INNOMEDIA

MTA 6328-4

MULTIMEDIA TERMINAL ADAPTER

NEXT GENERATION VOIP CPE DEVICES FOR BROADBAND SERVICE PROVIDERS

KEY BENEFITS

Ideal Solution for Broadband Telephony Service Providers to Deliver Telephony and Broadband Internet Services to SOHO and Enterprise Customers

Business environment friendly
- PBX (Ground start/Loop start, OSI)
- FAX (T.38 and G.711 fallback)
- High & low speed modem support (credit card reader transactions)

Simultaneous 3-way calls with compression on each line

VoIP performance metrics reporting allowing service providers to offer SLA based services

Intra-building GR1089 lightning protection allowing house wiring

High data throughput

Flexible Auto-provisioning and remote management

QoS Features (802.1 p/q, ToS) for optimum voice & data traffic management

Metering pulse for payphone applications

CLASS Feature Support with Call Agents or Softswitches

Standalone MTA 6328 with 4 voice ports

InnoMedia's MTA 6328-4 is a 4 voice port TA device that offers broadband telephony service providers to deliver new revenue generating telephony services to their business customers. It is designed to offer features and performance demanded by the enterprise markets. Its versatile and open system interfaces provide the flexibility to work with many different networks (HFC cable, ADSL, fiber, wireless) and broadband access devices. The MTA 6328-4 allows users to share their broadband connection by either connecting a PC or a hub into the MTA downlink port. Its data rate limiting feature ensures voice quality during phone calls by automatically throttling down data throughput and reserving bandwidth for voice whenever a call is in progress. It is highly interoperable and can be used with SIP-based Softswitches or MGCP/NCS Call Agents. For remote provisioning, monitoring and testing, the MTA 6328-4 supports HTTP, SNMP, TFTP, FTP, and Telnet. It can also be remotely accessed and managed through InnoMedia's Device Management System.

The MTA 6328-4 supports TCP/IP and allows for VPN connections with PPTP and IPSec pass-through capabilities. This feature is ideal for individuals who telecommute from home or small offices that need to create a single VPN connection to remote networks. NAT capabilities provide simultaneous Internet access for multiple PCs (see Figure 1). The built-in DHCP server automatically assigns IP addresses to devices on the network. The web-based

interface allows configuration of the MTA 6328-4 to handle IP routing and port forwarding for various services, such as FTP and Telnet, and other applications, such as gaming and remote PC access.

The MTA 6328 product family is equipped with business line features and is capable of VoIP performance metrics reporting*, thus, is ideal for broadband service providers to offer Service Level Agreement (SLA) based offerings to residential or enterprise customers.
The business line features include:

1. Key phone system friendly:
   a. Ground start/loop start
   b. Open disconnect (OSI) signaling
2. Reliable fax with T.38 and G.711 pass-through
3. Low-speed & high-speed modem support for credit card reader transaction
4. RFC 2833 for DTMF and telephony signals transmission with RTP payload
5. Set-based 3-way calling support
6. Intra-building GR1089 lightning protection

The MTA 6328-4 also works with softswitches to offer a wide variety of call features including Caller ID, Call Waiting, Call Forwarding, Call Return, Caller ID Blocking, Call Trace, and Automatic Callback.

The VoIP performance metrics reporting includes both RTCP-XR and end-of-call syslog reporting. The parameters available in the end-of-call syslog messages include:

wan-afactor	R-factor
wan-amos	Conversational MOS score
wan-ploss	WAN packet loss
wan-delay	Mean one-way delay = (End-system-delay A + Round-trip delay + End-system delay B)/2
wan-jitter	Average "nominal" jitter buffer size during the call

VoIP performance metrics reporting requires separate software license (SIP only).

