



NetVanta 838 OSP

Eight-port SHDSL EFM Ethernet NTU

Product Features

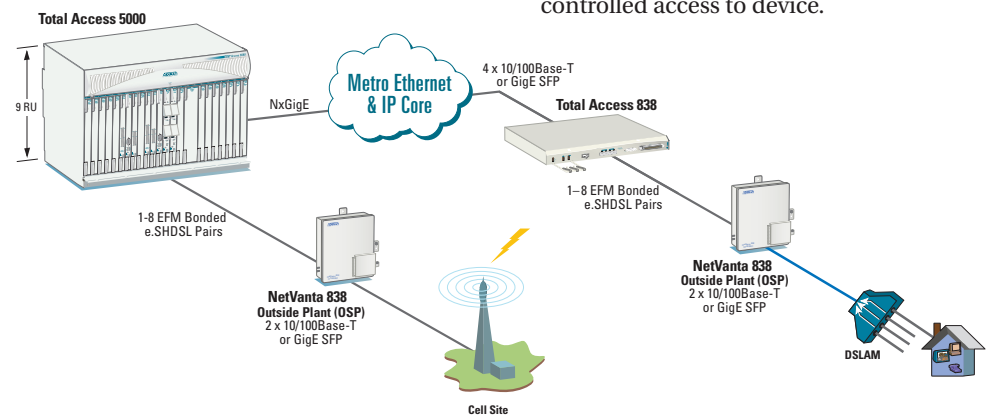
- Supports Carrier Ethernet services over copper for cell site or other uncontrolled environmental conditions
- Fully sealed and weatherproof mechanical design
- Provides lightning survivability via enhanced lightning protection on all metallic interfaces
- MEF 9/14 certified supporting standard Ethernet OAM
- Enhanced SHDSL data rate performance up to 15 Mbps per loop (120 Mbps symmetrical total)
- Auto-failover and recovery for improved service robustness
- Symmetrical data transfer rates for upstream/down-stream VLAN Management
- Plug-and-play auto line detection for easy installation
- Spectral compatibility for robust operation alongside other DSL services
- Supports Terminal and Facility MAC-Swap Loopback to validate service turn up and troubleshooting
- Firmware upgrades through the LTU
- +24/-48V DC Power supply
- Deskmount and rackmount options

The NetVanta® 838 Outside Plant (OSP) is a Carrier Ethernet Network Termination Unit (NTU) that terminates up to eight e.SHDSL copper pairs. Two 10/100 Ethernet ports are provided for customer use. The NetVanta 838 OSP is designed for cost-effective deployment of voice and data services to small- and medium-sized businesses, supporting bandwidth indoors of up to 120 Mbps. However, typical deployments using outside plant copper for extended distances will be closer to 16 Mbps (2 Mbps per loop) service offering. The NetVanta 838 OSP is designed for LAN, WAN and MetroEthernet extension in uncontrolled environments such as cell sites as well as supporting Voice over IP (VoIP) applications with voice, video and data traffic. Enterprise customers, as well as integrated communications providers like CLECs, ILECs and ISPs, will benefit from this intuitive, easy to install, plug-and-play unit. A key feature of this unit is the enhanced lightning protection on the metallic interfaces which allows survivability up to 20kV of ground potential rise.

In the event that a single loop fails, the NetVanta 838 OSP will continue to operate on the remaining loop, providing additional resiliency. Once the failed loop is operational again, the NetVanta 838 OSP will automatically detect its availability and will auto-recover to the original configuration.

The EIA-232 craft port enables local access for configuration and status information. The SHDSL Ethernet over Copper provides carriers a management channel to remotely configure and collect status information.

The compact, sealed design provides the safety and reliability required for the most stringent outdoor installations where no cabinet protection is available. The NetVanta 838 OSP comes with protector block isolation on all physical interfaces, and is 24/48 VDC powered. It can also support an optional, pluggable AC/DC converter available for water-tight AC powering. The sealed packaging offers a door on door housing design for separate provider and customer interface access including door access alarming for controlled access to device.





