

HIGH DENSITY ROUTING PLATFORM



| Overview |

The #1 Routing Solution for Mission Critical Applications

The EQX platform is Evertz[®] flagship routing & distribution solution designed for high availability by adopting extensive industry leading redundancy for all critical system elements. With its proven robustness and redundancy, the EQX is ideal for mission critical and demanding 24/7 environments including network and local broadcasters, mobile production, cable, military, government and corporate applications.

Key Features

High Performance Format Agnostic Platform

- 3G-SDI, SD-SDI, HD-SDI, DVB-ASI, SMPTE 310M
- Any fiber optical signals from 3Mb/s up to 3Gb/s
- 10GE Video over IP Gateway interface
- Scalable to 1152x1152 in a single 40RU frame
- Scalable to 576x1152 in a single 26RU frame
- Scalable to 288x576 in a single 16RU frame
- Scalable to 180x180 in a single 10RU frame
- Input & output expansion in increments of 18
- Up to 2304x2304 with redundancy in multiple frames
- Source-by-source intelligent auto-configuration:
 - Input equalization (On/Off)
 - Output reclocking (On/Off)
 - ASI Mode (On/Off)
 - Switch Point (Variable)

Advanced System Control & Interfacing

- MAGNUM Unified Control System
- VUE user interface
- CP-2232/2116 Advanced Control Panels
- Supports the full range of Quartz remote control panels
- Full VistaLINK[®] PRO command & control, SNMP & AVM
- Ethernet, Serial RS-422/232, F-Link and Q-Link port

High Availability, 24/7 Design

- Full modular design
- All modules are hot swappable
- Passive I/O
- Full redundant design
- Path by path crosspoint redundancy
- Redundant frame controller
- Redundant power supply (separate 1RU)
- Redundant cooling fans
- Comprehensive system monitoring bus
- VistaLINK® PRO SNMP
 - AVM Monitoring of I/O & crosspoint modules
 - Temperature monitoring
 - Power supply monitoring

EQX Family

The EQX offers four different frame sizes to choose from in order to meet the requirements of any application. Our new smaller 10RU frame supports 180x180 or 180x360 using Double Density outputs (plus X-LINK outputs). The half 16RU frame supports 288x288 or 288x576 using Double Density outputs (plus X-LINK outputs). The full 26RU frame will support 576x576, or 576x1152 using Double

Density outputs (plus X-LINK outputs). The traditional EQX is a very compact solution, perfect for trucks, mobile applications, or areas where space is a concern. However, the new EQXM was designed with large systems in mind. A single frame supports

1152x1152 with full path redundancy and options

for audio embed and de-embedding. Using

multi-frame the I/O can be expand into further square and rectangular sizes. Using multi-frame the I/O can be expanded into further square and rectangular sizes. For larger 2304x2304 matrices, using the EQXM is more economical in terms of space and cost than using the 26RU EQX.

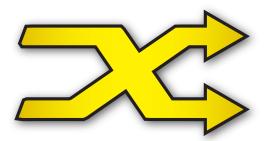








Designed for Performance



Ultra Wide Band Routing

By offering a format independent data path, the EQX supports signals from 3Mb/s all the way up to 3Gb/s, including SD-SDI, HD-SDI, 3G-SDI, DVB-ASI and SMPTE310 digital video formats, as well as Media IP Gateway (IPG) cards for SDVN[™] Hybrid Routing solutions, optical formats and other high data rate signals. In addition, the EQX supports four independent timing planes which will provide independent SMPTE compliant switching for up to four different digital video signal formats.

System Flexibility

The inspired modular approach of the EQX design provides excellent in-service expansion capabilities. In convenient increments of 18, the number of inputs and/or outputs can be increased from the base size of 18x18 up to 576x576 and beyond, with square and non-square configurations.

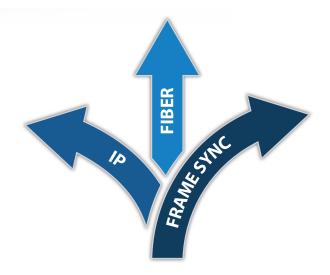
Input and Output Flexibility

The EQX offers a large number of Input and output options to meet the many different requirements in a facility or mobile applications. We have options for audio embedding and de-embedding, Frame Sync, IP video and line sync outputs for soft/quiet switching to name a few. Contact the factory with your specific router needs for a precise router system solution.



