

Alcatel's 3609 MainStreet Frame Relay Access Device (FRAD) consolidates toll-quality voice with fax and data while taking advantage of the statistical multiplexing and distance-insensitive benefits achievable with frame relay services. In addition to offering all the features supported by the 3608 MainStreet Frame Relay Access Device (FRAD), the 3609 MainStreet FRAD has an integral router that allows for IP connectivity.

With enough capacity to be used in a branch office, yet economical enough for remote access or SOHO (small office, home office) applications, the 3609 MainStreet FRAD provides a highly integrated solution.



Consolidated voice,
fax and data over
frame relay networks



The 3609 MainStreet FRAD offers a variety of features including:

- ▼ consolidation of voice, fax and data for transport over frame relay networks
- ▼ AssuredVoice technology
- ▼ DTMF call routing
- ▼ network-to-network switching
- ▼ legacy protocol support
- ▼ integral 10Base-T router/bridge
- ▼ integral DSU
- ▼ FRF.1, FRF.11, FRF.12
- ▼ ITU-T G.165 echo cancellation
- ▼ plug-and-play installation
- ▼ Alcatel 5620 Network Manager (NM), formerly the 46020 Network Manager*, SNMP and Telnet support

Toll-quality services

The 3609 MainStreet FRAD features AssuredVoice, an adaptive packet voice technology from Alcatel. Voice compression, ITU-T G.729 CS-ACELP, combined with the latest in adaptive delay equalization techniques, provides high quality services on packet-based networks. Innovative adaptive techniques by Alcatel ensure that the 3609 MainStreet FRAD maintains voice quality during adverse network conditions.

Data support

An extensive set of data access protocols is supported to allow easy migration of existing user data. The integral 10Base-T card also adds flexibility by routing or bridging Ethernet LAN traffic.

The 3609 MainStreet FRAD supports up to three data ports, which can be used for local or WAN access at speeds up to 256 kb/s. WAN access choices include V.24 (T1A/E1A-232), V.35 and X.21. An optional integral DSU port, replacing one of the serial ports, can also be used for WAN access.

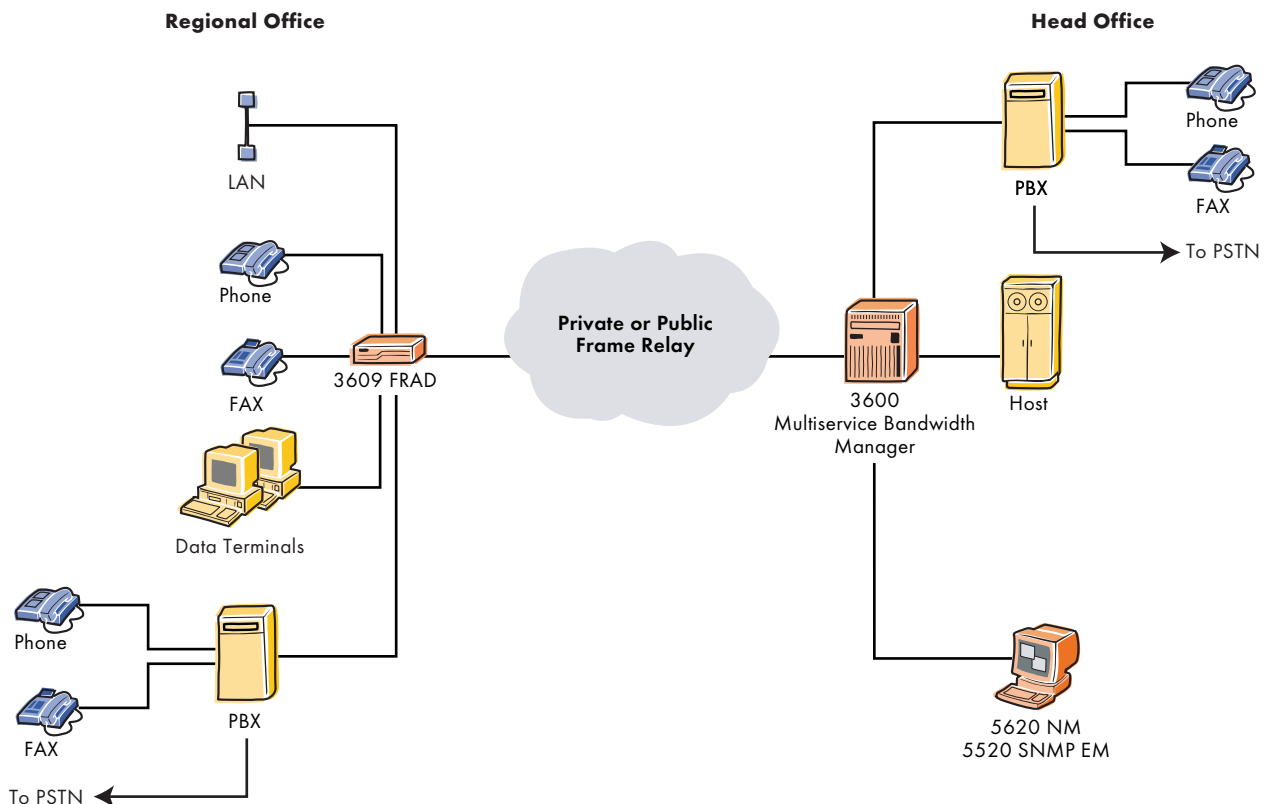
Network management

The 3609 MainStreet FRAD can be configured locally or remotely. In addition, the integral node management interface allows quick and easy local configuration, as well as remote configuration via Telnet. The unit can also be managed with industry-standard SNMP network management tools.

