Python 3G

Multichannel fiber optic HD-SDI transport system with CWDM multiplexing

DESCRIPTION

The Python 3G is your answer to lowering the cost of digital video distribution, simplifying your cable plant and eliminating all concerns about distance, interference and grounding.

The Python 3G converts up to 2 groups of 8-channels of HD-SDI to fiber optic transport, all in a compact 1RU frame. Select a transmitter and a receiver frame for eight or sixteen channels, for example, in one direction. Select two transceiver frames for eight channels in each direction.

In addition, Python 3G uses CWDM optical multiplexing options to carry up to 16 HD signals on a single optical fiber.
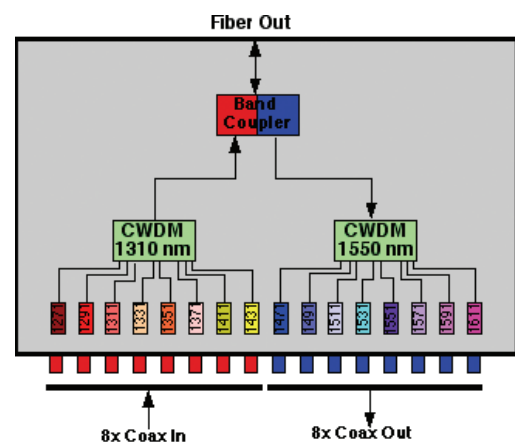
The Python 3G offers the industry's broadest range of digital transmission rates while maintaining the quality that broadcasters demand. It supports numerous interface standards, including applicable SMPTE, ATSC, and DVB recommendations.

No matter what your format, from 19.4 Mbps to 3 Gbps, the Python 3G allows you to implement it.

- 143 Mbps NTSC composite
- 177 Mbps PAL composite
- 270 Mbps serial component
- DVB/ASI
- 360 Mbps serial component and compressed HDTV
- 540 Mbps proprietary

KEY FEATURES AND BENEFITS

- Economical, low profile packaging
- 4 to 16 channels per 1RU
- Wide range of digital formats
- 19.4 Mbps to 3 Gbps transport
- Compatible with digital TV standards SMPTE 292M, 259M and 424M
- Handles DVB/ASI signals
- Immune to pathological data errors
- Equalizes coax up to 3 Gbps
- BNC I/O
- Wide optical budget
- Low system jitter
- Low power consumption
- High reliability, durable design
- CWDM multiplexing options
- Compatible with other Telecast Series HD/SD-SDI transport systems

TECHNICAL SPECIFICATIONS

VIDEO

Transmission method:	Digital
Input level:	800 mV p-p
I/O impedance:	75 ohm
Return loss	>15 dB, 5 Mhz - 1.5 GHz
	>10dB, 1.5GHz-3GHz
Coaxial Input equalization:	Maximum rate: 3 Gbps
	Equalization at 3 Gbps: 120 m of Belden 1694A
Bit-error rate at -22 dBm Rx optical power:	10^{-12}
Jitter (using pathological data pattern):	<0.2 UI

ELECTRO-OPTICAL

Operating wavelength:	1310 nm or 1550 nm, optional CWDM available
Link margin:	Up to 22 dB
Transmitter output power options:	-7 dBm
Receiver sensitivity:	-20 dBm
Optical source:	Laser diode
Optical detector:	PIN
Fiber type:	Single-mode

MECHANICAL/ENVIRONMENTAL

Dimensions (W x H x D):	10.5 x 1.75 x 16.7 in
Weight, each end:	5 lb
Connectors:	Electrical: BNC
	Optical: ST
Input voltage:	12-24 VDC
Power consumption:	<15 W
Indicators:	Power On, SDI data presence, optical power
Temperature range:	-20 to 55 °C
Humidity range:	0 to 95 % non-condensing

COMPLIANCE

Laser safety:	Class 1 laser 21 CFR 1040.10
EMI/RFI:	Complies with IEC/EN 60825-1
Certifications:	RoHS

ORDERING INFORMATION

INTEGRATED CWDM MODELS

PY3-GH-W8	8 channel transmitter, 1 fiber
PY3-RR-W8	8 channel receiver, 1 fiber
PY3-GHJK-W16	16 channel transmitter, 1 fiber
PY3-RRRR-W16	16 channel receiver, 1 fiber
PY3-GHRR-W8W8	8 channels each way, 2 fibers

BUNDLED SYSTEMS

PY3-GHRR-W16	(used together with) 8 channels each way, 1 fiber
PY3-JKRR-W16	8 channels each way, 1 fiber

The above two units are used together to create a single transport system

POWER SUPPLY (REQUIRED FOR ALL UNITS)

ADAP-AC-04	120/240 V to 15 VDC, 4 A, 4-pin XLRF

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