Green Technology

With the Flexibility of the EQX frame where all I/O and XPT active parts are modular and hot swappable from the front of the router we have been able to take advantage of new technology that allows for reduced power consumption and heat dissipation in the input, output and XPT module. This provides a more efficient router with quieter fans, while still maintaining the industry leading performance of the EQX router platform.





Multiview Processor Integration

The EQX integrates X-LINK on the 10, 16 and 26RU models. X-LINK is a high density interconnection used on a wide variety of Evertz[®] Multiviewer processors that DOES NOT use up standard router outputs. A 576x576 EQX will still have the full 576 outputs while supporting more than 500 additional outputs to a Multiview Processor. X-LINK technology is a unique Evertz[®] signal interconnection carrying 32 uncompressed baseband signals over a single connector.



Intelligent Auto-configuration

The EQX has an exceptional source-by-source intelligent auto configuration facility allowing the path to each destination to be independently and instantly reconfigured to suit the requirements of the source being switched. This includes auto selecting the reclocking/non-reclocking circuitry and the ASI mode, as well as selecting the correct switch point.



Simple Maintenance

The advanced design of the EQX ensures that all active components including input / output / crosspoint modules, frame controllers, cooling fans and power supplies are accessible from the front of the frame and can be hot swapped at any time for maintenance.



Independent Monitoring

The EQX provides extensive signal monitoring of both inputs & outputs, power supply voltages, interior temperatures and fan speeds. All monitored data is available through SNMP for facility-wide monitoring systems such as VistaLINK® PRO.



Outstanding Redundant Protection

The EQX is the ultimate design in terms of system availability.

The EQX architecture contains redundant protection for all of the critical system elements. This architecture provides redundant crosspoint configurations, redundant frame controllers, external redundant load sharing power supplies, redundant easy-access cooling fans and a dedicated monitoring bus that is independent of the system cross-points.

In the event of a failure, manual or automatic re-routing of signals on an output-by-output, path-by-path basis is fully supported by the system software. Using the EQX monitoring capabilities, output quality can be verified prior to switching to redundant signal paths. The EQX is a fully SNMP-enabled system and supports seamless integration with VistaLINK® PRO command & control systems.



Hybrid IP Routing

The Evertz® IP Video Media Gateway family includes modules that fit into any EQX frame, enabling all traditional EQX systems to operate in collaboration with Evertz[®] new format agnostic IP switch fabrics. The traditional routing control is preserved in this Hybrid solution through the use of Evertz® MAGNUM unified control system.



Audio Routing

The EQX has superior audio routing capabilities. It supports the ability to de-embed AES from any input signal and deliver it as discrete AES, Analog Audio, MADI, or Studer A-LINK signals. It can also re-embed (in any order) audio with other de-embedded AES channels, Analog inputs, Discrete AES, MADI, and/or Studer A-LINK inputs on any output video.



MAGNUM Unified Control System

Evertz®' MAGNUM Unified Control System addresses the ever-growing challenges broadcasters face as facilities become larger, more complex and distributed. MAGNUM has been designed to unify the control and operation of the routing core, master control, production switching, MAGNUM-SVDN and multiviewer.



Optical Routing

The EQX Router can accept optical signals at any data rate between 3Mb/s and 3Gb/s. Whether it is SMPTE259M or 292M compliant signals over fiber or proprietary optical signals such as Evertz[®] G-LINK or from a 3rd party, the EQX will accept the signals, route them through the digital core and re-launch them on fiber. The EQX can also take in digital signals via coax and launch them on fiber or accept optical signals and send them out electrically via coax.





Comprehensive Control

The EQX provides comprehensive connectivity to accommodate the most demanding installations. The internal frame controllers provide complete connectivity to any number of remote control panels and 3rd party control devices such as automation systems via multiple Q-Link, F-Link, Ethernet and Serial ports.

MAGNUM bridges all of the major components within the broadcast path under a single point of control enabling broadcasters to simplify facility workflow and gain efficiency while reducing operational costs

MAGNUM from a core routing perspective provides a superior, unified control / interfacing to Evertz® EQX and other Evertz® routing SDI products. MAGNUM can configure and manage systems ranging from a single router system (with hundreds of sources /destinations) to large enterprise sized system (with thousands of sources / destinations that utilize tie-lines). Based on MAGNUM's Router control module, MAGNUM-SE has been designed and released to support and manage smaller routing systems.

