



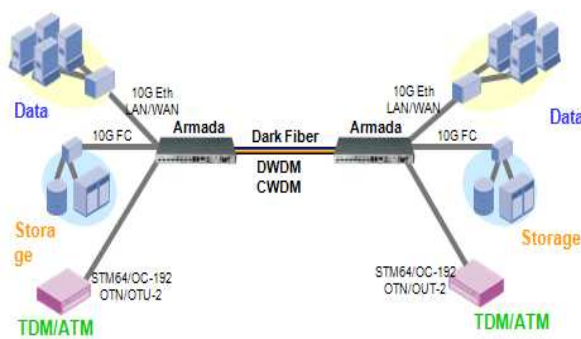
Armada™ 1000: 1U Metro DWDM Platform with Integrated G.709 OTN, FEC and Pluggable XFP



Description

Menara Networks **Armada™ 1000** addresses the growing needs for high data capacity applications such as IPTV, Triple play and NGN which need to be transported over existing or new fiber infrastructures. Menara **Armada™ 1000** offers the industry's highest density at the lowest cost and power consumption for DWDM and OTN transport for 10 Gbps services. Its versatility and flexibility makes it an ideal solution for evolving metro/regional Ethernet networks, enterprise networks, campus environments and central office connectivity.

Armada™ 1000 is a highly integrated system, incorporating Mux/DeMux, EDFA, dispersion compensation, optical supervisory channel, and optical switching capability for both 10G transponder and regenerator applications. This flexibility enables a simple and a cost effective upgrade of existing infrastructure to carry 10G services. **Armada™ 1000** seamlessly integrates with other platforms enabling a mixture of 10G and sub 10G services over the same fiber and supports stackable solution operation of up to 32 DWDM wavelengths. All optical transceivers, both on the client and network sides, including transceivers with integrated G.709 (OTN Framer and FEC), are hot-swappable allowing low first cost, pay-as-you-grow budget planning and simplified operations and maintenance.



Management

Armada™ 1000 1RU platform supports up to 4 high-speed 10G services. Each service is configured independently using Menara's user-friendly web based management tool. **Armada™ 1000** can be managed by any 3rd party SNMP system or with Menara's EMS, and is designed to support point-to-point, linear ADM and ring topologies with facility protection.

Applications

- Interconnection of LAN, TDM and SAN over remote metro sites
- High bandwidth managed service over dark fiber
- Simple upgrade of existing CWDM or DWDM networks to support 10G services
- High throughput Metro Ethernet connectivity
- Effective infrastructure for triple play, NGN and DSLAM backhaul

Features

- Flexible metro DWDM platform for transport of Data, Storage, and voice applications over dark fiber and C/DWDM networks with OTN OAMs
- Performs bidirectional 3R ensuring error free operation over long distances
- Integrated OTN G.709 Digital Wrapper
- >6dB Net Coding Gain FEC for superior optical performance
- Multi-protocol and bit rate support for 10GE LAN/WAN, OC-192/STM-64, OTN and Fibre Channel, in any mix
- Advanced SONET/SDH and Ethernet client signal monitoring
- Cost effective and compact (1RU) with low power consumption
- Remote management with dedicated OSC
- Bidirectional performance monitoring
- Pluggable client and network optics
- Pay-as-you-grow architecture
- Facility and fiber protection

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Technical Specifications (G.709 and FEC Enabled)

System	
Topology	Point to Point, Ring, Linear ADM
Transport Medium	Metro DWDM/Dark Fiber
Software Upgrade	Traffic hitless – dual image
Protection	1+1 Facility

Product Options	
Transponder	850nm to OTN DWDM, 3R, 2/4 Wavelengths Mux/DeMux
Optical Amp	EDFA (Booster, Pre-Amp, In-Line)
Regenerator	DWDM to DWDM 3R, 4 Lambda, 2xMux & 2xDeMux & 2xEDFA

DWDM Link	
Wavelength	ITU G.694, Ch 15-60, 100GHz
OSC	1490nm, 1510nm
Optical Reach	40, 80, 120, 250Km
Output Power	-1dBm to +2dBm, Unamplified
Sensitivity	-28dBm APD
Optical Monitoring	Tx & Rx power

Services	
Interface Rates	9.9 to 11.07 Gbps
Optical Interface	850nm to OTN DWDM
Services	10GE WAN/LAN, OC192/STM64 10G FC, OTU2 in any mix

Optical Switch	
Topology	Protected Point to Point
Switching Time	< 50ms
Signal WL	C and L band
Insertion Loss	Tx: 3.8dB; Rx: 1.2dB

Amplifier	
Applications	Booster, Pre-Amp
Output Power	14dBm, 17dBm, 20dBm, 23dBm
Input Power	-36dBm up to 16dBm
Gain	10dB to 22dB
Mode	AGC and APC
Eye Safety	Automatic power reduction

Network Management	
Ports	10/100MBase-T, RJ45, RS232 DB9
Protocols	SNMP, FTP, HTTP
Management	Web, Tivoli ready, Menara EMS
OAM	Loopbacks, Alarms, Event log PM for 10GE LAN, WAN, FC, 192
Channel	2 x OSC
Visual	LED status: Client, Line, Power

Environmental	
Temperature	-5° C to +50° C
Humidity	5% to 85% RHI

Dimensions	
Size	1.77" (1RU) (H) x 17.32" (W) x 9.05" D
Weight	5.5 Kg (max)
Mounting	19", ETSI and 23"

Approvals & Standards	
CE, FCC, RoHS 5/6	
NEBS complaint	



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Preliminary Data Sheet subject to change