

INNOMEDIA

# MTA8328-1NP

## 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 MTA8328-1NP provides crystal-clear wideband voice communications with a high degree of manageability, allowing rapid and scalable residential/SOHO service deployment. Enhanced line diagnostics for detecting house wiring problems provide added reassurance to the service provider and can reduce customer service expenses.

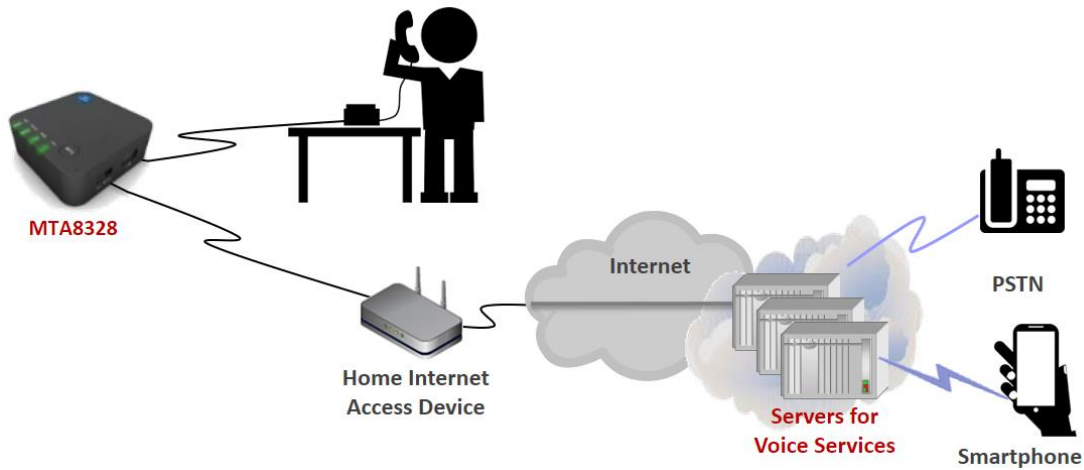
#### KEY BENEFITS

- 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



MTA8328-1NP

**Comprehensive Feature Set.** The new generation 1-voice-port MTA8328-1NP ATA 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.



MTA8328-1NP. Typical application addressing a seamless PSTN replacement

**Ease of Use and Highly Manageable.** The built-in interactive voice response system (IVR) in the MTA8328-1NP 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 MTA8328-1NP 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.

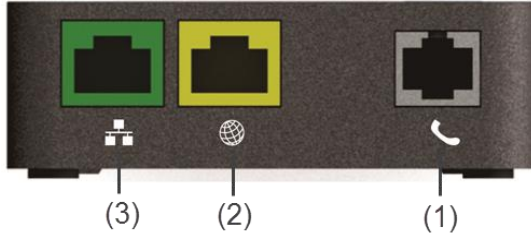
**Rapid and Secured Deployment.** The MTA8328-1NP supports various forms of auto-provisioning utilizing HTTP, HTTPS, FTP, or TFTP. The auto-provisioning feature enables dynamic and secure software upgrades as well as in-service configuration updates. In addition, the adoption of a X.509 PKI mechanism further secures the software upgrade process to prevent unauthorized software access. All these features make the MTA8328-1NP an ideal solution for service providers looking for rapid and scalable voice service deployments.



**Line Diagnostics & Intra-Building Lightning and Surge Protection.** Detecting and diagnosing building wiring problems can be extremely challenging for VoIP service providers. The built-in **GR-909** line diagnostic tests can quickly diagnose common line faults such as detecting the presence of foreign voltages, resistive faults, receiver off-hook states and REN violations, thus allowing service providers to offer high-quality voice services and minimize time spent on trouble tickets.

Since power lines and telecommunications wiring are often found in close proximity of each other, a lightning or surge fault can produce large voltages that are coupled into the telecommunications lines. The **GR-1089** capability incorporated into the MTA8328-1NP provides lightning and surge protection for indoor wiring networks, thus ensuring the ATA remains functional and safe.

## ATA INTERFACES



- (1) One standard FXS 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 ATA to connect to the Internet.

