7890MG-8-10GE2
Universal media over IP gateway for 8x ASI/SD/HD/3G/ATP and 2x 10GE/GE Access Ports

The 7890MG-8-10GE2 is part of the Evertz family of IP Gateway products, which utilize GE and 10GE networks for video and data transport.

The proliferation of carrier-grade IP networks and their associated capacity, flexibility and cost make them an attractive solution for modern video and data transport networks. Evertz gateway products facilitate the bridge between video and IP worlds, providing the extensive capability, control & monitoring, resilience and low latency demanded by video content creators and transport service providers.

The 7890MG-8-10GE2 has a dual trunk interface which allows for a full 1+1 redundant link.

7890MG-8-10GE2 provides up to 8x auto sensed ASI/SD/HD/3G and 2x GE/10GE data ports. To meet SLA requirements, each video interface port can also provide automatic, hitless switching between the dual links. In the event of failure or errors of one link, continuity of service remains uninterrupted.

The 7890MG-8-10GE2 is available in a compact easy to deploy 1RU chassis and a 3RU modular card that can be installed in a 7800 frame to provide high density Video/Audio/Data transport in addition to up/down stream signal processing.

▶Features & Benefits

Video/GE Interface Ports
- Accommodates auto-sensed combinations of up to 8x bi directional video and 2x data access ports
- Auto-Sensing of ASI/SDI/HD-SDI/3G Input/Output Ports
- Hitless Switching (independent per video port) capability between main and backup network paths provides for un-interrupted signal reception when network fault occur
- Up to 4 access ports can be used to interface with existing Evertz ATP products, allowing transport of a wide variety of other signals including AES Audio, MADI, GPIO, RS232/422
- Video ports use industry standard SMPTE 2022-2 and SMPTE 2022-6 encapsulation for maximum compatibility

Trunk Ports
- Dual trunk interface, which allow for full 1+1 redundant link
- Supports 10GE fiber, 1GE Fiber, and 1GE copper for each interface
- Available with optional 1310nm, 1550nm, and CWDM SFP/SFP+ modules

Product
- Fully hot-swappable from front of frame for low MTTR
- Comprehensive signal and card status monitoring via optional front panel display or remotely through SNMP and VistaLINK
- Fully integratable with ATP Platform using MAGNUM
- Standalone web page for configuration is also available
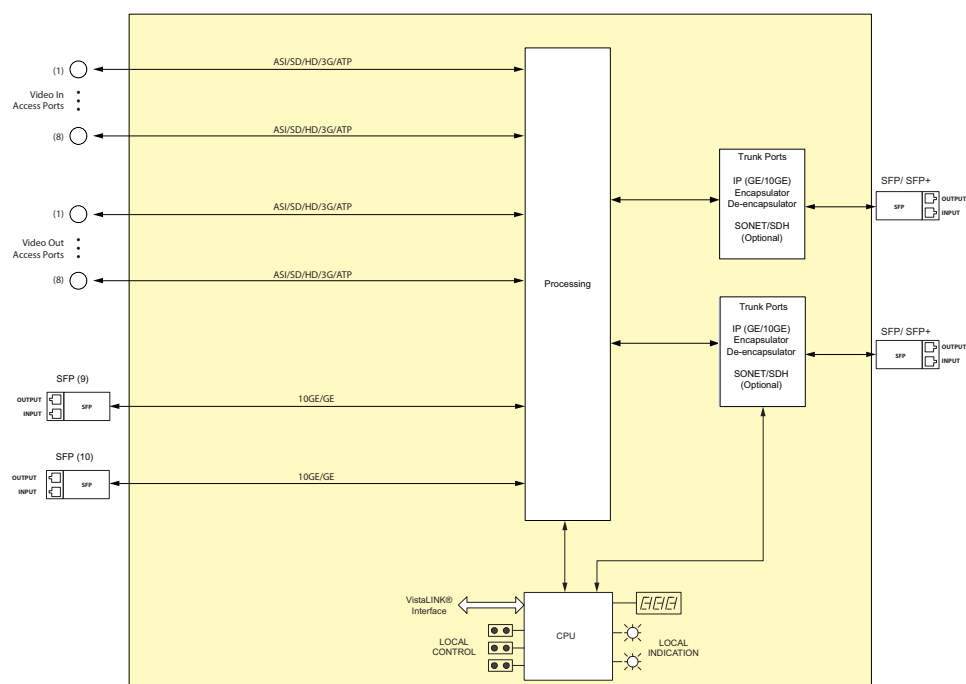
▶SFP+ Modules

