MultiDyne®
Video & Fiber Optic Systems

FiberSaver Series

3G, 12G, & 25G Configurable Digital Fiber Multiplexers & Wavelength Shifters

FEATURES

- Turns Any Digital Optical Signals Into CWDM
- Optical Only Versions & Coaxial Optical Versions Available
- Up To 18 Optical Signals or Up To 18 SDI Video On 1 fiber
- 3G & 12G Versions With Optional Support For 1 & 10 GbE
- Send (3) bi-directional 25 GbE links over 1 fiber
- Built-in CDR (auto-sensing)
- Up to 25.78 Gbps Bi-directional Data Links
- Supports 25GBASE, CPRI Option 10 @ 24.33Gbps
- Per-Channel Front Panel Status Display
- Built-in optical power meter (Inputs only) for easy system setup and status monitoring
- Regenerates/Amplifies Optical Signals
- Optional Redundant Power Supplies
- Auto-Fail Over To Coax Input
- Easy Access to Installed Fiber Infrastructures
- Choose between ST, SC, or LC fiber connections
- Extends Useful Life of Legacy Fiber Equipment
- Faster Set and Strike With Fewer Cables

MARKETS & APPLICATIONS

- Rentals
- OB Production
- Sports Broadcasting
- Remote Studios
- Corporate A/V
- Reclaiming Existing Fiber & Gear
- Use With SMPTE-HUTs to Extend Up To 9 SMPTE Camera Chains Over 1 Fiber
- Take Advantage of Stadium and Campus Fiber
- Replaces Need For Wavelength Specific Spares In CWDM Apps

The FiberSaver Series has been designed to help engineers and designers overcome situations where there are many signals to move over fiber, but not enough available fibers due to a lack of access or inability to run more fiber.

3G and 12G systems are available in uni and bi-directional configurations ranging from 6x0 and 18x0 to 3x3 and 9x9. Asymmetrical bi-directional configurations are also available.

Unique to the FiberSaver Series is the option to provide a Coaxial copy of an optical input or output path. This capability can be used on one or both sides of a system for the ultimate in conversion between optical and SDI sources and receive devices.

The coax input can be used to input an auto-failover / keep-alive signal as the system will automatically select the coax input when light is not detected on the input.

When the coax stage is populated on the Rx side of the system the FiberSaver will output simultaneous copies of the incoming optical signal.

Since the FiberSaver is receiving and then re-transmitting the optical signal, you get a fresh optical budget that allows transmission over even longer distances. The Rx side of the system can be an optical only passive de-mux unit or an active receiver with reamplified optical out with or without coax copies.

3G FiberSavers will also work with 1G Ethernet and MADI signals and special order 12G Systems can work 10G Ethernet and SMPTE Camera Chains that operate at 10Gbps.

In addition to 3G-SDI the 3G FiberSavers will also supports 1G Ethernet and MADI signals. Special order versions of the 12G FiberSavers can also support 10G Ethernet and SMPTE Camera Chains that operate at 10Gbps.

The FiberSaver 25G provides a cost-effective solution for network expansion and capacity enhancement. It eliminates the need for deploying and maintaining multiple fiber links, which can be expensive and time-consuming.

With CWDM technology, existing fiber infrastructure can be leveraged to its maximum potential. By utilizing different wavelengths, FiberSaver 25G effectively increases the capacity of the network infrastructure without the need for additional physical fiber runs. The system allows for the consolidation of multiple 25G network links onto a single fiber. Currently the 25G Fiber Saver is only available in a 3x3 bi-directional configuration.

Custom configurations are available providing the most comprehensive mixed signal, single system solution on the market. Contact MultiDyne to learn what is possible.

FSCu-12G-T-B-ST 6 Channel Fiber & Copper 12G Tx

FS-12G-T-B-ST 6 Channel Fiber Only 12G Tx

FSCu versions have both Fiber and Coaxial connections and FS versions have just Fiber. Both types can be used together to build the ideal system.