MAGNUM, as a SDVN orchestration and controller, controls both Hybrid SDI and IP applications. MAGNUM provides seamless integration of SDI and High Bandwidth Ethernet switch fabrics for video applications by providing operators with the same control interfaces (source/destination/take) found in legacy SDI facilities.

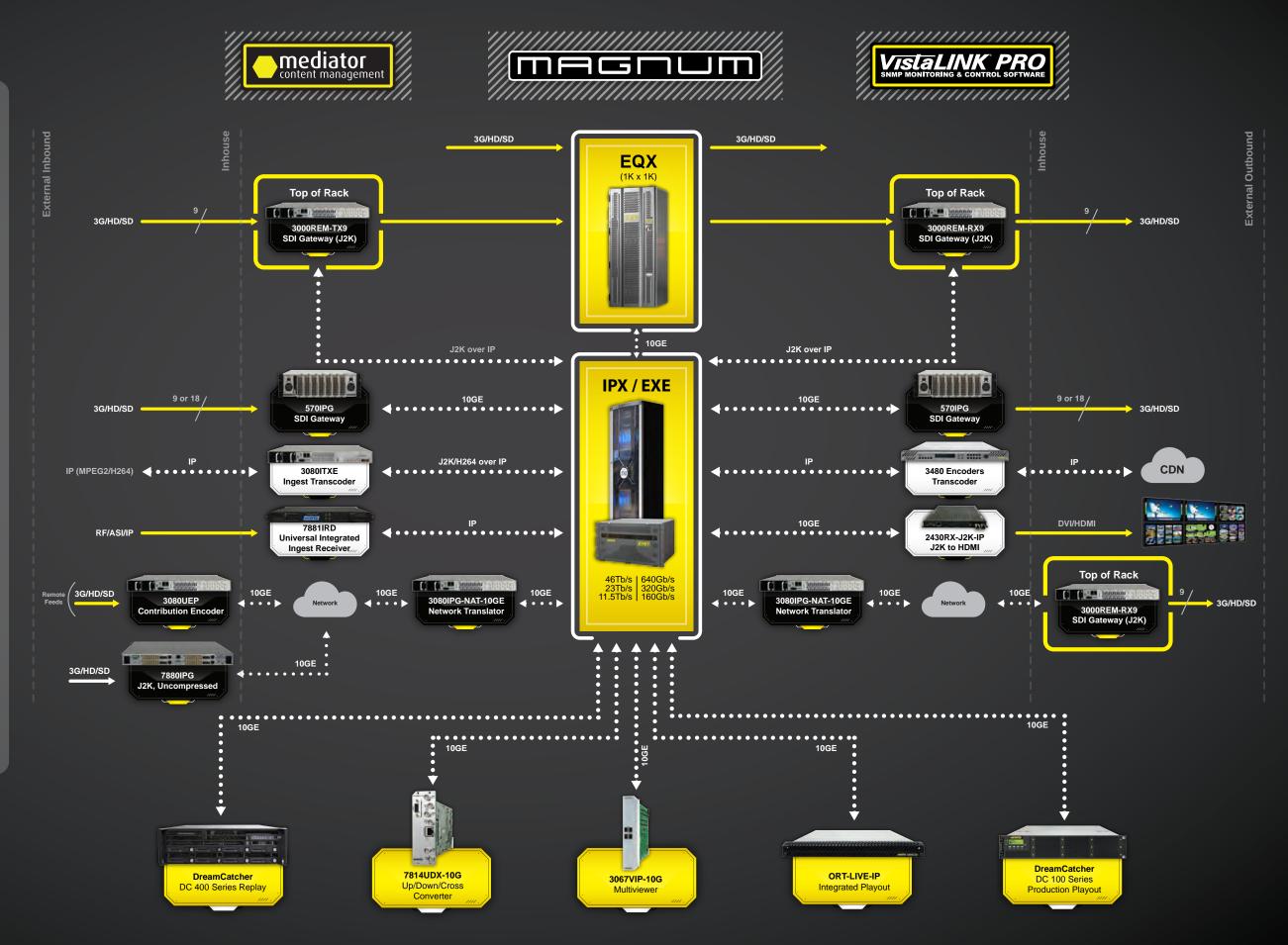
SDI/10GE Hybrid Infrastructure

Evertz[®] Software Defined Video Neworking (SDVN) leverages MAGNUM to bridge legacy SDI based facilities and IP-based facilities. MAGNUM provides orchestration and control of SDVN components that include Evertz[®] 10/100GE high capacity switch fabrics, media IP gateways, and Evertz[®] traditional SDI products such as the EQX family of 3G/HD/SD-SDI routers. Evertz^{®I} SDVN offers broadcasters, content distributors and service providers a flexible, format agnostic and scalable infrastructure for SD, HD, 3G, and Ultra HD (4K and 8K) video

