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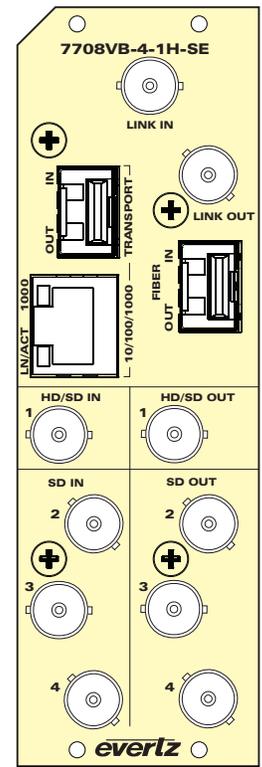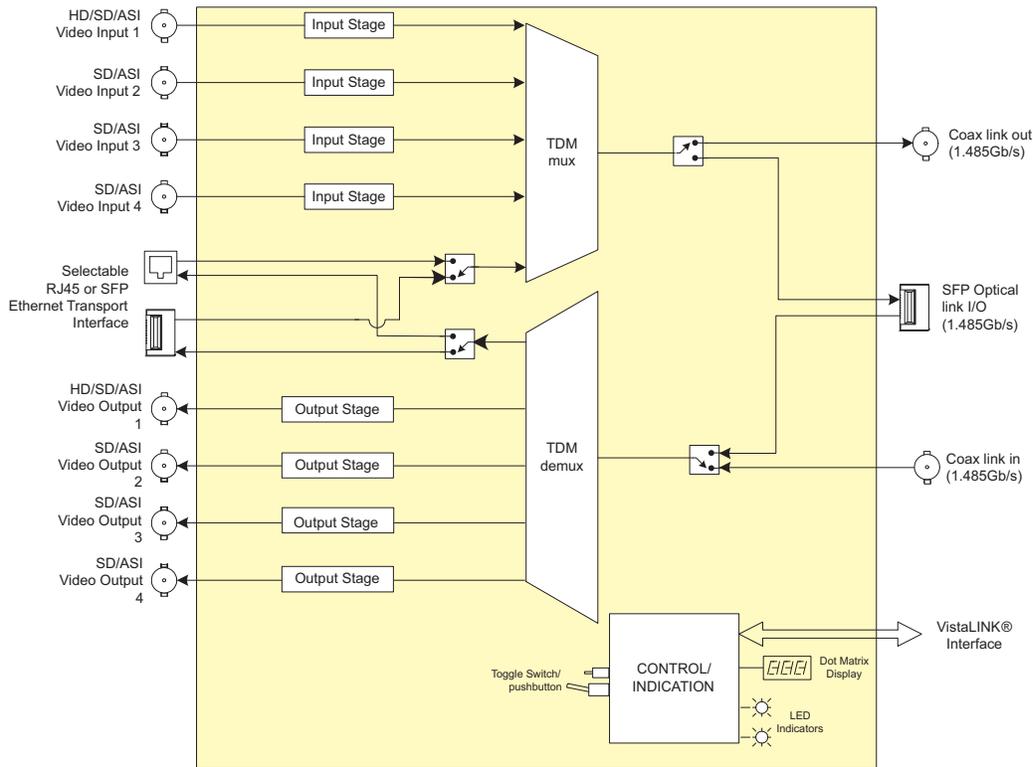## Single HD or Quad SD/ASI Transceiver with Ethernet

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

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

▸**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 or 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 |