UNIFY Harmonize your enterprise

OpenScape Branch V9 R3
Start with the right platform.

Leveraging the benefits of an open architecture in a Voice-over-IP enterprise communication environment, the OpenScape Branch is a SIP-based server that dramatically increases business continuity while lowering operational costs.

Remote Branch Office

OpenScape Branch assures continued communication services – while providing a feature-rich set of survivability capabilities at a remote branch location – during the loss or degradation of service between the remote branch and the main office.

OpenScape Branch is offered on several hardware platforms, allowing a wide range of maximum user capacity: up to 24, 48, 80, 250, 500, 1000 and 6000 registered lines. It can also be delivered as a virtual application independent of underlying hardware for models without an integrated gateway.

The OpenScape Branch includes survivability features, Proxy, Media Server, Voice Mail, Session Border Controller (SBC), and Branch SIP Trunking functionalities, while the OpenScape Branch 50i and 500i provide the additional functionality of an integrated PSTN Gateway (GW) and an Analog Terminal Adapter (ATA)

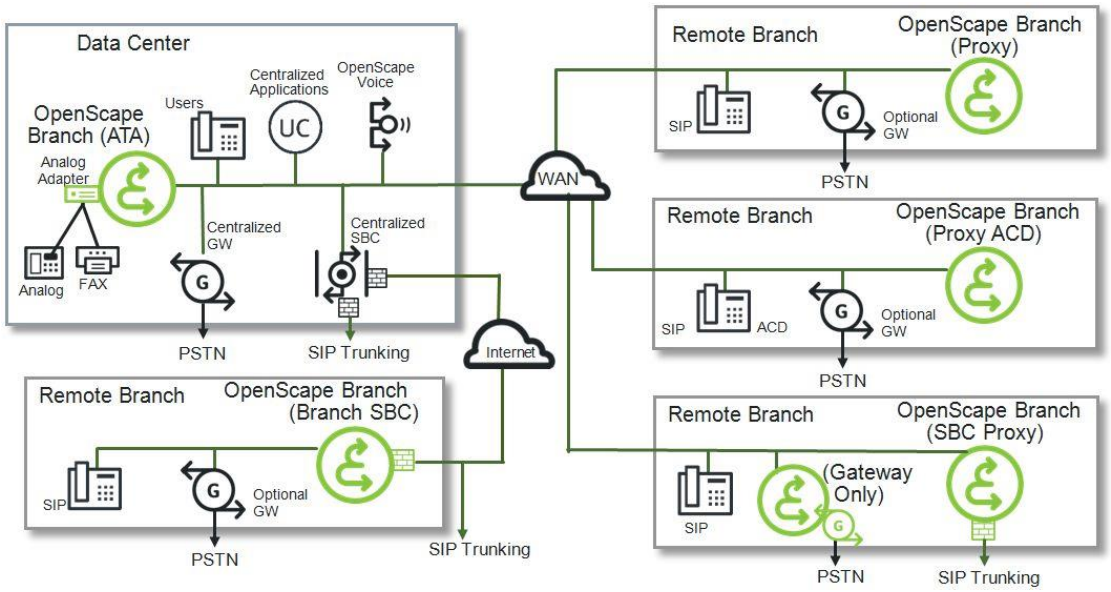
The local Media Server supports tones, announcements and conferencing, reducing the bandwidth needed to provide the same resources from a central location. This yields direct operational cost savings.

The integrated Session Border Controller (SBC) provides security functions like Fire-wall, and Virtual Private Network (VPN).

The OpenScape Branch is fully manageable via the Common Management Portal (CMP) as a single network element, lowering operational costs and making it "zero touch" when it comes to maintenance.

The OpenScape Branch has the flexibility to support, depending on the network topology, six deployment scenarios:

- Proxy
- Proxy ACD
- SBC Proxy
- Branch SBC
- ATA
- Gateway Only



The OpenScape Branch is a fully RFC 3261- compliant SIP device and provides:

- Proxy/Registrar
- Call routing functionality
- Survivable Proxy
- Alternative routing capabilities in case of network outages
- TLS/TCP/UDP connections
- Local announcement capabilities to reduce the WAN usage
- Full management integration in OpenScape Voice management
- SBC functionality
- Local Voice Mail
- PSTN Gateway support
- Analog Adapter support
- Billing/CDR capabilities in survivability mode
- OpenScape UC Geo-Redundancy support
- High serviceability for installation, upgrade, and configuration

OpenScape Branch provides a secure and reliable branch configuration by supporting:

