VIP-X™
Hardware Specification

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1. VIP-X HARDWARE SUMMARY

1.1. VIP-X BASE SYSTEMS

XE4-VIPX   Uses the compact 4RU Xenon router as the foundation platform, with up to 64 3G/HD/SD inputs and up to 64 outputs for signal routing. One of the two output boards in the Xenon 4RU are "X-LINK" enabled to provide additional monitoring outputs via "X-LINK" interconnect to enabled monitoring products, example 7767VIPX modules or 3000RP4-XLINK rear panel for the MVP.   There are a total of three (3) X-LINK outputs available from the XE4-VIPX system.

XE8-VIPX   Uses the versatile 8RU Xenon router as the foundation platform, with up to 128 3G/HD/SD inputs and up to 128 outputs for signal routing. Two of the four output boards in the Xenon 8RU are "X-LINK" enabled to provide additional monitoring outputs via "X-LINK" interconnect to enabled monitoring products, example 7767VIPX modules or 3000RP4-XLINK rear panel for the MVP.   There are a total of six (6) X-LINK outputs available from the XE8-VIPX system.

EQX16-VIPX   Uses the 16RU EQX router as the foundation platform, no other router is more advanced in terms of technology and redundancy. EQX16-VIPX offers up to 288 3G/HD/SD inputs and 288 outputs for signal routing. The EQX16 is "X-LINK" enabled via the addition of a EQX16-288x288 cross point module installed in the lower or third cross point slot in the router. With the addition of the EQX16-OP-XLINK rear module, there are a total of nine (9) main X-LINK outputs, and nine (9) redundant X-LINK outputs available.

1.2. VIP-X ROUTER COMPONENTS

XE-OP32SX-XLINK   Xenon output module with 32 SD-SDI outputs via mini-BNC (DIN) outputs plus three (3) X-LINK outputs. A single XE-OP32SX-XLINK output card can be installed in the Xenon 4RU router, and two XE-OP32SX-XLINK output cards can be installed in the Xenon 8RU router.

XE-OP32HX-XLINK   Xenon output module with 32 HD-SDI/SD-SDI outputs via mini-BNC (DIN) outputs plus three (3) X-LINK outputs. A single XE-OP32HX-XLINK output card can be installed in the Xenon 4RU router, and two XE-OP32SX-XLINK output cards can be installed in the Xenon 8RU router.

EQX16-OP-XLINK   EQX16 passive rear output module. Provides up to nine (9) X-LINK outputs plus up to nine (9) redundant X-LINK outputs. Installed in rear of EQX16 router frame below the power connector and above the redundant frame controller rear module.

1.3. VIP-X VIDEO PROCESSOR MODULES

7767VIPX16x2   X-LINK enabled VIP Advanced display processor module. Supports up to sixteen (16) video inputs distributed from router via "X-LINK" interconnect. Supports up to two (2) unique multi-image display outputs via DVI and HD-SDI. 7767VIPX is installed in Evertz standard 7700 Frame with high output power supplies. Each 7767VIPX16x2 occupies half of a 5 slot rear plate, up to two (2) 7767VIPX16x2 modules are supported from a single rear plate.

7767VIPX8X2   X-LINK enabled VIP Advanced display processor module. Supports up to eight (8) video input s distributed from router via "X-LINK" interconnect. Supports up to two (2) unique multi-image display outputs via DVI or HD-SDI. 7767VIPX is installed in Evertz standard 7700 Frame with high output power supplies. Each 7767VIPX8x2 occupies half of a five (5) slot rear plate, up to two (2) 7767VIPX8x2 modules are supported from a single rear plate.

3000MVP-RP4-XLINK   Rear panel for 3000FR to enable support for X-LINK connections from "X-LINK" enabled router platforms. Supports up to four (4) 3000 series input modules in the MVP.

Due to constant research and development, specifications are subject to change without notice. For the latest specification information, please visit www.evertz.com or contact your Evertz representative.