For Evertz[®] SDVN, the EQX family of routers offer a Video IP Gateway input module that takes 18 3G/HD/SD-SDI inputs and encapsulates the signals onto 10GbE. The Video IP Gateway module provides a union of traditional baseband EQX system and format agnostic IP switch fabrics.

Through its intelligent utilization of extreme bandwidth switching, the SDVN[™] solution allows media organizations to harness the true potential of a 10GE /100GE IP-Ethernet network. Evertz^{®I} SDVN[™] solution provides unprecedented scalability, highly efficient workflows, and a reduction in capital and operational costs.





Specifications

Confic 576x57

288x28

180x18

Inputs

Video Format

Optical

Signal

Imped Return

Cable E

Connec

Video

Signal

Reclock Non-re

Imped

Return

DC Offs Output Conne

uration (excluding f	rame Xlink ou	itputs)
6 (1152 available) in 26RU:		PSU separate 1RU
8 (576 available) in 16RU:		PSU separate 1RU
0 (360 available) in 10RU:		PSU separate 1RU
& Outputs:		Selectable in blocks of 18
nputs		
s:	SMPTE 259M,	292M, 310M,
	424M, ASI, 10	G
Formats:	SMPTE 292M,	G-LINK, any optical
	signal betwee	en 3Mb/s and 3Gb/s
evel:	800mV p-p	
ince:	75ohms term	inating
Loss:		il (5-1500 MHz) /
	> 10db typica	il (1.5-3GHz)
qualization:	Belden 1694A	@ 270MHz 300m to 500m
	Belden 1694A	@ 1.5GHz 100m to 200m
	Belden 1694A	@ 3GHz 90m to 150m
tors:	BNC IEC 6116	9.8 Annex A
Outputs		
Supported:	SMPTE 259M,	292M, 310M,
	424M, ASI, 10	G
ing:	Configurable	
clocking:	Configurable	
ince:	75ohms term	
Loss:	> 15db typica	l (5-1500 MHz) / > 10db
	typical (1.5-30	GHz)
et:	0 ±0.5V	
Jitter:	0.2 UI	
tors:	BNC IEC 6116	9.8 Annex A

Fiber Inputs/Outputs SFP1R-2: Connector: Operating Wavelength: Maximum Input Power: Optical Sensitivity:

SFP1T13-2: Connector: Wavelengths: Output Power:

Reference Timing Switching Referen

Connector:

Signal Level: Impedance: Reference Timing:

Control

Q-Link: F-Link:

Ethernet:

Serial RS-422/232:

2 X RJ45 2 X D9 female

Dual Optical SFP Receiver, Up to 3Gb/s
LC/PC
1270nm to 1610nm
-1dBm
-21dBm+/-1dBm
Dual Optical SFP Transmitter, Up to
3Gb/s, 1310nm
LC/PC
1310nm
-2dBm ±1dBm

Analog 525/625/tri-level HD looping connections 2 BNC IEC 61169.8 Annex A 1V p-p ±3dB 75ohms terminating (active loop out optional) 4 independent timing planes, programmable output by output

4 X 75OHM video cable (maximum length 500m) 10/100baseT, 2 X RJ45

Width: Depth: Operating Temp.: Cooling:	Height:	
Depth: Operating Temp.:	Width:	
Cooling:	Operating	Temp.:
	Cooling:	

Physical

Power Voltage

Power:

Redundancy:

45.5" (115.5cm), 26RU / 28" (71.1cm), 16RU / 17.5"(44.5cm), 10RU 19" (48.3cm), 19" Rack Mount 19.4" (49.3cm) over hinges and BNCs 0°C to -40°C Fan cooled, front to rear

