

T-POV Systems

Bidirectional HD Video/Audio/Data Robotic Camera Links



Lightweight, easy-to-deploy fiber connectivity solutions.

The T-POV line from Grass Valley, a Belden Brand, offers significant improvements in bidirectional fiber optic video and data transceiver technology for robotic point of view HD television cameras. These devices are an outstanding choice for sports, remote broadcasting, security, education or military applications.

Each is TelePort 3G and TeleThon 3G compatible with more flexible and affordable integrated SMPTE hybrid powering options and distributed power supplies. There's now an Ethernet option and the 324 model offers a return HD-SDI option.

As a broadcast link, the T-POV modules have a wide range of applications, from goal cameras, beauty shots, flying viewpoints and long distance remote controlled cameras. With the T-POV line, components can be mixed and matched to permit many configurations to suit virtually any requirement.



T-POV Systems Bidirectional HD Video/Audio/Data Robotic Camera Links

KEY FEATURES

- Bidirectional on one or two fibers
- Uncompressed HD-SDI up to 1.5 Gb/s
- Up to 6* duplex RS-232/422/485 data channels for full camera control and pan/tilt/zoom
- GPI relay closure circuits
- Return genlock, or tri-level sync for HD
- 4 audio channels in each direction*
- Use dry fiber or SMPTE Hybrid cable
- 10/100 Ethernet*

- Three housings for various applications:
 - Rack mount holds up to 3 units
 - Throwdown for single applications
 - Robust Mini-Mussel shell for harsh-environment applications
- Wide temperature range
- High reliability design

*Features vary by model

SPECIFICATIONS

Video, Digital

Interface: SMPTE 259M, 292M

Data rate: 270 Mb/s or 1.5 Gb/s

Input level: 800 mV p-p

Input impedance: 75Ω

Output impedance: 75Ω

Bit-error rate at -22 dBm: 10-12

Jitter measure w/color bars: <0.2 UI

Rise/fall times:

SD: 0.4-1.5 ns

HD: <270 ps

Video, Analog

Interface: RS-170, NTSC, PAL, SECAM

I/O level: 1 V p-p at 75Ω

Frequency response:

30 Hz-5 MHz, ±0.2 dB

-3 dB point min 8.6 MHz

Video signal to noise ratio: ≥67 dB, weighted

Differential gain: ≤2.0 %

Differential phase: ≤0.7°

Line time distortion: ≤0.5 IRE

Chrom-lum intermod: ≤1 IRE

Ethernet*

Data support: 10Base-T/100Base-T

Connector: Twisted pair RJ-45

Cable compatible: UTP 100Ω Cat5e Cat6

Input impedance: 100Ω differential

Output impedance: 100Ω differential

Audio*

Number of channels: 4 I/O

Type: Balanced, line level

Impedance I/O: >10 kΩ/30Ω

Maximum input level: 24 dBu

Quantization: 24 bits, 12.8x (oversampled)

Sample rate: 48 kS/s

Frequency response: ±0.1 dB, 20 Hz to 20 kHz

Signal to noise ratio: <-95 dB (A-weighted)

THD+N: 20 Hz - 20 kHz, ≤0.02%

Interface: DB25 (AES standard pinout)

Data Auxiliary

RS-422/485: 0 to 1 Mbaud

RS-232: 0 to 150 Mbaud

Number of channels: 2-6*

Sample: 80 ns

GPI contacts: NO, form 1 SPST

Electro-Optical

Operating wavelengths:

1300 nm standard

1550 nm, CWDM wavelengths available

Tx laser output power (std./opt): 6/0 dBm

Rx sensitivity, HD-SDI: -22 dBm

Fiber compatibility: Single-mode

Distance Limit**

TAC Cable (local power at camera): Standard laser: 15 dB optical loss (~30 km/18.6 mi.**)

Optional DFB laser: 19 dB optical loss (~38 km/23.6 mi.**)

SMPTE 311M hybrid fiber: ~240m (787 ft.), 95W at 12 VDC**

Optical connector options: Local power: LC, ST, MX, OpticalCON

Remote power: SMPTE 304M or OpticalCON

Mechanical/Environmental

Dimensions (W x H x D):

Rack mounted units (w/ears): 482.6 x 44.45 x 203.2 mm (x 19 x 1.75 x 8 in.)