2.   VIP-X HARDWARE DETAILS

2.1.   ROUTER PLATFORMS

2.1.1. XE4-VIPX

Uses the compact 4RU Xenon router as the foundation platform, with up to 64 3G/HD/SD inputs and up to 64 outputs for signal routing. One of the two output boards in the Xenon 4RU can be "X-LINK" enabled to provide additional monitoring outputs to enabled monitoring products, example 7767VIPX modules or 3000RP4-XLINK rear panel for the MVP.   There are a total of three (3) X-LINK outputs available from the XE4-VIPX system. For detailed information regarding the Xenon 4RU, please refer to the product specific hardware specification.

Xenon 4RU – 64x64 router

2.1.2. XE8-VIPX

Uses the versatile 8RU Xenon router as the foundation platform, with up to 128 3G/HD/SD inputs and up to 128 outputs for signal routing. Two of the four output boards in the Xenon 8RU can be "X-LINK" enabled to provide additional monitoring outputs enabled monitoring products, example 7767VIPX modules or 3000RP4-XLINK rear panel for the MVP.   There are a total of six (6) X-LINK outputs available from the XE8-VIPX system. For detailed information regarding the Xenon 8RU, please refer to the product specific hardware specification.

Xenon 8RU – 128x128 video router

2.1.3. EQX16-VIPX

Uses the 16RU EQX router as the foundation platform, no other router is more advanced in terms of technology and redundancy. EQX16-VIPX offers up to 288 3G/HD/SD inputs and 288 outputs for signal routing. The EQX16 is "X-LINK" enabled via the addition of a EQX16-288x288 cross point module installed in the lower or third cross point slot in the router. With the addition of the EQX16-OP-XLINK rear module, there are a total of nine (9) main X-LINK outputs, and nine (9) redundant X-LINK outputs available. For detailed information regarding the Xenon 4RU, please refer to the product specific hardware specification.
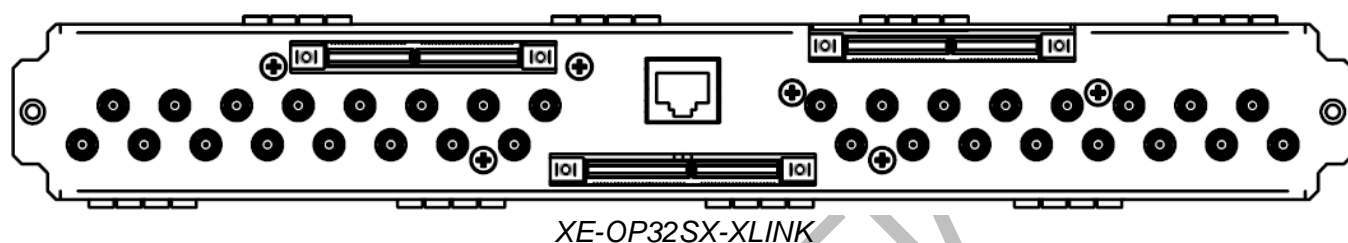

*EQX16 – 288x288 Router*

2.2. VIP-X COMPONENTS

2.2.1. XE-OP32SX-XLINK

Xenon output module with 32 SD-SDI outputs via mini-BNC (DIN) outputs plus three (3) X-LINK outputs. A single XE-OP32SX-XLINK output card can be installed in the Xenon 4RU router, and two XE-OP32SX-XLINK output cards can be installed in the Xenon 8RU router.