Auto ranging 100 to 240V 50/60Hz
Up to 4 load sharing PS modules in
1RU frame
Separate main input for each module
or external 48V DC
1200W per PS module
2000W for a Green 26RU populated as
a 576x576
1100W for a Green 16RU populated as
a 288x288
700W for a Green 10RU populated as a
180x180
Separate 1RU frame with up to 4 PS
modules for 1:1 redundancy available

Ordering Information

EQX Ordering Information for Base EQX packages

EQX10G-18X18-3G	18 input, 18 output 3G/HD/SDI/ASI/IP Video Router with potential for 6-Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX10G-18X18-3G-XLINK	18 input, 18 output 3G/HD/SDI/ASI/IP Video Router with potential for 15-Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX10G-18X18H	18 input, 18 output HD/SDI/ASI/IP Video Router with potential for 6-Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX10G-18X18H-XLINK	18 input, 18 output HD/SDI/ASI/IP Video Router with potential for 15-Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX16G-18X18-3G	18 input, 18 output 3G/HD/SDI/ASI Video Router, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX16G-18X18-3G-F1	18 input, 18 output 3G/HD/SDI/ASI Video Router, 1 Frame controller, 1 Crosspoint board includes I/O with Fiber SFPs power & noise reduction
EQX16G-18X18-3G-XLINK	18 input, 18 output 3G/HD/SDI/ASI Video Router with Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX16G-18X18H	18 input, 18 output HD/SDI/ASI Video Router, 1 Frame controller, 1 Crosspoint board includes I/O with single power & noise reduction
EQX16G-18X18H-XLINK	18 input, 18 output HD/SDI/ASI Video Router with Xlink, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX26G-18X18-3G	18 input, 18 output 3G/HD/SDI/ASI Video Router, 1 Frame controller, 1 Crosspoint board includes I/O with power & noise reduction
EQX26G-18X18H	18 input, 18 output HD/SDI/ASI Video Router, 1 Frame controller, 1 Grosspoint board includes I/O with power & poice reduction

EQX Ordering Options

EQX-PS	Additional Power Supply Module
EQX-PS-FR-B	1RU Frame for Power Supply Modules (holds up to 4 EQX-PS modules)
EQX-FC	Frame Controller Module
EQX-XPTG-576x576	Green Crosspoint Module
EQX-XPTG-576x288	Green Crosspoint Module
EQX10-XPTG-180x288	Green Crosspoint Module, made compact for the EQX10
EQX-GX-OP18H	18 Output HD/SDI/ASI Module
EQX-GX-OP18-3G	18 Output 3G/HD/SDI/ASI Module
EQX-IP18FSAD-3G	18 Input Frame Sync and Audio de-embed Module
EQX-IP18-IPG	18 Input IP Video Gateway module (Frame Sync and Audio de -embed Module)

More ordering option are available please contact the factory For Hybrid SVDN options, Fiber Optic options, and for sizes greater than 576x576, please contact factory

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Monitoring & Control Fiber Optics Master Control & Branding Management Software Time Code Distribution & Conversion Routing Systems Processors Digital Signage Closed Captioning / EAS Production Post-Production Multiviewers L-Band & RF Products Compressed DTV Products





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Fiber Optics

Using Evertz[®] fiber optic product line, a practical link for almost any conceivable signal type or group of signals can be easily implemented. Supported video formats include both analog video (NTSC and PAL) and digital video (SDTV, HDTV, DVB-ASI, SDTI, SMPTE 310M). Audio formats include both analog audio and AES/EBU audio. Control formats include bi-directional RS-232, RS-422 and GPI/GPO. Datacom formats include bi-directional Ethernet (10/100 BaseT), Gigabit Ethernet, and Fiber Channel. Other formats include SONET/SDH, DS3, T1/E1/J1, L-Band & 70/140Mhz I/F signals. Using VistaLINK[®] - capable modules provides the user with advanced features such as pre-emptive warnings and on-board signal and level monitoring through SNMP.



7705 & 7707 Series



RF Distribution & Routing

Evertz[®] offers modular RF signal matrices for routing and monitoring L-band and IF signals within a satellite communications facility. Built on a modular architecture, all active components are hot-swappable and front-loading ensuring ease of maintenance and matrix expansion. Advanced features such as automatic gain control, salvo operations, monitoring and alarm reporting of critical signal parameters such as input signal presence and signal level provide flexible RF signal management. Additionally, this flexible routing matrix can be controlled, configured and monitored via serial control and/or SNMP control over Ethernet. Matrices run from 16x16 up to 64x64 and beyond. In addition, Evertz[®] offers RF transmit, receive modules, passive splitters and combiners.