- VPN, IPSec
- State-of-the-art Firewall with Layer 7 classification (SIP and MGCP awareness)
- Basic Intrusion Detection System (IDS) / Intrusion Prevention System (IPS)
- Digest Authentication in survivable mode
- Encrypted SIP signaling
- Encrypted media (SRTP)
- Encrypted management protocols
- VRRP-like redundancy

Voice Features

- Proxy
- SIP Proxy Server (RFC 3261)
- SIP Registrar
- SIP Redirect/Routing Server
- SIP TLS
- OpenScape Voice-controlled Media Server for announcements and conference
- Supported codecs: G.711 A-law, G.711 μ-law, G.722, G.722-1, G.729

SBC

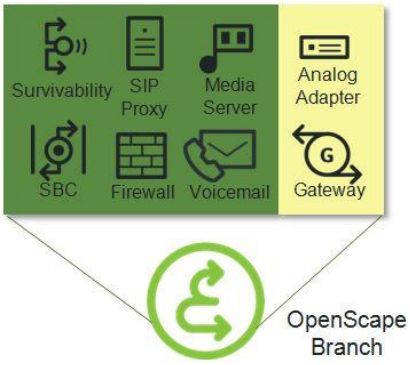
- SBC Header manipulation for topology hiding
- SIP Session aware RTP Proxy for VoIP NAT support
- SBC trunk to SIP service providers, including Skype

Media Server

- Media Server for announcements, tones, and conference

Survivability

- Multi-line Hunt Group support
- Call forward and call transfer
- Media Server for tones, announcements, and conferencing
- CDR creation, storage, and transmission
- Basic Automatic Call Distribution (ACD)
- Selectable ACD Agent Logon/Logoff Language
- ACD Agent Activation without Logon
- Digit manipulation
- Emergency call support for multiple numbers, based on subnet with LIN or CPM support
- Source-based Routing of Emergency Calls
- Auto Attendant
- Backup data channel via PSTN
- Meshing of multiple OpenScape Branches in a branch
- Music on Hold
- Support for Servers with Dual Power Supplies



Security Features

Firewall

Stateful inspection Firewall NAT/PAT, supporting:

- Intrusion detection
- Protocols DNS, SFTP, SSH, HTTPS, HTTP, NTP, SNMP
- Strict TCP validation to ensure TCP session-state enforcement, validation of sequence and acknowledgement numbers, rejection of bad TCP flag combinations
- TCP reassembly for fragmented packet protection
- Malformed packet protection
- Protocol anomaly protection

VPN

- IPSec
- Key generation is based on OpenSSL
- For message digest: SHA-1, SHA-2 and MD5
- For encoding and cipher: AES, 3DES

SIP Signaling

- TLS
- Media Stream Security supporting sRTP Mikey/SDES
- Key and certificate generation is based on OpenSSL
- For message digest: SHA-1, SHA-2
- For encoding and cipher: Base64 Encoding, Blowfish, CAST, CAST5, DES, Triple-DES, IDEA, RC2, RC4, RC5

Management

- SSH2, HTTPS, sFTP
- For PHP authentication, CRIPT MD5 is used with a SALT of 12 characters

Management/Alarming Features

The OpenScape Branch supports the following management interfaces:

- SOAP-based OpenScape UC CMP/ Assistant GUI
- Local PHP-based WebGUI
- Software download via sFTP
- SNMP V2C/V3 support
- Continuous tracing OSV-TM
- Backup/Restore of configuration database
- Software installation:
  Easy installation,
  Full installation,
  Upgrade,
  Update
- Assistant profiles

General Features

Routing

- Priority-based routing
- Static routing
- Source-based routing
- VRRP-like redundancy support
- SIP error code routing
- Auto Attendant

