



# Mediatrix<sup>®</sup> 4100 Series

The Mediatrix 4100 Series features VoIP adaptors that interconnect analog telephones, faxes, and modems into SIP based systems.

The Mediatrix 4100 Series allows operators to shorten deployment time and ensure a highly secure environment to enable cloud telephony services into branch offices and SMBs.



## **Interconnects any Device to SIP**

The Mediatrix 4100 Series links any analog connection to an IP network and delivers a rich feature set for a comprehensive VoIP solution.

## **Legacy PBX System Gateway**

With FXS ports, local call switching, and user-defined call properties (including caller/calling ID), Mediatrix 4100 Series gateways smoothly integrate into legacy PBXs.

## **Highly reliable Fax and Modem Transmissions over IP**

With T.38 and clear channel fax and modem pass-through capabilities, the Mediatrix 4100 Series ensures seamless transport of voice and data services over IP networks.

## **Advanced Mass Management**

Our advanced provisioning capabilities deliver remarkable benefits to Mediatrix customers. Mediatrix enables centralised CPE management, a definite advantage to monitor the network, ensure service, and reduce operational costs.

# Mediatrix® 4100 Series

## Applications

### Operators

- ✓ Connect legacy equipment in PSTN replacement/TDM replacement projects
- ✓ Provide SIP termination for cloud telephony services
- ✓ Convert analog signaling to SIP for Hosted Unified Communications and IP-Centrex

### System Integrators

- ✓ Integrate Unified Communications with legacy systems
- ✓ Connect Skype for Business with legacy telephony equipment
- ✓ Keep existing telephony equipment in SIP migrations
- ✓ Inter-connect branch offices to headquarters

## Key Features

### Carrier-Grade Voice Quality

T.38 and clear channel fax over IP  
High performance processing of up to 30 voice channels  
Battery reversal for pay phones

### Robust Security

Encrypted media, signaling, and management  
Deep packet inspection firewall with DoS protection

### Easy Configuration and Management

Zero-touch configuration  
Intuitive Web GUI  
Customisable factory settings

### Networking

Dual-stack IPv6 and IPv4  
Multiple IP addresses and VLANs  
NAT, firewall, and router capabilities

## Benefits

- ✓ High quality built and carrier-grade validation standards contribute to the industry's most reliable platform
- ✓ Extensive TR-069 support for an easy management of large-scale deployments with a centralised EMS
- ✓ Superior call routing and manipulation capabilities for the implementation of complex deployment scenarios

# Technical Specifications

## Media Processing

G.711 (A-law and  $\mu$ -law), G.723.1a (for 4116 and 4124 models only), G.726, and G.729a/b  
G.168 echo cancellation  
DTMF detection and generation  
Carrier tone detection and generation  
Silence detection/suppression and comfort noise  
Configurable de-jitter buffer and packet length

## IP Telephony Protocol

SIP (RFC 3261) over UDP, TCP, and TLS  
IMS (3GPP TS 24.229)  
RTP (RFC 3550)  
SDP (RFC 4566)  
Multi-part body support  
Redundancy support via DNS SRV  
Multiple trunk support  
IPv4 and IPv6 dual stack signaling and media

## Analog Telephony

Support for call forward, call transfer, conference call, call waiting, CCNR, and CCBS  
Multiple country presets  
Customisable tones and ring patterns  
Echo cancellation  
Message Waiting Indication (MWI), via FSK  
On-hook/off-hook caller ID generation (name & number) as per Bell-core DTMF or FSK and Telebras BINA  
Answer and disconnect signaling

## Call Routing

Local switching  
Call filtering and blocking  
Calling/called number manipulation using regular expressions  
Routing criteria:

- Interface
- Calling/called party number
- Calling/called URI
- Time of day, day of week, and date
- Many others

Mapping and transformation of call properties to/from SIP headers  
Hunt groups

## Fax and Modem Support

Group 3/super G3 fax real-time fax over IP  
T.38 fax relay (9.6 k and 14.4 k)  
Clear channel (G.711) fax and modem pass-through

## Enhanced Security

Denial of Service (DoS) protection  
SIP over TLS

SRTP with AES cipher – 128 bits  
MIKEY key management protocol (RFC 3830 and 4567)  
SDES key management protocol (RFC 4568)  
TLS-encrypted configuration and management  
X.509 certificate management  
OCSP (Online Certificate Status Protocol) revocation status verification  
Supported TLS key exchange mechanism:

- RSA
- Diffie-Hellman

Supported TLS ciphers (minimum):

- AES (128 and 256 bits)
- 3DES (168 bits)

## Management

Zero-touch provisioning  
TR-069, TR-104, and TR-111  
Web GUI  
SSH and TELNET  
SNMP v1, v2c, and v3  
Scripts/firmware files uploaded via HTTP, HTTPS, FTP, and TFTP  
Multiple levels of management access rights  
Customisable CDR  
Event notifications via Syslog, SIP, log file, and SNMP traps  
Remote activation of service licenses

## Monitoring and Troubleshooting

Alarms and traps  
Call Details Record (CDR)  
Media quality statistics  
System: CPU and memory usage  
PCM capture  
IP network capture  
Diagnostic traces

## Networking

IPv4 – IPv6  
Multiple IP addresses per link or VLAN  
Multiple VLANs per link  
DHCP client  
PPPoE (RFC 2516)  
IEEE 802.1q + DSCP QoS tagging (media, signaling, and mgmt)  
IEEE 802.1x wired authentication  
LLDP-med (ANSI/TIA-1057)  
QoS traffic shaping  
Firewall with stateful inspection, rate-limitation, and automatic black-listing  
Static routing  
NAPT  
DHCP Server

### Quality of Service (QoS)

Bandwidth limitation and traffic shaping  
TOS/DiffServ  
IEEE 802.1p/Q  
RTCP-XR – special order

### Operating Environment

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

### Power Supply

- 4102 - External 100-240 VAC power supply
- 4116/4124 - AC: Standard power cord receptacle (IEC 320-C14) for universal AC input internal SMPS

Analog Ports	Up to 24 FXS
Mounting	Desktop
Network	2 x 10/100 Base-T

### Physical Interfaces

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

### Dimensions

- 4102 - 3.1 x 12.7 x 9.9 cm approx.; 170 g
- 4116/4124 - 4.4 x 43 x 21 cm approx.; 1.7 kg



Model: 4102 front



Model: 4102 back



## A Trusted Partner

Media5 Corporation is a global supplier of multimedia communication solutions, offering a complete set of SIP-based products and technologies.

With a focus on innovation and excellence in customer support, we deliver highly adaptive hardware and software components as well as ready-to-market SoftClients. This allows our customers and partners to take advantage of secure, reliable, and comprehensive communication solutions.

Mediatrix access devices include a complete set of VoIP Adaptors, Media Gateways, and Session Border Controllers customer premise equipment to connect any network to cloud telephony services.

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