XRF1, XRF6, 7702 & 7703LT/R Series

Master Sync, Clocks & Generator

The 5600MSC is a Master SPG, Master Clock and Master Time Code Generator all in one box. It provides analog black and HDTV tri-level sync signals and solves the problem of locking the in-house master clock system to the master video sync pulse generator. The separate 5600ACO Automatic Changeover Unit completes the package.

The 5600ACO and 5600ACO2 Automatic Changeovers are intended for use with two 5600MSC Master Clock/Sync Generators. The systems use latching relays to ensure maximum reliability and minimal disruption in the event of any failure. The complete system provides the highest level of security for television station video and time synchronization systems.

5600MSC & 5600ACO2



Conversion/Processing & Distribution

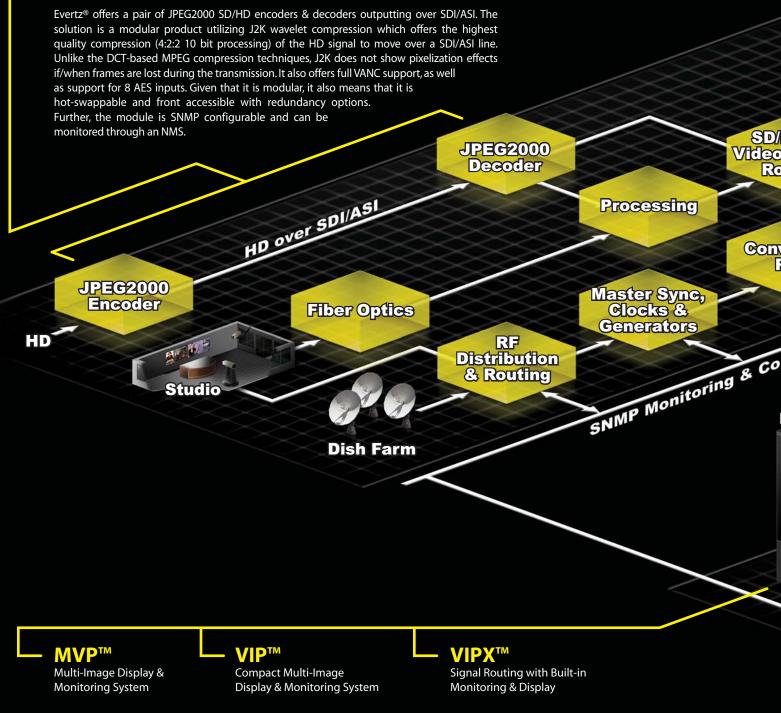
HDTV is here and so is Evertz[®], providing a complete solution for your broadcast, cable, satellite and IPTV facility needs. Offering modular solutions for A/D, D/A, up, down & cross conversion, aspect ratio conversion, frame synchronizers, audio embedders & de-embedders, Dolby encoders & decoders, keying & logo insertion, captioning using the 7700 series products, and the highest density distribution through the **exponent[™]** series, Evertz[®] infrastructure products help bring your DTV/HDTV plans to reality!