QoS/Traffic Control

- DSCP settings for Signaling, Media, and Management traffic

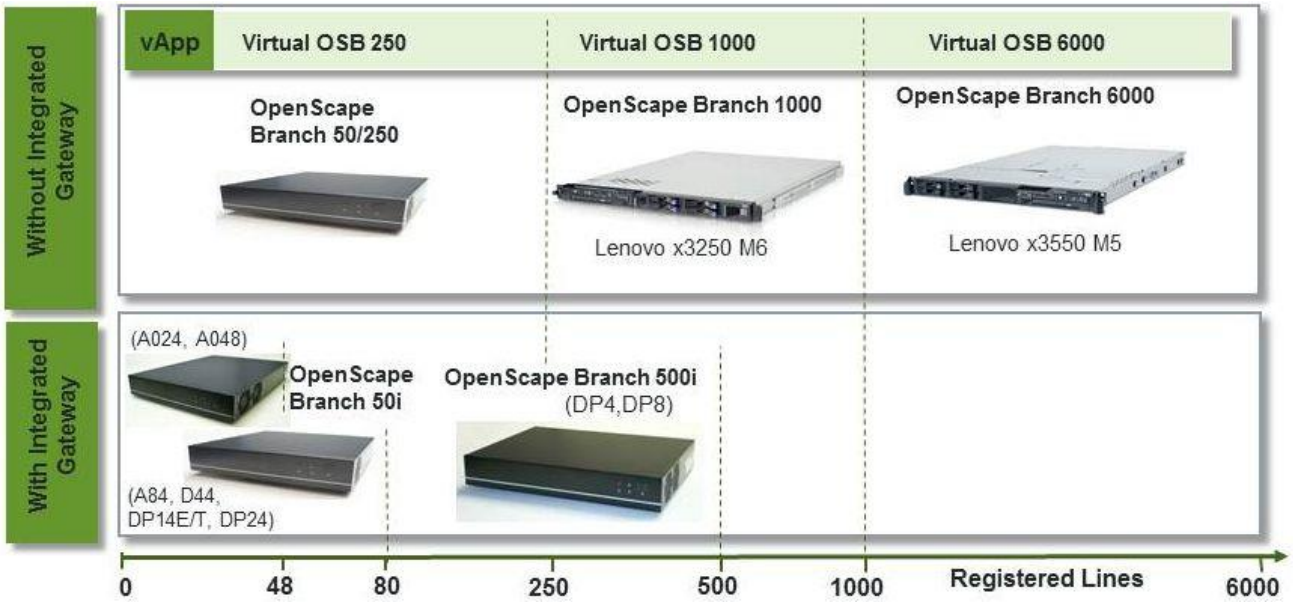
Networking

- DHCP Server
- DNS Server/Client
- NTP Server/Client
- Support of geo-separated OpenScape Voice server deployment
- IPV4/IPV6 to SIP Users and Gateways
- Passing of SDP Containing ANAT Parameters
- Local storage space for phone software redistribution
- Ethernet Port Teaming
- SIP Trunks on both WAN and LAN Interfaces

Logging

- Log data collection for all services
- Call trace data collection
- RapidStat collection

OpenScape Branch Model Landscape



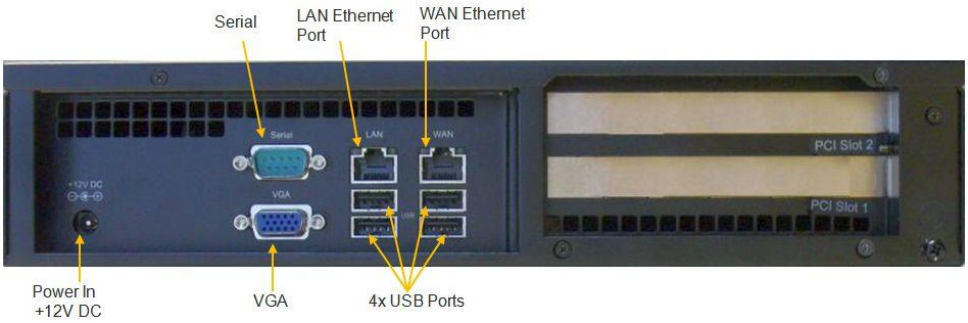
OpenScape Branch without integrated PSTN Gateway

Performance	OpenScape Branch 50/250	OpenScape Branch 1000	OpenScape Branch 6000
Max. number of SIP registered lines *	250	1000	6000
Max. number of concurrent sessions	50	200	2400
Max. number of calls per second (continuous)	3	5	30
Max. registrations per second (background)	10	20	40
Max. registrations per second (peak)	250	1000	6000
Max. number of announcement ports	16	32	100
Max. number of conference ports	28	32	60
Max. number of supported languages	2	5	5
Max. number of Backup ACD Agents	50	500	500
Max. number of SIP trunks	1	10	10
Max. number of SIP Service Provider Profiles	1	10	10
Max. number of SIP trunking sessions	30	120	400
Max. number of management sessions	5	5	5

* Registered lines include primary lines, secondary call appearances and phantom lines