XE-OP32SX-XLINK

2.2.2. XE-OP32HX-XLINK

Xenon output module with 32 HD-SDI/SD-SDI outputs via mini-BNC (DIN) outputs plus three (3) X-LINK outputs. A single XE-OP32HX-XLINK output card can be installed in the Xenon 4RU router, and two XE-OP32SX-XLINK output cards can be installed in the Xenon 8RU router.
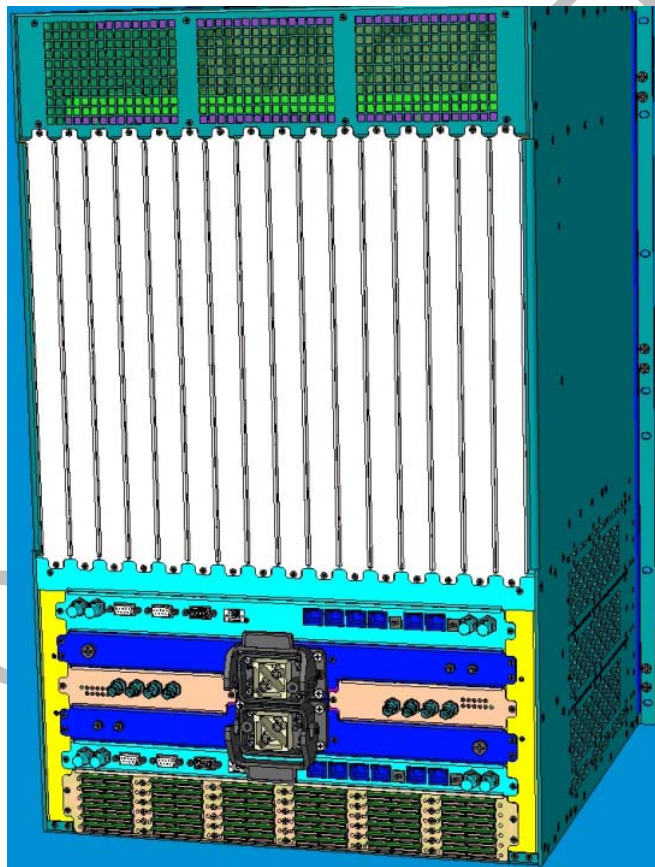

XE-OP32HX-XLINK
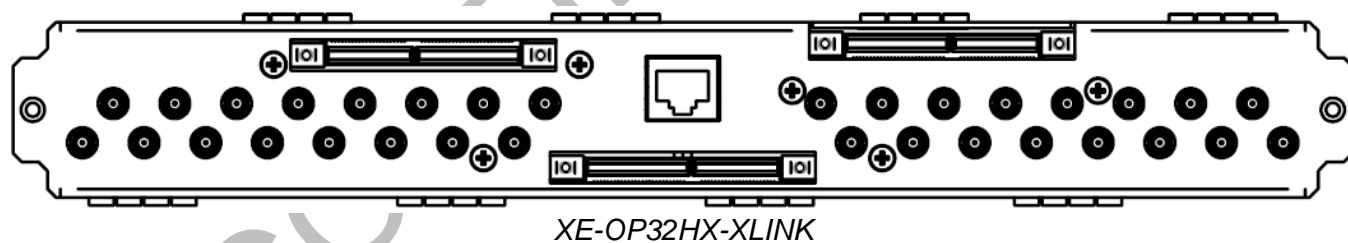
2.2.3. EQX16-OP-XLINK

EQX16 passive rear output module. Provides up to nine (9) X-LINK outputs plus up to nine (9) redundant X-LINK outputs. Installed in rear of EQX16 router frame below the power connector and above the redundant frame controller rear module. See sample drawing below:
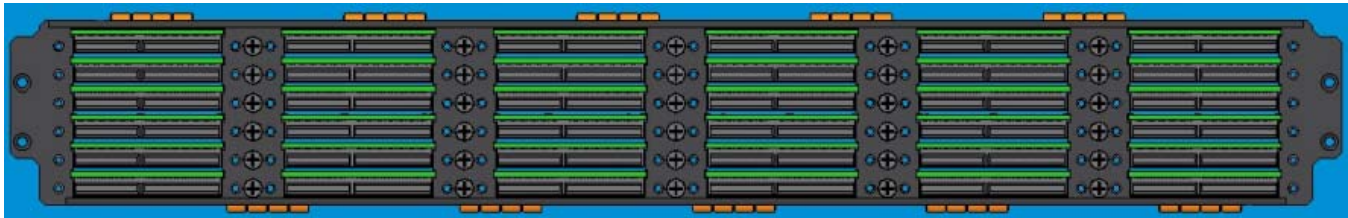
EQX-OP-XLINK

