

## Multichannel Wavelength Manager & HD/SDI Transport



### *Teleport Meets Python to Create the Ultimate Hybrid SDI/HD-SDI and CWDM Transport*

The TeleThon is the single optical and electrical multiplexer that simplifies all your cabling needs. It accepts electrical digital signals (via BNC), ranging from 19.4 Mbps up to 1.5 Gbps uncompressed HD/SDI and optical signals of up to 2.5 Gbps each, and multiplexes them for transmission in either or both directions. Up to 16 optical signals can be accommodated on one fiber, significantly increasing fiber capacity. The CWDM (coarse wavelength division multiplexing) capability of the TeleThon system simplifies and multiplies the effectiveness of fiber optic cables, reducing operator costs and improving overall signal transmission capacity.

#### **Huge Savings**

The TeleThon is our latest tool to reduce the cost and complexity of moving large numbers of wideband signals through fixed or mobile infrastructures. With each fiber strand capable of moving up to 40Gbps of data, fewer fibers are used, resulting in less expensive cable and connector costs, and lower overall life cycle costs for broadcasters.

The new TeleThon system is a compact 1 RU unit ideal for HD studio infrastructures, sports and field production, HDTV distribution on corporate and educational campuses, and other facilities requiring reliable, efficient delivery of HD and other signals.

#### **New Life to Old gear**

The true value of the TeleThon system comes from its ability to accept an optical signal and re-transmit it on a CWDM wavelength. By doing this, your optical signal is being amplified AND repeated. So whether you are using a new SHED/HDX system or your 10 year old Adder, the TeleThon gives you a fresh optical budget and extends the usable life of these older fiber products. Now ALL of your existing fiber products are CWDM ready.

#### **Simplify Complex Configurations**

Since the TeleThon accepts the optical output of virtually any digital transmitter and turns it into a specific CWDM wavelength, there is no need for "wavelength specific" devices, such as Rattlers, DiamondBacks, etc., in your system. This represents a huge savings not only in the costs of the spares but in the overall complexity of managing the individual wavelengths.

When you add the power and convenience of the TelePort to the high density signal transport of the Python II, you end up with an ideal solution for handling your ever changing production requirements. Whether you need it in the studio or out on your mobile unit, the TeleThon will fit seamlessly into your existing fiber inventory and dramatically increase your signal transport capabilities.

#### **Features - TelePort Side**

- Turns any optical signal into CWDM
- Mux up to 8 Optical signals on one fiber
- Up to 2.5 Gbps on each optical channel
- Optically repeats signals - extending range

#### **Features - Python II Side**

- Up to 8 Channels per 1 RU chassis
- Wide range of digital formats
- 19.4 Mbps to 1.5 Gbps transport
- Compatible with digital TV standards SMPTE 292M & 299M
- Handles DVB/ASI signals
- Immune to pathological data errors
- Equalizes coax up to 1.5 Gbps

#### **Features - System**

- Economical, low profile packaging
- Front panel monitoring of optics and signals
- Redundant power inputs
- Option for optical redundancy
- Wide optical budget
- Low system jitter
- Low power consumption
- High reliability, durable design

#### **Applications**

- Studio Infrastructure
- Sports & Field Production
- HD Tie Lines
- Campus/Metro HDTV distribution
- ATSC or HDTV STL
- Telco last mile and local loop

## User Features

Along with LEDs to indicate the presence of an HD/SDI signal at each BNC input and output, the TeleThon features an integrated optical power meter for monitoring the received power for each optical HD/SDI signal. The ability to measure the available light is critical in maintaining and troubleshooting your system.

The TeleThon also features dual 12 VDC power inputs for electrical redundancy. There is an option for dual optical transmitter outputs and "hot standby" receiver optical redundancy, using an integrated optical switch. When the system detects a loss of light on one fiber, it will automatically switch to the backup fiber providing an even higher level of reliability for your system.

The system includes provisions for SNMP monitoring of essential system parameters.

The TeleThon system represents the culmination of years of in-the-field use and incorporates all of the features that you need to build and maintain your digital transport infrastructure.

## Trust Telecast

The TeleThon features the same high reliability as our other fiber optic production systems. Our systems work every day in every broadcast environment around the globe. You count on Telecast, and you can count on the TeleThon for your digital and HDTV transport needs.



## Representative Part Numbers:

TN-GRNP-W83W83	4x4 HD + 4x4 Optical, 2 Fibers
TN-GRQP-W16 used with: TN-HRUP-W16	4x4 HD + 4x4 Optical 1 Fiber 4x4 HD + 4x4 Optical, 1 Fiber
TN-MNJK-W16 used with:	8 HD TX + 8 Optical TX, 1 Fiber
TN-RRPP-W16	8 HD RX + 8 Optical RX, 1 Fiber

## Interoperable with other Telecast Products



**SHED™ & HDX™**



**CopperHead™**



**DiamondBack 4x4™**



**Rattler™**



**Viper II™**

## Specifications

### Video

Transmission Method	Digital
Input Level	800 mV (peak to peak)
Input/Output Impedance	75 Ohms
Return Loss	15 db
Coaxial Input Equalization	
Maximum Rate	1.5 Gbps
Equalization at 1.5 Gbps	300 meters of Belden 8281
Bit-Error Rate (@ -22 dBm rx optical power)	10 <sup>-12</sup>
Jitter (using pathological data pattern)	< 0.2 UI

### Electro-Optical

Operating wavelength	1310 nm or 1550nm Optical Window
Link margin	up to 22 dB
Transmitter output power options	-7 dBm or 0 dBm
Receiver sensitivity	-22 dBm
Optical source	Laser diode
Optical detector	PIN
Fiber type	single mode

### Mechanical/Environmental

Dimensions (LxWxH)	7.5" x 17.5" x 1.75"
Weight, each end	5 lbs
Connectors	
Electrical	BNC
Optical	ST
Input Voltage	12-24 VDC
Power Consumption	< 15 Watts
Indicators	Power On, SDI Data Presence, Optical Power
Temperature Range	-20° C to +55° C
Humidity Range	0 to 95% non-condensing

### Compliance

Laser Safety	Class 1 Laser
EMI/RFI	Complies with IEC/EN 60825-1
RoHS	



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