Total Access 3000 DSLAM
Product Specifications

Key Modules
- System Controller Unit (SCU), PCU, or ECU
- DS3, OC-3c, or 128-port Cell Switch Modules (CSMs)
- Voice Cell Processor (VCP)
- DSL-specific line cards: ADSL, SHDSL, IDSL, DSX-1, DS1 IMA

Minimum Configurations
- SCU, CSM, and a single line card

Mechanical
- Dimensions: 6 in. H x 19 in. or 23 in. W x 12 in. D
- Weight: 14.35 lb (23 in. main chassis)
- 11.58 lb (19 in. main chassis)

Interfaces

MUX Interfaces
- OC-3c
- DS3

Line Module Interfaces
- SHDSL 8 ports
- DSX-1 4 ports
- DS1 IMA 8 ports, dual wide card
- Voice Cell Processor 1 DS1 port
- DS3 Line Module 1 port
- Circuit Emulation 4 DS1 ports
- ADSL 8 ports
- ADSL with splitters 8 ports, dual wide card
- DS1 Frame Relay 4 ports
- SHDSL with IMA 16 ports

Electrical
- 15 Amps
- –42 VDC to –56 VDC input range

Ordering Information for Other Total Access 3000 DSLAM Equipment

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<thead>
<tr>
<th>Equipment Part #</th>
<th>Total Access 3000 SCU 1181018L1#P</th>
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<td>Total Access 3000 Circuit Emulation Module 1181405L1</td>
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<td>Total Access 3000 SHDSL with IMA 1181405L1</td>
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<td>Total Access 3000 Access Module Blank Faceplate 1181952L1</td>
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<tr>
<td>Total Access 3000 MUX Blank Faceplate 1181952L1</td>
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Regulatory Standards
- NEBS Level 3
- GR-1089-CORE, Issue 3
- GR-63-CORE, Issue 2
- NRTL Safety Listed

Management
- Local management: TL1, EMS, Ethernet interface for SNMP
- Remote management: TL1, SNMP

Environmental
- Operating: –40°C to +70°C
- Storage: –40°C to +85°C
- Relative Humidity: 95 percent, noncondensing

Solution Overview

Expansion Architectures in DSLAM Central Office Solutions

Subscriber pricing has become the all-important issue in today’s DSL offerings. How to deliver DSL at the lowest per-subscriber cost is key. Recent technical developments have added expansion architectures as an effective tool to maximize subscriber density and minimize costs without replacing existing DSLAMs.

When considering a high-density DSLAM, service providers should also consider flexibility of service, scalability, space, and cost per port. These are all critical factors that greatly impact service provider ability to expand DSL delivery throughout their customer base.

The ADTRAN™ Total Access® 3000 DSLAM is a cost-effective, compact, high-density solution creating DSL expansion opportunities in areas that were previously considered not economical.

The Total Access 3000 HDX (High Density eXpansion) architecture provides a single system solution for networks that demand seamless, high-capacity solutions for the central office.
Central Office Exhaust and Expansion. With the heightened interest in DSL promotion and delivery, many offices have exceeded the capacity of initially deployed DSLAMs. The Total Access 3000 HDX (High Density Expansion) architecture brings new advantages to central office capacity concerns. ADTRAN's HDX architecture keeps expansion costs in check by allowing shelf-by-shelf growth, coupling low initial costs with per port costs that actually decrease as systems are added. A single HDX system can support 1,344 DSL ports with a common network interface and a single IP address.

IMA/ATM Aggregation. Many DSLAMs utilize multiple DS1s to transport user data to the centralized switch or router to interface the Internet. Multiple DS1 interfaces can exhaust the port capacity of a router long before any router processing limitations are reached, causing expensive, inefficient usage of network resources. The Total Access 3000 is commonly used throughout the industry to aggregate up to 112 DS1s in a single DS3 or OC-3c interface, minimizing router port requirements and increasing overall system efficiency. The same Total Access 3000 can also provide subscriber access through ADSL, SHDSL, and DSX-1 interfaces while simultaneously providing IMA aggregation services.

The HDX Architecture utilizes two system chassis:
1. Total Access 3000 DSLAM
2. Total Access 3050 Splitter Shelf

The Total Access 3000 DSLAM is a carrier-class, full-service, temperature hardened DSLAM ideal for CO and large RT applications. It provides full DSLAM functionality serving up to 224 ports in only ten inches of rack space. The Total Access 3000 DSLAM also provides edge switch capability, offering DS1 IMA and DS3 aggregation. The Total Access 3000 DSLAM HDX architecture scales port capacity from a single chassis, 224 port system to a multichassis configuration serving up to 1,344 subscribers.

The Total Access 3050 DSLAM Splitter Shelf houses 28 octal splitter modules for POTS access and complements the installation of the Total Access 3000 DSLAM. Cabling is neat and simplified for ease of installation.

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The ADTRAN Total Access 3050 accommodates other services deployed from the same chassis including SHDSL, IMA, IDSL, DS1 Frame Relay, Circuit Emulation Services, and DSX-1 by utilizing a cut-through module in the corresponding splitter chassis.

**HDX Features**
- 1,344 contiguous ports
- Single system expansion
- One IP address
- All DSLAM access modules supported
- Full GoS support for CBR, UBR, VBRrt, and VBRnrt
- UNI 3.1 and TM 4.0 support
- Per VC queuing and policing

**HDX Architecture**

- **Equipment Part #**
  - Heat Baffles 1181002L1
  - Rackmount Fan Module 1181005L1
  - ADSL Splitter Module 1180030L1
  - ADSL Splitter Module with Test Access 1180030L2
  - Cut-Through Module 1180030L1
  - Cut-Through Module with Test Access 1180030L2
  - DS3 PSM 1181041L3
  - ESM 1181040L1
  - PCU 1181918L1
  - ECU 1181919L1
  - Total Access 3050 Splitter Shelf 1181023L1
  - Metallic Test Controller 1180030L1
  - Dual BNC Adapter 1181040L2

**Ordering Information for HDX**

- **Equipment**
  - Total Access 3000 Shelf
  - Heat Baffles
  - Rackmount Fan Module
  - ADSL Splitter Module
  - ADSL Splitter Module with Test Access
  - Cut-Through Module
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  - DS3 PSM
  - ESM
  - PCU
  - ECU
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- **Part #**
  - 1181001L1
  - 1181002L1
  - 1181005L1
  - 1180030L1
  - 1180030L2
  - 1180030L1
  - 1180030L2
  - 1181041L3
  - 1181040L1
  - 1181918L1
  - 1181919L1
  - 1181023L1
  - 1180030L1
  - 1181040L2

Add Revenue and Network Efficiency With A Single Platform
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ADTRAN Total Access 3000 High Density eXpansion (HDX) Architecture

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How the HDX System Works

- Interconnection between the shelves is via an RJ-45 Cat 5E cable
- DS3 PSM is the primary switch
- Expansion Switch Modules (ESM) chain in and out additional shelves
- Up to five ESM modules per chain
- Serial communications from the expansion shelves are aggregated in the DS3-PSM
- HDX architecture can be configured with redundancy by deploying both A and B MUX slots
- Managed as a single platform
- Remote and local management options

Ordering Information for HDX

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<td>Dual BNC Adapter</td>
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For more information about how ADTRAN products can help you deliver DSL everywhere, visit www.adtran.com or call 1.800.9ADTRAN today.