Mediatrix® 3600

The Mediatrix 3600 Series is a multi-function device combining VoIP IAD & Gateway in a flexible and powerful platform. It applies to SIP Trunking, PBX IP Trunking, and PSTN access for local VoIP equipments solutions.

The Mediatrix 3600 Series also allows Enterprises, Carriers, Service Providers, and System Integrators to deploy secure VoIP systems, generate additional revenue streams, and to lower communications costs over any IP link.

Key Benefits

- Feature-rich carrier grade product
- 1 or 2 ISDN/R2 CAS E1 PRI interface ports.
- 15, 30 or 60 simultaneous calls.
- Secured SIP signalling and media transmission.
- Deployable in SIP VoIP networks.
- User-programmable call handling.
- Security features: SNMPv3, SSH, HTTPS.
- Hardware ready and capable to support SRTP and SIP over TLS.
- Proven voice algorithms implemented on dedicated DSP engine for enhanced voice quality on each interface card.
- Fax over IP support, including T.38.
- Multiple codec support.
- Remote management capabilities.

Product Overview

Designed specifically for enterprise applications, the Mediatrix 3600 Series gateways make use of existing broadband access equipment to connect to any standards-based VoIP network.

The Mediatrix 3600 Series gateways meet the requirements of enterprises that want to connect their ISDN/R2 CAS equipment, such as PBXs, through a E1 PRI interface to an IP network or as a gateway to the PSTN.

The Mediatrix 3600 Series offers security features such as TLS, SRTP, certificates management, and HTTPS designed to bring enhanced security for the network management, SIP signalling and media transmission aspects.

The Mediatrix 3600 Series is targeting:

- Enterprises with branch offices and remote offices, including SOHOs.
- Enterprises seeking access to the benefits of Voice over IP without discarding existing legacy equipment.
- Enterprises wishing to implement Voice over IP through a gradual, transparent, and cost-effective migration.
- Multi-tenant / multi-dwelling units and premises wishing to implement Voice over IP while maintaining existing wiring and handsets.
- Enterprises looking to implement secure RTP (SRTP) and Secure SIP (SIPS) in the future.

Applications

The Mediatrix 3600 VoIP gateways allow any office to use an existing IP network for lower-cost voice communications.

The Mediatrix units link any standard ISDN/R2 CAS E1 PRI connection to the IP network and deliver the clarity of toll-quality voice for a comprehensive VoIP solution.

T.38 FoIP, fax bypass, and modem bypass capabilities ensure that the Mediatrix 3600 gateways seamlessly transport voice and data services. The Mediatrix 3600 gateways offer flexibility and scalability for VoIP network integration and low-bandwidth voice.

With configurable NT/TE E1 PRI ports, call-switching, and user-programmable call routing (including caller/called ID), Mediatrix 3600 gateways integrate smoothly into existing PBX and PSTN networks.

Mediatrix 3600 Hardware Models

Mediatrix 3621 – 1 x E1 card

- Up to 15 simultaneous calls
- 1 x ISDN/R2 CAS E1 port software configurable
- NT/TE software configurable

Mediatrix 3631 – 1 x E1 card

- Up to 30 simultaneous calls
- 1 x ISDN/R2 CAS E1 port software configurable
- NT/TE software configurable

Mediatrix 3632 – 2 x E1 cards

- Up to 60 simultaneous calls
- 2 x ISDN/R2 CAS E1 ports software configurable
- NT/TE software configurable

Technical Specifications

Voice Processing

- Vocoders: G.711 (A-law, μ-law), G.723.1, G.726, G.729a/b
- G.168 echo cancellation
- DTMF detection and generation
- Carrier tone detection and generation
- Silence detection / suppression and Comfort Noise Generation level software adjustable
- Configurable dejitter buffer
- Configurable transmit packet length
- RTP/RTCP - RFC 1889, RFC 1890, RFC 2833, RFC 3389

Enhanced Security

- HTTPS, for the exchange of Configuration File and web pages.
- SRTP with MIKEY or SDES.
    - Supported Cypher
        - AES – 128 bits
- MIKEY key management (RFC 3830 and 4567).
- SDES key management protocol (RFC 4568).
- X.509 Certificate management.