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Specifications subject to change without notice

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TECHNICAL SPECIFICATIONS 3G & 12G

Coaxial Serial Data Input/Output (3G)

Connector	75-ohm BNC
Bit Rate	125 Mbps – 4.125 Gbps
Cable Auto Equalization	100m Belden 1694A @ 2.97 Gbps 170m Belden 1694A @ 1.485 Gbps 400m Belden 1694A @ 270 Mbps
Standards	SMPTE 424M, 292M, 259M-C DVB-ASI
Return Loss	< 15dB @ 5 MHz – 1.5 GHz < 10dB @ 1.5 GHz – 3.0 GHz
Level	800 mV ±80 mV
Alignment Jitter	< 0.3 UI

Coaxial Serial Data Input/Output (12G)

Connector	75-ohm BNC
Bit Rate	270 Mbps – 11.88 Gbps
Cable Auto Equalization:	60m Belden 1694A @ 11.88 Gbps 65m Belden 1694A @ 6 Gbps 100m Belden 1694A @ 2.97 Gbps 170m Belden 1694A @ 1.485 Gbps 400m Belden 1694A @ 270 Mbps
Standards	SMPTE 2082-1, 2081-1, 424M, 292M, 259M-C DVB-ASI
Return Loss	< 15dB @ 5 MHz – 1.5 GHz < 10dB @ 1.5 GHz – 3.0 GHz < 7dB @ 3.0 GHz – 6.0 GHz < 4dB @ 6.0 GHz – 12.0 GHz
Level	800 mV ±80 mV
Alignment Jitter	< 0.3 UI

Optical Input/Output (3G & 12G)

Fiber type	Singlemode
Connector	LC/UPC ST/UPC SC/UPC
Standard	SMPTE 297M
Input Range	1250 – 1650 nm
Input Upper Sensitivity	-2 dBm
Input Lower Sensitivity	3G -20dBm 12G -14 dBm
Output Range	CWDM mux 1271 – 1611 nm RX Side Output: 1310 nm
Output power	0 – 4 dBm per channel
Maximum Operation Distance	3G 40km 12G 10km

Mechanical

Width/Height	1RU, 19" [482.6mm] x 1.75" [44.45mm]
Depth	7.25" [184.15mm]

Electrical

Voltage	9 – 24 VDC, (12V Power Supply Included)
Power	≤ 60W (configuration dependent)

Environmental

Operating Temperature	-20 to +45°C (-4 to +113°F)
Storage Temperature	-40 to +70°C (-40 to +158°F)
Operation Humidity	Max. 90% (noncondensing)

TECHNICAL SPECIFICATIONS 25G

Electro-Optical 25G

Fiber type	Singlemode
Fiber Polish	UPC (Ultra-physical contact)
Fiber Connectors	ST, SC, or LC
TX Output power	-1 – +4 dBm
RX Sensitivity	-12 dBm
Optical Power Meter Accuracy	+/- 2dB
CWDM Wavelengths	1271 – 1371 nm
Optical Budget (typ.)	12dB
Power Connector	2.5mm

Data

MAX Data Rate	25.78 Gbps
Supported Data	25GBASE, CPRI Opt. 10 (24.33Gbps)

Power

Voltage	9 – 24 VDC, (12V Power Supply Included)
Power Consumption	5w

ORDERING INFORMATION

Use the FiberSaver configuration tool to build your solution and get a part number and rear panel elevation:

https://configurator.multidyne.com/fiber-saver

Contact sales@multidyne.com for information on special configurations

Accessories	
PS12V-65W-2.5MML	**(For 25G Version Only)** - Spare / Redundant 12V 65W Power Supply for FiberSaver Series, 2.5mm Locking Connector
PS12V-120W-2.5MML	**(For 3G and 12G Versions) -** Spare / Redundant 12V 120W Power Supply for FiberSaver Series, 2.5mm Locking Connector
ERPI-2.5MM-3FL-P	External Redundant Power Interface, Dual 2.5mm Female Locking Inputs, Single 2.5mm Female Locking Output, Diode Protected. Includes one 2' Switchcraft Male-to-Male cable

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