**G**FS

# Customized OTDR (Optical Time Domain Reflectometer)

Plug-in Card Type for FMT Multi-Service Transport System Cable Monitoring System for WDM Networks



### Description

FS OTDR is designed for remote fault detection and isolation, fiber level fault monitoring, span level fault monitoring and long span monitoring, which can measure fiber length, optical fiber transmission attenuation, splice attenuation and fault location, etc.

The ability to quickly identify and isolate network outages is a critical function for any network operator. With the OTDR module, optical fiber cable monitoring, fiber optic cable construction and maintenance are possible.

#### Features

- Remote fault detection and isolation
- Support fiber level fault, span level fault and long span monitoring
- High dynamic range combined with high resolution for highly accurate fiber characterization

### Application

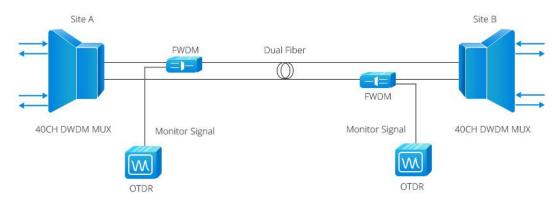
- Cable monitoring and maintaining system
- Optical fiber, cable, optical passive device loss
  measurement

#### Product Specifications

Dynamic Range	30~42dB	Wavelength (optional)	1550/1625 (±20 nm)
Optical Fiber	9/125m SMF	Min Sampling Interval	0.25m
Event Dead Zone	≤2m	Attenuation Dead Zone	≤10m
Connector	SC/UPC	Joint Converter	LC/UPC
Maximum Sampling	32k	Management	Monitor Cable

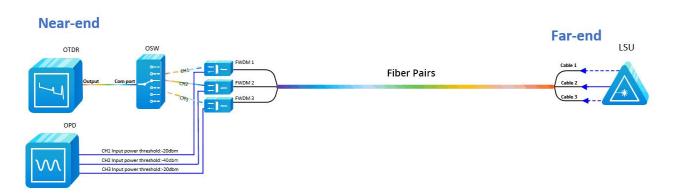
## Embedded OTDR Modules in DWDM Networks

The live fiber monitoring solution allows to secure the fiber network by identifying fiber procedures (so-called tapping). Monitoring is achieved through ongoing OTDR measurements (Optical Time Domain Reflectometer) in live operation in DWDM networks.



## Monitor Online System for Optical Cable

FS cable monitoring system is a centralized server solution that manages the status of cable and fiber network, as well as any fiber faults or performance degradation in your network. It consists of OPD, OTDR, OSW and LSU cards, and these cards are highly integrated via FS management platforms.



## Dimensions

4-slot 1U managed chassis, supports up to 4x multiplexer/EDFA/OEO/OLP card with accessories;

- Width: 482.6mm(19")
- Height: 44.50mm(1.75")
- Depth: 300mm(11.81")



482.6mm

## Ordering Information

Mux Demux & OADM				
DWDM MUX DEMUX	FMU-D402160M3	40 Channels 100GHz C21-C60, with 1310nm and Monitor Port, 3.5dB Typical IL, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #35887		
	M6200-D2160M	40 Channels 100GHz C21-C60 Dual Fiber DWDM Mux and Demux with Monitor Port, Pluggable Module, LC/UPC, Integrated with M6200 Series Managed Chassis #120424		
	FMU-D162136EM3	16 Channels 100GHz C21-C36, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #72430		
	FMU-MD085360EM3	CWDM/DWDM Hybrid Solution, 8 Channels 100GHz C53-C60, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, FMU Plug-in Module #72433		
CWDM MUX DEMUX	FMU-C182761M	18 Channels 1270-1610nm, with Monitor Port, LC/UPC, Dual Fiber CWDM Mux Demux, 1U Rack Mount #33489		
	FMU-MC084761EM	8 Channels 1470-1610nm, with Monitor and Expansion Port, LC/UPC, Dual Fiber, Low Insertion Loss CWDM Mux Demux, FMU Plug-in Module #78163		
LWDM MUX DEMUX	ABS-L042930A	4 Channels 1295.56-1309.14nm, Single Fiber LAN-WDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97782		
	ABS-C062737A	6 Channels 1271-1371nm, Single Fiber CWDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97784		
OADM	DOADM-DE	Customized Dual Fiber & Single Fiber DWDM OADM #70427		
	<u>COADM-DF</u>	Customized Dual Fiber & Single Fiber CWDM OADM #70425		
Chassis	<u>FMU-1UFMX-N</u>	FMU 2-Slot 1U 19" Rack Chassis Unloaded, holds up to 2 Units FMU Plug-in Module #30408		
	FUD-1UFMX-N	FUD 4-Slot 1U 19" Rack Chassis Unloaded, holds up to 4 Units FUD Plug-in Module #106578		



