3G-SDI Fiber Optic Extender
1-Channel 3G-SDI + 1 Duplex Data over Fiber

1
3G-SDI

Audio

1
Data

Ethernet

System Design

VOS-1H3G-DT/R provides for the digital transmission of 1-Channel uncompressed 2.97Gbps 3G-SDI (SMPTE 424M), 1.485 Gbps HD-SDI (SMPTE 292) or 270 Mbps SD-SDI (SMPTE 259M) 1080p HD video over fiber, support 1 duplex RS232/RS485 data, also support one loopback output for local display, and dual outputs for two displays in the remote end.

Stand-alone or rack-mount. All 3G-SDI video over Fiber of VOS-1H3G-DT/R comes in an insert card version. The cards can be inserted into our 16-slot, 19inch 4U rack-mountable (VOS-CH04-HD16).

Single-Mode or Multi-Mode, VOS-1H3G-DT/R can support FC/PC or ST/PC optical connector, the transmission distance range according to the Optical Budget. Manufacturer's standard is: Single-mode 20km, Multi-mode 300m.
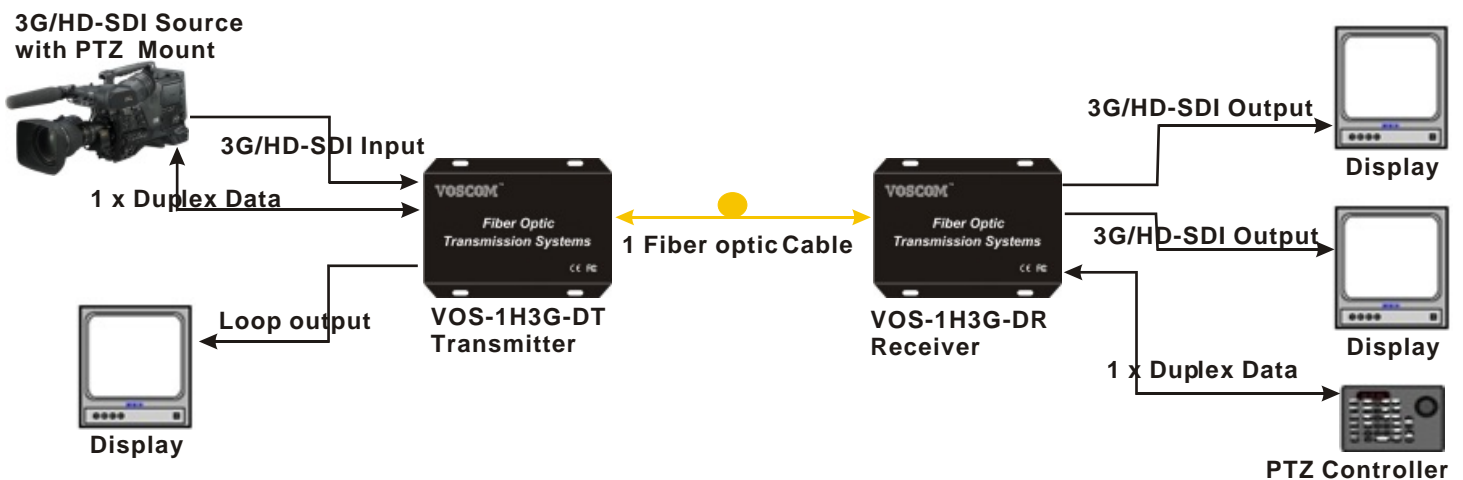
Features

• Extends uncompressed multi-rate 3G-SDI, HD-SDI or SD-SDI video over fiber
• Supports SMPTE 424M, SMPTE 292M, SMPTE 259M or DVB-ASI compliant
• Supports embedded digital audio stream
• Multi-mode Fiber Support for Distances up to 300m
• Single-Mode Fiber Support for Distances up to 20 km
• Real-Time Video Transmission for Exceptional Quality and Resolution
• LED Status Provide Rapid Indication of Operating Parameters
• No EMI or RFI and no ground loops
• Stand alone or rack-mount
• Produce according to customer's specifications, providing OEM

Typical Configuration

3G/HD-SDI Source with PTZ Mount

3G/HD-SDI Input

1 x Duplex Data

Loop output

Display

VOS-1H3G-DT Transmitter

1 Fiber optic Cable

VOS-1H3G-DR Receiver

3G/HD-SDI Output

Display

3G/HD-SDI Output

Display

1 x Duplex Data

PTZ Controller

Ordering Information

Model Number		Fiber Mode	Wavelengths	Optical Power Budget	Maximum Transmission Distance
Transmitter	Receiver				
VOS-1H3G-DMT	VOS-1H3G-DMR	Multi-Mode	1310nm/1550nm	16dB	300m
VOS-1H3G-DST	VOS-1H3G-DSR	Single-Mode	1310nm/1550nm	12dB	20km

Note:

- The Optical Power Budget data fit Mulit-mode(62.5/125 μm),Single-Mode(9/125 μm).
- When using 50/125 μm multimode fiber, subtract 3 dB from the optical power budget.
- Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.
- Maximum transmission distance is also limited by fiber bandwidth.
- Power adapter is manufactured by third party and is supplied with fitted screw-terminal output cables.Power adapter included (for standalone) US, European, UK or Australian power plug.
- Please feel free to consult factory for any special requirement and customization

Specification

• Video

Number of Channels:	1-Channel 3G/HD/SD-SDI
Data Rate:	19.4 Mbps to 2.97 Gbps
Standards:	SMPTE 424M, SMPTE 292M, SMPTE 259M or DVB-ASI
Max Resolution:	1920 x 1080 @ 60Hz
Equalization:	Automatic up to 100m of Belden 1694A at 3.0 Gbps, 200m at 1.485 Gbps and 350m at 270 Mbps
Return Loss:	> 15dB to 1.485Gbps: > 10dB to 2.97 Gbps

• Data

Data Formats:	1-Channel Duplex Rs232 & RS485 Data
Data Rate:	DC to 115.2Kbps
Bit Error Rate:	10E-9

• Connectors

Video Connector:	75 Ohm BNC (Gold Center Pin)
Data Connector:	Terminal Block
Optical Connector:	FC/PC or ST/PC Optional
Stand-Alone Power:	Screw terminal block
Rack Power:	AC line cord

• Electrical & Mechanical

Input Power Requirements:	DC 5V@2A
Power Adapter:	AC 100V~240V
Power Consumption:	< 5W
Stand-Alone Dimensions:	200mm × 135mm × 38mm
Card for 4U Rack Dimensions:	145mm × 170mm × 20mm
Shipping Weight:	2.5kg (include TX & RX)

• Environmental

Operating Temperature:	-45° C~+75° C
Storage Temperature:	-45° C~+85° C
Relative Humidity:	0%~95% (non-condensing)
MTBF:	>100,000 hours