

## 3 Gb/s Fiber Transceiver w/ Integral Distribution Amplifier



### 3 Functions, all SDIs, 1 Device

The Terrapin FTR-D6 combines the features of a fiber optic digital video transmitter, receiver, and a six-output digital video distribution amplifier, providing unprecedented flexibility for any application where video must be simultaneously transmitted, received and viewed.

The compact transceiver transparently handles the entire range of digital video rates while maintaining the signal quality that broadcasters demand. No matter what the format, the FTR-D6 allows you to transport and view:

- 3 Gb/s HD/SDI: SMPTE 424M (reclocked)
- 1.5 Gb/s HD/SDI: SMPTE 292M (reclocked)
- 540 Mb/s: SMPTE 344M
- 270 Mb/s DVB/ASI (reclocked)
- 143 Mb/s: SMPTE 259M
- 19.4 Mb/s ATSC: SMPTE 310M
- AES and MADI Audio
- Plus non-standard digital signals to 3 Gb/s

### Four Unique Modes

The Terrapin FTR-D6 accepts a 75ohm coaxial input or an optical signal up to 3Gb/s, or both at the same time. The unit's output can also be digital video on a BNC, fiber on an ST connector, or both at the same time. Single push-button operation makes it easy to switch between four modes, permitting the Terrapin FTR-D6 to act as a:

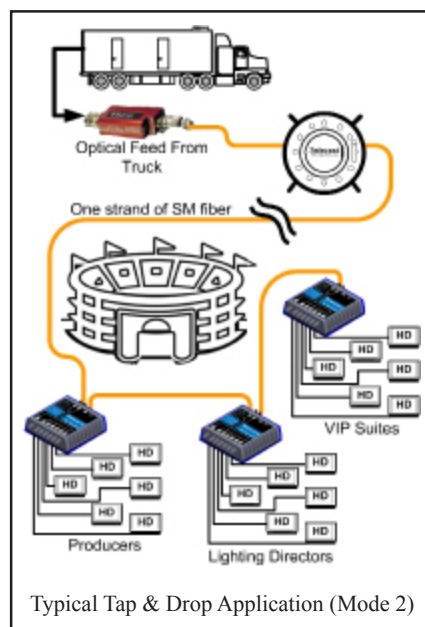
1. fiber optic transmitter with six BNC outputs of the digital video signal
2. fiber optic repeater with six BNC outputs of the received digital video signal
3. fiber optic transceiver with six BNC outputs of the received digital video signal
4. fiber optic repeater and local digital video D.A.

### Universal Interoperability

The unit is interoperable with industry standard optical HD/SDI signals to/from other equipment, such as Telecast Rattler™, Python™, TelePort™, Telethon™, and Viper™ series frames and modules, as well as other manufacturers' routers, DAs, etc.

### Tough Shell Enclosure

Telecast's "turtle-tough" Terrapin housing easily withstands the daily rigors of outside broadcasting. The machined aluminum enclosure resists crushing, and integral fins help maintain operable temperature without the need for fans. Use it as a throw-down or use its screw holes to wall-mount it anywhere.



### Features

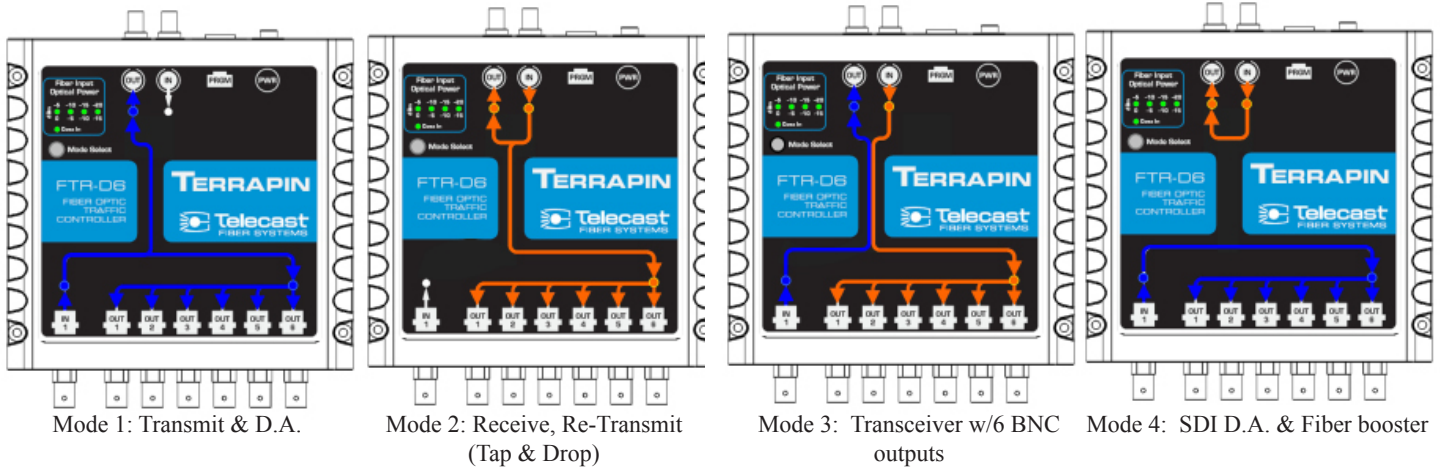
- Fiber optic transmitter and receiver (transceiver)
- Integral six-output digital distribution amplifier
- 4 user-selectable optical/electrical modes
- Intuitive LED Indications and signal flow arrows
- Easy-to-read optical power meter for instant troubleshooting
- Mode setting stored in non-volatile memory
- Error-free pathological
- Standard formats internally reclocked: 270Mb/s, 1.5Gb/s & 3Gb/s
- Modular, flexible design
- Very low system jitter
- >10dB Return Loss @3Ghz
- 19.4 Mb/s to 3Gb/s
- Compatible with SMPTE 310M, 292M, 259M, 297M, 424M
- Up to 50 km distance
- Cool, efficient, reliable
- Intuitive LED indicators show:
  - Power
  - HD/SDI data presence
  - Signal paths
  - RX optical power levels
- Supports embedded audio
- Durable, reliable, serviceable

