Streamline, Control, and Collaborate Empowering Rapid Response

XtendPoint KVM-over-IP System

The Power Behind *XtendPoint* KVM-over-IP

In mission-critical environments, like emergency communications centers and police command-and-control operations, relay of visual data and rapid assessment are crucial. RGB Spectrum's *XtendPoint*™ KVM-over-IP solution revolutionizes these processes by streamlining workflows, improving ergonomics, and even facilitating multi-office and multi-agency collaboration.

The *XtendPoint* system's IP distribution architecture allows seamless access to LAN or WAN networks using dedicated encoders and decoders, enabling real-time visual data sharing between operator consoles and IT closets, remote data sources, and across multiple locations, ensuring that operators, supervisors, and first responders have the information they need when they need it.

With the ability to display and control up to eight video sources on just two large 4K multi-window displays with single keyboard and mouse control, *XtendPoint* can replace a cluttered, work environment containing multiple monitors and input devices with an ergonomically efficient workspace. And by consolidating computers away from operators' consoles, *XtendPoint* also reduces clutter, heat, and noise, further enhancing the working environment and reducing operator fatigue.

Leveraging a standard 1 Gigabit Ethernet (GbE) network, the *XtendPoint* KVM-over-IP system delivers a scalable KVM matrix switching solution connecting multiple users with controllable systems.

Starting with a simple point-to-point connection, the system pairs an *XtendPoint* Transmitter with an *XtendPoint* Receiver to extend bandwidth-efficient KVM control of of a single- or multi-headed host system. With additional endpoints (transmitters and receivers) a scalable matrix of data sources and operators can be accommodated in a unified system.

Plug-and-play installation requires no additional software on host systems.
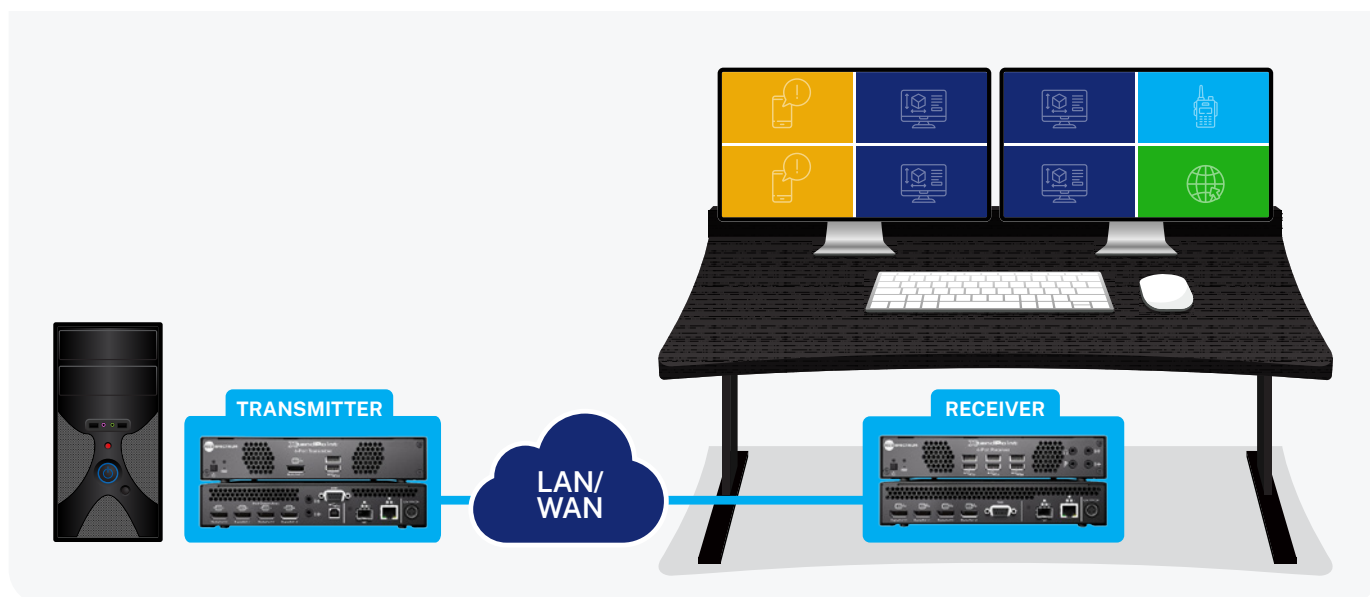
Networked Operations

XtendPoint provides a scalable KVM matrix over IP, supporting one-to-one, one-to-many, many-to-one, or many-to-many configurations. It allows operators to view multiple desktops on a multi-display or multiviewer operator station and take control of a system by simply moving the mouse to the target desktop using *KlickSimple*™ cursor navigation.

Depending on the model, *XtendPoint* receivers accept the encoded video streams from *XtendPoint* transmitters for display on up to four monitors. Keyboard and mouse signals are sent back over the network to an *XtendPoint* transmitter and then forwarded to the computer over a USB link.
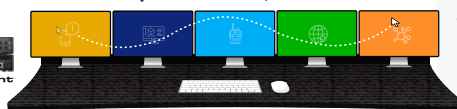
Users select a signal to view on their receiver via an onscreen display or hotkeys.

