# NetVanta 838

## Carrier Ethernet Network Termination

## Product Features

- 8-port EFM bonded e.SHDSL
- Up to 45 Mbps of resilient Carrier Ethernet service
- Certified MEF9, 14 Traffic Management Compliant
- 1 RMU stackable with wall-mount or rackmount options
- Rapid deployment via EZ-Ethernet Provisioning
- Standards based DAM supported
- Monitoring, fault detection, and loopback functions
- TScan advanced loop diagnostics
- Flexible Bandwidth management
- Performance monitoring with threshold alarms
- Configurable Queuing for CoS support
- Command Line Interface (CLI)
- Traffic storm protection to prevent service interruptions due to broadcast, multicast, unicast or L2CP traffic
- Small Form-factor Pluggable (SFP) 1000Base-X Ethernet
- Autosensing 10/100 Base-T Ethernet connections
- Industry-leading warranty

**Ethernet is the undisputed, global choice for Metro Access Networks (MANs) and Local Access Networks (LANs).** However, existing copper access networks do not facilitate an end-to-end high-bandwidth connection, creating a bottleneck. This bottleneck is the first mile of access. This refers to the access link (most often a TDM-based copper circuit) from the business customer's office LAN to their service provider's MAN. ADTRAN affords service providers the ability to remove this bottleneck through the utilization of an improved data transmission standard. This standard, ITU-T G.998.2, is known as Ethernet in the First Mile (EFM). ADTRAN EFM over Copper (EoCu) defines a way to effectively and universally bond together, lower bandwidth copper loops or pairs of wires creating a Carrier Ethernet access connection.

This innovative EoCu solution enables service providers to extend packet-based business-class services beyond the reach of their fiber network by leveraging the existing investment of copper-based TDM business services assets. This means leveraging the full advantages of TDM, the most understood, successful, and ubiquitous business service infrastructure. Due to budget restrictions and time to market requirements, deploying fiber to address uneven or disperse service demand is not feasible, leaving a large percentage of businesses to rely on copper business access.

The ADTRAN EoCu solution is comprised of the NetVanta 800 family of NTU and can be launched from our Total Access 3000 and Total Access 5000 platforms. The NetVanta 830 Series NTU delivers enhanced data rate capabilities to deliver up to 45 Mbps of Ethernet service over bonded e.SHDSL. The NetVanta 810 Series NTU leverages the existing copper-based TDM business services assets to rapidly extend Ethernet service to any customer who currently uses DS1 or E1 service. The NetVanta 873 can EFM bond up to three DS3 connections to deliver up to 134 Mbps of Carrier Ethernet service.

**Quality of Service Flexibility and Assurance**
The NetVanta 800 Series deliver packet flow capabilities certified compliant per the Metro Ethernet Forum. These packet flow capabilities offer the traffic classification and bandwidth profiling capabilities required to offer customers a flexible, tiered service offer. In addition to this highly configurable, granular bandwidth selection toolset enabling Quality of Service (QoS) options, these same network termination points support the standards-based measurement and monitoring capabilities required to maintain a carrier-grade Ethernet network. All of this allows providers to create and meet customer SLA agreements.

**Reliable Service Connection Mechanisms**
In the event a single loop fails, the NetVanta 800 offers resiliency, maintaining traffic over the remaining active loops in order to maintain service. Once the failed loop is operational again, the NetVanta will automatically detect its availability and return the loop to the bonded group, providing the original provisioned customer bandwidth. When deployed through the Total Access 5000, these NTUs tap into an unparalleled array of copper loop diagnostic tools that afford an even greater service assurance level.

**Simplified Service Delivery**
In order to improve service time to market and reduce deployment costs, the NetVanta 800 Series delivers a feature set designed to simplify service deployment and maintenance. ADTRAN Total Access EMS employs EZ-Ethernet Provisioning, minimizing the number of steps to provision a new service. The EIA-232 craft port enables local access for configuration and status information. A management VLAN is used to remotely configure and collect status information. The compact chassis and flexible deployment options offer wallmount or rackmount for superior flexibility. When wallmounted, any NetVanta 800 only occupies a 17-inch by 10-inch area of the customer's telephone wiring closet. For rackmount installations, custom 19-inch rackmount shelves are available.