## SPECIFICATIONS

### Product and Package Specifications

| Category                   | Specifications                                    |
|----------------------------|---|
| Telephone Interface        | 1 FXS voice port                                  |
| Ethernet 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         | <ul style="list-style-type: none"> <li>• Echo cancellation: G.168</li> <li>• Caller ID FSK signal regeneration</li> <li>• Attenuation and gain adjustment</li> <li>• Comfort noise generation(CNG)</li> <li>• Visual messaging waiting indicator (VMWI)</li> <li>• Packet loss concealment</li> <li>• Line reversal/Polarity reversal</li> <li>• OSI (Open Switch Interval-event)</li> <li>• Voice activity detection (VAD)</li> <li>• Jitter buffer: adaptive, fixed</li> <li>• Advanced media processing with NetEQ™</li> <li>• Hook flash event signaling</li> </ul> |
| FAX Capability            | Fax pass-through using G.711<br>Real-time fax over IP using T.38 fax relay  |
| Voice Features            | <ul style="list-style-type: none"> <li>• Configurable dialing plans (digitmap) with interdigit and critical timers</li> <li>• Caller ID blocking, call waiting, call transfer, do not disturb (DND), 3-way conferencing with local mixing, anonymous call rejection</li> <li>• Caller ID generation: FSK</li> <li>• Speed dialing</li> <li>• E911 support</li> <li>• Reject anonymous call</li> <li>• Multiple service profiles</li> </ul>  |
| DTMF Tone and IVR         | <ul style="list-style-type: none"> <li>• DTMF tone detection and generation: RFC2833 and in-band</li> <li>• 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</li> </ul>  |

| Category          | Specifications   |
|-------------------|--|
| Tones             | <ul style="list-style-type: none"> <li>• Ring back tone</li> <li>• Off hook warning tone</li> <li>• Message waiting tone</li> <li>• Reorder tone</li> <li>• Busy tone</li> <li>• Dial tone</li> <li>• Call waiting tones (multiple)</li> <li>• Confirmation tone</li> <li>• Multiple country support:                             <ul style="list-style-type: none"> <li>- CID Type</li> <li>- Tone cadence</li> <li>- Ring cadence (Five)</li> <li>- Splash Ring</li> <li>- Line Impedance</li> </ul> </li> </ul> |
| SIP Capabilities  | SIP INFO for DTMF/Flash Event<br>SIP NOTIFY<br>SIP PING<br>SIP PRACK   |
| GR-909 Line Tests | FEMF/HAZ – Foreign line voltage detection<br>ROH Tests – Receiver off-hook detection<br>REN Test – REN range violation detection<br>Resistive Faults Test – Tip-to-Ring short detection  |

## Software Specifications: Networking

| Category               | Specifications  |
|------------------------|---|
| IP and data networking | DNS: NAPTR, SRV record, A record<br>Dynamic host configuration protocol (DHCP) client, or fixed IP<br>ICMP, TCP, UDP, TLS (SIP transport protocol)<br>RTP, RTCP (media protocol)<br>SNTP (simple network time protocol) |
| QoS                    | Voice packet prioritization over other packet types. TOS settings for: <ul style="list-style-type: none"> <li>• VoIP SIP signaling</li> <li>• Voice media traffic</li> <li>• Host data traffic</li> </ul>               |

## Software Specifications: OAM&P

| Category  | Specifications   |
|---|--|
| Voice quality monitor                             | Voice quality statistics: RTCP/RTCP-XR reports<br>End of call MOS score reporting  |
| Remote Access                                     | Management consoles: WEB (HTTP, HTTPS), SSH, Telnet<br>Protocols: SNMP v1 and v2c, syslog<br>InnoMedia EMS (Element Management System) support<br>SIP packet and media loopback features   |
| Dynamic Provisioning and Secured Software Upgrade | <ul style="list-style-type: none"> <li>• Automated provisioning with in-service configuration update and software upgrade using HTTPS, HTTP, FTP, TFTP</li> <li>• Asynchronous server-initiated provisioning using SIP NOTIFY</li> </ul> |

## 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                    | 32°F to 104°F (0°C to 40°C)   |
| Storage Temperature                      | -4°F to 158°F (-20°C to 70°C)   |
| Operating Humidity                       | 10 to 90% RH  |
| Storage Humidity                         | 5 to 95% RH   |

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