

Integrates VoIP gateway, IP access router, IP VPN, Firewall, channel bank, 1/0 DCS, CSU/DSU, and DLC in a compact chassis

High-density architecture supports configurations up to 48 FXS or FXO ports, 18 T1s, or 12 10/100 interfaces

Two Adit 600s can be mounted side-by-side in a 2RU rack space

## A Gateway that Combines Multi-Network Access and Multi-Service Delivery Capabilities into a Single Chassis

With over 120,000 units in service, Force10 Networks' Adit® 600 is the most widely deployed, carrier-grade Converged Services Access Gateway in the industry. Optimized for a wide range of applications, the Adit 600 combines multi-network access and multi-service delivery capabilities into a single chassis. This results in an extremely cost-effective, compact, and flexible access platform that simplifies the migration from TDM to next-generation VoIP and IP data services for service providers and small to medium business (SMB) customers.

Unlike competing devices which provide only fixed configurations, the Adit 600 supports a fully modular architecture and hot-swappable service cards – delivering greater system reliability, scalability and a longer product deployment lifecycle. Additionally, the Adit 600 does not require fans for cooling, further increasing the reliability of the NEBS level three certified platform. The compact, 6-slot Adit 600 shelf is also only 3.5 inches high, and 8.5 inches wide, enabling two chassis to be mounted side-by-side in a 2RU (rack unit) space.

## A Broad Range of Services in a Single Scalable Platform

The Adit 600 integrates the functionality of a voice over IP (VoIP) gateway, Ethernet/IP access router, VPN/Firewall, channel bank, 1/0 digital cross-connect, CSU/DSU, and a digital loop carrier in a single chassis. The fully modular design of the Adit 600 is unique in its ability to support new revenue-generating services simply by installing new hot-swappable cards. Any service card can be placed in any of the six available slots. Flexible multi-T1 or 10/100 Ethernet WAN interfaces are supported, as well as a variety of standard customer interfaces and services including long reach FXS, FXO/DPT, 10/100 Ethernet, E&M/TO, V.35, ISDN BRI, Terminal Server Router (TSR), ADPCM, and T1. The Adit 600 provides a high-density design that supports up to 18 T1s, or 48 FXS/FXO ports per chassis.

Modular functions that can be added to the Adit 600 via specific service cards include Ethernet/IP routing features such as VPN (IPSec, PPTP, L2TP), Stateful Firewall/NAT, and VLAN tagging. High-capacity SIP- and/or MGCP-based VoIP gateway functionality can also be integrated – VoIP trunking (PRI/CAS) or line termination (FXS) – to enable the delivery of converged IP services.

## Key Features

- Fully modular design simplifies the migration to new VoIP and data services, while preserving existing capital investments
- Expandable platform delivers greater system reliability and scalability while providing a future-ready service migration path
- Flexible Multi-T1 or 10/100 Ethernet WAN interfaces
- High-capacity integrated SIP- or MGCP-based VoIP gateway supports up to 40 simultaneous calls per chassis (G.711 or G.729 codecs and T.38 Fax)
- New revenue-generating services can easily be added by installing hot-swappable service cards
- Advanced Ethernet/IP routing functionality includes VPN (IPSec, PPTP, L2TP), Stateful Firewall, NAT, and VLAN tagging
- Supports up to 8 bonded T1s (WAN), and up to 2 PRI/T1 CAS voice trunks from a single chassis
- Remote management options enable operational efficiencies and provide high service availability to SMB customers

**Adit 600 Chassis  
Maximum Interface Densities**

Interface	Ports
T1	18
10/100 Ethernet	12
FXS	48
FXO/DPT	48
ISDNBRI	40
V.35	12
Terminal Server Router	24
E&M/TO	24



# Specifications: Adit 600 Converged Services Access Gateway



## Chassis

### Adit 600

Wall mount bracket (included)

Rack mount option: dual side-by-side

19 in (48.26 cm) or 23 in (58.42 cm) rack

Dimensions: 3.5 in (H) in (2RU) x 8.5 in (W) x 12 in (D)

8.9 cm (H) x 21.6 cm (W) x 30.5 cm (D)

