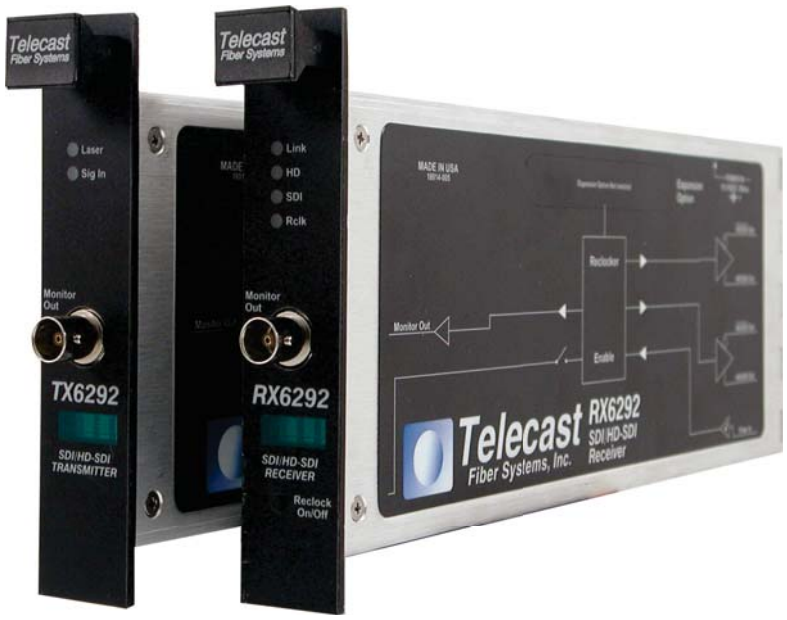
Telecast FIBER SYSTEMS
A BELDEN BRAND

TX/RX6292

Single Channel SDI/HD-SDI Modules for the Viper II



The new Viper II™ module set for transporting all of your digital video signals - up to 1.5 Gbps

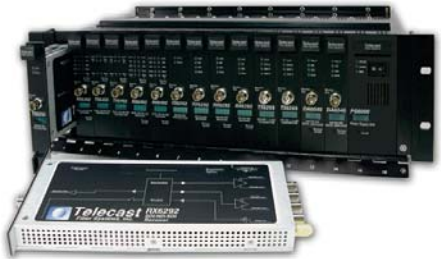
Telecast's TX/RX6292 fiber optic serial digital video module set offers the industry's broadest range of digital transmission rates while maintaining the quality of transmission that broadcasters demand. No matter what your format, the 6292 set allows you to implement:

- 19.4 Mbps ATSC
- 143 Mbps NTSC composite
- 177 Mbps PAL composite
- 270 Mbps Serial component
- 360 Mbps Serial component video and compressed HDTV
- 540 Mbps proprietary
- 1.5 Gbps HDTV
- DVB/ASI

And most any other digital signal including our Adder data paths.

Durable and Flexible

The 6292 module set is available as stand alone "throw down" modules (MTX6292 and MRX6292), or as rack mount (TX6292 and RX6292) modules to fit our Viper II 16-slot frame. Or use our easy, rack mount conversion kit to reconfigure them as you like.



Features

- *Rack modules or stand-alone*
- *Up to 16 HD/SDI per fiber via Teleport*
- *Compatible with TV standards SMPTE 292M, 259M & 244M*
- *19.4 Mbps to 1.5 Gbps transport*
- *No pathological data problems*
- *3 loop outputs on TX, 4 outputs on RX*
- *Front panel monitoring*
- *Up to 22 dB optical link budget for HD*
- *Equalized coax up to 100m @ 1.5 Gbps*
- *DA Option for 4 more outputs*
- *Reclocking ON/OFF switch on RX*
- *Durable, high reliability construction*
- *RoHS Compliant*
- *Wide temperature range*
- *Low power consumption*
- *WDM & CWDM multiplexing optional*

Applications

- *Campus SDI networks*
- *Government facilities*
- *In-building HDTV distribution*
- *ATSC and HDTV STL's*
- *Remote broadcast production*
- *Telco last mile and local loop*
- *CLEC access to IXC POP*

Specifications

Video

Transmission Method	Digital
Input Level	800 mV (peak to peak)
Input Impedance	75 Ohms
Output Impedance	75 Ohms
Bit-Error Rate (@-22dBm)	10^{-12}
Jitter (pathological Test pattern)	<0.2 UI
Rise/Fall TImes	<270ps
Input coax EQ (1505 or better)	100m