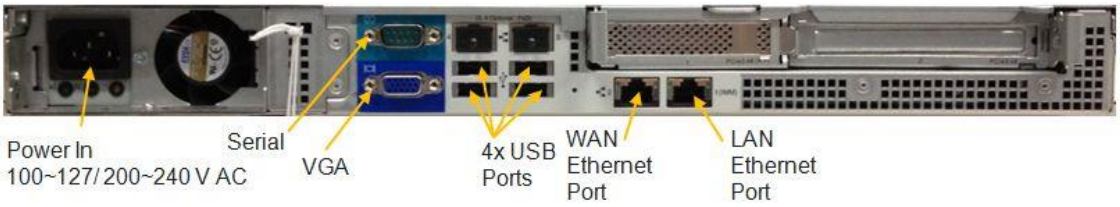
OpenScape Branch 50/250

Based on:	Advantech SYS-2USM12-6M01E Server
Physical size (W x H x D):	300 x 65 x 300 mm (11.8 x 2.6 x
Weight:	up to 4.5 kg (9.9 lb)
Rated power:	100 - 240 V AC, 50 - 60 Hz, 60 W
Average power consumption:	18 W
Rated heat emission:	216.2 kJ/h (204.8 BTU)
Operating temperature:	0-40°C (32-104 °F)
Part number:	L30220-D600-A598



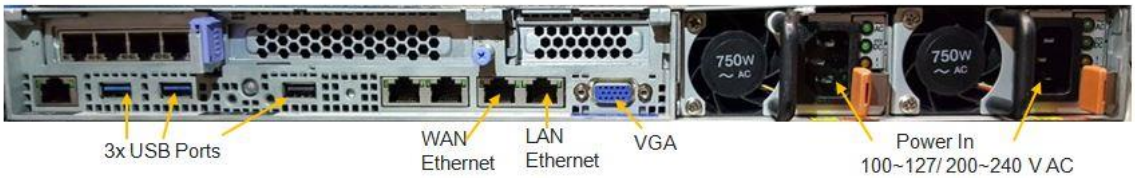
OpenScape Branch 1000

Based on:	Lenovo x3250 M6 Server
Physical size (W x H x D):	440 x 43 x 559 mm 17.32 x 1.69 x 22.01 inches
Weight:	up to 12.7 kg (28.0 lb)
Rated power:	100-127 / 200-240 V AC, 50 - 60 Hz, 351 W
Average power consumption:	75 W
Rated heat emission:	1263.7 kJ/h (1197.7 BTU)
Operating temperature:	10 - 35 °C (50 - 95 °F)
Part number:	L30220-D600-A550



OpenScape Branch 6000

Based on:	Lenovo x3550 M5 Server
Physical size (W x H x D):	440 x 43 x 711 mm 17.32 x 1.69 x 27.99 inches
Weight:	up to 15.4 kg (34.0 lb)
Rated power:	100-127 / 200-240 V AC, 50 - 60 Hz, 351 W
Average power consumption:	180 W
Rated heat emission:	1263.7 kJ/h (1197.7 BTU)
Operating temperature:	10-35°C (50-95 °F)
Part number:	L30220-D600-A599



OpenScape Branch with integrated PSTN Gateway

In addition to integrated Proxy, Survivability, Session Border Controller (SBC), SIP Trunking, and Media Server functionalities, the OpenScape Branch 50i also provides the functionality of a PSTN Gateway (GW) and an Analog Terminal Adapter (ATA). It is available in the following models:

- OpenScape Branch 50i A84 (8 FXO ports + 4 FXS ports)
- OpenScape Branch 50i D44 (4 BRI ports + 4 FXS ports)
- OpenScape Branch 50i DP14E (1 E1 PRI port + 4 FXS ports)
- OpenScape Branch 50i DP14T (1 T1 PRI port + 4 FXS ports)
- OpenScape Branch 50i DP24 (2 E1/T1 PRI + 4 FXS ports)

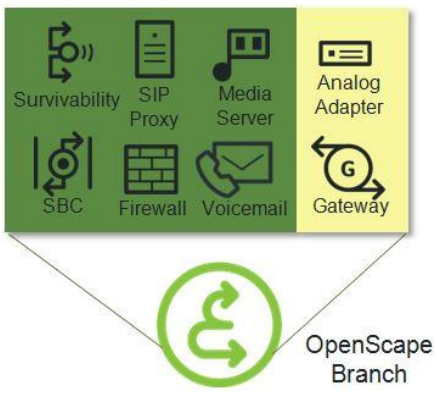
There is also the ATA variant that only provides the Analog Terminal Adapter functionality but in higher density. These two models are

- OpenScape Branch 50i A024 (24 FXS ports)
- OpenScape Branch 50i A048 (48 FXS ports)

For higher PRI capacity, the OpenScape Branch 500i is the best choice. It is available in two models:

- OpenScape Branch 500i DP4 (4 E1/T1 PRI ports)
- OpenScape Branch 500i DP8 (8 E1/T1 PRI ports)

This additional integration of Analog Terminal Adapter and PSTN Gateway functionality provides a better value as it requires a smaller footprint and less power to operate. This results in direct operational savings and a greener solution.