- TLS transport method.
    - Supported Key Exchange Mechanism:
        - RSA
        - Diffie-Hellman
    - Supported Cyphers (minimum):
        - AES (128 and 256 bits)
        - 3DES (168 bits)

Fax and Modem Support

- Fax over IP
- T.38 Fax relay (9.6 k, 14.4 k)
- G.711 Fax and Modem Bypass
- Clear channel (G.711) or T.38
- T.38, fax tone detection and pass-through on G.711 and G.726

IP Telephony Protocol

- SIP
- Multiple SIP Proxy support via DNS SRV

Management

- SNMPv3, HTTP, FTP, TFTP, HTTPS
- TR-069 for massive deployments (optional feature available at purchase time)Auto-provisioning for VoIP parameters
- Automatic firmware download
- User-friendly web Pages for VoIP Parameters

ISDN Signaling

- ISDN NI-2 (US T1 PRI)
- ISDN DMS100 (US T1 PRI)
- ISDN 5ESS (US T1 PRI)
- Euro ISDN EDSS-1 / ETSI PRI/NET5
- ETS 300 011 (ISDN PRI UNI)
- ETS 300 012-1 (ITU-T I.430)
- ETS 300 402-2 (ITU-T Q.921)
- ETS 300 403-1/2 (ITU-T Q.931)
- ETS 300 102-2 (ITU-T Q.931)
- ISDN speech, audio and data (Fax Gr 4, UDI 64)
- ECMA-143 (QSIG-BC)

CAS Signaling

- E1 R2 Digital Line Signalling (ITU-T Q.421)
- E1 R2 MFC Interregister Signalling (ITU-T Q.441)
- E1 R2 Brazil Digital Line Signalling (ABNT PN 03:012.04-021)
- E1 R2 Brazil MFC Interregister Signalling (ABNT PN 03:012.04-022)

Call Routing

- Local switching
- Interface hunt groups
- Routing Criteria
    - Interface
    - Calling/called party number
    - Time of day, day of week, date
    - ISDN bearer capability
- Number manipulation functions
    - Replace numbers
    - Add/remove digits
    - Multiple remote gateways
    - PLAR

- Call properties manipulations
- SIP header manipulations

QoS Marking

- TOS/DiffServ
- IEEE 802.1p/Q

WAN Connection

- 1 x 10/100 BaseT Ethernet RJ-45 connector

IP Routing NAT and Firewall

- NAT/PAT/Firewall
- Statefull inspection
- Static routes
- Source-based routing
- IP filtering and Port forwarding
- DHCP Client
- DHCP Server
- PPPoE client
- VLAN support

QoS / Traffic Control

- 802.1q priority tagging
- TOS/DiffServ tagging

LAN Switch

- 4 Ethernet 10/100 Base-T Ethernet RJ-45 ports

Operating Environment

- Operating temperature: 0°C to 40°C.
- Storage temperature: -20°C to $+70^{o}$C
- Humidity: up to 85 %, non-condensing

Power Supply

- Internal 100-240 VAC power supply

Mechanical

- Rack mount, Desk mount, Wall mount
- 2 interface card slots
- Stackable units to increase port count

Dimensions

- Height: 4.4 cm (1.73 in.) approx.
- Width: 44.5 cm (17.5 in.) approx.
- Width (mounting brackets): 48.5 cm (19 in.) approx.
- Depth: 20.5 cm (8 in.) approx

Mediatrix SDK (Software Development Kit)

- Enables developers and content authors to create rich, integrated VoIP applications for their specific requirements
- Available for download free of charge at http://mediatrixsdk.media5corp.com