

Adit 3104 Series IP Business Gateway

Release 1.4



Key Benefits :

- Comprehensive routing, firewall, VoIP gateway, and integrated T1 in a single platform with price-disruptive features and performance
- Speed without sacrificing security to deliver public and private IP access at wire-speed across all packet sizes
- Web-enabled stateful firewall provides integrated network-level and application-level protection
- Scalable SIP Gateway delivers full capacity voice and data with Quality of Service (QoS) required for carrier-grade Voice over IP (VoIP)

Routing, Switching, Inspection, Protection and VoIP at Wire-Speed

The Adit® 3104 series of IP Business Gateways are a new breed of access equipment designed to deliver carrier-hosted voice and data services at a disruptive price with unmatched performance.

The Adit 3104 integrates the features of a high-performance router, stateful firewall, VoIP gateway and T1 CSU/DSU. It replaces multiple elements at the customer premises that typically provide routing, security appliances, and voice gateway functions—offering a powerful blend of speed, security and voice.

This single platform offers scalability, security, and high-performance for secure Internet and IP access, LAN-to-LAN connectivity over private and public networks and hosted Voice over IP (VoIP) service applications.

Speed Without Sacrificing Security and Performance

Unlike competing offerings, the Adit 3104 maintains T1 wire-speed throughput with low latency for all packet sizes. The Adit 3104's VoIP-aware routing engine is based on the latest advanced network processing technology and enables support of key security applications without the typical degradation in performance seen in other legacy solutions on the market.

By integrating all routing and security functions into a single processor, the Adit 3104 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. 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

Based on the analog voice technology in our TDM gateway solutions, the Adit 3104 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 3104 provides a scalable integrated SIP line side gateway capable of terminating up to 24 analog business grade phone lines. The routing engine provides ample support for the small packet sizes characteristic of full-capacity voice and data plus Quality of Service (QoS) necessary to deliver carrier-grade voice. It also adds small-size packet throughput and deep packet inspection.

Simplified Configuration and Management

The Adit 3104's scalability does not increase its complexity. Remote provisioning is simplified through both an easy-to-use web interface and a intuitive command line interface. Remote alarms from the Adit 3104 are reported via SNMP, Syslog, e-mail alerts, or through a web interface. The router can also be automatically configured and upgraded remotely.

Components :

- Adit 3104 platform
- Software features (options):
 - SIP Line Side Gateway Key: enables SIP signaling conversion for analog lines (max. 1 key/system)
 - G.729 Low Bit Rate Codec Key: enables G.729A support
- Included accessories:
 - System software
 - AC power converter (AC models only)
 - DC power cable (DC models only)
 - Wall mount bracket
- 8-hour battery back up unit option
- Rack mount kit option

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-derived clock source
 - Supports loop and BERT tests
- 1 10/100Base-T WAN port (RJ-45 connector)
- 4 10/100Base-T switched LAN ports (RJ-45 connector)
- 8, 16, 24 FXS ports (RJ-21 connector)
 - FXS signaling: loop start and ground start
 - Terminating impedances: 19 selectable impedances
 - Maximum ringers: 5 REN, FCC Class B ringers
 - Ringing Voltage: ≥ 55 Vrms @ 20 Hz
 - Modem support: full compatibility with V.90 modems
 - Telcordia™ GR-57-CORE (FXS parameters)
- RS-232 console port (DB-9 connector)

Network Standards :

- ANSI/TIA T1.403
- ANSI/TIA T1.231
- ITU G.703, G.704

Voice Signaling :

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

Voice Processing and Mediation :

- SIP call control
- Voice CODEC support for G.711 a-law, G.711 μ -law, and G.729A
- 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
- Max. 150 ms jitter buffer
- Gain control

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 T1 interface

Quality of Service :

- ToS marking & interpretation per IETF Std. 5

Firewall Features :

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

Management :

- 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 :

- AC Input Voltage: 120/240 VAC @ 60/50 Hz
- DC Input Voltage: -48 VDC, 1 Amp
- Internal solid-state (fuseless) protection

Regulatory Approvals :

- USA
 - UL60950
 - FCC Part 15, Class A
 - FCC Part 68
 - Interbuilding-Network T1
 - ICSA Compliant (Certification in Process)
- Canada
 - ICES-003 Class A digital devices
 - CSA C22.2 No. 60950-00
 - CS-03
 - Interbuilding-Network T1

Physical :

- 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%

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