

### Overview

The 6G-SDI Extender over Fiber Optic with Return Channel is a unique solution from MuxLab for extending SDI cameras or other SDI sources in up to 4K resolutions to a distance of up to 400m (1300ft) using OM4 multi-mode fiber (model 500734), 10km (33,000ft) using single-mode fiber (model 500734-SM10), 40km (132,000ft) using single-mode fiber (model 500734-SM40), and 80km (264,000ft) using single-mode fiber (model 500734-SM80).

The product supports multichannel transmission, and can simultaneously transmit up to 9Gbps of data throughput over the fiber link, and allows for versatile combinations of sources, including 6G-SDI, 3G-SDI and HD-SDI. The unit supports simultaneous transmission of mixed signals such as one 6G-SDI signal + one 3G-SDI, or two 3G-SDI signals + two HD-SDI signals, and many other combinations up to 9Gbps. The device supports one input and one output SDI port, plus three directional SDI ports that can be individually configured as input or output. This flexibility allows for up to four source ports and one return channel, or up to one source port and four return channels, or anything in between. The SDI return channel may be used for AV monitoring and talk-back, while the RS232 pass-through supports return of tally light, camera control unit (CCU) and control of end devices.



### Applications:

Video production, Broadcasting, Outside Broadcasting vehicle, HD camcorder, Studio-to-studio, Post production, Live events, Medical imaging display, Mobile video

### Key Features:

- Extend up to 4K @ 30Hz resolution from 985ft (300m) over OM3 MM fiber to 265000ft (80km) over SM fiber
- Supports multichannel transmission, and can simultaneously transmit up to 9Gbps of data
- Accepts mixed signal transmission of up to one 6G-SDI signal + one 3G-SDI, or two 3G-SDI signals + two HD-SDI signals, and many other combinations in any direction, including the return channels
- Supports one input and one output SDI port, plus three configurable directional SDI ports
- Supports RS232 pass-through for remote control and as a return channel for tally light and camera control unit (CCU)
- Supported modes: SMPTE 292M, SMPTE 296M, SMPTE 372M, SMPTE 424M, SMPTE 425M
- Supports all 6G channel configurations (1, 2, or 4 BNC)
- Automatic SDI Link recognition and configuration
- Supports a standard SFP+ module for the optical fiber interface, or other media
- USB interface for diagnostics and field upgradable firmware
- Aluminium casting enclosure for ruggedized use

Specifications	
Environment	6G-SDI, 3G-SDI, HD-SDI digital signal transmission
Serial Interface	RS232 Serial transmission
Enclosure	Aluminum casing, 4.3" x 4.3" x 1" (10.9 x 10.9 x 2.54cm), for TX and RX (black in color)
Control	Serial console emulation with USB interface
Front panel (RX)	5x BNC, SDI connectors (1 input, 1 output, 3 input/output)
Rear panel (RX)	SFP+ connector for optical fiber cable interface Terminal Block for RS232
Top panel (RX)	Mini USB for firmware updates and status LEDs
Side panel (RX)	Locking power jack (supports a +12VDC to +48VDC voltage range)
Front panel (TX)	5x BNC, SDI connectors (1 input, 1 output, and 3 configurable as input/output)
Rear panel (TX)	SFP+ connector for optical fiber cable interface Terminal Block for RS232
Top panel (TX)	Mini USB for firmware updates and status LEDs
Side panel (TX)	Locking power jack (supports a +12VDC to +48VDC voltage range)
Connectors (SDI in)	1 BNC connectors for SDI input (0.8V pp, 75 ohm)
Connectors (SDI out)	1 BNC connectors for SDI output (0.8V pp, 75 ohm)
Connectors (SDI in/out)	3 BNC connectors
Connectors (Control)	Mini USB, for configuration and firmware updates
Connectors (Fiber)	SFP+ Connector for dual optical fiber cable interface
Connectors (Power)	One standard 2.1mm locking Power Jack
Compliance	FCC, CE, RoHS
Power	2x 12V DC external power supplies with US, UK and Euro blades
Signal Distance	Multi-mode OM3 fiber - 985ft (300m), OM4 fiber length - 1300ft (400m) Single-mode fiber - 33,000ft (10km), 132,000ft (40km) and 264,000ft (80km) depending on model. <i>Note: The 500734-SM40 requires a 5dB attenuator for distances less than 33,000ft (10km). The 500734-SM80 requires a 10dB attenuator for distances less than 115,500ft (35km).</i>
Order information	500734 6G-SDI Extender over MM Fiber Kit with Return Channel – 400m (UPC: 627699007341) 500734-SM10 6G-SDI Extender over SM Fiber Kit with Return Channel – 10km (UPC: 627699907344) 500734-SM40 6G-SDI Extender over SM Fiber Kit with Return Channel – 40km (UPC: 627699807347) 500734-SM80 6G-SDI Extender over SM Fiber Kit with Return Channel – 80km (UPC: 627699707340)

### Available Models

500734	6G-SDI Extender over MM Fiber Kit with RTN CH (OM4 multi-mode)	1,300ft (400m)
500734-SM10	6G-SDI Extender over SM Fiber Kit with RTN CH (single-mode)	33,000ft (10km)
500734-SM40	6G-SDI Extender over SM Fiber Kit with RTN CH (single-mode)	132,000ft (40km)
500734-SM80	6G-SDI Extender over SM Fiber Kit with RTN CH (single-mode)	264,000ft (80km)

### Typical Applications (many more configurations supported)

