sharing Power Supply Modules, Hot Swappable

- Single Fan Tray with Annunciator Port (for Alarms) Hot Swappable

- Protocol Agnostic

- Controllable via LAN or Serial Connection

- SNMP Control Protocol

- Control/Administration X4 Configurator GUI Included

- Multicasting and Macros Supported

- 5 Port Scalability for In and Out Cards, Hot Swappable

## Technical Specifications

| | |
|---|---|
| Humidity | 5-95% RH, non-condensing |
| Operating Temperature | 0-50° C (32-122° F) |
| Physical Dimensions | Rack Size: EIA 19" (48.26 cm)<br>Height: 6 RU 10.50" (26.7 cm)<br>Width: 17.19" (43.7 cm)<br>Depth: 14" (35.56 cm)<br>Weight: 60 lbs. (27.22 kg)<br>Shipping Weight: 100 lbs. (45.36 kg) |

| | |
|---|---|
| Ports | 5 x 5 minimum configuration – Up to 40 x 40 |
| Power Requirements | AC Input: 100-240VAC, 47-63 Hz Universal AC Power Supply |
| Power Consumption | Approximately 450 Watts Fully Loaded |

## Ordering Information - Part Number and Description

**VELOCITY MATRIX ROUTER 40**
VXR-000040 - Velocity Matrix Router 40 Chassis

**VELOCITY MATRIX ROUTER 40
Spare Parts**

VXM-000005  Spare Controller
VXM-000006  Spare Fan Module
VXM-000007  Spare Power Module

**VELOCITY MATRIX ROUTER 40 DATA CARDS**
VXM-DI0005
Velocity Matrix Router 40 Data Input Card, 5 Ports, SFP+, Multi-Mode
VXM-DO0005
Velocity Matrix Router 40 Data Output Card, 5 Ports, SFP+, Multi-Mode
VXM-DI0S05
 Velocity Matrix Router 40 Data Input Card, 5 Ports, SFP+, Single Mode
VXM-DO0S05
Velocity Matrix Router 40 Data Output Card, 5 Ports, SFP+, Single Mode

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