TRANSPONDERS & MUXPONDERS				
25G	<u>FMT4DL-</u> OEO25GSFP28	4 Channels 25G WDM Transponder (Converter), 8 SFP28/SFP+ Slots#92056		
10G	FMT4DL-OEO10GSFP	4 Channels WDM Transponder (Converter), 8 SFP/SFP+ Slots#30515		
Chassis	<u>FMT04-CH1U</u>	1U Managed Chassis Unloaded Platform, Supports up to 4x EDFA/OEO/OLP Card with Accessories #39214		
	<u>FMT-CH</u>	Customized 1U/2U/4U Managed Chassis Unloaded, Supports up to 16x Multiplexer/EDFA/OEO/OLP Module with Accessories #70413		
OPEN LINE SYSTEM				
Amplifiers	<u>FMT26PA-EDFA</u>	26dB Gain DWDM EDFA Pre-Amplifier, 16dBm Output#36524		
	<u>FMT20PA-EDFA</u>	20dB Gain DWDM EDFA Pre-Amplifier, 13dBm Output#72284		
	<u>FMT17BA-EDFA</u>	17dBm Output DWDM EDFA Booster Amplifer, 17dB Gain #72283		
	<u>FMT-LA</u>	In-Line EDFA for DWDM Solution#35924		
Dispersion Compensation	FMT40-DCM	40KM DCF-based Passive Dispersion Compensation Module#65781		
	FMT80-DCM	80KM DCF-based Passive Dispersion Compensation Module#65779		
	<u>FS-TDCM</u>	C-band Tunable Dispersion Compensation Module (TDCM)#72427		
Line Protection	<u>FMT-OLP2</u>	1+1 Optical Line Protection Switch (OLP)#66010		
	<u>FMT-BDOLP</u>	FMT-BDOLP, Optical Line Protection Switch (OLP)#72700		
	<u>FMT-BDSplitter</u>	FMT-BDSplitter, Optical Splitter#73324		
Red/Blue Filter	<u>FMT-RB</u>	1x2 Single Fiber DWDM Splitter Red/Blue C Band Filter#65981		
Fiber Monitoring	<u>FMT-OPD</u>	4 Channels 1550nm Optical Power Detection OPD (AIU)#78568		
	<u>FMT-OPM</u>	Optical Performance Monitoring (OPM)#71586		
	<u>FMT-OSW</u>	1x16 Multi-Channel Opto-Mechanical Optical Switches with Adjustable Channels Control#73287		
	EMT-OTDR	Optical Time Domain Reflectometer (OTDR)#73281		
	<u>FMT-LSU</u>	LSU Light Source Unit, Pluggable Module for FMT Multi-Service Transport Platform#78469		
VOA Units	<u>FS-VOA-C</u>	Variable Optical Attenuator, 0~15dB, Pluggable Module, LC/UPC#65271		
	<u>AT-M-LCU</u>	Fixed Fiber Optic Attenuators #70009		

Chassis	FMT04-CH1U	1U Managed Chassis Unloaded Platform, Supports up to 4x EDFA/OEO/OLP Card with Accessories #39214
	FMT-CH	Customized 1U/2U/4U Managed Chassis Unloaded, Supports up to 16x Multiplexer/EDFA/OEO/OLP Module with Accessories #70413
WDM TRANSC	EIVERS	
25G SFP28	DWDM-SFP25G-10	25G DWDM SFP28 100GHz 1563.86nm 10km DOM LC SMF Optical Transceiver Module #87000
	CWDM-SFP25G-40S	25G 1270nm CWDM SFP28 40km DOM LC SMF Optical Transceiver Module #100112
	CWDM-SFP25G-10SP	25G 1270nm CWDM SFP28 10km DOM LC SMF Optical Transceiver Module #76003
	LWDM-SFP25G-40	25G LWDM SFP28 1286.66nm 40km DOM LC SMF Optical Transceiver Module #93786
16G/8G FC	DWDM-SFP16G-40	Customized 16G DWDM SFP+ C20-C61 100GHz 40km DDM LC SMF Transceiver Module#73084
	DWDM-SFP16GH-40	Customized 16G DWDM SFP+ 50GHz 40km DDM LC SMF Transceiver Module #73085
	CWDM-SFP16G-40	Customized 16G Fiber Channel CWDM SFP+ 1470-1610nm 40km DDM LC SMF Transceiver Module #80765
10G SFP+	DWDM-SFP10G-80	10G DWDM SFP+ 1559.79nm 80km DOM LC SMF Transceiver Module, Commercial Temperature#31237, Industrial Temperature#113562
	DWDM-SFP10G-40	10G DWDM SFP+ 1560.61nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#38731, Industrial Temperature#113511
	DWDM-SFP10G-C	10G DWDM C-band Tunable SFP+ 50GHz 80km DOM LC SMF Transceiver Module #69267
	CWDM-SFP10G-80L	10G CWDM SFP+ 1470nm 80km DOM LC SMF Transceiver Module #19367
	CWDM-SFP10G-40S	10G CWDM SFP+ 1270nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#22168, Industrial Temperature#112392
1G SFP	DWDM-SFP1G-EZX	1000BASE-DWDM SFP 100GHz 1563.86nm 100km DOM LC SMF Transceiver Module #54150
	DWDM-SFP1G-ZX	1000BASE-DWDM SFP 1563.86nm 80km DOM LC SMF Transceiver Module #47697
	<u>CWDM-SFP1G-EZX</u>	1000BASE-CWDM SFP 1270nm 120km DOM LC SMF Transceiver Module #102776
	<u>CWDM-SFP1G-ZX</u>	1000BASE-CWDM SFP 1270nm 80km DOM LC SMF Transceiver Module #33234



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