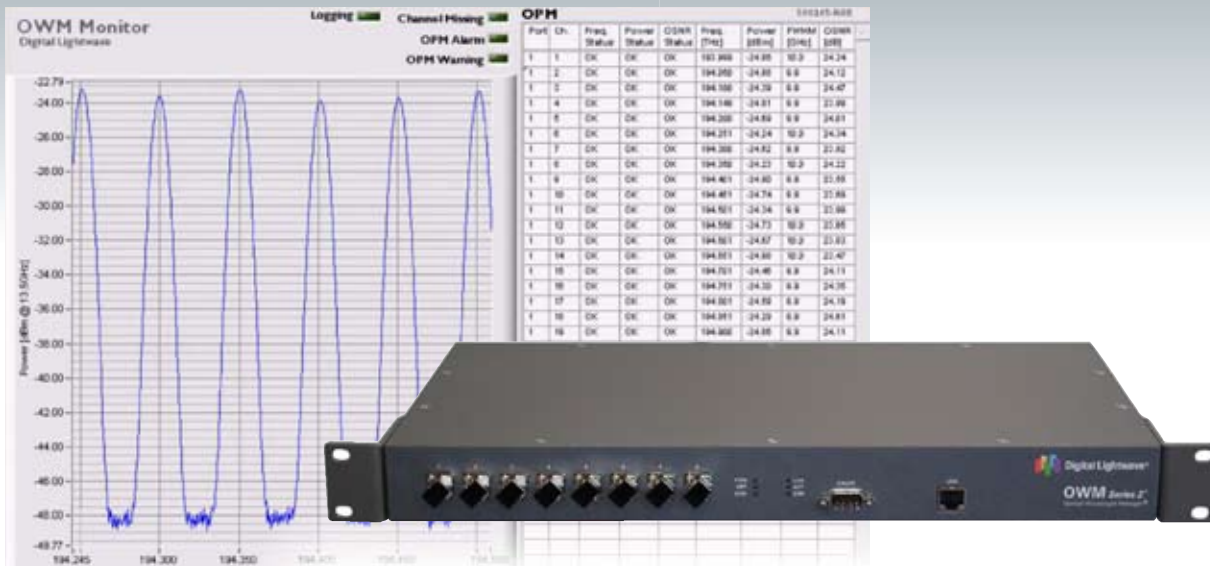


Optical Wavelength Manager OWM Series 2™

Real-Time DWDM Optical Monitoring System



- 100 μ S Scan Time
- 5GHz Resolution BW
- Better than 20pm Accuracy
- 14,000 Datapoints/Scan
- Capture Transient Events
- Show Trends
- Avoid Revenue Impacting Outages
- Reduce Truck Rolls

The Digital Lightwave OWM Series 2 is a high-performance optical layer monitoring system, ideal for both DWDM long haul and metropolitan area network applications.

