

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 enables service providers 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.

This solution, an alternative to costly fibre and microwave build-outs or expensive SONET/SDH access tariffs, leverages existing infrastructure which expedites the deployment time of the most sought after Ethernet service segment (100 Mbps).

Quality of Service Flexibility and Assurance
ADTRAN carrier Ethernet solutions 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 carrier Ethernet network termination device offers resiliency, maintaining traffic over the remaining active loops in order to maintain service. Once the failed loop is operational again, the solution 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 100 Mbps Ethernet services delivery solution provides a tool set designed to simplify service deployment and maintenance. The ADTRAN Advanced Operational Environment (AOE) is a services management platfrom that offers tools such as ServiceDesigner and ServiceActivator which minimise 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.

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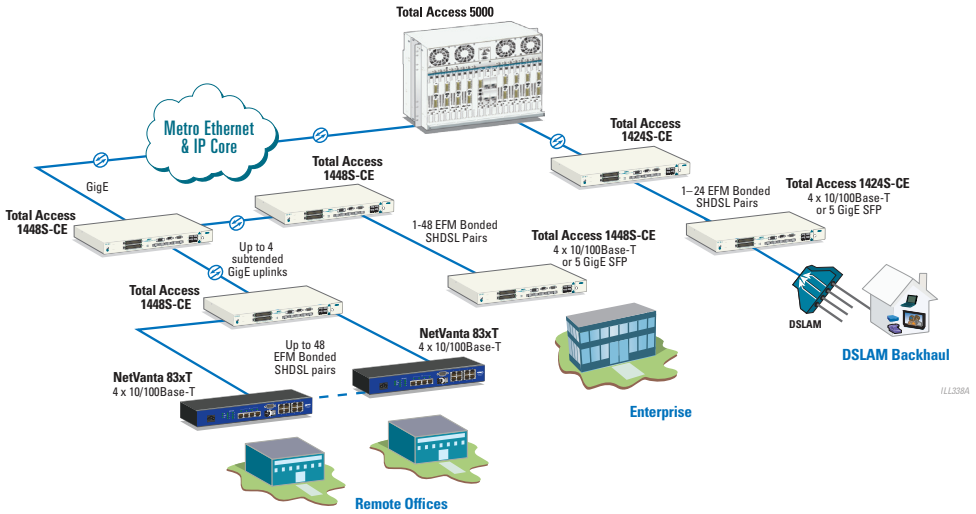
nsai TL 9000 TELECOMMUNICATIONS ISO 9001:2000 QUALITY ISO 14001 ENVIRONMENT

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

- EN 60950-1, AS/NZS 60950.1, and IEC 60950-1
- FCC Part 15 Class A
- FCC Part 68
- UL 60950, CAN/CSA C22.2 No. 60950
- EU RoHS Directive 2002/95/EC
- NEBS Level 3
- S043.2
- ITU-T K21:2000 Basic

Ordering Information

Equipment	Part #
Total Access 1424S-CE	1172654G1
Total Access 1448S-CE	1172655G1
Replacement Fan Module	1179675G1

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