7708VB-4-1H-SE
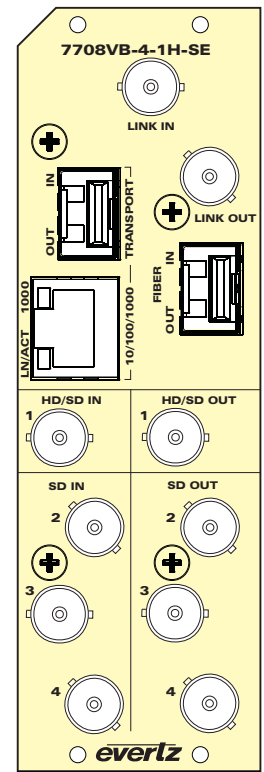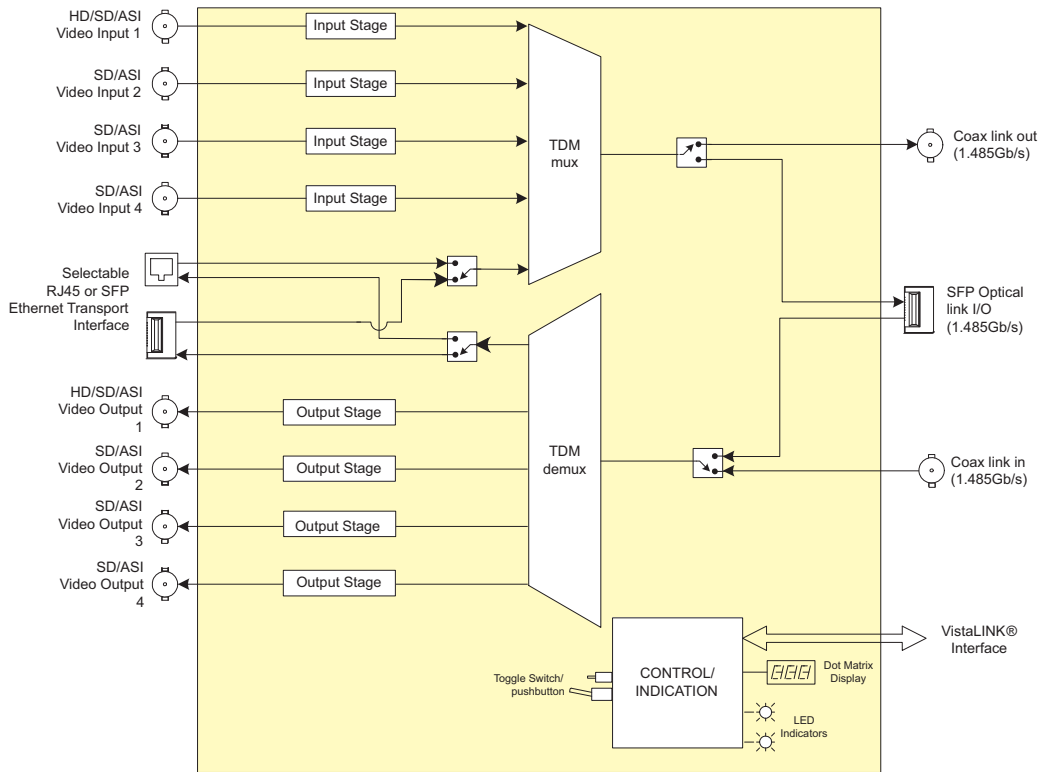## Single HD or Quad SD/ASI Transceiver with Ethernet

The 7708VB-4-IH-SE is part of the Evertz FacilityLINK™ series of Multiservice fiber transport products. Common applications include bi-directional transport of video plus Ethernet for purposes as simple as bringing back M&C data to full file-transfer or LAN extension. The 7708VB-4-1H-SE combines these signal types and directions into a single product which utilizes a 1.485Gb/s link rate. This allows the use of economical HD-SDI local loop transport links, and expands their capabilities and value by adding the ability to transport HD-SDI or multiple SD-ASI signals and up to 1Gb/s Ethernet.

▶ Features & Benefits

- Bi-directional transport of one HD-SDI or four SD/ASI signals plus Ethernet on a single card
- 1.485Gb/s, HD-SDI-compliant link rate allows use of economical HD-SDI transport services for also transporting Ethernet and SD/ASI
- Link may be coaxial or optical when fitted with optional SFP optical modules (see ordering options)
- Ethernet transport connection may be RJ45 or optical when fitted with optional SFP optical modules (see ordering options)
- FBM (Flexible Bandwidth Management) controls Ethernet port data rate with respect to presence or absence of applied input video. 1.485GB/s transport link, min 30MB/s Ethernet available with one input HD-SDI applied.

