

# DSL ACCESS SPEEDPORT™ *Digital Subscriber Line Multiplexer*

## Open Your Loop to High-Speed Services

Service providers can now offer advanced high-speed data services over existing copper lines with SPEEDPORT. It expands data service offerings to the level of, and beyond that of, alternate carriers' systems such as cable-based networks. It also interconnects with today's extensive frame relay-based networks and is ready for emerging ATM-based networks.

SPEEDPORT's asymmetrical digital subscriber line (ADSL) technology enables you to:

- Expand revenue opportunities with high-speed Internet and corporate LAN connections
- Bundle DSL data service with existing lifeline POTS service
- Relieve switch congestion by routing connection-intensive data services such as Internet calls around your switch
- Reuse the existing copper plant for economical and fast implementation
- Provide a competitive service to cable modem to keep customers on *your* network

## Install Full-Rate or G.Lite ADSL Advanced Service

SPEEDPORT's digital subscriber line access multiplexer (DSLAM) shelf and CPE modem work together to provide full-rate or G.Lite ADSL-based data rates and provisionable service. This gives your customers data rates up to 8.192 Mbps downstream and 768 kbps upstream—a huge jump over that which is possible with analog modems. You can even reach distances of up to 18,000 feet for maximum coverage. Overall, you can supply and provision:

- Ethernet 10Base-T and ATM-25 customer connections
- Asymmetric or symmetric operation from the same ADSL line cards
  - Rate-adaptive DSL (RADSL) or fixed-rate speeds

Flexible line cards allow you to provide asymmetric service for residential customers who surf the Web and symmetric service for corporate LAN connections. You can offer your customers various committed rates at different price points to capture the best return on your investment.

In addition, SPEEDPORT adheres to the ANSI T1.413 DMT (discrete multitone) standard, which means you will be able to interwork with other compatible products. DMT support gives you distinct quality of service advantages over CAP-based systems.



## Jump Ahead with Direct Frame Relay or ATM Network Interfaces

The DSLAM shelf allows you to terminate frame relay or ATM network interfaces. Frame relay support gives you a distinct advantage in connecting with many of today's data service providers.

ATM support protects your investment as service providers migrate to ATM.

One DSLAM shelf supports up to 96 customer connections. With SPEEDPORT's daisy chaining ability, you can interconnect multiple SPEEDPORT shelves together for variable concentration. This reduces cost by allowing you to minimize the number of expensive router connections. You have a choice of:

- DS1 frame relay
- DS3 UNI
- OC-3 UNI

## Complete Your Network with Fujitsu

SPEEDPORT is one member of our complete line of access and transport products, which also includes our FACTR® universal access and add/drop multiplexer and FLASH150 ADX SONET/ATM multiservice multiplexer. These products work together for end-to-end transmission of your voice and data traffic.

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## Features and Specifications

### DSLAM Shelf

Up to 96 DSL subscribers per shelf

Variety of network interfaces:

DS1 (concentrated frame relay)

DS3 UNI (concentrated ATM)

OC-3 UNI (concentrated ATM)

Ethernet 10Base-T (unconcentrated)

Central office and remote-site environment support

### DSL Modem Line Card

Two or four individually-configurable DSL lines

ANSI T1.413 DMT line-code compliant

Full-rate or G.Lite operation

Asymmetric data rate: up to 8.192 Mbps downstream  
up to 768 kbps upstream

Symmetric data rate: up to 768 kbps

Automatic data rate adaptation (RADSL) or fixed-rate speeds

### Frame Relay Concentrator Card

Two DS1 frame relay network interfaces

Provisionable frame relay quality of service (QoS) parameters

Committed Information Rate (CIR)

Excess Information Rate (EIR)

Variable concentration ratios to meet load and service requirements

Daisy chain DSLAM shelves to reduce backbone connection costs

### ATM Concentrator Card

DS3 UNI or OC-3 UNI network interfaces

ATM QoS parameters such as CBR, UBR, VBR-rt, and VBR-nrt

Variable concentration ratios to meet load and service requirements

Daisy chain DSLAM shelves to reduce backbone connection costs

### CPE Modem

Single- or multiple-user capable on one ADSL link

Ethernet 10Base-T and ATM-25 CPE interfaces

RFC-1483 multiprotocol encapsulation over ATM

RFC-1577 classical IP and ARP over ATM

Full-rate and G.Lite operation

ANSI T1.413 DMT line-code compliant

Asymmetric data rate: up to 8.192 Mbps downstream  
up to 768 kbps upstream

Symmetric data rate: up to 768 kbps

Automatic data rate adaptation (RADSL) or fixed-rate speeds

### Operations

Software downloadable DSLAM line-card modems

CPE modem software downloadable over DSL link

CPE modem managed over DSL link

In-band and out-of-band management:

Craft interface via SPEEDPORT shelf manager

SNMP-based network management via SPEEDPORT FENS AN

### POTS Splitter Shelf

Used with DSLAM shelf when POTS service is desired

Splits/combines DSL and POTS for up to 96 customer connections

Standalone shelf for 23" rack mounting

Integrated wire-wrap version for MDF mounting

### CPE POTS Splitter Module

Customer premises unit

Splits/combines DSL and POTS for a single customer connection

Available for indoor and integrated outdoor applications

### Operating Environment

DSLAM shelf, POTS splitter shelf, and integrated outdoor CPE

POTS splitter:

Temperature: -40°C to 65°C (-40°F to 149°F)

Humidity: 5% to 95% (Non-condensing)

CPE modem, MDF POTS splitter module, and indoor standalone

CPE POTS splitter:

Temperature: -5°C to 55°C (23°F to 131°F)

Humidity: 5% to 90% (Non-condensing)

### Physical Characteristics

DSLAM shelf: 12"H x 23"W x 10"D

NEBS compliant

CPE modem: 1.5"H x 6.5"W x 9"D

POTS splitter shelf: 5.25"H x 23"W x 10"D

Indoor CPE POTS splitter: 1.25"H x 3.75"W x 5.75"D

### Power Consumption

DSLAM shelf: 298 W maximum (-48 Vdc)

CPE modem: 10 W (120 Vac)

POTS splitters: none

Specifications subject to change without notice.