Optical

Operating wavelength range	1300 nm or 1550 nm
Transmitter output options	-7 dBm & 0 dBm
Receiver input range	-2 to -22 dBm
Optical source/detector type	Laser diode/PIN
Fiber Type <540Mbps	Single mode or multimode
Fiber Type HDTV	Single mode

Mechanical/Environmental

Dimensions (WxLxD)	5" x 11" x 1"
Weight (per stand alone module)	10 ounces
Video connectors	BNC
Power Req. (typ., per module)	10 to 18VDC
Power Consumption (typ., per module)	5 watts
Temperature Range	-25° to +55℃
Humidity Range	0 to 95% RH, Noncond.

Operating Notes for: 6292 SDI/HD-SDI Modules for Viper II

Power Requirements

Viper II modules typically consume only 5 watts. The stand-alone module accepts a 10-18VDC, 500mA power cube wth a 2.5mm locking jack, center pin positive. When mounted in the V2 frame, the modules are powered via the 24-pin Future-Bus connector.

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 and three loop outs, one with inverted data. The RX module has four outputs, 2 with inverted data. A four output expansion DA card is available as an option.

Fiber Each TX and RX has a bulkhead ST receptacle that accepts a standard multimode or single mode fiber terminated with ST type connectors. Although it is possible to use multimode fiber at HD rates, range will be significanly impaired. For this reason, we recommend single mode fiber for HD applications. The optical wavelength and output power of the TX is indicated on the TX faceplate. The optical input range is indicated on the RX faceplate. Four-way optical splits are available as an option.

Faceplate Indicators

RX6292 has 4 LED indicators and a 4-segment display:

OPT LINK	RED indicates NO link
	RED/GREEN flashing indicates GOOD link
	GREEN indicates good optical link/good data
HD RX	GREEN indicates HD signal present
SDI RX	GREEN indicates SDI signal present
RECLK	GREEN indicates reclocker is activated

The 4-Segment display can indicate the following conditions:

-X.X	Received optical power
TEMP	Detector temperature fault

The reclocker is toggled ON/OFF via the button on the faceplate. Reclocking should not be used with ASI signals.

TX6292 has 2 LED indicators and a 4-segment display:

SDI IN	GREEN indicates SDI signal presence,
LASER	GREEN indicates Laser is within spec.
	LED out indicates a fault that will be indicated on the display

The 4-Segment display can indicate the following conditions:

OK	Normal operation
TEMP	Laser temperature fault
BIAS	Laser bias fault

Using Wavelength-Division Multiplexers (WDM and CWDM)

WDM couplers can be used to combine a 6292 signal with a signal of a different wavelength on the same fiber. For Coarse WDM (CWDM), which allows up to 16 different wavelengths to share a common fiber, each TX6292 module may be equipped with a distributed feedback (DFB) laser of a different wavelength, e.g. 1311 nm, 1331 nm, etc. Alternately, the TelePort CWDM manager can handle the optical multiplexing without outfitting each module with a unique CWDM laser. Contact Telecast for more details pertaining to WDM and CWDM applications.

Installation, Care and Maintenance

As stand-alone modules, the 6292 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 6292's are truly "plug and play" devices. The LEDs and 4-segment display indicate optical and signal status and, on the RX, optical power level. If the units seem to malfunction, contact Telecast for a return materials authorization (RMA) number.

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 removing 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.

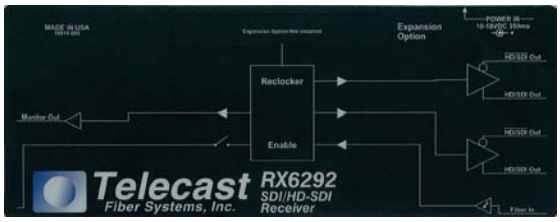
Perform steps in reverse order to revert to a stand-alone module.

Ordering Information

TX6292-A	-7dBm @ 1300nm fp laser output
TX6292-B	0 dBm @ 1300nm fp laser output
TX6292-13CW	+3 dBm @ 1300nm DFB laser output
TX6292-15CW	+3 dBm @ 1550nm DFB laser output
RX6292	-2 to -22 dBm received optical power at 1.5 Gbps

Adding an "M" to the beginning of the part number (MTX) indicates "Stand Alone" modules.

ADAP-AC-01LC	Wall-wort power supply for Throw-Downs (110V AC input, 500mA, US plug type)



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