



Total Access 850-TDM

Modular Integrated Access Device

Product Features

- Modular T1/FT1 integrated access device
- Integrated IP router
- Analog FXS and FXO voice expansion (four per board)
- Integrated DSX-1 PBX interface
- V.35 Nx56/64 DTE interface
- Supports TR-08 signaling
- TDM to ATM migration
- Modular network interface for future xDSL compatibility
- SNMP management
- UL 1950 compliant
- Industry-leading 10-year North American warranty

The Total Access® 850 is an integrated access device designed for cost-effective deployment of voice and data services at the customer's premises. The Total Access 850 benefits enterprise customers as well as integrated communications providers, such as CLECs, ILECs and ISPs, who require a customer premises device that integrates voice and data functions, and provides a viable migration path from TDM to packet-based technology. The Total Access 850 features remote management, an integrated IP router, and special services slots.

Total Access 850 is a modular device with two common slots and eight access slots. Common cards required for operation are a power supply unit (PSU) and a system control unit. System Control Units include either a Bank Control Unit (BCU) or a Router Control Unit (RCU). With a BCU, the Total Access 850 can be configured as a cost-effective TDM channel bank. The BCU activates a T1 network interface and a fractional T1 (DSX-1) interface located on the rear of the chassis. The RCU is another system control option that offers TDM functionality and a migration path to packet technologies including ATM. The RCU also offers an integral IP router and activates a Nx56/64 V.35 port on the rear of the chassis for connecting an additional external data device. Additionally, a variety of user modules are available for use with either the BCU or RCU. Six access slots allow the user to combine a variety of voice and data services. Up to six Quad FXS or Quad FXO

access modules can be installed to support up to 24 analog voice lines. Other access modules for data applications include the OCU DP and ISDN U-BR1TE. The other two access slots are for future hardware options.

Using local or remote inband management, carriers can turn features, functions and access ports on and off. Easy access to modules, common cards, the power supply, and the optional battery back-up system simplify maintenance procedures. Hot-swappable modules may be replaced without disrupting other units. The four-circuit-per-module design ensures that a maximum of only four analog circuits are affected when replacing a module.

A compact, metal chassis suitable for the customer premises or the central office provides added safety and reliability. The 2U design uses a minimum amount of rack space with an 8.5-inch by 11-inch footprint the size of a standard piece of notebook paper. Two Total Access 850 systems can be mounted side-by-side in either 19-inch or 23-inch relay racks. Pre-configured packages are available.

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Product Specifications

Network Interface

- **Line Rate:** 1.544 Mbps +/- 75 bps
- **Physical Interface:** RJ-48C (Modular, 8-pin)
- **Framing:** D4 (SF)/ESF, TR-08, AT&T 54016 or ANSI T1.403
- **Line Code:** AMI/B8ZS
- **Input Signal:** 0 to -36 dB
- **DS0 Assignment:** User selectable
- **T1 Transmit Timing:** Loop and local
- **TR-08 Support:** Single Party Ringing (SPR) and Universal Voice Grade (UVG) analog ports supported with FXS modules. CLASS® services.

Management Options

Craft Interface

- Accessible from front or rear of unit
- **Electrical Interface:** EIA-232, PC Serial Port or Modem
- **Physical Connector:** DB-9 front, RJ-48C back 10BaseT Port
- SNMP/Telnet support

LAN Interface

- Ethernet 10BaseT (RJ-45)
- IEEE 802.3

LAN Protocols

- **IP Support:** TCP, RIP V1 and V2, UDP, ICMP, DHCP, ARP, UDP Relay, SYSLOG
- **PPP Support:** LCP, IPCP, BCP
- IEEE 802.1D MAC bridging
- RFC 1490 Frame Relay encapsulation

Security

- PAP, CHAP, EAP, Radius, Caller-ID, NAT, PAT with DHCP
- Filtering (Pattern, IP, Bridge)
- Password protection

Testing and Troubleshooting

Local

- Payload, Line, and DTE Loopback

Remote

- Payload, Line, and DTE Loopback
- Fractional T1 Loopback: Per ANSI T1.403-1995, Annex B
- CSU Loopback (from Carrier Network)

Performance Monitoring

- **Error Counts:** ES, SES, UAS, % AS, % EFSEC, Alarms and Error Rates
- **Reports:** NI information stored for past 24 hours (15-minute increments)
- **PRMS:** ANSI performance report messages

Network Interface Test Jacks

- **Bantam Jacks:** RXMON, TXMON, TXNET & TXNet

V.35 DTE Interface (activated by RCU)

- **Data Rate:** Nx56 or Nx64 kbps (N=1 to 24)
- **Electrical and Mechanical:** CCITT V.35, Winchester type, 34-pin
- **Clock Options:** Normal/Inverted and Internal

DSX-1 Interface (activated by RCU)

- **Line Interface:** DSX-1 per ANSI T1.102
- **Physical Interface:** RJ-48C, modular 8-pin
- **DSX-1 Framing:** D4(SF)/ESF
- **DSX-1 Line Code:** AMI/B8ZS
- **DSX-1 Line Length:** 0 to 655 ft in 133 ft steps

Environment

- **Operating Temperature:** 0° to 50°C, (32° to 113°F)
- **Storage Temperature:** -20 to 70°C, (-4 to 158° F)
- **Relative Humidity:** Up to 95%, non-condensing

Physical

- **Dimensions:** 3.5" H, 11" D, 8.5" W
- **Weight:** approx. 8 lbs. (fully loaded, depending on configuration)

POWER

- **DC Power:** 40-56 vDC, 50W Max
- **AC Power:** (order 1175043L2): 90-130 vAC, 60Hz, 50W Max
- Optional eight-hour battery backup system

Agency Approvals

- UL 1950, CUL, FCC Part 15 (class A) and Part 68

Ordering Information

| Equipment | Part # |
|---|---------------|
| Total Access 850 Chassis | 1200375L1 |
| Total Access 850 Dual Chassis | 1200375L2 |
| 750/850 Power Supply Unit (PSU) | 1175006L2 |
| 850 Bank Control Unit (BCU) (L1) | 1200373L1 |
| 850 BCU (L2) | 1200373L2 |
| 850 T1 TDM Router Controller Unit (RCU) | 4200376L1#TDM |
| 750/850 Single DSO DP Module | 1180003L1 |
| 750/850 Dual V.35 Module | 1180025L1 |
| 750/850 Quad FXO Module | 1175407L2 |
| 750/850 Quad FXS Module | 1175408L2 |
| 750/850 OCU DP Module | 1180005L1 |
| 750/850 U-BRITE Module | 1180020L1 |
| 750/850 E&M/TO | 1180402L1 |
| 850 V.35 Module | 1200372L1 |
| 850 Single DSX-1 Module | 1200385L1 |
| 50/850 AC Supply & Battery Charger | 1175043L3 |
| 750/850 Battery Backup (L1) | |
| Rack or Wallmount | 1175044L1 |
| 750/850 Battery Backup (L2) Wallmount | 1175044L2 |
| 750/850 19" rackmount brackets | 1175045L1 |
| 750/850 23" rackmount brackets | 1175046L1 |



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