Gateway

PSTN Interface (FXO)

- 8 RJ11 connectors
- Trunk type: Loop Start
- Nominal impedance
- Software-configurable AC and DC impedances to support most countries worldwide
- Caller ID: FSK or country-specific DTMF
- Ring detection
- Answer (loop supervision, battery reversal)
- Disconnect support (loop supervision and country-specific busy detection)
- Software-adjustable audio input and output level

Basic Rate Interface (BRI)

- RJ45 connectors
- Trunk support (EuroISDN):
  Layer 1: ETS 300 012-1 (ITU-T I.430)
  Layer 2: ETS 300 402-1/2 (ITU-T Q.921) – Data Link
  Layer 3: ETS 300 403-1/2 (ITU-T Q.931) – Signaling Network Layer 4: ETS 300 102-1/2 (ITU-T Q.931) – Basic Call Control
  Point to Point and Point to Multi-Point operation

Primary Rate Interface (PRI)

- RJ45 connector
- Available with E1 or T1 interface
- E1 protocol support:
  EuroISDN, CAS MFC-R2 (Brazil, Mexico) QSIG, CorNet-NQ
- T1 protocol support:
  NI2, 4ESS, 5ESS Custom, CAS (Immediate Start and Delayed Start), CAS MRD/ARD/HH, QSIG, CorNet-NQ
- E1/T1 interface:
  Layer 1: ETS 300 012-1 (ITU-T I.431) Layer 2: ETS 300 402-1/2 (ITU-T Q.921) – Data Link
  Layer 3: ETS 300 403-1/2 (ITU-T Q.931) – Signaling Network
  Layer 4: ETS 300 102-1/2 (ITU-T Q.931) – Basic Call Control
- Framing types:
  T1 - Superframe (D4)
  T1 – Extended Superframe (ESF)
  Channel Associated Signaling (CAS)
- Coding types:
  T1 - Alternative Mark Inversion (AMI) T1 - Bipolar with 8 Zeros Substitution (B8ZS)
  E1 - High Density Bipolar of Order 3 Code (HDB3)
  Optional Cyclic Redundancy Check 4 (CRC4)
- Compliance TBR 4, Net 5
- Configurable Calling Party Number

Analog Terminal Adapter

Interface (FXS)

- RJ11 connectors
- Trunk type: Kewl Start
- Software-configurable AC and DC impedances to support most countries worldwide
- Ringer support of 3 REN (with Caller ID)
- Caller ID: FSK or country-specific DTMF
- Country-specific tones support
- Software-adjustable audio input and output level
- Hotline

Fax Support

Automatic selection between voice and fax:

- Protocols:
  Group 3 Fax,
  Clear channel - G.711,
  T.38 Real-time
- Fax transmission (up to 9600 kbps)
- DSP-based DTMF tone detection
- 16-digit DTMF decoding (0 to 9, *, #, A, B, C, D)
- RFC 2833 support (configurable)
- Echo cancellation up to 32 ms
- Jitter Buffer for FAX calls

Performance	OSB 50i A84	OSB 50i D44	OSB 50i DP14E	OSB 50i DP14T	OSB 50i	OSB 50i	OSB 50i	OSB 500i	OSB 500i DP8
Max. supported number of SIP registered lines	80	80	80	80	80	0	0	500	500
Max. number of concurrent sessions	40	40	40	40	40	24	40	120	240
Max. number of calls per second (continuous)	1	1	1	1	1	1	1	5	5
Max. registrations per second (background)	5	5	5	5	5	5	5	10	10
Max. registrations per second (peak)	80	80	80	80	80	24	48	500	500
Max. number of concurrent announcement ports	5	5	5	5	5	0	0	16	16
Max. number of concurrent conference ports	12	12	12	12	12	0	0	30	30
Max. number of supported languages	2	2	2	2	2	0	0	2	2
Max. number of Backup ACD Agents	10	10	10	10	10	0	0	250	250
Max. number of SIP trunking sessions	20	20	20	20	20	0	0	60	60
Number of FXO ports	8	0	0	0	0	0	0	0	0
Number of BRI ports **	0	4	0	0	0	0	0	0	0
Number of E1/T1 PRI ports	0	0	1	1	2	0	0	4	8
Max. number of concurrent integrated gateway calls	8	8	30	23	60	0	0	120	240
Number of analog terminal adapter ports (FXS)	4	4	4	4	4	24	48	0	0
Max. number of management sessions	5	5	5	5	5	5	5	5	5