An Alcatel 5520 SNMP Element Manager (SNMP EM), formerly the 45020 Element Manager*, descriptor file is available to provide graphical management of the 3609 MainStreet FRAD unit from a network management station.

* This product belonged to the Newbridge family. Newbridge was acquired by Alcatel in May 2000.

▼ The 3609 MainStreet FRAD provides a variety of voice and data interfaces for private and public frame relay access.



Technical Summary

Features

Telephony and voice features

- ▼ ITU-T G.729 CS-ACELP – 8 kb/s voice compression
- ▼ Digital speech interpolation (silence suppression) for maximum bandwidth utilization
- ▼ DTMF detection and regeneration

Data features

- ▼ 64 data link connections
- ▼ PVC tunneling
- ▼ Frame relay switching between local access ports and network access port
- ▼ Data frame fragmentation
- ▼ Voice and data prioritization on a per-port basis
- ▼ PVC multicast

Echo Cancellation

- ▼ Conforms to ITU-T G.165 echo cancellation (no tone disabling) with 16 ms tail circuit length
- ▼ Configurable minimum echo return loss
- ▼ Optional non-linear suppressor

Data Protocols Supported

- ▼ Transparent asynchronous encapsulation
- ▼ BSC encapsulation
- ▼ Transparent HDLC with NRZ and NRZI options
- ▼ Frame relay
- ▼ X.25
- ▼ X.3/X.28/X.29 PAD
- ▼ Multiprotocol encapsulation over X.25

Interfaces

Voice port interfaces

- ▼ Up to four analog voice channels using FXS (LGS), FXO (LGE) and E&M modules

Data port interfaces

- ▼ All universal access ports are configurable as either local access or network access ports
- ▼ Up to three V.24 (T1A/E1A-232), V.35, or X.21 interface ports
- ▼ Asynchronous 1.2 kb/s to 115.2 kb/s
- ▼ Synchronous 1.2 kb/s to 256 kb/s
- ▼ Auto-configure interface
- ▼ Optional integral DSU

Traffic Management

- ▼ Advanced traffic management allows maximum use of available bandwidth while maintaining voice quality
- ▼ Features priority queuing, fragmentation and reassembly
- ▼ Congestion management support using CIR, BECN, FECN, DE frames, Bc and Be

Frame Relay Access

- ▼ Voice, fax and data traffic is consolidated for transmission over frame relay networks

10Base-T Router/Bridge Module

- ▼ IP (OSPF/RIP/RIP2)
- ▼ IPX (RIP/SAP)
- ▼ AppleTalk
- ▼ Transparent bridging
- ▼ 4:1 data compression
- ▼ Express Queuing

AssuredVoice Technology

- ▼ Adaptive delay equalization
- ▼ Adaptive jitter buffer management
- ▼ Adaptive silence suppression
- ▼ Adaptive traffic management
- ▼ Adaptive echo cancellation
- ▼ PVC tunneling

Fax Support

- ▼ G3 fax at speeds up to 9.6 kb/s supported by demodulating fax data for transmission over the network and regenerating at far end

Node Management

- ▼ SNMP or Telnet support for local or remote configuration and management
- ▼ Integral node management terminal interface for configuration
- ▼ 5520 SNMP EM support

Software Upgrades

- ▼ Supports local software upgrades and remote upgrades via FTP

Physical Description

- ▼ Height: 7.37 cm (2.9 in.)
- ▼ Width: 27.43 cm (10.8 in.)
- ▼ Depth: 27.94 cm (11.0 in.)
- ▼ Weight: (excluding power supply) 2.7 kg (5.9 lb.), 0.4 kg (0.9 lb.) for power supply
- ▼ Desk or wall mountable

Operating Environment

- ▼ Operating temperature from 0 C to 40 C (32 F to 104 F)
- ▼ Relative humidity of 5% to 95%, noncondensing
- ▼ Elevation of 60 m (197 ft.) below sea level to 1,800 m (5,906 ft.) above sea level

Protocol Standards Compliance

- ▼ Link management: LMI, ANSI T1.617 Annex D and ITU-T Q.933 Annex A
- ▼ Frame relay: FRF.1, FRF.11, FRF.12, frame relay standard UNI ANSI T1.618 frame format, ANSI T1.617 Annex F and Annex G encapsulation of X.25
- ▼ X.25: ITU-T X.25 (1988), X.3/X.28/X.29 PAD, DTE and DCE

Power

- ▼ 100 V to 240 V AC switching power supply (50/60 Hz)
- ▼ Ring generators switchable between 20 Hz battery biased and 25 Hz ground biased, 55 V AC

For more information www.cid.alcatel.com

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