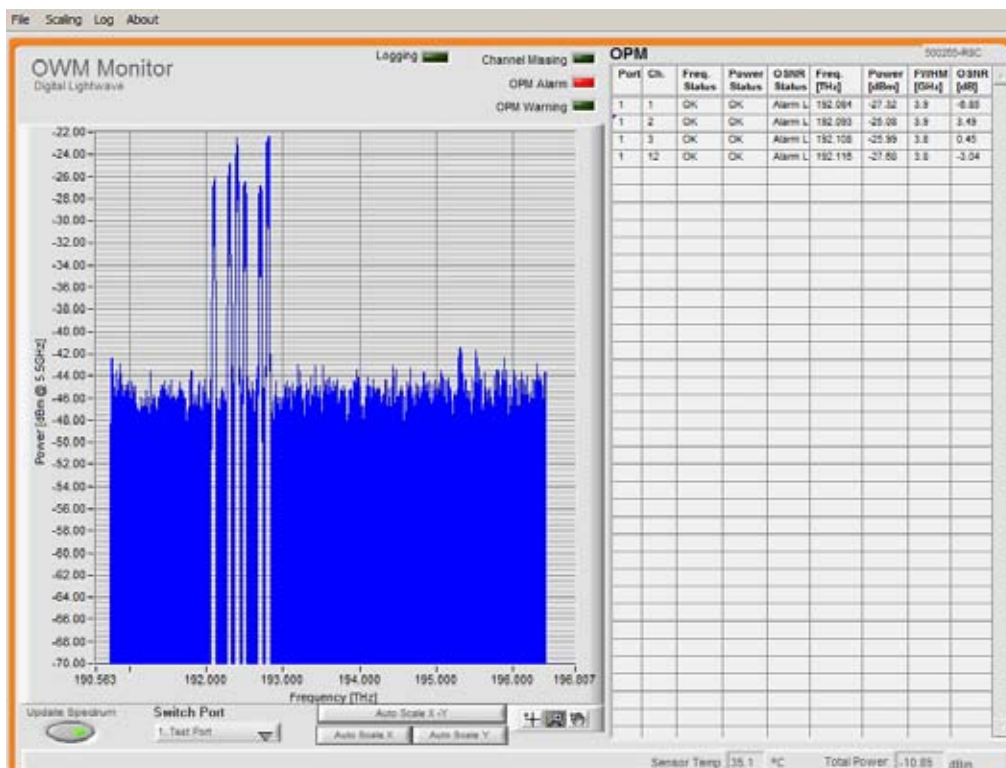
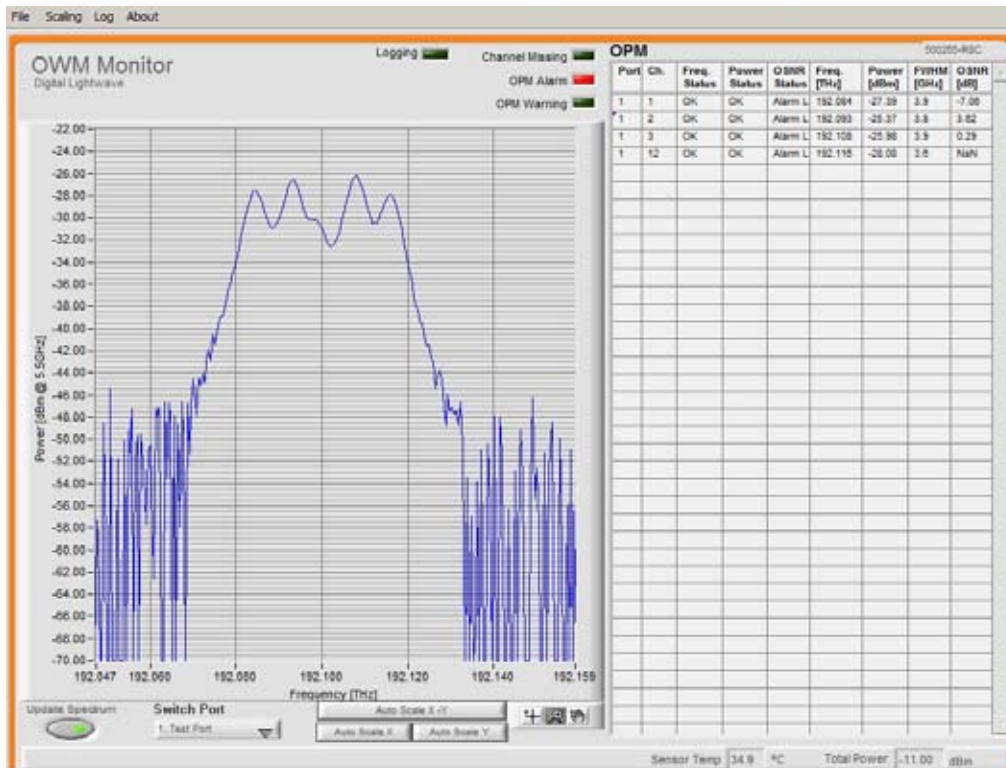
The OWM Series 2 combines optical channel monitoring (OCM) and optical performance monitoring (OPM) into a real-time optical layer monitoring (OLM) system. This enables proactive optical signal surveillance in the all-optical domain.

The OWM Series 2 monitors the spectral characteristics over the C Band including central wavelength, power level, Optical Signal to Noise Ratio (OSNR) and Spectral Width, measured as Full Wavelength Half Maximum (FWHM). Any channel deviating from normal conditions is reported within milliseconds. Long-term drift of these parameters can be tracked and analyzed, thus providing input for network tuning and resource allocation.

The OWM Series 2 enables service providers to resolve channel-specific problems, often before a degrading channel suffers critical data loss. This translates into reduced network downtime and the ability to avoid violation of service level agreements (SLA).

The unique measurement performance of OWM Series 2 also enables diversified billing models and SLA supervision.

