Adit 3402 Series High-Bandwidth Multi-Service Router

Release 1.2.3

Key Benefits :

- Voice and data convergence on a single access circuit
- Comprehensive wire-speed routing, Stateful Firewall protection, mini-DCS functionality, CSU/DSU capability and 8 to 24 voice lines in a single plat form
- High performance IP routing under the most difficult conditions with streaming video, voice and security features running simultaneously
- Scalable and remotely upgradeable WAN bandwidth from 1.5 Mbps to 100 Mbps for growing bandwidth needs
- Protection of corporate network assets through state-of-the-art security features including NAT, stateful packet inspection, flow classification, Application Layer Gateway, Intrusion Detection and Denial of Service filtering
- Carrier-grade design, features and performance at a disruptive price

Speed, Security, and Voice to Unleash the Potential of WAN Services

The Adit® 3402 High-Bandwidth Multi-Service Router consolidates network access into a single, large IP pipe, while providing the speed that a growing business needs. Carrier-class performance is delivered, while securing voice and data traffic on the corporate network. All of these features are packaged into the Adit 3402 at an unmatched performance and price.

The Adit 3402 integrates the features of a wire-speed router, security appliance, T1 CSU/DSU, and integrated access device into a single element – without sacrificing speed or security. It replaces multiple elements in an enterprise location that typically provide voice, data and security between the LAN and WAN.

Speed and Scalability to Grow with Business Demands

Utilizing the latest IP network processor technology, the Adit 3402 enables packet performance greater than 100 Kpps. The Adit 3402 delivers speed two ways: scalability of WAN and voice ports and wire-speed performance on those ports. There is no need to over-engineer a router to plan for growth. The Adit 3402 is scalable to meet a business customer's bandwidth requirements. The 3402 base configuration includes 1 T1 WAN port, 1 T1 port for drop and insert applications and two routed 10/100Base-T Ethernet ports that can be used for WAN, LAN and DMZ applications.

Up to 4 T1 WAN ports are available. The additional T1 WAN ports can be activated through a software license key when bandwidth needs increase. One of the Ethernet ports can even be used to deliver metro Ethernet services.

IP Security Without Sacrificing Performance

The Adit 3402 maintains wire-speed throughput with low latency – even with small packets used for streaming media – while stateful packet inspection, network address translation, and Denial of Service protection are enabled. These stateful firewall features keep the network and LAN segments secure from attacks while allowing authorized access to network resources. Whether hosting e-commerce or web services or using VoIP, the Adit 3402 routes and secures data packets.

Carrier-class Voice Service

The Adit 3402 delivers 8, 16, or 24 lines of carrier-grade voice services providing the reliability and robustness required for carrier services. The telephony interfaces operate over a variety of operating environments and with almost any telephone, key system, or PBX. An optional eight-hour battery backup unit keeps the system operational in the event of a power interruption.

Simplified Configuration and Management

Adit 3402 units are shipped configured for quick turn-up and operation. Just select the right configuration for the application and we will ship it ready for service. There are no complex hardware modules or software packages to select. New features can be activated remotely through a software download.

Configuration and maintenance is performed locally or remotely. The command line interface is accessed locally through the serial port on the unit or remotely through Telnet. SNMP is used for alarm and performance monitoring. Best of all, no site visits are required to increase the capabilities or manage the system; thereby reducing cost and personnel required to support the system.

