Terminal Adapters TA7100

The TA7100 units are security-ready, VoIP terminal adapters, allowing analog phones, modems and fax machines to connect to MiVoice MX-ONE communications system. In addition, the units can act as remote gateways for analog end-points via an IP network to a central MiVoice MX-ONE communications system.

Product Overview

The Terminal Adapters for analog devices connecting to SIP extensions come in two packages, the Mitel TA7102 with two analog ports and the Mitel TA7104 with 4 analog ports. Through the analog ports the TA7100 terminal adapters can connect up to two, or four, analog phones, modems or faxes. In addition, a PC or home router can be connected to the units second LAN/Ethernet port.

For wide area connection, the terminal adapters make use of existing broadband access equipment to connect to any standards-based VoIP network. The TA7100 offers security features such as SIP over TLS, SRTP, certificates management, and HTTPS, designed to bring enhanced security for the network management, SIP signaling and media transmission aspects. TA7100 unites interface seamlessly with the full Mitel communication system portfolio of products in secure networks.

The unites also use the innovative TAS (Transparent IP Address Sharing) technology and an embedded PPPoE client to allow the PC (or router) connection to the second Ethernet port. This is done in order to have the same public IP address as the first port, eliminating the need for private IP addresses or address translations. The Terminal Adapters support high compression codec's simultaneously on all analog voice ports, saving valuable bandwidth.

For management purpose, the TA7100 unites provide a web interface, giving administrator convenient access to the unit for initial setup. The devices can also be auto-provisioned by fetching their encrypted configuration from a TFTP or HTTPS server, making installation secure and transparent to the endusers.

Product Benefits

TOTAL COST OF OWNERSHIP

- Ease of deployment & management via auto-provisioning
- Protect analog telephony investments with the VoIP-benefits and integration with Mitel SIP-based call servers

BEST PRICE QUALITY RATIO

- High Voice Quality and Reliability
- Industry-proven fax over IP, including T.38 fax

NETWORK FUNCTIONALITIES

- Secured SIP signaling and media transmission (TLS, SRTP, MIKEY)
- QoS features support
- DHCP client
- STUN Client
- Support for IPv6 Internet Protocol

IP TELEPHONY PROTOCOL

- SIP – RFC 3261
- MGCP/NCS – RFC 3435
- Multiple Virtual Gateways
- Multiple SIP Proxy support via DNS SRV
- Dual-Stack IPv4/IPv6 support using ANAT (RFC 4091)
- FIPS supported
- Online Certificate Status Protocol (OCSP) revocation status verification for TLS links

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- ANAT grouping in the SDP
- SIP signaling and media stream can be on different networks
- The call routing table can be configured with multiple SIP gateways for both sources and destinations

VOICE PROCESSING

- Vocoders: G.711 (A-law, μ-law), G.726, G.729a/b
- G.168 echo cancellation (64 ms)
- DTMF detection and generation
- Carrier tone detection and generation
- Silence detection / suppression and Comfort Noise Generation level software adjustable
- Configurable jitter buffer
- Configurable tones (dial, ringing, busy)
- Configurable transmit packet length
- RTP/RTCP - RFC 1889, RFC 1890, RFC 2833, RFC 3389

ENHANCED TELEPHONY FEATURES

- Call Forward / Call Transfer / Conference Call / Call Waiting support
- Inter-digit timer and IP dialing
- Echo Cancellation / Dynamic Jitter Buffer / Voice Activity Detection / Silence Suppression
- Message Waiting Indication via FSK
- Flash hook event signaling
- Caller ID generation (name & number) as per Bellcore DTMF or FSK
- Call Completion (CCNR / CCBS)
- PRACK & UPDATE

DATA FEATURES

- PPPoE client – RFC 1332, RFC 1661, RFC 1334, RFC 1994, RFC 2516, RFC 1471, RFC 1472, RFC 1473, RFC 1877
- DHCP server (planned)
- STUN client

FAX AND MODEM SUPPORT

- Group 3 / Super G3 fax real-time FoIP over clear channel (G.711), G.726 or T.38
- T.38 fax relay (9.6 k, 14.4 k)
- G.711 fax and modem bypass
- T.38, fax tone detection and pass-through on G.711 and G.726

ENHANCED SECURITY

- HTTPS for web pages and exchange of configuration file
- SRTP with MIKEY, SDES: Supported Cypher, AES – 128 bits
- MIKEY key management protocol (RFC 3830 and RFC 4567)
- SDES key management protocol (RFC 4568)
- X.509 certificate management

- TLS transport method:
  - Key Exchange Mechanism: RSA, Diffie-Hellman
  - Ciphers (minimum): AES (128 bits), 3DES (168 bits)
- User Access Levels for unit management; Observer; User; Admin, user access rights with the inclusion of flexible policies on the user password configuration

MANAGEMENT

- Web-based GUI
- TFTP, HTTP configuration up- and download (auto-prov.)
- TFTP, HTTP firmware upgrade
- SNMPv1/v2/v3 agent (MIB II and private MIB)

NETWORK MANAGEMENT PROTOCOLS

- SNMPv3, DHCP – RFC 2131, RFC 2132, TFTP – RFC 1350, RFC 2347, RFC 2348, RFC 2349, Syslog – RFC 3164, HTTP 1.0 – RFC 1945, HTTP 1.1 – RFC 2616, basic and digest HTTP authentication – RFC 2617

VOICE SIGNALING

- On Hold Session Description Protocol (SDP)
- Compliant with MMTEL requirements for 3GPP specification 24.615 for Call Waiting requests

QOS

- TOS / DiffServ
- IEEE 802.1p/Q

NETWORK CONNECTION

- 2 x 10/100 Base-T Ethernet RJ-45 connectors

ANALOG CONNECTION

- 2 x RJ-11, analog phone/fax (FXS) interface for TA7102
- 4 x RJ-11, analog phone/fax (FXS) interface for TA7104

POWER

- Universal power adapter included
- 12 V DC, min 700 mA for TA7102
- 12 V DC, min 1150 mA for TA7104

OPERATING ENVIRONMENT

- TA7102
  - Operating temperature: 0 °C to 45 °C
  - Storage temperature: -40 °C to 85 °C
  - Humidity: up to 85 %, non-condensing
- TA7104
  - Operating temperature: 0 °C to 45 °C
  - Storage temperature: -20 °C to 70 °C
  - Humidity: up to 85 %, non-condensin

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