

# EMR Video Router

High Density Modular Video Router (3G, HD, SD, ASI)



The EMR is a multi-format modular router that provides a high density solution without compromising functionality. The EMR provides a unified platform for routing video as well as other formats. The EMR uses a proprietary X-Link interface to produce a video router that is both cost effective and powerful.

A single 6RU frame can accommodate 128x128 video signals, and expansion beyond this is as easy as adding another frame. With two 6RU frames, the EMR can accommodate 256x256 video signals with full redundancy.

The modular design of the EMR means that there are no limitations to the signal formats that can be added to the router, or limitations to the size at which it can be expanded to. Other products that can be combined with the EMR are audio routing, master controllers, multi-viewers and more.

## Configuration

The EMR allows any mix of formats within a frame. The inputs and outputs are scalable in blocks of 32. A system consists of the input stage, the crosspoint, and the output stage. Each input and output device is connected to the crosspoint through a proprietary X-Link connection. It is the use of this connection that provides the flexibility for the system to scale and evolve with changing needs.

## Scalability

The EMR can be scaled well beyond a single frame. A single crosspoint module can support up to 9 input modules and 9 output modules, allowing a system to scale to 288x288 video signals.

## Redundancy

Each input and output card in the EMR contains multiple X-Link interfaces that allow connections to multiple crosspoints. Each input card provides two X-Link outputs that can be used for redundant connections, and each output card provides two X-Link inputs that can be setup to automatically failover if the primary connection fails. The redundancy structure of the EMR minimizes the chances of any failure to the system.

## Control

Control of the EMR is via the SC-2000 system controller. The SC-2000 provides a unified interface for the EMR so that it can function as a standalone system and be controlled using a wide range of control panels and interfaces. When combined with MAGNUM, the EMR can utilize further enhancements in configuration and control. The EMR also provides a SNMP interface to control various configuration options.

## Comprehensive Monitoring

When combined with MVPX and VIPX multi-viewers, the EMR provides an abundant of options to monitor the integrity of video signals. Each crosspoint module contains 9 X-Link outputs that are available to feed video signals directly to Evertz multi-viewers. This provides a cost effective, and implementation effective way to monitor the router inputs without sacrificing router outputs.

## ► Features & Benefits

### Video Routing

- Support for 3G-SDI, HD-SDI, SD-SDI, DVB-ASI, SMPTE 310M and more
- Scalable to 128x128 in a single 6RU frame
- Scalable to 288x288 in two 6RU frames
- Input expansion in steps of 32
- Output expansion in steps of 32
- Source-by-source intelligent auto configuration
- Input equalization (on/off)
- Output reclocking (on/off)
- ASI mode (on/off)
- Variable switch point

### Advanced system control & interfacing

- Supports the full range of Quartz remote control panels
- Full VistaLINK® PRO command & control, SNMP & AVM
- Supports a wide selection of control protocols
- Ethernet, Serial RS-422/RS-232 connections
- Full integration with 3rd party automation systems
- High availability, 24/7 design
- Full modular design
- All modules are hot swappable
- All components are front accessible
- Passive I/O
- External MI connection
- Redundant frame controller
- Redundant crosspoint
- Redundant power supply
- VistaLINK® PRO SNMP monitoring of I/O modules



### ► Specifications

<b>Configuration:</b>		<b>Switching Reference:</b>		<b>Physical:</b>	
Inputs	Selectable in blocks of 32	Reference Inputs	2x BNC, analog 525/625/tri-level HD	<i>EMX6-FR:</i>	
Outputs	Selectable in blocks of 32	Reference Timing	2 independent timing planes, programmable per output	Height	10.5" (266 mm)
<b>Video Inputs:</b>		Signal Level	1V p-p ±3dB	Width	19.0" (483 mm)
Formats	SMPTE 259M, SMPTE 292M, SMPTE 310M, SMPTE 424M, ASI	Impedance	75Ω terminating	Depth	15.75" (400 mm)
Signal Level	800mV p-p	Connectors	BNC per IEC 61169-8 Annex A	Module Capacity	15 single slot EMR series modules
Impedance	75Ω terminating			Weight	Approx. 34.8 lbs (15.8 kg) with 2 power supplies, no slots occupied
Return Loss	> 15dB typical (5-1500MHz)	<b>Control:</b>			Approx. 64.0 lbs (29 kg) with 2 power supplies, all slots occupied
Cable Equalization	Belden 1855A, 300m @ 270MHz Belden 1855A, 100m @ 1.5GHz	Ethernet	2x RJ45	<i>EMX3-FR:</i>	
Connectors	DIN 1.0/2.3	Serial		Height	5.25" (133 mm)
		RS-232/RS-422	2x D15 female	Width	19.0" (483 mm)
				Depth	15.75" (400 mm)
				Module Capacity	5 single slot EMR series modules
<b>Video Outputs:</b>		<b>Electrical:</b>		Weight	Approx. 17.4 lbs (7.9 kg) with 2 power supplies, no slots occupied
Formats	Same as input	Supply	Auto ranging, 100 - 240VAC, 50/60Hz		Approx. 32.0 lbs (14.5 kg) with 2 power supplies, all slots occupied
Reclocking	Configurable	Power Consumption			
Non-Reclocking	Configurable	EMX6-FR	650w		
Signal Level	800mV p-p ±10%	EMX3-FR	360w		
Impedance	75Ω terminating	Redundant PSU	Optional		
Return Loss	> 15dB typical (5MHz-1500MHz)				
	> 10dB typical (1.5GHz-3GHz)				
DC Offset	0±0.5V				
Output Jitter	0.2UI				
Connectors	DIN 1.0/2.3				

### ► Ordering Information - EMR Video Router

<b>EMX6-FR</b>	EMX 6RU Router Chassis with 15 slots
<b>EMX3-FR</b>	EMX 3RU Router Chassis with 5 slots
<b>EMX-FC</b>	EMX frame controller
<b>SC-2000</b>	2RU System Controller
<b>SC-2000-R</b>	Redundant System Controller (fits into SC-2000 chassis)
<b>EMR-IP32H</b>	32 HD/SD inputs with 3 X-Link outputs
<b>EMR-IP32-3G</b>	32 3G/HD/SD inputs with 3 X-Link outputs
<b>EMR-IP32-3G-F</b>	32 3G/HD/SD inputs (fiber capable-no SFP modules) with 3 X-Link outputs
<b>EMR-OP32H</b>	32 HD/SD outputs with 2 X-Link inputs
<b>EMR-OP32-3G</b>	32 3G/HD/SD outputs with 2 X-Link inputs
<b>EMR-OP32-3G-F</b>	32 3G/HD/SD outputs (fiber capable - no SFP modules) with 2 X-Link inputs
<b>EMR-XPT-288X288</b>	Crosspoint with 9 X-Link inputs and 9 X-Link outputs
<b>EMR-XPT-160x160</b>	Crosspoint with 5 X-Link inputs and 5 X-Link outputs

#### Ordering Options

<b>+6PS</b>	Redundant Power Supply for EMX6-FR
<b>+3PS</b>	Redundant Power Supply for EMX3-FR

#### Fiber Optic Modules

<b>SFP3T-13-2</b>	Dual optical SFP fiber transmitter module
<b>SFP3R-2</b>	Dual optical SFP fiber receiver module