XtendPoint Transmitter
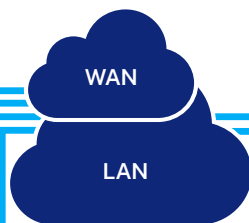
XtendPoint Receiver

Multiple Monitors, Full Screen

WAN

LAN

Multiple Monitors, Windowed

- Extend ultra-high resolution desktops (3840x2160 @60Hz) at unprecedented low bitrates.

- Support dual-monitor and quad-monitor configurations (2x and 4x 1920x1080 @60Hz) with a single transmitter and receiver pair.

- Deliver pristine image quality, smooth video playback, and excellent keyboard and mouse responsiveness over a LAN or WAN with latency as low as 40msec.

Distributed Control

XtendPoint endpoints support a distributed model of operation — settings and parameters reside in each transmitter and receiver unit. If the central system running the control software gets disconnected, the *XtendPoint* endpoints will continue to operate on their own. The system's distributed mode of operation eliminates single point of failure.

USB

DisplayPort

TRANSMITTER

LAN/ WAN

Transmitters with Ethernet and USB Connections

XtendPoint transmitters take video from a computer source via a DisplayPort connection, encodes the stream using compression, and sends it over Ethernet to one or more *XtendPoint* receivers. Each transmitter, depending on model, can accept up to four video inputs from a computer. Multiheaded computer feeds are synchronized. Single inputs up to 4K60, two inputs up to 4K30, and four inputs at 1080p60 are accepted.

USB connections between the transmitters and computers, plus keyboard and mouse emulation, eliminate the need for custom software.

# Expanded Control of Your KVM-over-IP System

Receivers with *KlickSimple* Cursor Navigation

With a single keyboard and mouse, an *XtendPoint* receiver can display up to four video streams on separate monitors, up to four on a multi-window monitor or up to eight on two multi-window monitors. Selection of a video stream for control is achieved simply by moving the cursor over the desired video stream. We call this feature *KlickSimple*.

KlickSimple Across Multiple Monitors
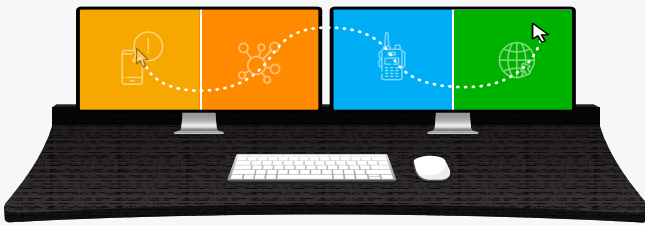
### *KlickSimple* Across Two Multi-Image Displays
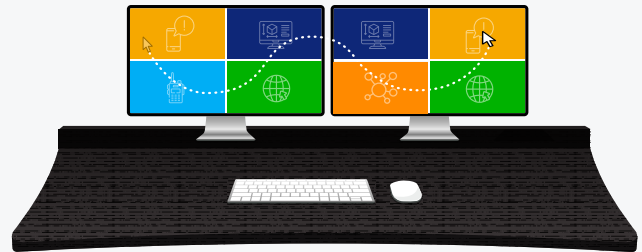
Streamlined Software

Secure, centralized management of all networked *XtendPoint* endpoints is overseen through the *XtendPoint* Central Manager, an easy-to-use software app for configuring, managing, and monitoring *XtendPoint* transmitter and receiver endpoints.

Users can create and manage password-protected user rights through *XtendPoint* Central Manager or use Microsoft Active Directory Services to manage user authorization. The *XtendPoint* system uses HTTPS — a secure communication protocol — to send control commands over the network, encrypting audio, video, and USB signals. It provides options for USB human interface devices (HID), such as keyboards and mice, while blocking all USB 2.0 devices or whitelisting approved ones.

XtendPoint Central Manager allows administrators to easily discover, configure and monitor *XtendPoint* endpoints on the network.

XtendPoint Central Manager provides a system-level view of all connections between transmitter and receiver endpoints.
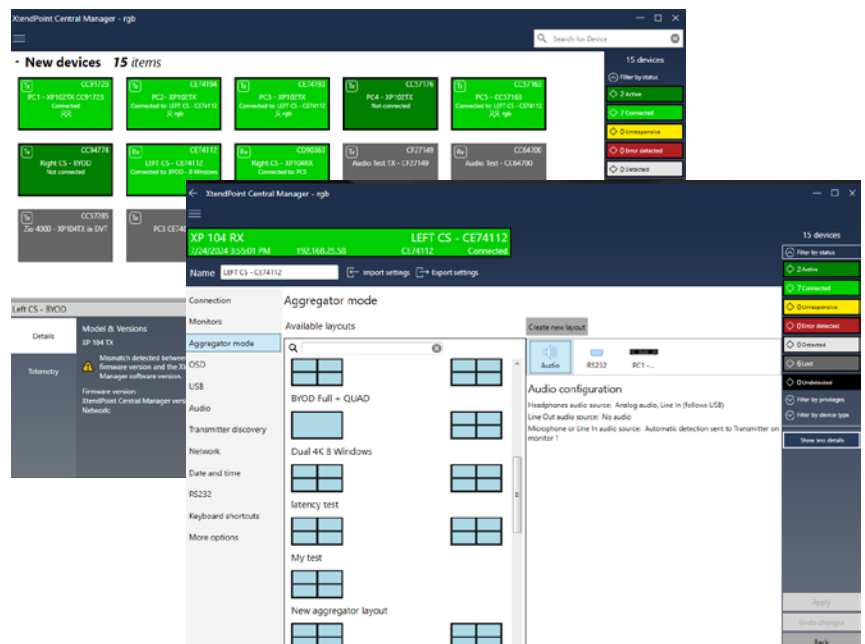
High-Capacity KVM-over-IP Endpoints for Seamless Remote System

