

Total Access 1424S-CE/1448S-CE

Carrier Ethernet Network Termination and Aggregation

Product Features

- 24/48-port EFM bonded e.SHDSL
- Up to 125/250 Mbps of resilient Carrier Ethernet service
- Certified MEF9, 14 Traffic Management Compliant
- 1 RMU stackable with wallmount or rackmount options
- Rapid deployment via AOE ServiceDesigner, ServiceActivator tools
- Standards based OAM 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.

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 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.



Smart Solutions for a
Connected World.





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

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Total Access 1424S-CE/1448S-CE

100 Mbps Ethernet services over Copper

Product Specifications

Physical Interface

- **Network Interface:** e.SHDSL – RJ21
- **Customer:** Four autosensing 10/100/1000Base-T Ethernet
 - RJ-45
 - Auto MDI/MDIX
 - Auto-Rate
 - Auto-Duplex
- Gigabit Ethernet Interface (Quantity 5)
 - **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

- Software selectable for LTU or NTU mode of operation
- E-Line support
- Mini jumbo frame support (2,000 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

- ITU-T Y.1731 performance monitoring
- IEEE 802.1ag fault management
- 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 5000
- Flow through provisioning via ADTRAN's Advanced Operational Environment (AOE)
- Supports OAM management status and loopback messaging
- Configuration script download
- Three auxiliary alarm inputs
- Three alarm relay outputs

Environment

- **Operating Temperature:** -40 C to +65 C (32 to 122 F)
- **Storage Temperature:** -40 C to + 85 C (-4 to 158 F)
- **Relative Humidity:** Up to 95%, noncondensing

Physical

- **Dimensions:** 44 mm (1.7 in.) H, 437 mm (17.2 in.) W, 254 mm (10.0 in.) D
- **Weight:** 3.4 kg
- **DC Power:** -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 #
Total Access 1424S-CE	1172656G1
Total Access 1444S-CE	1172657G1
Replacement Fan Module	1179675G1