

ADSL2-24 Plug-In Card



DESCRIPTION

Provides 24 ADSL interfaces per card. Each interface can be individually configured to support G.DMT (G.992.1), T1.413, G.Lite (G.992.2), ADSL2 (G.992.3), ADSL2+ (G.992.5), Annex M (G.992.5 Annex M), or Reach Extended ADSL2 (G.992.3 Annex L).

The ADSL-24 card can be plugged into any of the 20 universal slots on a Calix C7 shelf. Physical access to each ADSL interface is provided through standard 25-pair RJ-21 connectors mounted on the back of the Calix C7 shelf.

KEY ATTRIBUTES

INTERFACE DENSITY: The 14-inch high Calix C7 shelf can be equipped with up to 20 ADSL2-24 cards for a total of 480 ADSL interfaces per shelf. Up to five shelves can be configured in a single node to deliver 2,400 ADSL interfaces from one 7-foot bay.

ENVIRONMENTALLY HARDENED: The ADSL2-24 card is environmentally hardened. For deployment in outdoor environments, Calix offers a complete line of simplified services cabinets that serve from 120 to over 2,000 ADSL subscribers.

BANDWIDTH AND GRANULARITY: The Calix C7 supports ADSL2+ traffic profiles of up to 32,736 kbps downstream and 3076 kbps upstream, provisionable in 32 kbps increments. G.Lite profiles of up to 1.5 Mbps downstream and 512 kbps upstream, provisionable in 32 kbps increments, are also supported.

INTELLIGENT POWER MANAGEMENT: Traditional loop interface systems drive all loops as if they were the longest supported by the system. This "worst case" approach can be very inefficient in high-density urban deployments where short loops do not require maximum DSL power. The Calix C7 eliminates superfluous power consumption by automatically adjusting the power of ADSL lines to the minimum required based on loop lengths. This enables service providers to maximize their power budgets and serve more customers with less power.

SERVICE GUARANTEES AND RATE REPORTING: The Calix C7 supports rate reporting on a per interface basis. This enables service providers to monitor subscriber line performance.

Each ADSL interface can support customer SLAs using CBR, UBR, rtVBR, nrtVBR, and GFR classes of service.

END-TO-END SERVICE AUTO PROVISIONING: The user specifies two end points of a particular service. The system then provisions the path and bandwidth (primary and protected) between those two points. The criteria used for path selection is programmable, and the user always has the option of overriding the automatic selection and configuring services manually.

PLUG AND PLAY: New ADSL2-24 cards can be added to the system with ease and minimum user intervention, allowing quick and easy turn up of new services.

INDUSTRY STANDARDS COMPLIANCE: Each ADSL interface can be individually configured to support industry standard ADSL services. The ADSL2-24 card complies with all applicable ADSL ITU standards, including G.992.1, G.992.2, G.992.3, G.992.4, G.992.5, and G.994.1, as well as ANSI T1.413, ensuring interoperability with a wide range of CPE.

METALLIC TEST ACCESS: The Calix C7 supports test access for equipment and facility testing of metallic circuits. Service technicians can perform onsite testing through a direct connection in the front of the Calix C7, or perform remote automated testing through a rear access connection. Connection to a third party test head is also available.

SPECIFICATIONS

ADSL2-24 Plug-In Card

ORDERING INFORMATION

Calix Part No. 100-00456

PORTS

24 ADSL ports per card
480 ADSL ports per shelf
2400 ADSL ports per 7-foot rack

ADSL FORMAT

Full-rate ANSI T1.413, Issue 2
G.DMT full-rate ITU-T G.992.1
G.Lite ITU-T G.992.2
ADSL2 G.992.3
ADSL2+ G.992.5
Reach Extended ADSL2 (G.992.3 Annex L)
Annex M (G.992.5 Annex M)
ITU-T G.994.1 G.hs or "Handshake"

MAXIMUM DATA RATES

ADSL2+: up to 24 Mbps downstream, 3076 kbps upstream. Selectable in 32 kbps increments
Full rate ADSL: up to 8 Mbps downstream, 896 kbps upstream. Selectable in 32 kbps increments.
G.Lite: up to 1.5 Mbps downstream, 512 kbps upstream. Selectable in 32 kbps increments

ATM

UNI 3.0/3.1 PVC support
CBR, UBR, rtVBR, nrtVBR and GFR service categories per ATM Forum Traffic Management 4.0/4.1 specifications
Full VPI/VCI address field with translation
Up to 8 user PVCs per interface
Non-interleaved flows

STATUS INDICATORS

4 module status LEDs on unit faceplate:
FAIL: Red – indicates that the card has failed
ACTIVE: Green – indicates that one or more lines are active
SYNC: Green – indicates at least one ADSL line is synched
LINE: Yellow – indicates one or more provisioned lines has a fault condition

POWER DISSIPATION

45 watts maximum per card

PHYSICAL DIMENSIONS

Size: 9.3 inches (height) x 0.7 inches (width) x 9.0 inches (depth)

OPERATING ENVIRONMENT

Temperature: –40° C to +65° C (–40° F to +149° F)
Humidity: 5 to 90% non-condensing
Altitude: to 13,125 feet

STORAGE TEMPERATURE

–40° C to +70° C (–40° F to +158° F)

NEBS LEVEL 3 COMPLIANCE

Telcordia GR-63-CORE, Network Equipment-Building System (NEBS) Requirements, Issue 1, October 1995
Telcordia GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety, Issue 2, December 1997 with revision 1, February 1999

SAFETY

NTRL-UL 1950

EMI/RFI

FCC Part 15 Class A

STANDARDS SUPPORT

Full-rate ANSI T1.413, Issue 2
G.DMT full-rate ITU-T G.992.1
G.Lite ITU-T G.992.2
ADSL2 G.992.3
ADSL2+ G.992.5
Reach Extended ADSL2 (G.992.3 Annex L)
Annex M (G.992.5 Annex M)
ITU-T G.994.1 (G.hs or "Handshake")
T1.413 Annex A: ADSL operating above POTS
ITU-T G.997.1 (Physical Layer Management)
ITU-T I.610 (B-ISDN (ATM) operation and maintenance principles and functions)
ATM Forum Traffic management 4.0/4.1
RFC 2662 (Managed Objects for ADSL Lines)
Supplemental ADSL Line MIB
RFC 2515 (Objects for ATM Management)
ITU-T G.992.1, Annex E (CO POTS splitter interoperability)
ANSI T1.413 Issue 2, Annex E (CO POTS splitter interoperability)



1035 N. McDOWELL BLVD., PETALUMA, CA 94954
TEL: 877.766.3500 WWW.CALIX.COM

#250-00090, Rev. 12

© 2001–2008 Calix. Calix and the Calix logo design are trademarks of Calix Networks, Inc.