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

The modular design of the EMR means there are no limitations to the signal formats that can be added to the router, or limitations to the size to which it can be expanded. 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. The use of this connection is what 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 nine input modules and nine output modules, allowing a system to scale to 288 x 288 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 nine X-Link outputs that are available to feed video signals

Features & Benefits

Video Routing
- Support for 3G-SDI, HD-SDI, SD-SDI, DVB-ASI, SMPTE ST 310-1 and more
- Scalable to 128 x 128 in a single 6RU frame
- Scalable to 288 x288 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)

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

The Complete Solution Provider

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Specifications

Configuration:

Inputs:	Selectable in blocks of 32
Outputs:	Selectable in blocks of 32

Video Inputs:

Formats:	SMPTE ST 259-1, SMPTE ST 292-1, SMPTE ST 310-1, SMPTE ST 424, ASI
Signal Level:	800mV p-p
Impedance:	75Ω terminating
Return Loss:	> 15dB typical (5-1500MHz) >10dB typical (1.5-3GHz)
Cable Equalization:	Belden 1855A, 300m @ 270MHz Belden 1855A, 100m @ 1.5GHz
Connectors:	DIN 1.0/2.3

Video Outputs:

Formats:	Same as input
Reclocking:	Configurable
Non-Reclocking:	Configurable
Signal Level:	800mV p-p ±10%
Impedance:	75Ω terminating
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

Switching Reference:

Reference Inputs:	2x BNC, analog 525/625/tri-level HD
Signal Level:	1V p-p ±3dB
Impedance:	75Ω terminating
Connectors:	BNC per IEC 61169-8 Annex A

Control:

Ethernet:	2x RJ45
Serial:	RS-232/RS-422 2x D15 female

Electrical:

EMX6-FR:

AC Mains Input:	Auto ranging, 100 ↔ 240 VAC, 50/60 Hz
Max Operating Current:	9.5 A (@ 115 VAC nominal), 4.0 A (@ 220 VAC nominal)
Max Power Consumption:	850 W
Max Module Load:	650 W (40 W per slot)
Power Supply Configuration:	1 supply standard, optional redundant supply requires separate inlet
Connector:	IEC 60320 - 1 per power supply

EMX3-FR:

AC Mains Input:	Auto ranging, 100 ↔ 240 VAC, 50/60 Hz
Max Operating Current:	4.6 A (@ 100 V/60Hz), 1.85A (@ 240 V/50Hz)
Max Power Consumption:	450 W
Max Module Load:	360 W (24 W per slot)
Power Supply Configuration:	1 supply standard, optional redundant supply requires separate inlet
Connector:	IEC 60320 - 1 per power supply

Physical:

Dimensions:	
EMX6-FR:	10.5" H x 19.0" W x 5.75" D (266 mmH x 483 mmW x 400 mmD
EMX3-FR:	5.25"H x 19.0"W x 15.75" D (133 mmH x 483 mmW x 400 mmD)
Module Capacity:	
EMX6-FR:	15 single slot EMR series modules
EMX3-FR:	5 single slot EMR series modules
Weight:	
EMX6-FR:	Approx. 34.8 lbs (15.8 kg) with 2 power supplies, no slots occupied Approx. 64.0 lbs (29 kg) with 2 power supplies, all slots occupied
EMX3-FR:	Approx. 17.4 lbs (7.9 kg) with 2 power supplies, no slots occupied Approx. 32.0 lbs (14.5 kg) with 2 power supplies, all slots occupied

Ordering Information - EMR Video Router

EMX6-FR	EMX 6RU Router Chassis with 15 slots
EMX3-FR	EMX 3RU Router Chassis with 5 slots
EMX-FC	EMX frame controller
SC-2000	2RU System Controller
SC-2000-R	Redundant System Controller (fits into SC-2000 chassis)
EMR-IP32H	32 HD/SD inputs with 3 X-Link outputs
EMR-IP32-3G	32 3G/HD/SD inputs with 3 X-Link outputs
EMR-OP32H	32 HD/SD outputs with 2 X-Link inputs
EMR-OP32-3G	32 3G/HD/SD outputs with 2 X-Link inputs
EMR-XPT-288X288	Crosspoint with 9 X-Link inputs and 9 X-Link outputs
EMR-XPT-160x160	Crosspoint with 5 X-Link inputs and 5 X-Link outputs

Ordering Options

+6PS	Redundant Power Supply for EMX6-FR
+3PS	Redundant Power Supply for EMX3-FR

Fiber Optic Modules

SFP3T-13-2	Dual optical SFP fiber transmitter module
SFP3R-2	Dual optical SFP fiber receiver module

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