SFP Model	Wavelength	Optical Output Power		Receiver Sensitivity	Nominal Received Wavelength	Max Distance	Fiber Type
		MAX	MIN				
SFP10G-TR85	850nm	-1dBm	-6.5dBm	-11dBm	850nm	300m*	Multimode
SFP10G-TR13	1310nm	+0.5dBnm	-8.5dBm	-14dBm	1310nm	10km	Singlemode
SFP10G-TR15S	1550nm	+4dBm	-5dBm	-15dBm	1550nm	40km	Singlemode
SFP10G-TR15H	1550nm	+3dBm	0dBm	-24dBm	1550nm	70km	Singlemode
SFP10G-TRCxxH	CWDM	+3dBm	0dBm	-24dBm	1270-1610nm	70km	Singlemode
SFP10G-TRDxxxH	DWDM	-1dBm	-1dBm	-24dBm	1535-1565nm	80km	Singlemode
* On 2000MHz/km MMF, consult Evertz for max distance on other multimode fiber types							

▶Specifications

Serial Video Interface:
Connectors: DIN 1.0/2.3
Standards: SMPTE 424M, SMPTE ST 259-C, SMPTE ST 292-1, DVB-ASI

Input:
Equalization: Automatic to 50m @ 2.97Gb/s, 50m @ 1.485 Gb/s and 50m @ 270 Mb/s on Belden 1694A or equivalent

Output:
Signal Level: 800mV nominal
DC Offset: 0V +/- 0.5V
Rise and Fall Time:
3G/HD: < 135 ps
SD: < 900 ps
Overshoot: < 10% of amplitude
Alignment Jitter: < 0.2 UI (Reclocked) to 1.485 Gb/s
< 0.3 UI (Reclocked) to 2.97 Gb/s

Ethernet Optical Interface:
Connector: Female LC Duplex (on SFP module)
Wavelengths:
Standard: 1310nm, 1550nm
CWDM: 1270nm-1610nm

Ethernet Electrical Interface:
Connector: RJ-45 (on SFP Module)
Standard: IEEE 802.3ab (1000BaseTX)
Cable Requirements:
1000BaseTX: UTP category 5 cable up to 328ft/100m (4 pairs)

Trunk Interface:
Number: 2 SFP cages
Connector Type: LC/UPC, two simplex or one duplex per SFP/SFP+
Rates: 10 Gig Ethernet

Electrical:
Voltage: +12 VDC

Physical (number of slots):
350FR: 2
3700FR: 2
7800FR: 2
7801FR: 2

Compliance:
Laser Safety: Class 1 laser product, complies with 24CFR 1040.10 and 1040.11, IEC 60825-1
EMI/RFI: Complies with FCC regulations for class A devices
Complies with EU EMC directive

▶Ordering Information

7890MG-8-10GE2 Universal Media over IP Gateway for 8x ASI/SD/HD/3G/ATP and 2x Data Ports

SFP Interface Options
SFPTR-RJ45-SER-AV SFP module for 10/100/1000 Interface ports
(used for ports 9 and 10 as well as the trunk ports)
SFP1G-TR13 SFP module for GbE, 1310nm
SFP1G-TR85 SFP module for GbE, 850nm
SFPTR-13 SFP Transceiver, 1310nm, standard sensitivity receiver, supports rates up to 3Gb/s
SFPTR-Cxx SFP Transceiver, CWDM, standard sensitivity receiver, supports rates up to 3Gb/s

SFP+ Link Options
SFP10G-TR85 SFP+ Optical Transceiver, 10Gbs, 850nm, MMF
SFP10G-TR13 SFP+ Optical Transceiver, 10Gbs, 1310nm, SMF, 10Km
SFP10G-TR15S SFP+ Optical Transceiver, 10Gbs, 1550nm, SMF, 40Km
SFP10G-TR15H SFP+ Optical Transceiver, 10Gbs, 1550nm, SMF, 80Km

For CWDM applications please refer to the end of the fiber section for ordering information. 1470, 1490, 1510, 1530, 1570, 1590 and 1610nm wavelengths available
SFP10G-TRCxxH SFP+ Optical Transceiver, 10Gbs, CWDM, SMF, 70/80Km

For DWDM applications please refer to the end of the fiber section for ordering information.
SFP10G-TRDxxxH SFP+ Optical Transceiver, 10Gbs, DWDM, SMF, 80Km

Rear Plate Suffix
+3RU 3RU Rear Plate for use with 7801FR, 350FR, 7700FR-C or 7800FR Multiframe
+1RU 1RU rear plate for use with 7801FR

1RU Enclosure and Front Control Panel
Note: 7801FC is required for 1RU 7890MG configuration
7801FR+MGCP 1RU Multiframe with front control panel installed for use with 7890MG
+7801PS Redundant power supply (optional)
7801FC-MG Frame controller module for use with 7801FR-IRDCP and 7881IRD

Enclosures
350FR 3RU Portable Multiframe which holds up to 7 single slot modules
3700FR 6RU frame, includes one 3000PS power supply
7800FR 3RU Multiframe which holds up to 15 single slot modules
7801FR 1RU Multiframe which holds up to 4 single or 2 dual slot module