EQX 16RU Video Router with EQX-OP-XLIINK installed

2.2.4. 7767VIPX16x2

X-LINK enabled VIP Advanced display processor module. Supports up to sixteen (16) video inputs distributed from router via "X-LINK" interconnect. Supports up to two (2) unique multi-image display outputs via DVI and HD-SDI. 7767VIPX is installed in Evertz standard 7700 Frame with high output power supplies. Each 7767VIPX16x2 occupies half of a five (5) slot rear plate; up to two (2) 7767VIPX16x2 modules are supported from a single rear plate.

Serial Video Inputs:
Standard: 3Gbps (SMPTE 424M), and/or
        HD-SDI (SMPTE 292M),
        SD-SDI (SMPTE259M-C)
Number of Inputs: 16
Connector: X-LINK (Evertz proprietary)
Equalization: Automatic to 100m (Belden 1694A)
Return Loss: > 15dB up to 270Mb/s
Embedded Audio: SMPTE 272M-A

Background (Computer) Video Input:
Standard: GLINK (Evertz proprietary) requires video to GLINK formatter
Number of Inputs: 1
Connector: BNC per IEC 60169-8 Amendment 2
Input Resolution: 640x480 (VGA) to 1600x1200 (UXGA)
Input Impedance: 75Ω

Display Video Output:
Standard: VESA (DVI-D) up to WUXGA (1920x1200)
Number of Outputs: 2
Connector: DVI-I
Video: 1V p-p RGB, 60/50 Hz refresh
Impedance: 50Ω

Serial Video Output:
Standard: Selectable HD/SD serial monitoring output (720p, 1080i, 625i, 525i)
Number of Outputs: 2
Connector: BNC per IEC 60169-8 Amendment 2
Signal Level: 800mV nominal
DC Offset: 0V ±0.5V
Rise and Fall Time: 200ps nominal (HD), 740ps nominal (SD)
Overshoot: < 10% of amplitude

Genlock Input:
Type: NTSC/PAL color black
Level: 1V p-p nominal
Connector: requires 7700FR+G (frame genlock option)

General Purpose Interface I/O (GPI/GPO):
Number of Inputs: 4 (pins 10,11,12,13)
Number of Outputs: 2 (pins 4,9)
Type: GPI: 1 Opto-isolated, active low with internal pull-ups to +5V
     GPO: 1 Relay closure to ground
Input Signal: Closure to ground
Connector: HD-15

Input/Output Serial Port:
Number of Ports: 1 RS-232 (pins 6,7) or 1 RS-422 (pins 1,2,6,7)
Connector: HD-15
Baud Rate: Up to 1Mbaud
Format: Image Video, TSL

Ethernet:
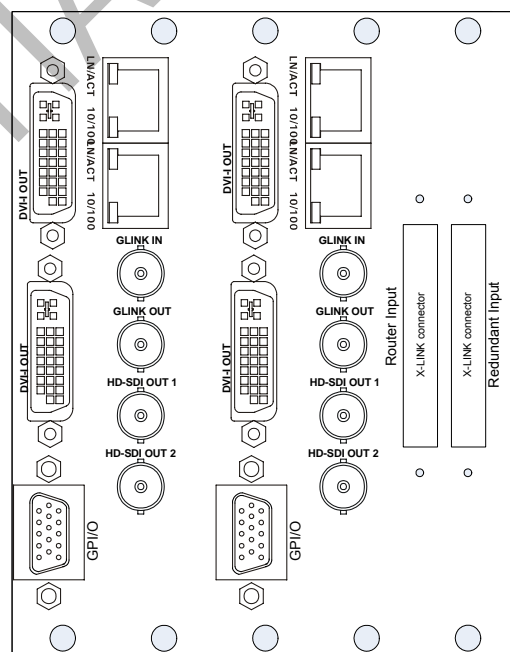Network Type: Fast Ethernet 100 Base-TX 1EEE 802.3U standard for 100Mbps base band CSMA/CD local area network
Connector: RJ-45 x2