### Applications

- Sports teleproduction
  - Golf, skiing, racing, etc.
- Outside Broadcast
- Metropolitan production
- Cross-campus signal distribution
- Pre-fibered venues

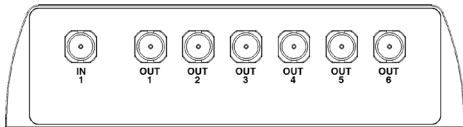
## Modes

Colored LEDs show the current mode with easy-to-understand arrows indicating signal flow of the copper and optical signals. A simple four-second push-and-hold of the "Mode" button puts the unit into programming mode. LEDs indicating the current mode will flash, and additional button pushes cycle the unit through the four possible modes. Release the button for four seconds and the selected mode is set. Non-volatile memory retains the current mode even when power is disconnected.

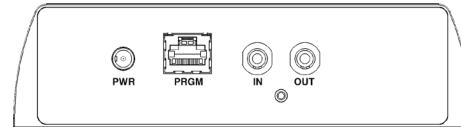


## Connectors

**Copper I/O:** An "Input" BNC connector accepts any digital signal from 19.2 mb/s to 3 Gb/s, even non standard. The six "Output" BNCs deliver six copies of the same signal. Standard 270Mb/s, 1.5Gb/s & 3Gb/s signals are relocked for maximum stability and integrity.

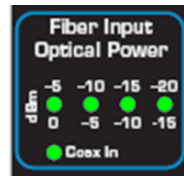


**Fiber I/O and Power:** Robust ST connectors are provided for fiber optic input and output. A locking 3.5mm power connector accepts any DC power source from 5 to 16 VDC. An RJ11 connector permits firmware updates and programming.



## Optical Power Monitoring

Easy to read LED indicators display Power On, HD/SDI signal presence and Received Optical Power levels. These provide critical system diagnostic information at a glance without a need for additional test equipment, such as an optical power meter.



## Versatile Power Input

Use the Telecast ADAP-AC-01LC with its secure locking connector (ordered separately), or use any customer-supplied power supply from 5 VDC to 16 VDC.



## Ordering Information

### Product

Product	Part Number
Terrapin model FTR-D6 fiber optic transceiver with 6-output D.A., 2 ST connectors, 1300nm*	TRPN-FTR-D6-S2-13
120VAC to 12VDC adaptor, circular locking connector (US)	ADAP-AC-01LC

(\*available in WDM or CWDM wavelengths, contact dealer or Telecast for more info)

## Specifications

### Transmission

Operating Wavelength.. 1310, or 1270-1610 (CWDM)  
 Coaxial video connectors in/out ..... BNC  
 Optical Connectors (2)..... ST  
 Optical Source Laser Diode.....(FP or CWDM DFB)  
 Optical detector.....PIN-TIA Diode  
 Optical Output Power (standard/opt.).....-7dBm/0dBm  
 Receiver sensitivity.....-20 dBm @ 3Gb/s  
 Link Margin/Distance.....15-25 dB/20-50 km  
 Fiber type..... single-mode or multimode (dist ltd.)

### Video

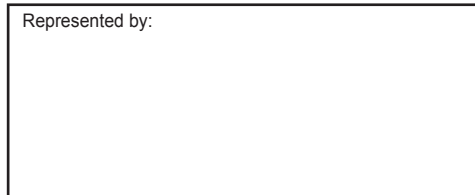
Transmission method ..... Digital  
 Input level ..... 800 mV (peak to peak)  
 Input Impedance ..... 75 ohms  
 Coax Equalization.....@ 2.97 Gb/s 100 meters  
 Output Impedance..... 75 ohms (x6)  
 Bit-Error Rate ..... (-20 dBm @ 3Gb/s)  
 Jitter (pathological data pattern) ..... < 0.2 UI  
 Rise/Fall Times ..... < 120 ps @ 3Gb/s

### Mechanical/Environmental

Dimensions: (LxWxH) ..... 5.9" x 6.2" x 1.7"  
 Weight, each end..... 14.4 oz.  
 Input Voltage ..... 9-18 VDC  
 Power connector plug ..... 2.5mm circular (locking)  
 Power Consumption (typ.)..... 4.4 watts  
 Indicators ..... Power, Signal, Link, Optical Power  
 Temperature Range ..... Operating -25° C to +55° C  
 Humidity Range ..... 0 to 95%RH, non-condensing  
 Certifications..... FCC Part 15, RoHS, LEED, CE



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