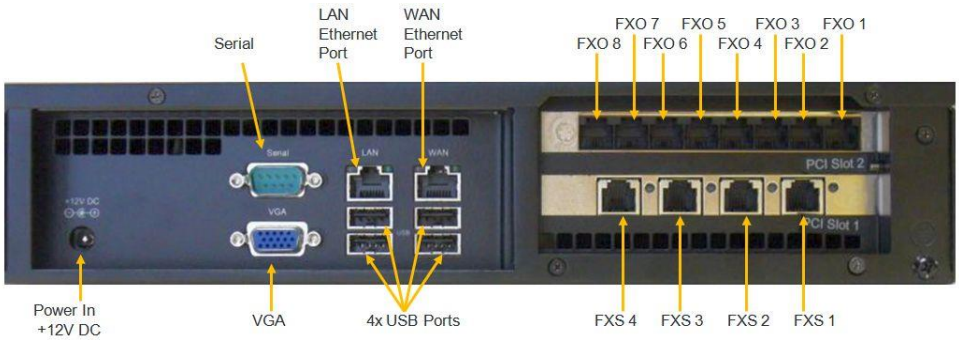
* Registered lines include primary lines, secondary call appearances and phantom lines
** BRI ports are for PSTN connectivity only

OpenScape Branch 50i models

Based on:	Advantech SYS-2USM12-6M01E Server
Physical size (W x H x D):	300 x 65 x 300 mm 11.8 x 2.6 x 11.8 inches
Weight:	up to 4.5 kg (9.9 lb)
Rated power:	100 V - 240 V AC, 50/60 Hz, 60 W
Average power consumption:	25 W
Rated heat emission:	216.2 kJ/h (204.8 BTU)
Operating temperature:	0-40°C (32-104 °F)

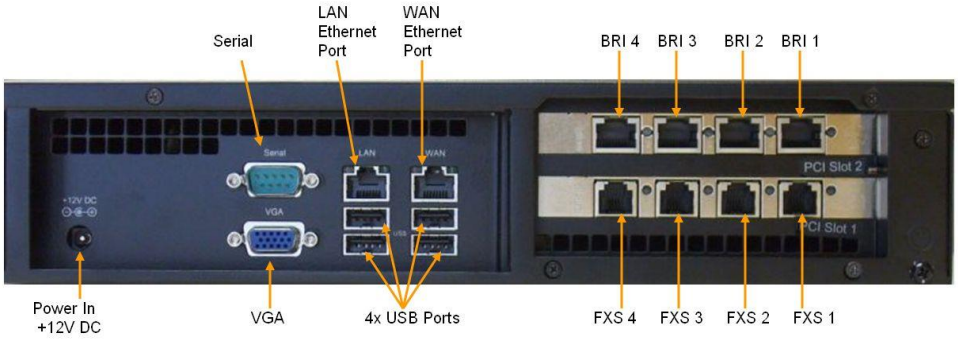
OpenScape Branch 50i A84

Analog – 8 ports FXO + 4 ports FXS (L30220-D600-A594)



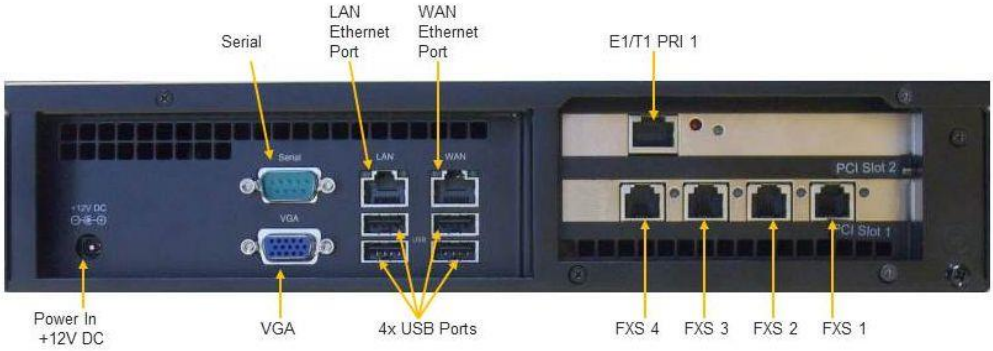
OpenScape Branch 50i D44

Digital BRI – 4 ports BRI + 4 ports FXS (L30220-D600-A595)