Electrical:
Voltage: +12V DC
Power: 75W
Physical: Number of Slots: 5 slots (single module occupies only ½ of total rear plate)

2.2.5. 7767VIPX8x2

X-LINK enabled VIP Advanced display processor module. Supports up to eight (8) video inputs distributed from router via "X-LINK" interconnect. Supports up to two (2) unique multi-image display outputs via DVI or HD-SDI. 7767VIPX is installed in Evertz standard 7700 Frame with high output power supplies. Each 7767VIPX8x2 occupies half of a five (5) slot rear plate, up to two (2) 7767VIPX8x2 modules are supported from a single rear plate.

Serial Video Inputs:
Standard: 3Gbps (SMPTE 424M), and/or
         HD-SDI (SMPTE 292M),
         SD-SDI (SMPTE259M-C)
Number of Inputs: 8
Connector: X-LINK (Evertz proprietary)
Equalization: Automatic to 100m (Belden 1694A)
Return Loss: > 15dB up to 270Mb/s
Embedded Audio: SMPTE 272M-A

Background (Computer) Video Input:
Standard: GLINK (Evertz proprietary) requires video to GLINK formatter
Number of Inputs: 1
Connector: BNC per IEC 60169-8 Amendment 2
Input Resolution: 640x480 (VGA) to 1600x1200 (UXGA)
Input Impedance: 75Ω

Display Video Output:
Standard: VESA (DVI-D) up to WUXGA (1920x1200)
Number of Outputs: 2
Connector: DVI-I
Video: 1V p-p RGB, 60/50 Hz refresh
Impedance: 50Ω

Serial Video Output:
Standard: Selectable HD/SD serial monitoring output (720p, 1080i, 625i, 525i)
Number of Outputs: 2
Connector: BNC per IEC 60169-8 Amendment 2
Signal Level: 800mV nominal
DC Offset: 0V ±0.5V
Rise and Fall Time: 200ps nominal (HD), 740ps nominal (SD)
Overshoot: < 10% of amplitude

Genlock Input:
Type: NTSC/PAL color black
Level: 1V p-p nominal
Connector: requires 7700FR+G (frame genlock option)

General Purpose Interface I/O (GPI/GPO):
Number of Inputs: 4 (pins 10,11,12,13)
Number of Outputs: 2 (pins 4,9)
Type: GPI: 1 Opto-isolated, active low with internal pull-ups to +5V
      GPO: 1 Relay closure to ground
Input Signal: Closure to ground
Connector: HD-15

Input/Output Serial Port:
Number of Ports: 1 RS-232 (pins 6,7) or 1 RS-422 (pins 1,2,6,7)
Connector: HD-15
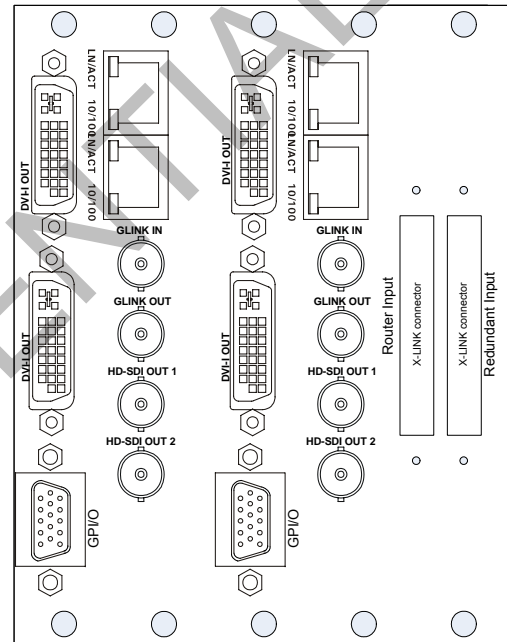Baud Rate: Up to 1Mbaud
Format: Image Video, TSL

