



Rattler 4

Ultra-miniature Single Link, Dual Link and Bidirectional Fiber Optic Media Converters

Lightweight, easy-to-deploy fiber connectivity solutions.

The unique Rattler 4 miniature fiber optic serial digital video transmission modules from Grass Valley offer the industry's broadest range of digital rates while maintaining the signal quality that broadcasters demand. No matter what your format, the Rattler 4 systems allow you to transmit one or two streams of:

- 3 Gb/s SMPTE ST 424 HD-SDI
- 1.5 Gb/s SMPTE ST 292 HD-SDI
- 19.4 Mb/s SMPTE ST 310
- 143 to 540 Mb/s SMPTE ST 259/SMPTE ST 344
- DVB/ASI 270 Mb/s
- AES and MADI audio
- Plus non-standard digital signals to 3 Gb/s

Singles, doubles and bidirectionals

At just 81.28 mm (3.2 in.) in length, these tiny modules can be deployed almost anywhere. They are available as single transmitters and receivers, dual transmitters (Tx) and receivers (Rx), and bidirectional transceivers (TR). Each Rattler 4 Tx accepts one or two 75 ohm coaxial inputs and converts it into an optical stream via standard ST connectors. The Rx units reconvert the uncompressed signal back to BNC outputs.

Ensure pristine trouble-free signals

The Tx modules include equalization for long lengths of coaxial cable, so you can use them at nearly any point in your HD-SDI chain. The Rx modules automatically reclock the incoming SMPTE standard signals at 270 Mb/s, 1.5 Gb/s and 3 Gb/s.

Universal interoperability

Rattler 4 modules are interoperable with industry standard optical HD-SDI signals to/from other Grass Valley equipment such as routers, DAs and fiber converters from the Densité Series, NVISION routers, picoLink converters and other Grass Valley fiber products including Python Plus. They make it easy to expand the systems that you already have and create a wide variety of network topologies.

Intuitive displays with built-in metering

Each Rattler 4 unit includes LED indicators to display Power on, HD-SDI signal presence and received optical power level on the Rx. This provides critical system diagnostic information without the need for additional test equipment, such as an optical power meter.

Secure power

The Rattlers use their own in-line power supplies or accept any DC voltage from 5 to 16 volts via a mini-XLR jack.

KEY FEATURES

- Portable, lightweight devices
- Five models:
 - Single Tx
 - Single Rx
 - Dual Tx
 - Dual Rx
 - Bidirectional transceiver
- 19.4 Mb/s to 3 Gb/s
- Compatible with:
 - SMPTE ST 310
 - SMPTE ST 292
 - SMPTE ST 259
 - SMPTE ST 297
 - SMPTE ST 424
- Standard formats internally reclocked: 270 Mb/s, 1.5 Gb/s and 3 Gb/s
- Up to 26 km (16 mi.) distance
- Cool, efficient, reliable
- Quick, easy installation
- LED indicators show you:
 - Power on
 - HD-SDI data presence
 - Rx optical power levels
- Supports embedded audio
- Power from 5-16 VDC
- Durable, reliable and serviceable
- Very low system jitter
- >10 dB return loss at 3 GHz

SPECIFICATIONS

Video

Transmission method: Digital

Input level: 800 mV p-p

Input impedance: 75Ω

Coax equalization at 2.97 Gb/s: 100m (328 ft.)

Output impedance: 75Ω

Bit-error rate at -22 dBm: 1x10⁻¹¹

Jitter (pathological data pattern): <0.2 UI

Rise/fall times: <120 ps

Transmission

Operating wavelength: 1310 nm

Coaxial video connector I/O: BNC

Optical connector: ST

Optical source: Laser diode (FP)

Optical detector: PIN-TIA diode

Transmitter output: -7 to +1 dBm

Receiver sensitivity: -22 dBm

Link margin/distance: 15 dB / 26 km

Fiber type: Single-mode or multimode*

Mechanical/Environmental

Dimensions (W x H x D):

Singles: 19.05 x 19.05 x 81.28 mm (0.75 x 0.75 x 3.2 in.)

Doubles: 19.05 x 38.1 x 81.28 mm (0.75 x 1.5 x 3.2 in.)

Weight, each end: 85g (3 oz.)

Input voltage: 5-16 VDC

Power connector: plug replaceable, mini XLR

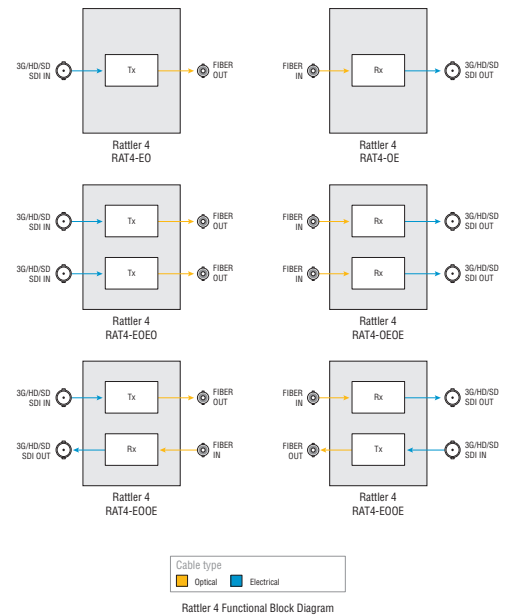
Power consumption (typ.): 600 mW

Indicators: Power, signal, link, optical power

Temperature range, operating: -25° to 55° C (-13° to 131° F)

Humidity range: 0 to 95% RH, non-condensing

*Check for availability



ORDERING

Single Transmitters and Receivers

RAT4-EO-A-MXLR

Rattler 4, electrical (BNC) in to optical (ST) OUT; 1310 nm, -7 dBm; EQ and reclocking; mini-XLR locking cord

RAT4-OE-MXLR

Rattler 4, optical (ST, -22 dBm) in to electrical (BNC) OUT; mini-XLR locking cord

RAT4-KIT1-T-MXLR

Rattler 4 kit, 1310 nm, mini-XLR power, in injection-molded road case: TX-RAT4-EO-A-MXLR, Rx: RAT4-OE-MXLR, 2x LKS-WSU

Dual Transmitters and Receivers

RAT4-EEOE-A-MXLR

Rattler 4, dual electrical (BNC) in to optical (ST) OUT; 1310 nm, -7 dBm; EQ and reclocking; mini-XLR locking cord

RAT4-OEOE-MXLR

Rattler 4, dual optical (ST, -22 dBm) in to electrical (BNC) OUT; mini-XLR locking cord

RAT4-KIT2-TT-MXLR

Rattler 4 kit, 1310 nm, mini-XLR power, in injection-molded road case: Dual Tx: RAT4-EEOE-A-MXLR, Dual Rx: RAT4-OEOE-MXLR, 2x LKS-WSU

Bidirectional Transceivers

RAT4-E00E-A-MXLR

Rattler 4, transceiver. Tx: electrical (BNC) in to optical (ST) OUT; 1310 nm, -7 dBm; EQ and reclocking; Rx: optical (ST, -22 dBm) in to electrical (BNC) OUT. Reclocking; mini-XLR locking cord

RAT4-KIT3-TR-MXLR

Rattler 4 kit, bidirectional link, 1310 nm: 2x TR: RAT4-E00E-A-MXLR, 2x LKS-WSU in Pelican case

Accessories

LKS-WSU Universal Power Supply

Inline power supply for 110V or 220V



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