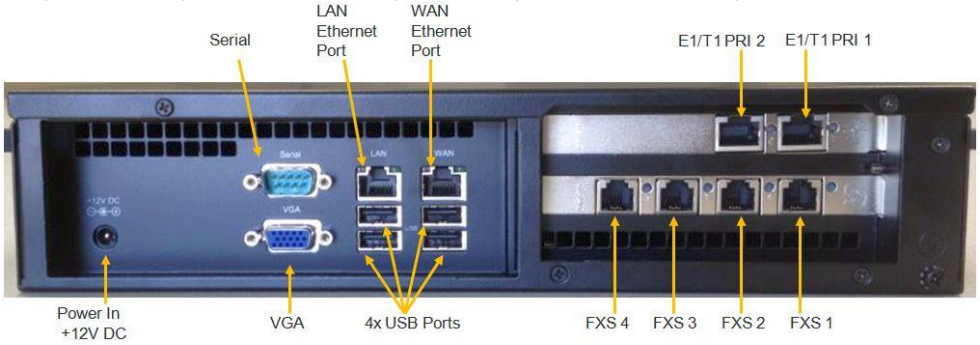
OpenScape Branch 50i - DP14

Digital PRI – 1 port E1 PRI + 4 ports FXS (L30220-D600-A597)



OpenScape Branch 50i – DP24

Digital PRI – 2 port E1/T1 PRI + 4 ports FXS (L30220-D600-A597)

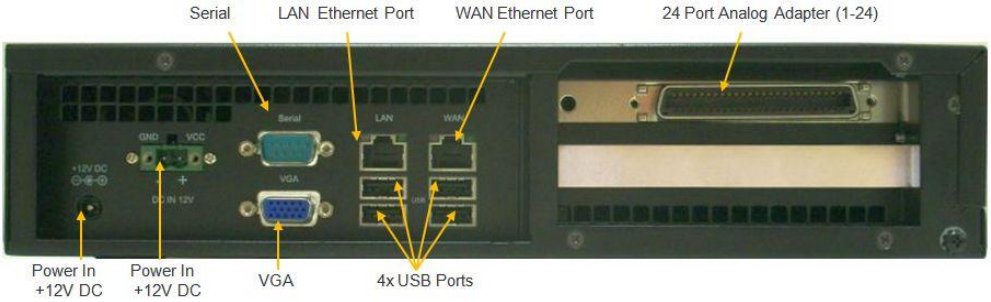


OpenScape Branch 50i Analog Terminal Adapter Models

Based on:	Advantech SYS-2USM01-6M01E Server
Physical size (W x H x D):	300 x 65 x 400 mm 11.8 x 2.6 x 15.8 inches
Weight:	up to 6.44 kg (14.2 lb)
Rated power:	100 V - 240 V AC, 50/60 Hz, 140 W
Rated heat emission:	504 kJ/h (477.7 BTU)
Operating temperature:	0-40°C (32-104 °F)

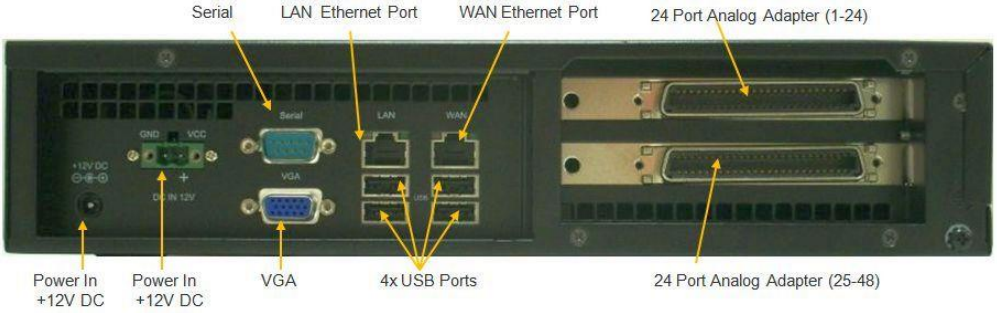
OpenScape Branch 50i – A024

Analog – 0 ports FXO + 24 ports FXS (L30220-D600-A565)



OpenScape Branch 50i – A048

Analog – 0 ports FXO + 48 ports FXS (L30220-D600-A566)