Ethernet:
Network Type: Fast Ethernet 100 Base-TX 1EEE 802.3U standard for 100Mbps base band CSMA/CD local area network
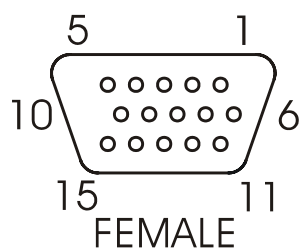Connector: RJ-45 x2

Electrical:
Voltage: +12V DC
Power: 75W

**Physical:** Number of Slots: 5 slots (single module occupies only ½ of total rear plate)

2.2.5.1. 7767VIPX16x2/8x2 General purpose pin-out

HD-15 PIN #	PIN Function
1	RS-422 : RX+
2	RS-422: TX+
3	LTC IN +
4	GPO
5	GND
6	RS-232: RX, RS-422: RX-
7	RS-232: TX, RS-422: TX-
8	LTC IN -
9	GPO
10	GPI
11	GPI
12	GPI
13	GPI
14	AES OUT 0
15	AES OUT 1

2.2.6. 3000MVP-RP4-XLINK

Rear panel for 3000FR to enable support for X-LINK connections from "X-LINK" enabled router platforms. Supports up to four (4) 3000 series input modules in the MVP.
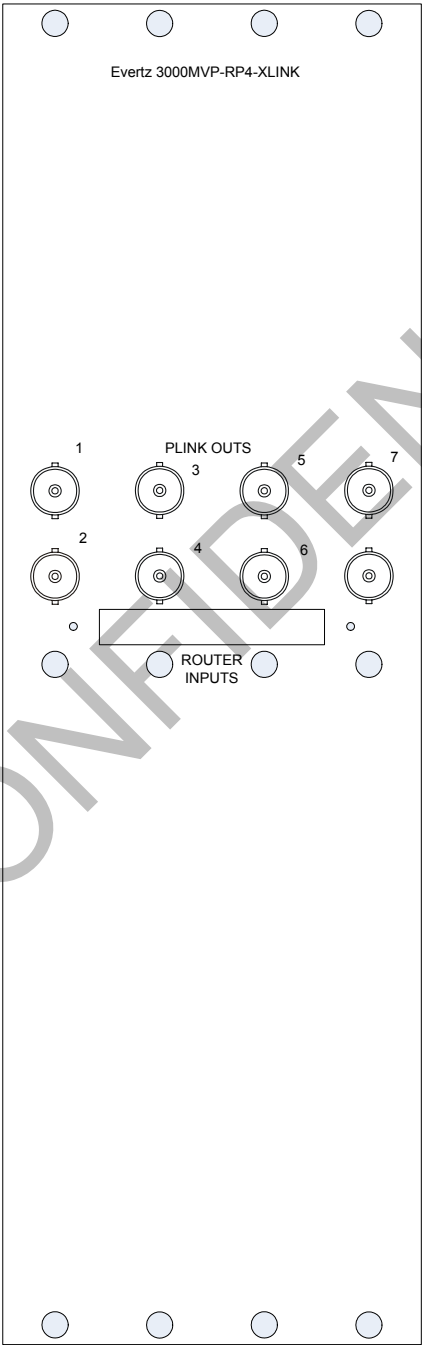
2.3. X-LINK INTERCONNECT

The X-LINK interconnect provides a high-density extension of the additional outputs from the routers to the 7767VIPX modules. The X-LINK cable can be extended up to 3 meters or 10 feet from router to 7767VIPX module.