



# Mediatrix® Sentinel 100 Pure SBC

The Sentinel 100 Pure SBC is a high performance Session Border Controller for SMBs targeting applications for up to 500 users.

Designed to carry out SIP normalisation, network demarcation, survivability, and security, the Sentinel 100 offers QoS monitoring, remote mass management, and troubleshooting tools for a cost-effective network maintenance and customer service. It is the greatest solution to connect multiple trunks, branch offices, and mobile workers to the enterprise IP-PBX and UC systems. Sentinel also features firewalls with DDoS prevention and encryption capabilities to ensure maximum protection to signaling, media, and data.



## Survivability

Sentinel ensures service continuity by establishing external calls through a secondary trunk and by routing internal calls when the primary network is temporarily unavailable.

## SIP Normalisation

Sentinel normalises major vendor SIP signaling protocols into a single well-defined interface that can be adapted to any specific IMS or Softswitch implementation.

## Network Demarcation

Create a clear separation between the enterprise's and the operator's networks by hiding the topologies and credentials, and by blocking unauthorised users.

## Housekeeping

Sentinel monitors the quality of service and provides enhanced remote troubleshooting tools to understand and resolve failures affecting the service.

# Mediatrix<sup>®</sup> Sentinel 100

## Applications

### Operators

- ✓ Provide a demarcation point with QoS monitoring and remote troubleshooting for a cost-effective network management and customer service.
- ✓ Provide service continuity in Hosted Unified Communications/PBX deployments with phone survivability, failover to geo-redundant core servers, and QoS traffic shaping.
- ✓ Secure communications inside or outside on both the operator and customer networks.

### System Integrators

- ✓ Safely connect multiple trunks, branch offices, and mobile workers to the enterprise IP-PBX or UC system.
- ✓ Perform SIP normalisation translating any vendor implementation into a single well-defined SIP interface.
- ✓ Protect the IP network of the Enterprise by controlling all incoming and outgoing media, signaling, and data.

## Key Features

### Carrier-Grade Features

QoS monitoring, remote mass management, and troubleshooting tools  
Service continuity in Hosted UC/PBX deployments

### Robust Security

Enterprise communication encryption  
SIP-enabled firewall inspects and authorises communications and prevents DoS attacks

### Easy Configuration and Management

Zero-touch configuration  
Intuitive Web GUI  
Customisable factory settings

### Networking

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 rule-based SBC with dynamic routing and manipulations for solving complex deployment scenarios

# Technical Specifications

## Session Border Controller

Back-to-Back user agent  
SIP header manipulation  
SIP registrar  
SIP authentication  
SIP failover  
Registration throttling/caching  
Call forking  
Advanced, rule-based, call routing  
Dynamic call routing based on:

- Peer monitoring state
- Registration cache

Call Admission Control (CAC), per trunk, based on:

- Call volume
- Bandwidth usage
- Concurrent calls

Near and far-end NAT traversal  
Audio and video media relay  
Codec filtering  
SIP and media encryption  
UDP/TCP/TLS interworking  
DTMF interworking

## Enhanced Security

Signaling and media topology hiding  
Denial of Service (DoS) protection of core and enterprise networks  
Call rate limitation  
SIP over TLS  
SRTP with AES cipher – 128 bits  
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  
Dual firmware banks  
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)  
Subscriber's active registration and call monitoring  
Media quality statistics  
System: CPU and memory usage  
PCM capture  
IP network capture  
Diagnostic traces

## Quality of Service (QoS)

Bandwidth limitation and traffic shaping  
TOS/DiffServ  
IEEE 802.1p/Q

## 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

## Networking

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

## Physical Interfaces

5 x 10/100/1000 BaseT Ethernet RJ-45 connectors  
2 x TDM sync RJ-45 connectors  
1 x USB 2.0 Type-A connector

## Power Supply

Internal 100-240 VAC power supply

## Operating Environment

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

## Dimensions

Height: 4.4 cm  
Width (mounting brackets): 48.3 cm  
Depth: 19.5 cm

## SBC Licensing

A license is needed for each concurrent call

SBC Sessions	Up to 120 sessions
Registered Users	Up to 500
Network	5 x 10/100/1000 Base-T

*This datasheet applies to model: M.*



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