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NetVanta 838 OSP

Eight-port SHDSL EFM Ethernet NTU

Product Specifications

Physical Interface

Network Interface

- RJ-21 e.SHDSL

Client Interface

- Two Autosensing 10/100Base-T Ethernet
 - RJ-45
 - Auto MDI/MDIX
 - Auto-Rate
 - Auto-Duplex
- Gigabit Ethernet interface via SFP cages
- All Ethernet ports may be used for either network WAN or customer-side LAN connections

Gigabit Ethernet Interface

- Connector: Single SFP
- Interface Type: 1000 Base-X
- Compliance: 802.3, 802.1D, 802.1Q

Management: Console Port

- DB-9
- EIA-232

Diagnostics LEDs

- Power/Alarm LED
- Ethernet LED
- SHDSL Loop Status for Each Loop

Environment

- Operating Temperature: -40 F to +149 F (-40 C to +65 C)
- Storage Temperature: -40 F to +158 F (-40 C to +70 C)
- Relative Humidity: Up to 100%

Physical Specifications

- Dimensions: 18.125 in. x 16.125 in. x 5.375 in. (H x W x D)
(460 mm x 410 mm x 137 mm)
- Weight: 12 lbs (5 kg)
- DC Power: -48 VDC or +/-24 VDC (A or B power feed)
- Power Dissipation: 16.8 watts maximum

Enhanced Protection on Ethernet and DSL Interfaces

- DS1 Isolation and surge protection
- Electrical Ethernet interfaces isolation and surge protection
- Protect against voltage surge and ground potential rise
- GR 1089 Issue 4 for Type 4 equipment port defines 2.5kV isolation

Powering Options and Protection

- Redundant +24/-48VDC version
- 24VDC prevalent at cell site installations
- GR 1089 Issue 4 for Type 4 equipment port defines 2.5kV isolation
- Redundant power feeds mandatory
- Redundant power supplies highly desirable
- GR 1089 Issue 4 Type 8 protection
- Grounding via Post & Lug type connection

DSL Features

- Variable rate bonding for the SHDSL loops
- Auto-failover and recovery
- Plug-and-play auto-line detection
- ITU-G.991.2-2003, Annex A&B-SHDSL

Ethernet Features

- IEEE 802.1p priority marking
- IEEE 802.1d dynamic/transparent bridging
- IEEE 802.1Q VLAN tagging
- IEEE 802.3u Ethernet
- MEF 9/14 certified EPL, EVPL, ELAN

Ethernet Services Support

- Priority queuing of traffic based on VLAN priority
 - Supports eight class of service queues
 - Per UNI port, CE VLAN ID (C-Tag) and/or CE VLAN P-bits, DSCP fields
- Single stack VLAN and double stack VLANs (Q-in-Q)
 - Manipulation based on 802.1p and DSCP fields
 - STAG TPID provisioning supports 802.1ad and 802.1Q standards
 - Port-based service support
- Services Scale and Flexibility
 - MEF 9, 14 compliant EPL, EVPL, ELAN
 - Configurable EtherType and TPID for service flexibility
 - VLAN IDs 0-4095; EVC configurable in the range of 2-4094
 - Configurable MTU Mini Jumbo frame support (1700 Bytes)
 - 16k active MAC address; Ability to disable MAC learning (32k support future software)
 - Ingress policers (tr3CM), CIR and EIR settings to 64 kbps granularity, Configurable Burst through EBS, CBS settings
 - Egress shaping per port (per port per queue and per up to 16 VLAN groups in future)
- Resources
 - 64 EVCs
 - 64 EVC Maps
 - 64 Policers
 - 4 EFM Group

Fault and Performance Management

- IEEE 802.3ah EFM standard
- ITU-T Y.1731 CFM, PM
- Supports OAM management status and loopback messaging
- Supports Terminal and Facility MAC-Swap Loopback

Management and Administration

- Management Methods
- Craft interface (Local, EIA-232)
- SNMP proxy via Total Access 5000, 838 LTU and 1400S series
- Firmware upgrades
- Local: YMODEM through craft port
- Remote: Managed through Total Access 5000, 838 LTU and 1400S series
- Configuration script download

Regulatory Agency Approvals

- FCC Part 15 Class A
- FCC Part 68
- UL 60950, CAN/CSA C22.2 No. 60950
- EN 60950, IEC 60950, AS 3260/ AS NZS60950
- NEBS Level 3
- S043.2
- ITU-T K21:2000 Basic

Ordering Information

Equipment	Part #
NetVanta 838 OSP	1172830G1

Water tight AC Power Supply 1172291G1

Supported Small Form Factor Pluggables (SFPs) for this product may be found at www.adtran.com/sfp

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TL191270



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61172830G1-8A February
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