

# NetVanta 868



## 8-port VDSL2 EFM Ethernet NTU

### Product Features

- 8-port EFM bonded VDSL2
- Extend 800 Mbps of resilient Carrier Ethernet service
- Certified MEF9, 14 Traffic Management Compliant
- Supports simultaneous pair bonding and vectoring to achieve over 100 Mbps per copper loop
- Rapid deployment via EZ-Ethernet Provisioning
- Standards based OAM supported
- Monitoring, fault detection, and loopback functions
- Advanced loop diagnostics
- Flexible Bandwidth management
- Performance monitoring with threshold alarms
- Configurable Queuing for CoS support
- Traffic storm protection to prevent service interruptions due to broadcast, multicast, unicast or L2CP traffic

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 utilisation 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.

The solution is an alternative to costly fibre and microwave build-outs or expensive SONET/SDH access tariffs by leveraging existing infrastructure which speeds the deployment time of the most sought after Ethernet service segment (100 Mbps). In addition, IT applications from email to streaming video have access connections trending to a downstream dominant usage pattern. High-Performance Ethernet is optimised for delivering high-capacity downstream bandwidth over an extended service reach to better align with the traffic demands associated with cloud computing as well as 4G mobile and DSLAM infrastructure backhaul.

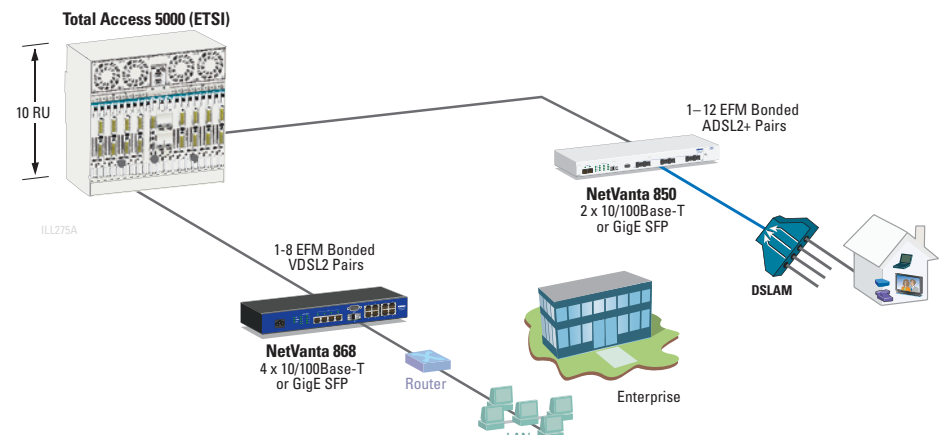
### Quality of Service Flexibility and Assurance

The NetVanta 800 Series delivers 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.

### 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 Advanced Operational Environment (AOE) employs EZ-Ethernet Provisioning, minimising 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.

### 50 - 800 Mbps Ethernet access using EFM bonded ADSL2+/VDSL2



Smart Solutions for a Connected World.

## 8-port VDSL2 EFM Ethernet NTU

### Product Specifications

#### Physical Interface

- **Network Interface:** 8-ports, EFM bonded ITU-T G.993.2 (VDSL2)
- **Customer:** Four autosensing 10/100Base-T Ethernet
  - RJ-45
  - Auto MDI/MDIX
  - Auto-Rate
  - Auto-Duplex
- Supports Vectoring to allow over 100 Mbps service delivery speeds per copper loop
- 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
- VDSL2 loop status for each loop
- Ethernet LED
- EFM Status

#### Ethernet Features

- Supports eight class of service queues
- 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
- MEF9/14 certified EPL, EVPL, ELAN

#### Ethernet Services Support

- Priority queuing of traffic based on VLAN priority
  - 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 from Mini Jumbo frame support (2,000 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
  - 1 EFM Group

#### Fault and Performance Management

- IEEE 802.3-ah EFM standard
- Supports OAM management status and loopback messaging
- ITU-T Y.1731 CFM, PM (2013)

#### Management and Administration

- Craft interface (local, EIA-232)
- Remote firmware upgrades
- **Local:** YMODEM through craft port
- **Remote:** Managed through ADTRAN AOE
- Flow through provisioning via Total Access EMS
- Supports OAM management status and loopback messaging
- Configuration script download
- SNMP support
- Environmental alarming

#### Environment

- **Operating Temperature:** -40 C to +65 C (-40 to 149 F)
- **Storage Temperature:** -40 C to + 85 C (-40 to 185 F)
- **Relative Humidity:** Up to 95%, noncondensing

#### Physical

- **Dimensions:** 44 mm H x 437 mm W x 254 mm D (1.7 in. H x 17.2 in. W x 10 in. D)
- **Weight:** 3.1 kg (6.8 lbs.)
- **AC Power:** 100-240 VAC 50/60 Hz
- DC Power Converter options for -48 VDC

#### 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 868, AC	1172868F1
NetVanta 868, DC	1172868F2
NetVanta 868, VDSL OVR ISDN, AC	1172868F3
NetVanta 868, VDSL OVR ISDN, DC	1172868F4
NetVanta 868, AC, NORDIC	1172868F5

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



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

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