The *XtendPoint* RX is a high-capacity KVM-over-IP receiver designed for efficient remote system of up to 8 computers. By combining *XtendPoint* RX receivers, users can expand control for as many as 32. The RX unit connects to monitors, a keyboard, and a mouse at the operator's console, enabling seamless control of remote devices equipped with *XtendPoint* TX transmitters.

Integration with RGB Spectrum's *Zio* AV-over-IP Platform

Integrating *XtendPoint* with the *Zio* AV-over-IP platform brings additional and unparalleled command-and-control functionality. The combination enables seamless integration with video walls and other front of room displays, enhancing data management and collaboration. The *Zio* Mobile app extends these capabilities to a mobile workforce, providing real-time access to critical information anywhere. The app ensures that first responders and other field personnel can view and interact with live video feeds and essential data on the go, facilitating more effective collaboration.

Empowering Connectivity: The Advantages of a Networked Architecture

A networked architecture provides numerous benefits that enhance the efficiency and effectiveness of command and control operations. By enabling the input of data from remote sources over a LAN/WAN, it facilitates real-time information gathering and sharing. It also allows for the control of remote devices and supervisory control of operator consoles from anywhere within the network. Additionally, networked systems offer robust operator backup capabilities. Sharing data seamlessly with other offices and outside agencies further enhances collaboration and response capabilities, making a networked architecture an indispensable asset in modern command and control environments.

With over 30 years of experience in command-and-control solutions, RGB Spectrum brings unparalleled expertise. The *XtendPoint* KVM-over-IP solution is designed to meet the rigorous demands of real-time operations, offering robust, reliable support for critical decision-making.

Scalable, secure, and efficient solution for remote KVM management.

Product Specifications

	XP 104 TX - 4-Signal Transmitter	XP 102 TX - 2-Signal Transmitter
Connections to Host System		
Video	1x DisplayPort 1.2; 3x DisplayPort 1.1	2x DisplayPort 1.1
USB	1x USB 2.0 Type B	
Serial	RS-232	
Audio	DisplayPort (embedded); Line in 3.5mm, line out 3.5 mm	
Network	1x RJ45 (1 GigE); 1x SFP cage	
Outputs to Local Devices (for future use)		
Video	1x DisplayPort 1.1	
USB	2x USB 2.0 Type A	
	XP 104 RX - 4-Signal Receiver	XP 102 RX - 2-Signal Receiver
Connections to Local Devices		
Video	1x DisplayPort 1.2; 3x DisplayPort 1.1	
USB	6x USB 2.0 Type A	4x USB 2.0 Type A
Serial	RS-232	
Audio	DisplayPort (embedded); Line in 3.5 mm, line out 3.5 mm; Mic in 3.5 mm, headphone out 3.5 mm	
Network	1x RJ45 (1 GigE); 1x SFP cage	
All Appliances		
Maximum Resolutions		
XP 104 TX/RX	1x 3840x2160 @60Hz, 2x 2560x1600 @60Hz; 2x 3840x2160 @30Hz; 3x 1920x1200 @60Hz; 4x 1920x1080 @60Hz; 4x 1920x1200 @50Hz	
XP 102 TX/RX	1x 2560x1600 @60Hz, 2x 1920x1200 @60Hz	
Physical		
Size (H x W x D)	1.676 x 7.45 x 8.526 inches (42.6 x 189 x 216.6 mm), 1 RU	
Power Supply	+12 V DC, maximum 5 A	
Power Consumption	60W max	
Distance in Point-to-Point	OM2, OM3, OM4 (50/125µm) multi-mode cable type – 550 m (1804 ft.) OM1 (62.5/125µm) multi-mode cable type – 275 m (902 ft.) OS1, OS2 (9/125µm) single-mode cable type – 5 km (3.10 mi.) Cat5e, Cat6 – 100 m (328 ft.)	
XtendPoint Link		
Power	5V	
2x USB	USB 2.0 Type A; Connection to local devices	
2x KVM	USB HID Type A; Connection to local devices; Keyboard and mouse sharing	
4x USB 1 - 4	USB 2.0 Type B; Connection to local sources	
RJ45	1GbE; Management	
RS232	1x 9-pin D Type (Female); Management	
Dimensions (W x H x D)	12.57 x 1.76 x 6.69 in (399.3 x 44.7 x 169.9 mm)	