Mini-Mussel low profile: 133.35 x 69.85 x 323.85 mm (5.25 x 2.75 x 12.75 in.)

Mini-Mussel high profile: 133.35 x 101.6 x 323.85 (5.25 x 4 x 12.75 in.)

Throwdown low profile: 114.3 x 44.45 x 247.65 mm (4.5 x 1.75 x 9.75 in.)

Throwdown, high profile: 114.3 x 76.2 x 247.65 mm (4.5 x 3 x 9.75 in.)

Weight:

Rack mounted unit, 12 VDC:

– Single 2.27 kg (5 lbs.)

– Dual 2.61 kg (5.75 lbs.)

– Triple 2.84 kg (6.25 lbs.)

Rack mounted unit — AC for SMPTE Power: 2.95 kg (6.5 lbs.)

Mini-Mussel low profile: 0.91 kg (2 lbs.)

Mini-Mussel high profile: 1.59 kg (3.5 lbs.)

Throwdown low profile: 0.68 kg (1.5 lbs.)

Throwdown, high profile: 1.36 kg (3 lbs.)

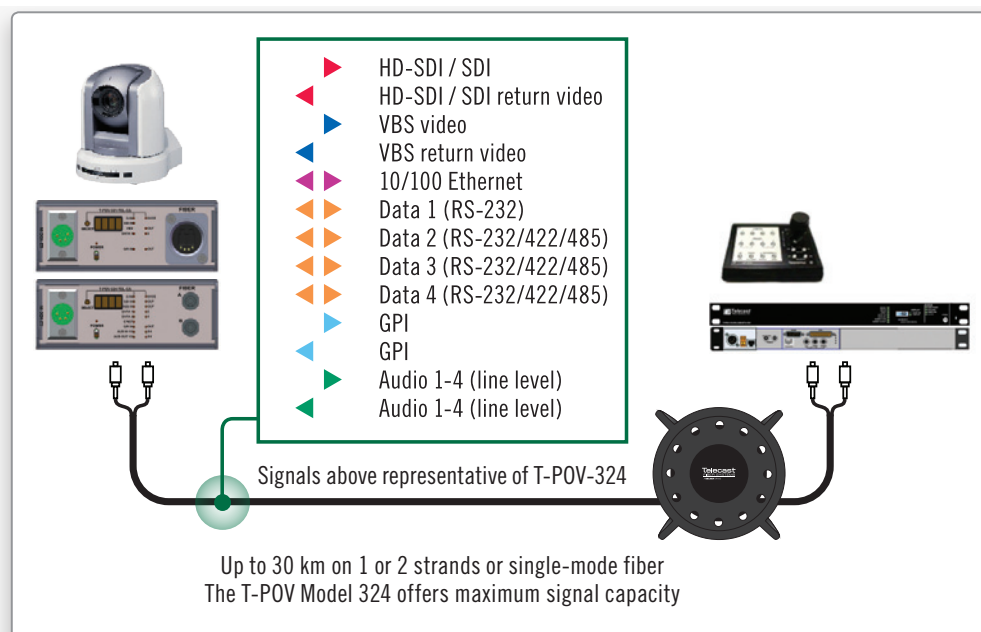
Humidity: 0 to 95% RH, non-condensing

Certifications: FCC Part 15, RoHS, LEED, CE

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

*Available signal paths vary by model

**The maximum cable length varies due to optical loss that can depend on cable quality, dirt/dust/contamination on connectors, and number of fiber interconnects. When using hybrid cable for power, the size of the hybrid cable, as well as the power draw of the camera, lens and pan/tilt head are also factors.



ORDERING

Contact your Grass Valley sales representative.