Weight: 11.8 lb (5.35 kg) maximum (fully loaded)

## Power

### Standard 115 VAC/-48 VDC Power Supply/Charger

Power supply with integrated battery charger

AC power: 90 to 135 VAC, 60 Hz

DC power: -42 to -60 VDC @ 3.5 A max

Maximum power: 115 W

Battery backup unit option (for external mounting)

### Optional 230 VAC/-48 VDC Power Supply/Charger

Power supply with integrated battery charger

AC power: 190 to 254 VAC, 47-63 Hz

DC power: -48 to -60 VDC @ 2.5 A max

Maximum power: 90 W

Battery backup unit option (for external mounting)

### Optional 24 VDC Power Supply

Power supply with ringing generator

DC power: 21 to 29 VDC @ 6 A max

Maximum power: 90 W

## Environmental

Operating temperature range: 32°F to 104°F (0°C to 40°C)

Storage temperature range: -40°F to 158°F (-40°C to 70°C)

Cooling method is by free air convection and requires long axis of unit to be mounted horizontally

Maximum operating altitude: 10,000 ft (3,048 m)

Maximum non-operating altitude: 40,000 ft (12,192 m)

Relative humidity (non-condensing) range: 0% to 95%

## Components

Adit 600 chassis with six hot-swappable Service Card slots, single Controller Card slot and one Power Supply slot

### Power supply options

Combination 115 VAC/-48 VDC Power Supply/Charger

Combination 230 VAC/-48 VDC Power Supply/Charger

24 VDC Power Supply

### Dual T1 Controller

#### Service cards available include

8-channel FXS 8D Voice Service Card

8-channel FXO/DPT Voice Service Card

8-channel ISDN BRI Service Cards

Dual-Port 10/100Mbps Ethernet Multi-Service Router (MSR) Card (SIP-based VoIP)

Quad 4-Wire E&M/TO Service Card

Hardened Dual V.35 Service Card with V.54 test capability

Quad DS1 Network Access/Digital Cross-Connect Service Card

Quad-Port Terminal Server Router (TSR) Service Card

Customer Media Gateway-01 (CMG-01) Service Card (MGCP-based VoIP)

Customer Media Gateway-02 (CMG-02) Service Card (MGCP-based VoIP)

## Management

SNMP in-band management over 10BaseT customer WAN connection or dedicated DSO for out-of-band management

Remote in-band management over T1 ESF Facility Data Link or dedicated DSO for out-of-band management

Hitless remote upgrade capable

## Network Interfaces

Dual T1 included with T1 Controller

Framing for T1: SF (D4) or ESF

Line code for T1: B8ZS and AMI

## Network Standards

ANSI/TIA T1.403 ESF FDL

T1.403-1995

## Clocking

T1 reference timing with hold-over

Internal Stratum 4E clock with hold-over

## Alarms

External Alarm: 6-pin connector (rear), one input, two outputs for major/minor alarms

T1: LOS, BPV, Yellow, LOF, AIS

## Testing & Diagnostics

Configurable for CSU or NIU loopback codes, or disabled

V.54 loop codes, QRSS, 2047, 2E20-1, 2E15-1 Test Patterns

## Regulatory Compliance

### USA

UL60950, FCC Part 15, Class A, FCC Part 68 and RUS Listed

Designed to meet NEBS Level-3

GR-63-CORE and GR-1089-CORE

### Canada

CSA C22.2 No. 60950-00, ICES-003, Class A and CS-03

### European Union (CE Mark)

EN60950, EN55022, Class A, EN55024, Immunity, EN 300

386 V1.3.1, EN61000-3-2, Harmonics, EN61000-3-3,

Flicker and CTR 12 and CTR 13

### Australia/New Zealand (ITE Applications only)

C-Tick (Datacom), AS/NZS 60950 and AS/NZS CISPR22, Class A

### Brazil

Anatel-certified for specific telecom applications



### Force10 Networks, Inc.

350 Holger Way

San Jose, CA 95134 USA

www.force10networks.com

408-571-3500 PHONE

408-571-3550 FACSIMILE

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