CDM/CD2, CEM/CE2, UC, XUDC & 500 exponent[™] Series

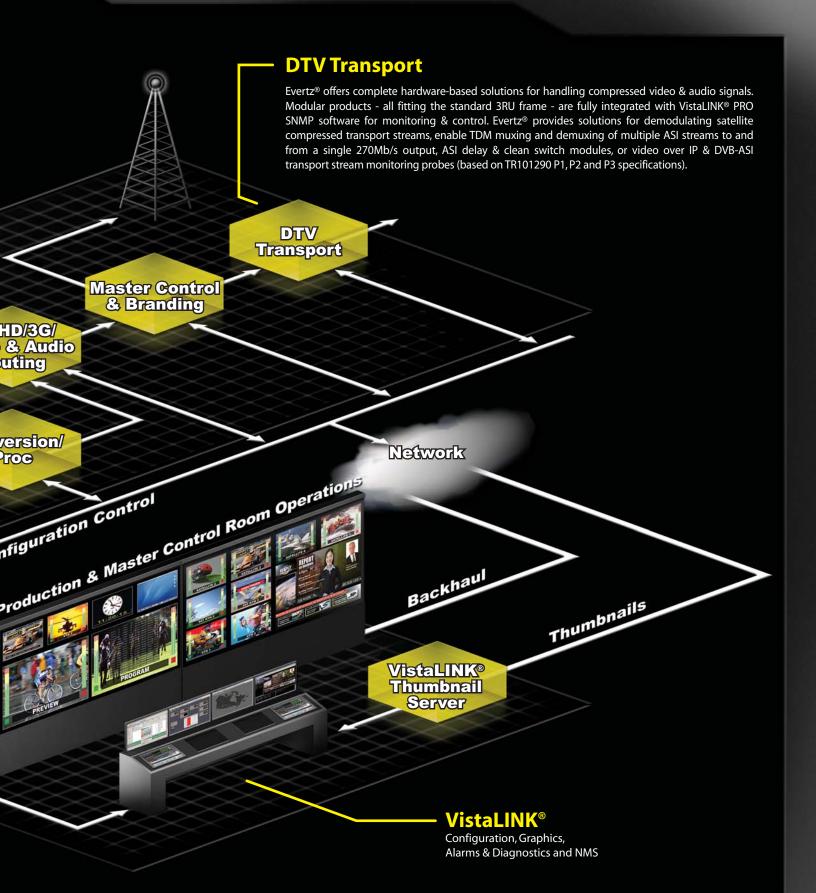


The Complete Solution...

JPEG2000



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SD/HD/3G & Audio Routing

The EQX platform is Evertz[®] flagship routing and distribution solution designed for high availability by adopting extensive redundancy for all critical system elements. With this, and the ability to route up to 576x576 signals, the EQX is ideal for mission critical and demanding 24/7 environments including network local broadcaster, mobile production, cable, military, government and corporate applications.

Xenon and Topaz routing lines bring many advanced new capabilities to the world of routing switchers, building on a new generation design that starts with a solid multi-format router core.

Topaz, Xenon & EQX Series, Modular & Bypass Routers

Master Control & Channel Branding

Master control is the heart of any broadcast facility, and demands for reliability, serviceability, and signal protection are essential. Equally essential is a Master Control that can be expanded to provide for future growth as facilities migrate from analog to SD to HD. Many broadcasters look at master control as a major long-term investment.

Trusted by the networks and production facilities worldwide, the Evertz[®] family of Channel Branding products offers a wide range of capabilities and features that meet the needs of the modern broadcast facility. The lineup of Keyers, Logo and Media Inserters provide the solutions for your HD, SD and Analog branding requirements.

QMC-2, QMG and 9725LG/LGA Series





Monitoring & Control

The MVP[™] & VIP[™] revolutionize the multi-display marketplace with a highly flexible, intuitive, simple yet comprehensive approach to virtual wall monitor applications.

The MVP[™] is the next generation of Multi-Image Display Processor Technology, boasting the most flexible & feature-rich platform available, making it ideal for all applications where video/audio monitoring & display are required. The MVP[™] architecture is revolutionary in its approach, as it does NOT use a PC platform at the core of its operation. The VIP[™] provides a feature-rich yet cost-effective signal monitoring and display solution displaying up to WUXGA (1920x1200) resolution.

MVP[™], VIP[™], MWP[™] & Quattro[™] HD

VistaLINK[®] PRO Software

With effective and simple-to-use graphics, unparalleled drill-down information, external notification tools and a network of efficient SNMP monitoring & configuration architecture, VistaLINK[®] and VistaLINK[®] PRO PLUS provide you with all the details!

From a simple module setup and configuration tool to an advanced level monitor/control element manager and everything in between, VistaLINK[®] PRO covers all of your application needs.

VistaLINK[®] PRO & VistaLINK[®] PRO PLUS = 100% SNMP



Evertz® Around the World



The Evertz[®] Corporate Head Office is located in Burlington, Ontario, Canada. We also have United States offices located in Washington DC and Burbank CA, as well as International Offices located in London UK, South East Europe and Hong Kong.

Evertz[®] supports over 80 local dealers, who deliver our products, solutions, and expertise. Dealers know your local market and provide the customer service that sets us apart from the competition. If you need advice about selecting or using an Evertz[®] product, set-up or servicing needs, your local dealer can answer your questions and even put you in touch with a regional Evertz[®] office. To locate your Evertz[®] representative, visit http://www.evertz.com/contact/international-dealers for a list of our authorized dealers.



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