CarrierAccess™

Solution Diagram for the Adit 3402
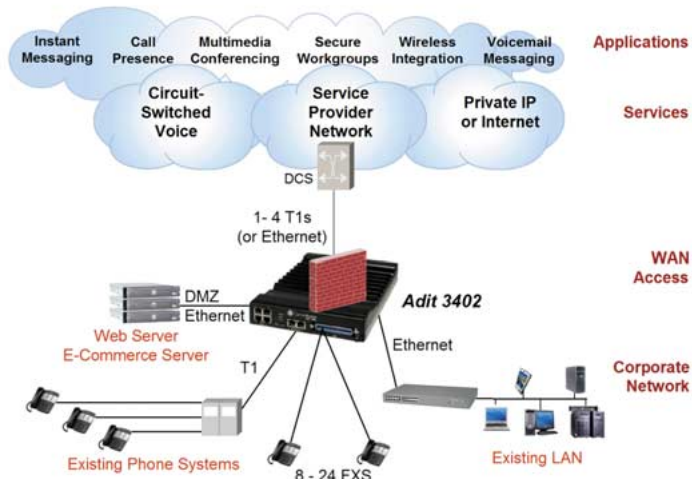
Technical Specifications for the Adit 3402

Components :

- Adit 3402 Platform
- Software Features
  - T1 WAN Upgrade: Enables one T1 interface (max. 3 keys/system)
- Included Accessories
  - System software
  - AC power converter (AC models only)
  - DC power cable (DC models only)
  - Wall mount brackets

Interfaces :

- 2 10/100Base-T Ethernet (RJ-45 connector) ports
  - LAN, WAN, or DMZ
- 4 T1 ports (RJ-48C connector)
  - Option: 2nd – 4th T1 WAN ports are software enabled
  - 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 port for drop-and-insert (if used reduces T1 WAN capacity to 3)
  - Non-blocking DS0 time-slot interchange
- 8, 16, 24 FXS ports (RJ-21 connector)
  - FXS signaling: Loop Start, Loop Start Reverse Battery, Ground Start, Ground Start Reverse Battery, Ground Start Wink, Ground Start Wink Reverse Battery
  - Terminating impedances: 19 selectable impedances
  - DC loop range: 1000 feet, 26 AWG
  - ERL: ≥19 dB
  - SRL: ≥11 dB
  - Maximum ringers: 5 REN per line, FCC Class B ringers
  - Ringing Voltage: ≥50 Vrms @ 20 Hz
  - Modem support: full compatibility with V.90 modems
- RS-232 console port (DB-9 connector)
- Battery status/general alarm interface

Network Standards :

- ANSI/TIA T1.403
- ANSI/TIA T1.231
- ITU G.703, G.704, G.712
- TIA/EIA-464
- Telcordia™ GR-57-CORE

Voice Processing :

- Voice CODEC support for G.711a/µ-law

Voice Signaling :

- FXS loop/ground start
- DTMF signaling
- CLASS℠ support

Routing and Policy Management :

- IPv4
- Static routes
- RIP v1, v2
- OSPF
- PPP, ML-PPP
- DHCP Server/Client/Relay

- DNS Relay and Resolver
- BootP Relay
- PAP, CHAP, & RADIUS authentication
- Ping, Trace Route
- IPCP

Router Performance :

- Wire-speed on T1 and 100Base-T interfaces (≥100 Kpps) (Actual performance depends on features enabled)

Firewall Features:

- Stateful Firewall
- NAT/NAPT, NAT Bypass, NAT Pin-Holes
- L1-L4 Flow Classification
- Application Layer Gateway
- Intrusion Detection
- Denial of Service (DoS) Filtering

Management :

- Visual status indicators
- SNMP v1, v2 (via 10/100 Base-T or in-band network)
- Standard MIB
- Command Line Interface via telnet or craft port
- File transfer via TFTP
- Syslog

Power :

- AC Input Voltage: 120/240 VAC @ 60/50 Hz
- DC Input Voltage: -48 VDC, 0.7 Amp
- Internal solid-state (fuseless) protection
- 8-hour battery backup (optional)

Regulatory Approvals :

- USA
  - UL60950-1
  - FCC Part 15, Class A
  - FCC Part 68 and TIA-968-A
- Canada
  - CSA 60950-1
  - ICES-003 Class A
  - CS-03

Physical :

- Wall mount brackets (included)
- Rack mount option: 19 in or 23 in 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%

CarrierAccess™