

Adit 3104 Series IP Business Gateway

Release 1.6



The Adit® 3104 integrates the features of a high performance VPN capable 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 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 even with all security applications enabled. 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 NAT/NAPT, stateful packet inspection, flow classification, Application Layer Gateway, intrusion detection and IPSec VPN tunneling. 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, it provides a scalable integrated SIP line side gateway capable of terminating up to 24 analog business grade phone lines. The Adit 3104 also supports Fax-Modem bypass as well as T.38 Fax Relay allowing businesses to connect their fax machines and POS modems directly to the gateway. The routing engine provides ample support for the small packet sizes characteristic of full-capacity voice and data plus Quality of Service 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 an intuitive Command Line Interface. Remote alarms from the Adit 3104 are reported via SNMP, Syslog, e-mail, or through a web interface. The router can also be automatically configured and upgraded remotely.

Major product benefits:

- Comprehensive router, stateful firewall, VoIP gateway, managed Ethernet switch 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 with security applications enabled
- VPN capabilities to deliver secure connection over the Internet
- Web-enabled stateful firewall provides integrated network level and application-level protection
- Scalable SIP Gateway delivers full capacity voice and data with QoS required for carrier-grade VoIP
- Carrier grade reliability, performance and life cycle to enable mission critical business applications

Components

- Adit 3104 platform
- Included accessories:
 - System software
 - AC power converter (AC 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)
 - 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 parametrics)
- RS-232 console port (DB-9 connector)

Voice Processing and Mediation

- SIP call control
- Inter-op with various industry-leading SIP proxies and application servers such as Alcatel-Lucent, Avaya, BroadSoft, Sylanro, etc.
- Voice CODEC support for G.711 a-law, G.711 μ -law, and G.729A
- G.168 echo cancellation and silence suppression
- Voice activity detection/comfort noise generation
- RTP/RTCP
- T.38 FAX
- Fax/Modem Bypass
- Call progress tone and cadence generation
- Max. 150 ms jitter buffer
- Gain control

VPN

- IPSec tunneling, PPTP and L2TP support
- VPN Interoperability with Cisco, FreeBSD, Netscreen, Checkpoint, SafeNet, Microsoft, FreeSwan
- DES, 3DES and AES
- IKE based key management
- Digital certificates and pre-shared key authentication

Router Performance

- Wire-speed on Ethernet or T1 interface

Quality of Service

- ToS marking & interpretation per IETF Std. 5
- VLAN Priority Queuing

Power

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

Routing and Policy Management

- IPv4
- Static routes
- RIP v1, v2
- PPP
 - ACF, VJ Compression
- DHCP Server/Client/Relay
- DNS Relay, Resolver and BootP Relay
- PAP & CHAP authentication
- Ping and IPCP
- Multi-Protocol Encapsulation
- VLAN Tagging

Voice Signaling

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

Security Features

- Stateful firewall
- NAT/NAPT, NAT Bypass and NAT Pin-Holes
- L1-L4 Flow classification
- Denial of Service Filtering and 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
- RADIUS
- Web-based interface over SSL and Syslog

Regulatory Approvals

- USA
 - UL60950, FCC Part 15 Class A, FCC Part 68 - Interbuilding-Network T1 and 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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09-07-JC