INNOMEDIA

MTA8328-1N

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 MTA8328-1N allows crystal-clear wideband voice communications with a high degree of manageability which allows rapid and scalable residential/SOHO service deployment. The enhanced line diagnostics feature provides added reassurance to the service provider and reduce customer service expenses.

KEY BENEFITS

- Feature-rich and very manageable
- Highly interoperable and reliable
- Wideband crystal-clear voice quality with advanced QoS features
- Reliable fax with T.38
- Modem compatibility to support credit card readers
- Secured remote monitoring and diagnostics
- Seamless PSTN replacement with line diagnostic tests

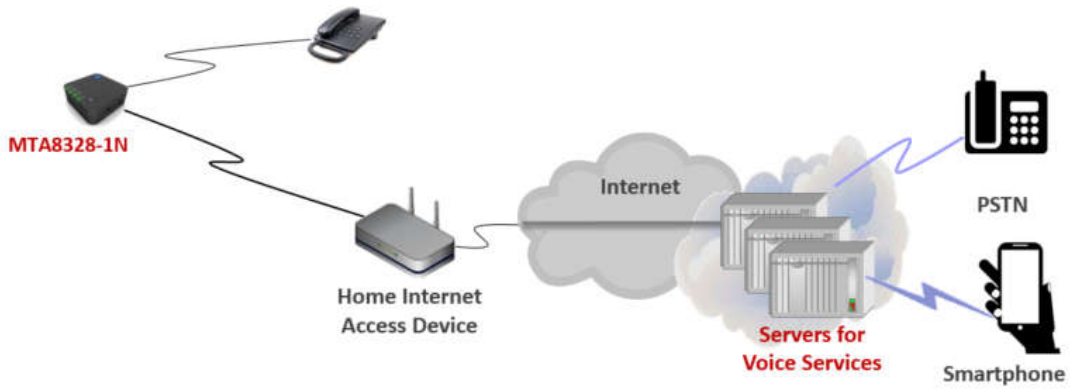
MTA8328-1N

Comprehensive Feature Set. The new generation 1-voice-port MTA8328-1N CPE offers service providers a feature rich and highly manageable solution for the residential and small office market. It provides exciting features such as wideband codec support (Opus, G.722) to allow superior voice quality to the PSTN, 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.

Rapid and Secured Deployment. The MTA8328-1N also 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 MTA8328-1N an ideal solution for service providers looking for rapid and scalable voice service deployments.

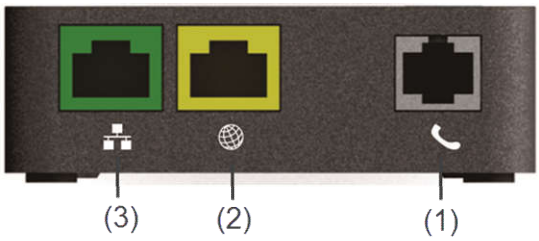
Ease of Use and Highly Manageable. The built-in interactive voice response system (IVR) in the MTA8328-1N offers user-friendly status information in 2 languages (English, Spanish) including the device IP address, Ethernet cable connection status, Internet service status, and device registration status. In addition, the MTA8328-1N 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.

Minimal Support Problems. The MTA8328-1N'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.



MTA8328-1N. Typical application and seamless PSTN replacement

MTA INTERFACES



The MTA8328-1N includes:

(1) One standard telephone port to connect an existing analog phone or fax machine to a VoIP service provider.

(2) One 100BASE-T RJ-45 Ethernet WAN port for Internet connectivity to the service provider network

(3) One 100BASE-T RJ-45 Ethernet LAN port for devices behind the MTA to connect to the Internet.

SPECIFICATIONS

Product and Package Specifications

Category	Specifications
Telephone Interface	1 FXS voice port
Network Interface	2 RJ45 Ethernet 10/100 BaseT ports (1 WAN, 1 LAN)
Accessories	Ethernet cable, phone cable, AC/DC power adapter

Software Specifications: Telephony

Category	Specifications
Signaling Protocol	SIP 2.0
SIP Proxy Redundancy	Dynamic through use of NAPTR, DNS SRV, A records
Speech Codec Capabilities	G.711, G.729, G.722, iLBC, Opus
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 • Line reversal/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 • Speed dialing • Caller ID generation: FSK • Caller ID blocking, call waiting, call transfer, do not disturb (DND), 3-way conferencing with local mixing, anonymous call rejection • 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 • Off hook warning tone • Message waiting tone • Reorder tone • Busy tone • Dial tone • Call waiting tones (multiple) • Confirmation tone • Multiple country support: – CID Type – Tone cadence – Ring cadence (Five) – Splash Ring – Line Impedance

Category	Specifications
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 ICMP TCP, UDP, TLS (SIP transport protocol) RTP, RTCP (media protocol) SNTP (simple network time protocol)
QoS	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	FCC part 15B, UL. RoHs compliant

Hardware and Environmental Specifications

Category	Specifications
Subscriber Line Interface Circuit (SLIC)	Maximum ringer load: 3 ringer equivalence numbers (RENs)
Power Consumption	Idle: 0.96W / Ringing: 3.6W / Talking: 2.28W
Power Adapter	Output: DC 12V, 1A / Input: AC 120V, 60Hz, 200mA
Dimensions	1.12 in (H) x 3.27 in (W) x 3.27 in (D) / 28.5 mm (H) x 83 mm (W) x 83 mm (D)
Weight	Unit: 0.09 kg (0.2 lb) Packaging: 0.36 kg (0.8 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

www.innomedia.com

InnoMedia Pte Ltd.
15 Jalan Kilang Barat #06-03 Singapore,
SINGAPORE 159357
Ph: (65) 6872 0828; Fax: (65) 6586 9111

InnoMedia, Inc
1901 McCarthy Boulevard, Suite 200
Milpitas, CA 95035 USA
Ph: (408) 432-5400; Fax: (408) 941-8152

InnoMedia Technology Inc.
3F, No. 3, Industrial East Road IX Hsinchu Science-Based Industrial Park, Hsinchu TAIWAN 300
Ph: (886) 3 564 1299; Fax: (886) 3 564 1589

InnoMedia Technology China, Ltd.
707 Colorful Plaza, NO. 16, Guangshun North Street,
Chaoyang District Beijing, 100102 CHINA
Ph: (86) 10 59782890; Fax: (86) 10 59782890 ext. 210