

# Adit 3500 Series Trunk Gateway

Release 1.4



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## Key Benefits :

- SIP-PRI/CAS trunk capability for PBX trunk applications
- WAN options include 2xT1 and Ethernet
- 2xT1- trunk capacity
- Comprehensive routing, firewall, VoIP gateway, and integrated T1 in a single platform
- Price-disruptive features and performance
- 4 FXS option for analog modems, FAX and alarms

## Integrated PRI Trunk Gateway and Router at Wire-Speed

The Adit® 3000 series of IP Business Gateways are a new breed of access platforms designed to deliver carrier-hosted voice and data services at a disruptive price with unmatched performance.

The Adit 3500 integrates the features of a trunk gateway, high-performance router, and stateful firewall with flexible WAN options. It replaces multiple elements at the customer premises that typically provide routing, security, and trunk gateway functions—offering a powerful blend of speed, security, data and voice.

Additionally a 4 FXS option provides connectivity for analog fax and modems. This single platform offers scalability and high-performance for Internet and IP access, LAN-to-LAN connectivity over private and public networks, and Voice over IP (VoIP) PBX trunk service applications.

### Converged IP Services Without Sacrificing Performance

Unlike competing offerings, the Adit 3500 maintains 2xT1 wire-speed throughput with low latency for all packet sizes. The Adit 3500's VoIP-aware routing engine is based on advanced network processing technology and enables converged IP applications without the typical degradation in performance seen in other legacy solutions on the market.

By integrating routing and security features into a single processor, the Adit 3500 cost-effectively supports Network Address Translation (NAT/NAPT), stateful packet inspection, flow classification, Application Layer Gateway (ALG) and intrusion detection. Access control lists also protect traffic flowing in and out of the network. The Integrated firewall keeps the network and LAN segments secure from intrusions and attacks while allowing authorized access to network resources.

### Carrier-Grade VoIP Service Delivery

The Adit 3500 is a carrier-class solution that enables the key calling features used by today's business services. Built on top of the base routing engine, the Adit 3500 provides a scalable, integrated SIP trunk gateway that can terminate PBX traffic, and route both voice and data across public and private networks. The routing engine supports small packet size characteristics of full-capacity voice and data plus the quality of service (QoS) necessary to deliver carrier-grade voice.

### Simplified Configuration and Management

The Adit 3500's scalability does not increase its complexity. Both local and remote provisioning is simplified through an easy-to-use web interface. Remote alarms from the Adit 3500 are reported via SNMP, Syslog, e-mail alerts, or through a web interface. The platform can also be remotely configured and upgraded.

## Technical Specifications for the Adit 3500

### Components :

- Adit 3500 platform
- Hardware features (options):
  - 4 FXS hardware option
- Included accessories:
  - System software
  - AC power converter (AC models only)
  - DC power cable (DC models only)
  - Wall mount bracket
- Optional 8-hour battery back up

### Interfaces :

- 1 T1 WAN port (RJ-48C connector)
  - Framing for T1: SF (D4) or ESF
  - Line Code for T1: B8ZS or AMI
  - Internal or line timed with dual sources
  - T1 Loop Codes and BERT Testing
- 1 T1-PRI/CAS port (RJ-48C connector)
  - National ISDN-1/2
  - Configurable to support most common Class 5 switches
  - E&M: Wink Start, Immediate Start, Delay Dial
- 1 10/100Base-T WAN port (RJ-45 connector)
- 1 10/100Base-T LAN port (RJ-45 connector)
- RS-232 console port (DB-9 connector)
- Optional 2nd T1-PR/CAS port
  - Includes 2nd T1 WAN port
- Optional 4 FXS capacity

### Network Standards :

- ANSI/TIA T1.403
- ANSI/TIA T1.231
- ITU G.703, G.704
- National ISDN-1/2
- ITU-T Q.931
- ITU-T Q.921

### Voice Signaling (4 FXS Option) :

- FXS loop start, ground start
- DTMF signaling per RFC 2833
- Call progress tone generation
- CLASS<sup>SM</sup> (Custom Local Area Signaling Services) support
- Distinctive ringing support
- Multiple line appearance

### Voice Processing and Mediation:

- SIP call control
- Full T1 voice capacity
- CODEC support for G.711 a-law/G.711 u-law/G.729ab
- G.168 echo cancellation
- Silence suppression
- Voice activity detection/comfort noise generation
- RTP (Real Time Protocol)/RTCP (Real Time Control Protocol)
- Call progress tone and cadence generation
- 10-80 ms voice frame
- Max. 150 ms jitter buffer
- Gain control
- Modem support – v.90, g.711 fallback

### Dial Plan Features :

- Prefix number stripping and appending
- PRI Trunk Routing Table.
- Configurable Dial Plan

### Routing and Policy Management :

- IPv4
- Static routes
- RIP v1, v2

- PPP
  - ACF,VJ Compression
- DHCP Server/Client/Relay
- DNS Relay and Resolver
- BootP Relay
- PAP & CHAP authentication
- Ping
- IPCP
- Multi-Protocol Encapsulation

### Router Performance:

- Wire-speed on Ethernet to 2xT1 interface

### Quality of Service:

- ToS (Type of Service) marking & interpretation per IETF Std. 5

### Firewall Features :

- Stateful firewall
- NAT/NAPT, NAT Bypass, NAT Pin-Holes
- L1-L4 Flow classification
- Application Layer Gateways including VoIP
- Denial of Service Filtering
- Intrusion detection

### Management :

- LED Status indicators
- SNMP v1, v2c (via 10/100Base-T or in-band network)
- Standard MIB
- Command Line Interface (CLI), Telnet, FTP, TFTP
- CLI over secure telnet
- Web-based interface over SSL
- Syslog

### Power :

- Integrated battery charger
- DC Input Voltage: 12 VDC, 3 Amp

### Regulatory Approvals & Certifications :

- USA
  - UL60950
  - FCC Part 15, Class A
  - FCC Part 68
    - Intrabuilding (FXS)
    - Interbuilding-Network T1 (WAN)
- Canada
  - ICES-003 Class A digital devices
  - CSA C22.2 No. 60950-00
  - CS-03
    - Intrabuilding (FXS)
    - Interbuilding-Network T1 (WAN)

### Physical :

- Integrated wall mount brackets (included)
- Rack mount option: 19 inch or 23 inch rack
- Dimensions:
  - 1.75 in (H) x 8.25 in (W) x 12 in (D)
  - 4.4 cm (H) x 21 cm (W) x 30.5 cm (D)
- Weight: 6.25 lb (2.83 kg)

### Environment :

- 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)
- 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%