ADTRAN Smart Solutions for a Connected World.

Total Access System

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ADTRAN is an ISO 9001, ISD 14001, and a TL 9000 certified supplier.



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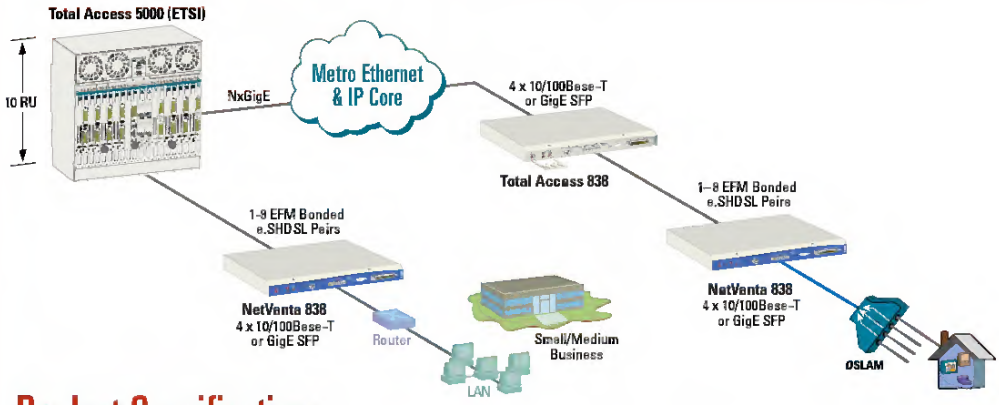
## 8-port EFM over e.SHDSL




# Product Specifications

## Physical Interface

- **Network Interface**: e.SHDSL – RJ21
- **Customer**: Four autosensing 10/100Base-T Ethernet
  - RJ-45
  - Auto MDI/MDIX
  - Auto-Rate
  - Auto-Duplex
- Gigabit Ethernet Interface
  - **Interface Type**: 1000 Base-X
  - **Connector**: Single SFP
  - **Compliance**: 802.3, 802.1D, 802.1Q
- **Management**: Console port
  - DB-9
  - EIA-232

## Diagnostic LEDs

- Power/Alarm LED
- SHDSL loop status for each loop
- Ethernet LED

## Features:

- E-Line support
- Mini jumbo frame support (1700 Bytes)
- Efficient EFM bonding
- Q in Q
- Flexible bandwidth profiles for rate limiting
- Traffic classification options include CE-VLAN, port, p-bit, DSCP
- SNMP support

## Standards Compliant

- IEEE 802.1p priority marking
- IEEE 802.1d dynamic/transparent bridging
- IEEE 802.1q VLAN tagging
- IEEE 802.3-ah EFM standard
- IEEE 802.3u Ethernet
- MEF 9,14

## Management & Administration

- Craft interface (local, EIA-232)
- Remote firmware upgrades
- **Local**: YMODEM through craft port
- **Remote**: Managed through Total Access 3000, Total Access 5000
- Flow through provisioning via Total Access EMS
- Supports DAM management status and loopback messaging
- Configuration script download

## Environment

- **Operating Temperature**: -40 C to +65 C
- **Storage Temperature**: -40 C to + 85 C
- **Relative Humidity**: Up to 95%, noncondensing

## Physical

- **Dimensions**: 44 mm H, 437 mm W, 254 mm D
- **Weight**: 3.6 kg
- **DC Power**: -48 VDC or +/-24 VDC (A or B power feed)

## 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 | 1200633G4 |
| 48VDC Power Supply, US Cord | 1202470E1 |
| 48VDC Power Supply, Eu Cord | 1202470E2 |
| 48VDC Power Supply, UK Cord | 1202407L3 |
| 48VDC Power Supply, US Cord | 1202407L4 |