- Signal transport uninterrupted by the application/loss of input signals
- Automatic coaxial input equalization up to 100m at 1.485Gb/s and 250m at 270Mb/s (Belden 1694)
- Fully hot-swappable from front of frame
- Optical output wavelengths of 1310nm, 1550nm, and up to sixteen CWDM wavelengths (ITU-T G.694.2 compliant)
- VistaLINK® capable for remote monitoring via SNMP (using VistaLINK® PRO) when installed in 7800FR frame with a 7700FC VistaLINK® Frame Controller
- Occupies two card slots and can be housed in the 3RU 7800FR frame which has a 15 slot capacity or the portable 3RU 350FR frame which has a seven slot capacity or the 1RU 7801FR, which has a two module capacity

The Complete Solution Provider

Rev. 14-2

▶Specifications

Serial Video Input:

Number of Inputs:	4
Max capacity:	One HD-SDI or up to 4 SDI and/or ASI signals
Standard:	
Input 1:	ST 292-1, SMPTE ST 259-C, DVB-ASI
Inputs 2-4:	SMPTE ST 259-C, DVB-ASI
Connector:	BNC per IEC 61169-8 Annex A
Equalization:	Automatic to 100m @ 1.485Gb/s and 250m @ 270Mb/s with Belden 8281 and equivalent cable
Return Loss:	> 15dB up to 1.5Gb/s

Serial Video Output:

Number of Outputs:	4
Standard:	
Output 1:	ST 292-1, SMPTE ST 259-C, DVB-ASI
Outputs 2-4:	SMPTE ST 259-C, DVB-ASI
Connector:	BNC per IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise/Fall Time:	
1.485Gb/s:	< 270ps
270Mb/s:	900ps nominal
Overshoot:	< 10% of amplitude
Return Loss:	> 12dB up to 1.5Gb/s
Wideband Jitter:	< 0.2UI

Coax Link Input:

Number of Inputs:	1
Standard:	ST 292-1 compliant 1.485 Gb/s data stream
Connector:	BNC per IEC 61169-8 Annex A
Equalization:	Automatic to 100m @ 1.485Gb/s and 250m @ 270Mb/s with Belden 8281 or equivalent cable

Return Loss:	> 15dB up to 1.5Gb/s

Coax Link Output:

Number of Outputs:	1
Standard:	ST 292-1 compliant 1.485 Gb/s data stream
Connector:	BNC per IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise/fall time:	< 270ps
Overshoot:	< 10% of amplitude
Return Loss:	> 12dB up to 1.5Gb/s
Wideband Jitter:	< 0.2UI

Optical Link Output (when fitted with optional SFP):

Number of Outputs:	1 per SFP
Connector:	Female LC/UPC
Wavelengths:	
Standard:	1310nm
CWDM:	1270nm - 1610nm
Output Power:	
1310nm:	-2dBm ±1dBm
CWDM:	+4dBm +1.5dBm

Optical Link Input(when fitted with optional SFP):

Number of Inputs:	1 per SFP
Connector:	Female LC/UPC
Operating Wavelength:	1270nm-1610nm
Max Input Power:	-1dBm
Optical Sensitivity:	
Standard:	-19dBm

Ethernet Input/Output:

Standard:	IEEE 802.3 (10 Base T), IEEE 802.3u (100 Base TX), IEEE 802.3ab (1000 base TX)
Optical (when fitted with optional SFP):	
Connector:	SFP (duplex female LC/UPC)
Output:	
Wavelengths:	
Standard:	1310nm
CWDM:	1270nm - 1610nm
Output Power:	
1310nm:	-2dBm ±1dBm
CWDM:	+3dBm ±1dBm
Input:	
Operating Wavelength:	1270nm-1610nm
Max Input Power:	-1dBm
Optical Sensitivity:	
Standard:	-21dBm
High Sensitivity:	-28dBm
Electrical:	
Connector:	RJ45
Cable Requirements:	
10 BaseT:	UTP category 3,4 or 5 cable up to 328ft/100m (2 pairs)
100 BaseTX:	UTP category 5 cable up to 328ft/100m (2 pairs)
1000 BaseTX:	UTP category 5 cable up to 164ft/50m (4 pairs)

Electrical:

Voltage:	+12VDC
Power:	13W

Physical (number of slots):

350FR:	2
7700FR-C:	2
7800FR:	2

▶Ordering Information

7708VB-4-1H-SE	Single HD or Quad SD/ASI transceiver with Ethernet, HD link rate, SFP's not included

Ordering Options — Rear Plate and Fiber Connector and SFP's must be specified at time of order (Eg: Model +SC +3RU)

SFP for Ethernet or Optical Link

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
SFPTR-CxxH	SFP Transceiver, CWDM, high sensitivity receiver, supports rates up to 3Gb/s

Rear Plate Suffix

+3RU	3RU Rear Plate for use with 350FR, 7700FR-C or 7800FR Multiframe

Enclosures

350FR	3RU Portable Multiframe which holds up to 7 single slot modules
7800FR	3RU Multiframe which holds up to 15 single slot modules
7801FR	1RU Multiframe which holds up to 4 single or 2 dual slot modules