INNOMEDIA

MTA8328-24

ANALOG TERMINAL ADAPTER

FEATURE-RICH AND HIGHLY MANAGEABLE TELEPHONE ADAPTER EMPOWERS VoIP SERVICE PROVIDERS

Expanding on InnoMedia's widely deployed Broadband IP Telephony product families, the MTA8328-24 provides crystal-clear wideband voice communications with a high degree of manageability, allowing rapid and scalable SOHO/Business service deployment. The enhanced line diagnostics feature provides added reassurance to the service provider and can reduce customer service expenses.

KEY BENEFITS

- Feature-rich and very manageable

- Highly interoperable and reliable

- Business environment friendly

    - PBX (Loop start, OSI)

    - FAX (T.38 and G.711 fallback)

    - High and low speed modem support (e.g., for credit card reader support)

- Intra-building GR1089 lightning protection allowing house wiring

- Set-based 3-way calls

- Wideband crystal-clear voice quality with advanced QoS features (802.1 p/q, ToS) for optimum voice & data traffic management

- Secured remote monitoring and diagnostics

- Seamless PSTN replacement with line diagnostic tests

Comprehensive Feature Set. The new generation 24-voice-port MTA8328-24 ATA offers service providers a feature rich and highly manageable solution for the small office or business market. It provides exciting features such as wideband codec support to allow superior voice quality, reliable fax transmission with T.38 or G.711 fallback, in-band and RFC2833-based DTMF and low/high-speed modem support for credit card readers and other POS terminals.

It can act as a DHCP server for LAN devices, as well as allowing port forwarding. The MTA8328-24 also features VLAN tagging for connected LAN devices.
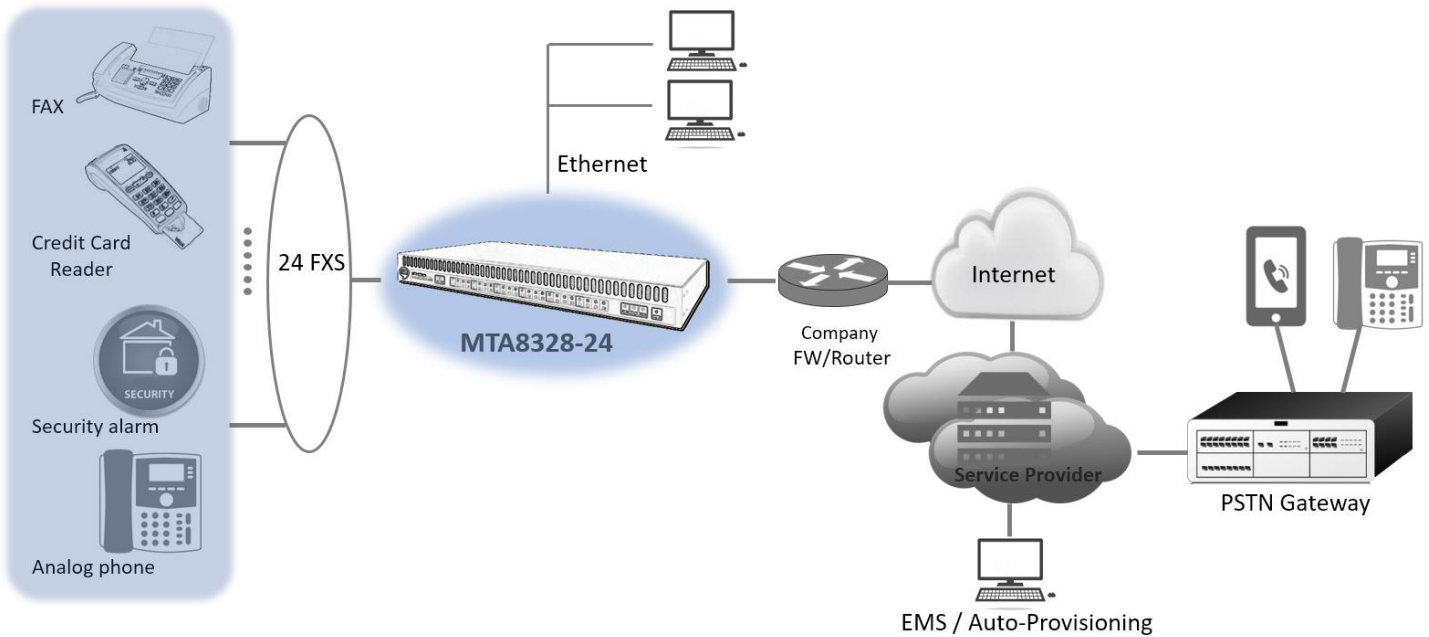
MTA8328 addressing a seamless PSTN replacement for business

