

TR6292

Bi-Directional SDI/HD-SDI Modules for the Viper II



The Expandable Viper II transceiver module set for two-way HD/SDI video transport on 1 fiber

Telecast's TR6292 bi-directional fiber optic serial digital video transceiver offers Telecast performance in the space-saving Viper II form factor. The TR6292 uses only one fiber to transmit and receive any format of HD/SDI in two directions, using WDM muxing.

A front panel BNC is available to monitor incoming or outgoing video, plus an essential received optical power meter.

Using the optional expansion card, the TR6292 can convert into a 2-slot transceiver, with six HD/SDI BNC rear panel outputs.

TR6292 set will support any standard format SDI video, from 19.4 Mbps ATSC to 1.5 Gbps HDTV, as well as other digital signals.

Durable and Flexible

The TR6292 module is housed in an enclosure suitable for use as a stand alone "throw down" unit (MTR6292) or as a rack mount (TR6292) card to fit our Viper II 16-slot frame. Use our easy, front/back plate conversion kit to reconfigure them as you like.



Features

- Rack modules or stand-alone
- One HD/SDI each way on 1 fiber, WDM
- DAplug-in option for 4 more HD/SDI outputs
- Loop-through TX video input
- Dual RX video outputs
- front panel monitoring
- Reclocking ON/OFF front panel switch
- Equalized coax up to 1.5 Gbps
- Compatible with TV standards SMPTE 292M, 259M, & 244M
- 19.4 Mbps tp 1.5 Gbps transport
- Up to 22 dB optical link budget for HD
- Durable, high reliability construction
- No pathological data problems
- RoHS Compliant
- Wide temperature range
- Low power consumption

Applications

- Campus SDI networks
- Government Facilities
- In-building HDTV distribution
- ATSC and HDTV STL's
- Remote broadcast production
- Telco last mile and local loop

Specifications

Video		Optical	Mechanical/Enviornmental
Transmission Method	Digital	Operating wavelengths	Dimensions (WxLxD)
Input Level	800 mV (peak to peak)	Transmitter output	Weight (per stand alone module)
Input Impedance	75 Ohms	Receiver input range	Video connectors
Output Impedance	75 Ohms	Optical source	Power Req. (typ., per module)
Bit-Error Rate (@-22dBm)	10 ⁻¹²	Detector type	Power Consumption (typ., per module)
Jitter (pathological Test patter)	<0.2 UI	Fiber Type	Temperature Range
Rise/Fall Time	<270ps		Humidity Range
Input coax EQ (1505 @ 1.5 Gbps)	100m		

Operating Notes for: TR6292 SDI/HD-SDI Modules for Viper II

Power Requirements

Viper II modules typically consume only 3 watts. The stand-alone model accepts 10-18VDC, 500mA power cube with a locking 2.5mm jack, center pin positive. When mounted in the V2 frame, the modules are powered via the 24-pin Future-Bus connector on the top right side of the module.

Connections

Video All video inputs and outputs use standard 75-ohm coaxial BNCs. The front mounted BNC provides convenient monitoring of the SDI signal. The TX module has one input with loop output, and two outputs, one with inverted data. A four output expansion DA card is available as an option, resulting in six total outputs with a 2-slot wide TR6292.

Fiber Each TR has a bulkhead ST receptacle that accepts a standard multimode or single-mode fiber terminated with ST type connectors. Because the integral WDM device is single-mode type, the TR6292 is compatible only with single-mode fiber cable. The optical input power is indicated on the faceplate.

Faceplate Indicators

TR6292 has 4 LED Indicators and a 4-segment display:

SIG IN	GREEN indicates good SDI signal IN
LASER	GREEN indicates laser function normal (out) indicates fault. See Display
MON RX	GREEN indicates monitoring outbound signal
MON TX	GREEN indicates monitoring inbound signal
LINK	GREEN indicates good optical link
RECLK Enable	GREEN indicates reclocker is activated
HD	GREEN indicates good HD incoming signal
SDI	GREEN indicates good SDI incoming signal

The reclocker for the received SDI signal is toggled ON/OFF via the bottom button on the faceplate. Reclocking should not be used with ASI signals. The top button selects the signal on the front BNC monitor and the display.

The 4-Segment display can indicate the following:

-00	Received optical power
OKAY	Normal operation
TEMP	Laser temperature fault
BIAS	Laser bias fault

Installation, Care, and Maintenance

As stand-alone modules the TR6292 can be installed in any orientation. Keyholes are furnished to allow the units to easily be hung on any vertical surface. Velcro may also be used.

Troubleshooting

The TR6292's are truly "plug and play" devices. The LED's and 4-segment display indicate optical and signal status and on the RX, optical power level.

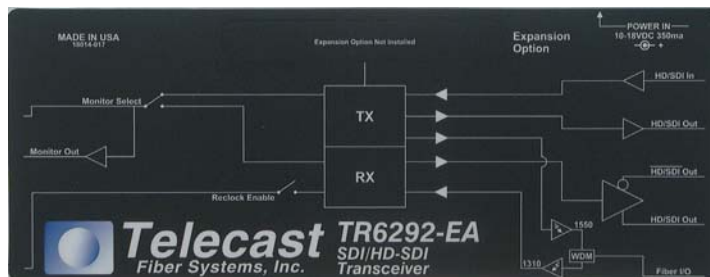
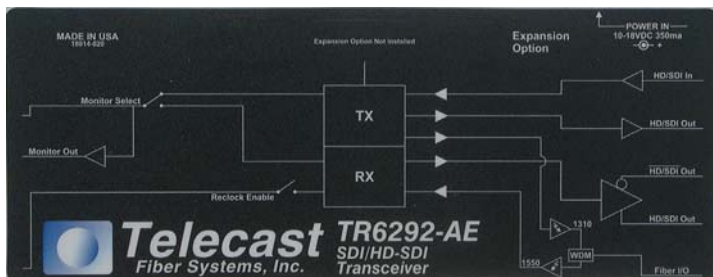
Conversion to Rack Mount

Five steps are required to convert from "stand-alone" modules into rack mountable modules. An RMK (rack mount conversion kit) for each particular module is required to make this conversion.

1. Remove the two phillips screws each on top and bottom edges
2. Remove the two phillips screws near connectors on right side
3. The cover will now come free
4. Replace connector-side plate by remove the two screws under and any nuts on the BNC connectors
5. Replace the faceplate by removing the two screws under. Use care when re-installing the new faceplate and cover.

Ordering Information

• TR6292-AE	Rack mount, -7dBm @ 1300nm fp laser output
• TR6292-EA	Rack mount, 0 dBm @ 1550nm DFB laser output
• MTR6292-AE	Stand alone, -7dBm @ 1300nm fp laser output
• MTR6292-EA	Stand alone, 0 dBm @ 1550nm DFB laser output
• ADAP-AC-01LC	Wall-wart power supply for Stand alone modules



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Represented by:

324 Clark Street; Worcester, MA 01606 USA
Phone: (508)754-4858 FAX: (508)752-1520
telecast-sales@belden.com
www.telecast-fiber.com

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