MTA INTERFACES

A. Power
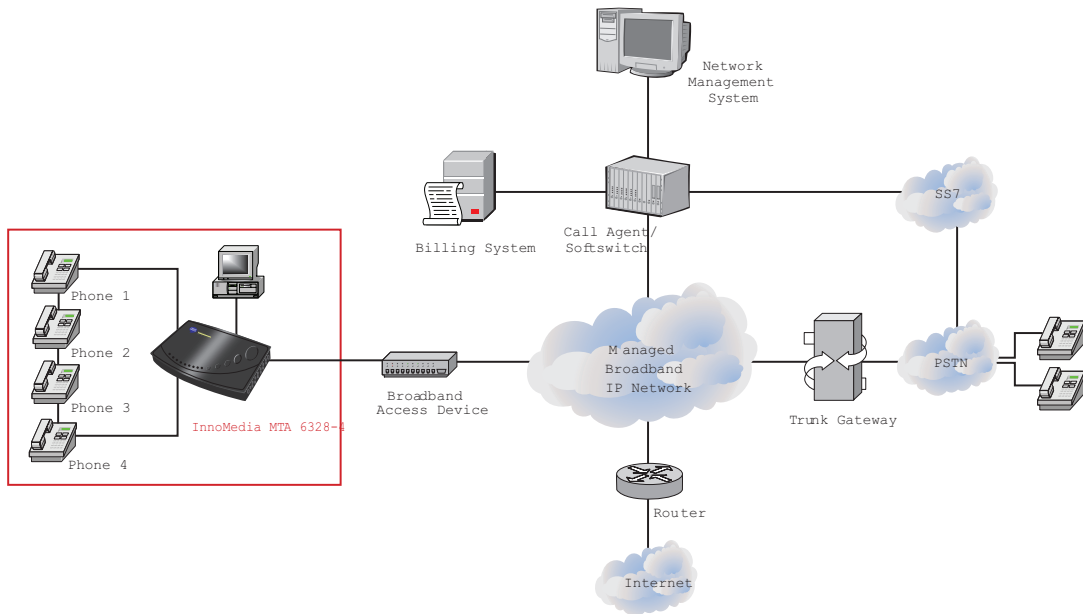B. WAN port
C. LAN port
D. Restore button
E. RJ-11 ports
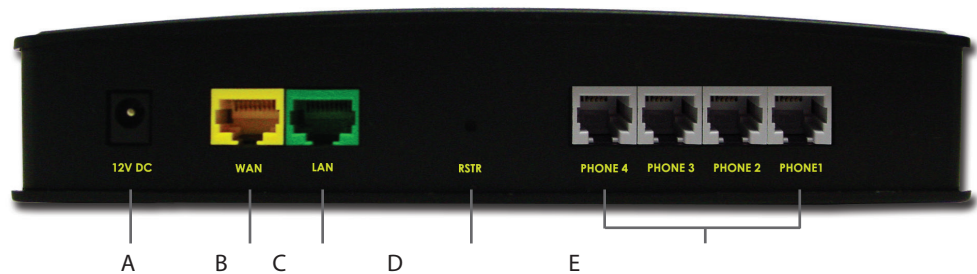
Figure 1 - Typical Applications For MTA 6328-4

SPECIFICATIONS

Product Specification

Category	Specification
Telephone Interface	4 FXS voice port
Network Interface	10/100 Base-T RJ-45 Uplink and Downlink ports
Accessory	Ethernet Cable, AC/DC Power Adapter

Software Specification

Category	Specification	
Protocols	SIP 2.0, MGCP 1.0, NCS 1.0	
Speech Codec Capabilities	G.711 and one of the following: G.726 G.723.1; G.729A (Low bit rate codecs) Supports 3-way conferencing with compression	
Quality of Service	IEEE 802.1p/q; IP TOS Tagging; Built-in Priority Switch; Data Bandwidth Control; Adaptive jitter buffer	
Signal Processing	Echo cancellation Silence suppression T.38 Fax (or fall-back to G.711) Caller ID FSK signal regeneration Line reversal/Polarity reversal 16 Khz metering pulse (MGCP only)	
Certification	FCC part 15A; CE	
Tones	Ring back tone Reorder tone Off hook warning tone Message waiting tone (MWI)/Stutter tone	Busy tone Dial tone Call waiting tone
DTMF Tone	DTMF tone detection and generation/RFC2833	

SPECIFICATIONS cont.

Software Specification

Category	Specification
Announcements	Play out any voice stream sent by Call Agent or SIP Proxy controlled announcement server Device IP announcement (SIP only)
OAM&P	Access components implemented: CLI, TFTP, HTTP 1.0, SNMP, Telnet, DHCP or DNS Works with any SNMP (v.1, v.2c, v.3)-based EMS Offers web-based access as well as HTTP, Secured HTTP, or TFTP-based remote software downloads/upgrades Provisionable set feature codes
Features	Multiple Line Profiles (SIP only) STUN NAT traversal (SIP only) RTCP-XR (SIP only)

Physical Specification

Category	Specification	
Power Consumption	Talk	DC 12V @ 600 mA (7.2W)
	Idle	DC 12V @ 300 mA (3.6W)
Loop Current	Loop resistance of 520Ω@ 23 mA	
Ring Voltage	> 40 VRms @ 2000 ft. 5 REN max. per port; 10 REN total aggregate 24 AWG loop	
Power Supply	Output: DC 12V, 2A; Input: AC 100~240V, 50~60Hz (preliminary) (Proper grounding required for lightning protection)	
Dimensions	8 in (W) x 5.125 in (D) x 1.625 in (H) / 204 mm (W) x 128 mm (D) x 40 mm (H)	
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	

www.innomedia.com

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

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, Inc.
1901 McCarthy Blvd
Milpitas, CA 95035 USA
Ph: (408) 432-5400; Fax: (408) 941-8152

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