Ease of Use and High Manageability. The built-in interactive voice response system (IVR) in the MTA8328-24 offers user-friendly status information in 2 languages (English, Spanish), including the device IP address, Ethernet cable connection status, Internet service status, and device registration status. In addition, the MTA8328-24 has a built-in element management client which, in conjunction with InnoMedia's carrier-grade Element Management System (EMS), provides full provisioning and device management support even for devices behind NAT routers, as well as sophisticated call quality monitoring. This allows the device to be highly manageable, thus greatly reducing service provider customer support costs.

Rapid and Secured Deployment. The MTA8328-24 supports various forms of auto-provisioning utilizing HTTP, HTTPS, FTP, or TFTP. The auto-provisioning feature enables dynamic and secure software upgrades as well as in-service configuration updates. In addition, the adoption of a X.509 PKI mechanism further secures the software upgrade process to prevent unauthorized software access. All these features make the MTA8328-24 an ideal solution for service providers looking for rapid and scalable voice service deployments.

Minimal Support Problems. The MTA8328-24's GR-909 line diagnostic tests detect the presence of foreign
voltages, resistive faults, receiver off-hook and REN violations, thus allowing service providers to offer high-quality voice services for a seamless PSTN replacement.

GR 1089 Protection. The MTA8328-24 has built-in intra-building GR1089 protection when proper grounding to earth ground is provided for the 3-prong power supply.

ATA INTERFACES

MTA8328-24 AC

(1) Amphenol connector to connect an existing analog phone or fax machine to a VoIP service provider
(2) One Gigabit RJ-45 Ethernet WAN port for Internet connectivity to the service provider network
(3) Three Gigabit RJ-45 Ethernet LAN ports for devices behind the ATA to connect to the Internet
(4) 9-pin RS232 serial diagnostic interface

Product and Package Specifications

Category	Specifications
Telephone Interface	24 FXS voice ports
Ethernet Network Interface	4 RJ45 Ethernet 10/100/1000 BaseT ports (1 WAN, 3 LAN)
Accessories	Ethernet cable, phone cable, AC/DC power adapter

Software Specifications: Telephony

Category	Specifications	
Signaling Protocol	SIP 2.0/TLS 1.2	
SIP Proxy Redundancy	Dynamic through use of NAPTR, DNS SRV, A records	
Speech Codec Capabilities	G.711, G.729, G.722, iLBC	
Signal Processing	• Echo cancellation: G.168 • Caller ID FSK signal regeneration • Attenuation and gain adjustment • Comfort noise generation(CNG) • Visual messaging waiting indicator (VMWI) • Packet loss concealment	• Polarity reversal • OSI (Open Switch Interval-event) • Voice activity detection (VAD) • Jitter buffer: adaptive, fixed • Advanced media processing with NetEQ™ • Hook flash event signaling
FAX Capability	Fax pass-through using G.711 Real-time fax over IP using T.38 fax relay	
Voice Features	• Configurable dialing plans (digitmap) with interdigit and critical timers • Caller ID blocking, call waiting, call transfer, do not disturb (DND), 3-way conferencing with local mixing, anonymous call rejection	• Caller ID generation: FSK • Speed dialing • E911 support • Reject anonymous call • Multiple service profiles
DTMF Tone and IVR	• DTMF tone detection and generation: RFC2833 and in-band • IVR in multiple languages (English and Spanish): Plays out any voice stream sent by a SIP Proxy controlled announcement server as well as pre-stored announcements for (1) Device IP (2) Internet cable not connected (3) Internet service down (4) Device not registered with service provider	