Screenshot Examples



SPECIFICATIONS

Wavelength Range	C-band (1528.0nm – 1570.4nm)
Channel Power Input Range	-10 to -40 dBm
Channel Spacing	50 GHz
Monitored Channels	128 per fiber
Scan Time	100 μ s
Sample Resolution	0.375 GHz
Scanning Filter Bandwidth (FWHM)	5 GHz
Return Loss	-40 dB

OPTICAL PERFORMANCE MONITORING (OPM)

OPM analysis	Power, Wavelength, OSNR and FWHM per channel: Yes
OPM alerts Levels per channel	Power(4), Wavelength(4), OSNR(2)
Power Accuracy	± 0.5 dB
Wavelength Accuracy	± 20 pm
OSNR Accuracy	± 0.5 dB
OSNR Dynamic Range @ 50 GHz	30 dB
Response Time (typ.)	50 ms

OPTICAL CHANNEL MONITORING (OCM)

OCM alerts: Pc	4 levels per channel
Response time (typ.)	1 ms

OPTICAL INTERFACE

Optical connectors	SC or FC, with APC option
Number of inputs	8 (custom configurations available with 1, 2 or 4 inputs)

COMMUNICATION INTERFACES

Serial interface	RS-232
Network interface	Ethernet 100base-T

SUPPORTED PROTOCOLS AND APPLICATIONS

SNMP	Yes
API over TCP/IP	Yes
Telnet	Yes
Serial port	Yes
Software and Firmware Upgrade Via TCP/IP	Yes

ENVIRONMENTAL

Qualification	NEBS Level 3 Compliant
Operating temperature	-5 to +60 °C
Operating humidity (non condensing)	5 to 85 %
Storage temperature	-40 to +70 °C

Storage humidity	0 to 95 %
EMC	FCC Class A Compliant
POWER	

Power Requirements	90-240 VAC / -48 VDC Dual/simultaneous power
Power Consumption	15 W

PHYSICAL

Dimensions	16.5 (19 with mounting brackets) x 10 x 1.75 Inches 420 (483 with mounting brackets) x 254 x 44 mm
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NETWORK MANAGEMENT SYSTEM SPECIFICATIONS

OPTICAL LAYER MONITORING

Number of OWM units	1 – 50+
Monitoring capacity	1-8 fibers per unit, 1024 channels per unit
Surveillance (alarms)	Power, frequency, OSNR, lost/new channel
Measured channel parameters	Power, frequency, OSNR, FWHM
Other parameters	Total power in spectrum
Detection time	10ms (typical)
Alarm latency	50ms (typical)

FUNCTIONS

Network map	User editable and with alarm status
Alarm overview and summary	Yes
Alarm actions	Indicators, spectrum log, email, SMS
User-defined naming of entities	OWM units, ports and channels have individual names
Detailed alarm information for each node	Time-stamped alarms, alarm information, acknowledgments, history
Alarm acknowledgment procedures	Time stamps and user IDs track processing
Access to detailed information	Real-time spectrum and channel data for each node
Data storage	Alarms, channel power, frequency and OSNR, total power, spectrum graph
Log/storage interval	10 millisecond to 1000 hours
Time stamp resolution	1 millisecond
Automatic connection and reconnection to OWM Series 2 units	Yes
Log analysis	Filtered alarm logs, channel data plots, spectrum browser, total power graphs

PLATFORM

OWM NMS client platform	Windows 7/Vista/XP/2000
Communications protocol	TCP/IP
Data storage	Tab separated ASCII

Note: The general specifications are presented as a baseline. Performance parameters can be optimized to match customer requirements.

BENEFITS AT A GLANCE

- OWM Series 2 serves the functions of Optical Channel Monitor (OCM) and Optical Performance Monitor (OPM) units.
- OWM Series 2 is grid-transparent. Thus, DWDM schemes with different channel spacing and various modulation rates can be accommodated.
- Due to fast channel alert functionality, OWM Series 2 is suitable for protection switch measurement applications.
- The integrated optical switch reduces cost per fiber.
- OWM Series 2's adaptable product platform allows for versatile hosting and deployment options.
- All-optical layer performance monitoring significantly reduces the need for O-E-O conversion.
- Concurrent monitoring of all channels in full spectrum lowers the added cost per optical channel.
- Non-intrusive monitoring minimizes signal interference.
- Network performance optimization and channel allocation decisions are improved by using OWM Series 2's multi-channel OLM data.
- Dynamic channel power equalization in add/drop networks nodes is facilitated due to OWM Series 2's high performance channel power measurements.
- Simple installation procedures facilitate a quick deployment at site.
- Embedded modular SW platform enables remote re-configuration and upgrade on-the-fly
- Power connections for AC and DC for redundancy

ORDERING INFORMATION

- OWM2C-1 - OWM Series 2 C-Band w/1 Optical Port, Connector type optional
- OWM2C-4 - OWM Series 2 C-Band w/4 Optical Ports, Connector type optional
- OWM2C-8 - OWM Series 2 C-Band w/8 Optical Ports, Connector type optional
- OWM2-FC - FC-PC connector option for OWM Series 2
- OWM2-SC - SC-PC connector option for OWM Series 2
- OWM2-RA - 19" to 23" rack adapter (1U) for OWM Series 2
- OWM2-OSA - OSA (Optical Spectrum Analyzer) Software
- OWM2-NMS - OWM Series 2 NMS (Network Monitoring System)

Distributor:



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