

DiamondBack II™

8-Channel Fiber Optic Video/Audio Multiplexer



Features

- 8 Video channels, NTSC/PAL or Component RGB or S-Video
- Audio port carries entire Adder
- Auto standby optical redundancy
- Optional dual laser outputs
- Switched front panel monitor
- Up to 30 km on single mode fiber
- Internal UPS backup protection
- Installs & sets up quickly
- Compatible with Telco/CATV fiber

This low cost, broadcast quality video multiplexer is also a high performance platform for Adder audio/intercom/data

DiamondBack II is the broadcast quality version of our popular DiamondBack series of video multiplexers. This powerful system turns one optical fiber into your reliable pathway for multiple video, audio, data and intercom channels.

The DiamondBack II targeted for all aspects of TV production, including booth packages, and all types of analog video/audio distribution around your facilities. This system is also a low cost tool for video/audio telecommunications on single mode cable distances to thirty kilometers,

Compact, Portable and Efficient

The compact 1RU unit is lightweight and portable for field use and operates over a wide temperature range with no cooling fans. Each end of the system runs on 12 to 24 VDC, and consumes less than 20 watts, so it can operate for hours on a camera battery.

High Capacity, Flexibility

The DiamondBack II accommodates a mix of video, audio, data, GPI switch closures and intercom. Each of the 8 rear panel BNCs independently accepts an NTSC, PAL or component video input. The ninth BNC is the auxiliary audio input for the coaxial output of an Adder 161 audio/data multiplexer or, for bi-directional communication using two sets of DiamondBacks, an Adder 882i intercom/data mux.

Thus the DiamondBack II can transmit eight video plus 16 audio channels on a single fiber. Use wavelength division multiplexer (WDM) couplers (Telecast Viper II family) to further multiply this capacity by up to a factor of eight, or 64 video plus 128 audio channels on one single mode fiber.

Applications

- Broadcast Announce Booth feeds
- Courtesy and Utility Video
- Monitoring & Surveillance
- Television Traffic Cams
- Distance Learning
- Corporate Video Distribution
- Tele-Arraignment & Tele-Medicine

Reliable and Redundant

Cool, low power operation means less heat and higher reliability. An internal, alarmed NiCad uninterruptible power supply (UPS) keeps the unit running for 15 to 30 minutes in the event of a power failure.

Optional dual lasers on the transmitter and dual detectors on the receiver provide full optical redundancy with automatic switchover in case the main fiber path is disrupted. The dual laser transmitter can also "split" all signals and send them to multiple receivers.

Specifications

Video

Interface	RS170, NTSC, PAL
Input/Output Impedance	75 Ω
Signal to noise ratio, weighted (100kHz-5MHz)	> 67 dB
Frequency Response (10 Hz to 5.8 MHz)	\pm 0.5 dB
Differential Gain	\leq 2%
Differential Phase	\leq 0.7°

Electro-Optical

Aggregate Data Rate	2.4 Gbps
Optical Source	Laser Diode
Recommended Fiber Type	Single-Mode
Link Margin/Distance	
standard	16 dB/20 km
optional	22 dB/28 km
Wavelength (standard)	1300 nm
optional for WDM	1550 nm*

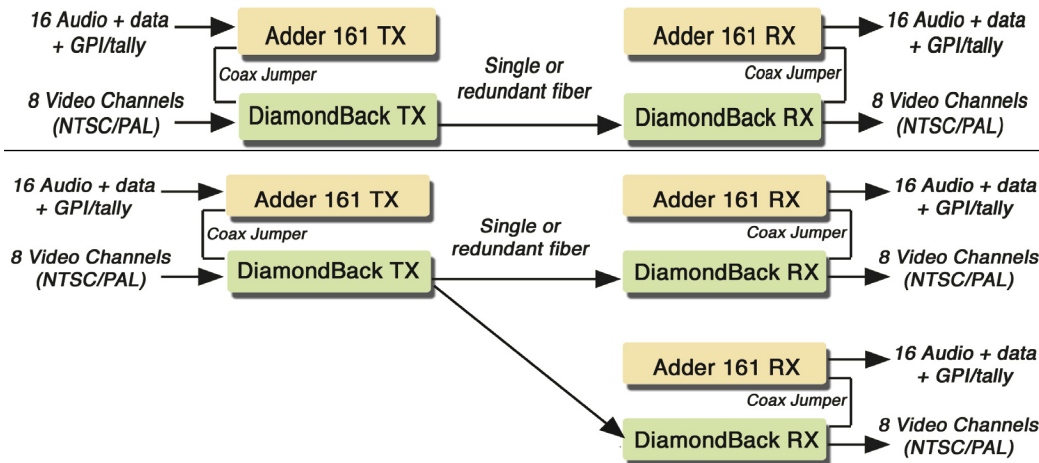
*Due to intrinsic fiber dispersion effects at 1550 nm, DFB laser recommended.
For Coarse WDM, multiplexing 4 to 8 DiamondBacks on one fiber, contact factory for available wavelengths

Mechanical/Environmental

Dimensions (LxWxH)	16.7" x 10.5" 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, Sync, Audio/Data
Temperature Range	-20° C to +55° C
Humidity Range	0 to 95% non-condensing

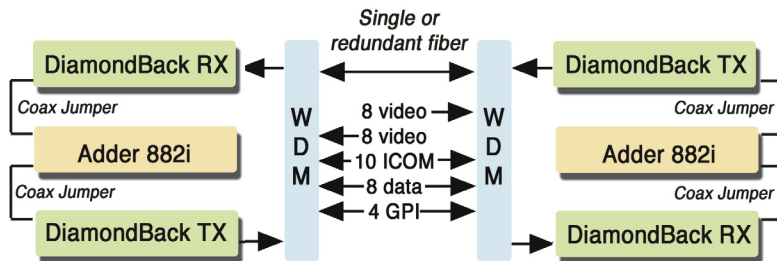


Use a multi-fiber cable, like the Tac-4 (shown), with a combination of Telecast Fiber Systems to carry all your video, audio, intercom, data and camera signals. The hermaphroditic connector is now an industry standard for fast set up and harsh environments.



Expand the DiamondBack with audio and data with the Adder 161. Receiver provides automatic switchover protection to redundant optical path.

Use the second laser optical path to create a split feed to two locations. The DiamondBack's high power laser source can be passively split into even more directions with a multiport optical coupler.



Use two DiamondBack systems for bi-directional transmission. WDM couplers permit transmission of both systems on the same fiber strand. Or have both systems transmit in the same direction on one fiber. Adders deliver intercom, audio, data and switch closure circuits.