Tones	• Ring back tone	• Confirmation tone
	• Off hook warning tone	• Multiple country support:
	• Message waiting tone	– CID Type
	• Reorder tone	– Tone cadence
	• Busy tone	– Ring cadence (Five)
	• Dial tone	– Splash Ring
	• Call waiting tones (multiple)	– Line Impedance
SIP Capabilities	SIP INFO for DTMF/Flash Event SIP NOTIFY SIP PING SIP PRACK	
GR-909 Line Tests	FEMF/HAZ – Foreign line voltage detection ROH Tests – Receiver off-hook detection REN Test – REN range violation detection Resistive Faults Test – Tip-to-Ring short detection	

Software Specifications: Networking

Category	Specifications
IP and data networking	DNS: NAPTR, SRV record, A record Dynamic host configuration protocol (DHCP) client, or fixed IP DHCP Server (Router mode only) Port Forwarding (Router mode only) ICMP, TCP, UDP, TLS (SIP transport protocol) RTP, RTCP (media protocol) SNTP (simple network time protocol)
QoS	VLAN support Voice packet prioritization over other packet types. TOS settings for: • VoIP SIP signaling • Voice media traffic • Host data traffic

Software Specifications: OAM&P

Category	Specifications
Voice quality monitor	Voice quality statistics: RTCP/RTCP-XR reports End of call MOS score reporting
Remote Access	Management consoles: WEB (HTTP, HTTPS), SSH, Telnet Protocols: SNMP v1 and v2c, Syslog InnoMedia EMS (Element Management System) support SIP packet and media loopback features
Dynamic Provisioning and Secured Software Upgrade	• Automated provisioning with in-service configuration update and software upgrade using HTTPS, HTTP, FTP, TFTP • Asynchronous server-initiated provisioning using SIP NOTIFY

Regulatory Compliance

Category	Specifications	
Certifications/Compliance	AC	FCC, CE UL/cUL, and RoHS compliant
	DC	FCC, CE, and RoHS compliant

Hardware and Environmental Specifications

Category	Specifications	
Power Consumption	AC	Idle: 12.8W Talk: 34.8W (max. for all FXS ports) Ringing: 39.4W (max. for all FXS ports @ 2REN each)
	DC	Idle: 4.9 W Talk: 29.1W (max. for all FXS ports) Ringing: 33.5W (max. for all FXS ports @ 2REN each)
Loop Current	For load of 600Ω, settable to 25 mA (default) or 40 mA (max.)	
Ring Voltage	> 40 VRms @ 2000 ft. maximum 2 REN per port 24 AWG loop	
Power Supply	AC	AC 110~240V/50~60Hz (Proper grounding required for lightning protection)
	DC	IN 48V (Proper grounding required for lightning protection)
Dimensions	H x W x D: 1.75 in x 17.3 in x 10 in / 44.45 mm x 439.42 mm x 254 mm	
Weight	AC	Unit: 3.27 kg (7.22 lb) Packaging: 4.09 kg (9.02 lb)
	DC	Unit: 3.25 kg (7.16 lb) Packaging: 3.92 kg (8.64 lb)
Operating Temperature	32ºF to 104ºF (0ºC to 40ºC)	
Storage Temperature	-4ºF to 158ºF (-20ºC to 70ºC)	
Operating Humidity	10 to 90% RH	
Storage Humidity	5 to 95% RH	

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