Session Border Controller

Model SN10500

The Patton SN10500 is a carrier-grade session border controller (SBC) designed for network-to-network interface (NNI) and peering deployments.

Network function

Back-to-back user agent (B2BUA)

IP Network Security

- *Topology hiding*
- *Line-rate DOS/DDOS protection (64 bytes packets)*
- *Rogue RTP detection*
- *Dynamic blacklisting*
- *Access control list*
- *Session admission control*
- *Session bandwidth control*

Interoperability Functions

- *SIP message manipulation*
- *Extensive header manipulation*
- *SIP UDP/TCP interworking*
- *SIP to SIP-I interworking*
- *Local and remote*
- *NAT traversal adaptation*
- *Error/cause code adaptation*

Quality of Service

- *Per session network quality analysis*
- *Per session statistics*
- *DSCP/TOS marking*

Patton's SmartNode 10500 is a carrier-grade session border controller designed for Network-to-Network interface (NNI) and peering deployments.

Software upgradeable from 25 to 5000 sessions, the SN10500 is the most cost-effective session border controller for service providers currently available on the market. Depending on ordering configuration, it also supports up to 2744 transcoding sessions without any external hardware required.

Product Characteristics:

- Back-to-back user agent (B2BUA)
- Line rate DOS/DDOS protection (64 bytes packets)
- Up to 5000 simultaneous signaling and media sessions
- Supports up to 686 or up to 2744 simultaneous transcoding sessions, flexible and extensive routing capabilities, and integrated network troubleshooting tools (traces, media/signaling recording, test call generation, etc)
- Easy to deploy, operate, and manage optional TDM fallback capabilities

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1U Session Border Controller, front view (all models)

1U Session Border Controller, rear view (SN10500A/680P/xxx)

1U Session Border Controller, rear view (SN10500A/2700P/xxx)

PATTON® let's Connect!™

SmartNode™ Model SN10500 Session Border Controller

Specifications*

Transcoding and Media Adaptation

DTMF transcoding (inband, INFO, RFC2833/4733)

T.38 fax and video relay

T.38 V.17 & V.34 fax conversion to pass-through

NSE and VBD conversion

Media transcoding:

- G.711, G.723.1, G.726, G.729ab, G.729eg,
- Clear mode (RFC 4040), G.728, iLBC,
- G.722, AMR-NB, G.722.2 (AMR-WB), EVRC,
- GSM FR/EFR, QCELP

Voice services

Call progress tones

Announcement prompts

Routing and Policy

Least cost routing

Scheduled routing

Load-balancing and percentage routing

Script-based routing

SIP REFER/3xx based routing

RADIUS based routing

Routing alternate retry routes

Digit matching and manipulation

Call blocking

Loop detection and prevention

Direct media routing (no anchoring)

Optional TDM Fallback

ISDN PRI (NI1, NI2, 4ESS, 5ESS, DMS, Euro, NFAS)

CAS R1 (E&M, loop/ground start)

CAS R2 (ITU, Brazil, Mexico, Venezuela)

Customizable R1/R2 scripts for any variant

Management Capabilities

Provisioning and status graphical interface (GUI)

HTTPS secured transport

CLI interface for local and remote management

RESTful northbound provisioning and status API

Level-based user access

Configuration change audit logging

SNMP v2, v3 GET, TRAPs (alarms)

Extensive SNMP call statistics MIBs

Configurable Call-detail-records (CDRs)

Local text customizable format

Customizable RADIUS accounting

Network Analytics

Live session trace with protocol information (ladder)

Live test call with media playback (and recording)

Live media call recording with selectable targets

Raw signaling protocol capture (pcap format)

High Availability & Redundancy

1+1 redundancy support (active/standby)

Power supply redundancy

Ethernet port bonding support

Fault-tolerant software

Seamless software upgrade

Capacity and Performances

Maximum signaling/media sessions: 5000

Maximum transcoding sessions: 686 or 2744

Maximum routes: 100,000

Regulatory

Lawful interception (ETSI 201 671)

Emergency routing

Optional TDM fallback [SN10500A/680P/xxx only]

Interfaces

SN10500A/680P/xxx:

- Up to 6 Ethernet ports 100/1000 Base-T (RJ45)
- All ports used for signaling, media and/or management
- Ethernet bonding and 802.1Q VLAN support
- 1 RS232 serial port (RJ45)
- 1 USB serial port (USB type B)
- Up to 16 RJ48C TDM fallback interfaces (T1/E1)

SN10500A/2700P/xxx:

- Up to 4 ports for signaling, media or management
- 1 dedicated management port for local access
- All Ethernet ports are 100/1000 Base-T (RJ45)
- Ethernet bonding and 802.1Q VLAN support
- 1 RS232 serial port (RJ45)
- 1 USB serial port (USB type B)

Maintenance

Replaceable fan filters

Offline configuration export/import

Multiple configuration backup storage

Multiple software version storage

GUI/CLI/API system upgrade and management

Electrical Characteristics

90 to 260 VAC, 47 to 63 Hz or -36 to -72 VDC

Hot-swap redundant power supplies (AC or DC)

Maximum 70W power consumption [SN10500A/680P]

Maximum 138W power consumption [SN10500A/2700P]

Physical

Size: 1.75 H x 16.9 W x 16 D in.
(44.5 H x 429 W x 406 D mm)
1U, 19-in. rackmount

Weight:

- 14 lbs (6.4 kg) [SN10500A/680P/xxx]
- 14.5 lbs (6.5 kg) [SN10500A/2700P/xxx]

Environment

Operating temperature:

- 0 to +70 °C
- Relative humidity: 95% non-condensing

Storage temperature:

- -10 to +85 °C
- Relative humidity: 95% non-condensing

Designed to meet NEBS Level 3

RoHS compliant

Regulatory Compliance

Safety

- CAN.CSA C22.2
- EN 60950-1:2005
- EN 60950-1:2006

EMC

- FCC Part 15:2013, Subpart B,
- CE Mark (EN55022:2010, Class A, EN61000,ETSI EN 300 386)

* Specifications subject to change without notice

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