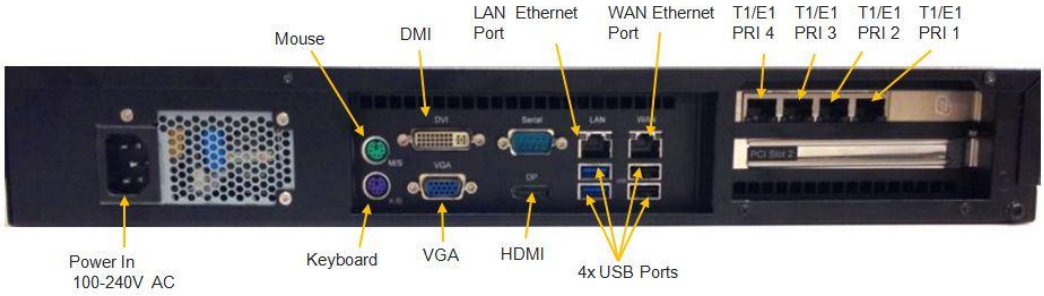
Please note that sales of the OpenScape Branch 50i A024 and OpenScape Branch 50i A048 models will be discontinued as of May 2018. The replacement for these units will be the Mediatrix S724 and S7LP models.

OpenScape Branch 500i Models

Based on:	Advantech SYS-2USM13-6M01E Server
Physical size (W x H x D):	425 x 65 x 320 mm 16.8 x 2.6 x 12.9 inches
Weight:	up to 4.99 kg (11.0 lb)
Rated power:	100 V - 240 V AC, 50/60 Hz, 180 W
Average power consumption:	41 W
Rated heat emission:	147.6 kJ/h (139.9 BTU)
Operating temperature:	0-40°C (32-104 °F)

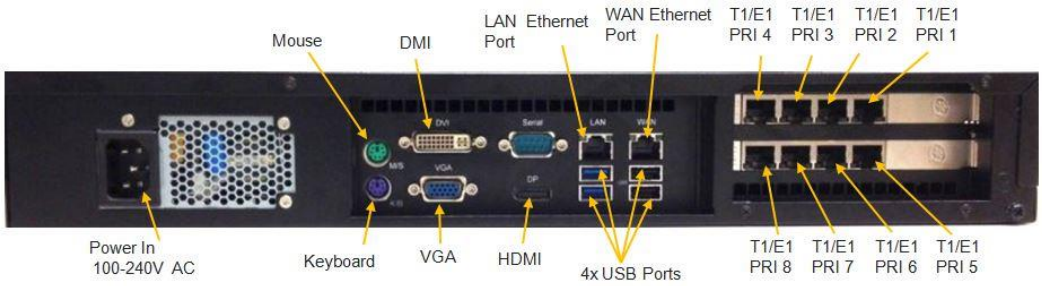
OpenScape Branch 500i - DP4

Digital PRI – 4 ports E1/T1 PRI (L30220-D600-A590)



OpenScape Branch 500i – DP8

Digital PRI – 8 ports E1/T1 PRI (L30220-D600-A591)



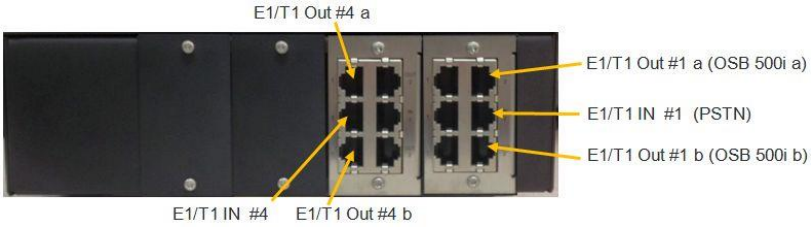
Accessories

OpenScape Branch 500i – Splitter Box

Physical size (W x H x D):	215 x 65 x 320 mm 8.5 x 2.6 x 12.9 inches
Weight:	up to 4.0 kg (8.0 lb)
Rated power:	no power connectivity
Operating temperature:	0-40°C (32-104 °F)

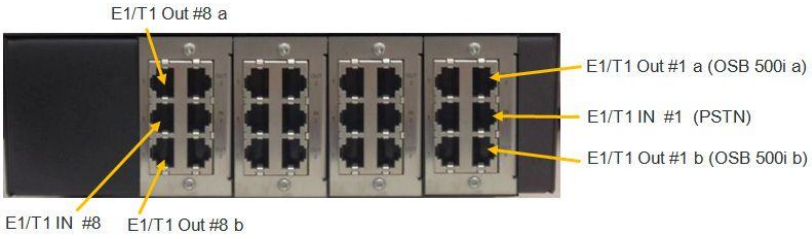
OpenScape Branch 500i Splitter Box 4 PRI

Splitter for – 4 ports E1/T1 PRI (L30220-D600-A640)



OpenScape Branch 500i Splitter Box 8 PRI

Splitter for – 8 ports E1/T1 PRI (L30220-D600-A641)



Reference No.: A31002-H8190-D100-01-7629

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