



OmniSwitch 6600 Family

High Availability
Advanced Workgroup Switching



OmniSwitch 6600 family switches are advanced 10/100 based stackable layer 3 workgroup switches that provide wire rate L2+ switching, L3 routing and advanced services with high availability for IP communications and mission-critical environments. A compact form factor, a rich set of features and a high availability design makes the OS6600 a great choice for the following applications:

- Enterprise workgroups/LAN wiring closets
- Edge deployments and branch offices
- Converged voice and data environments
- Power over Ethernet
- 100BaseFX fiber to the desktop



OmniSwitch OS6600-48



OmniSwitch OS6600-24



OmniSwitch OS6600-U24



OmniSwitch OS6600-P24



OmniSwitch OS6602-24



OmniSwitch OS6602-48

The OmniSwitch 6600 family consists of the OmniSwitch 6600 and OmniSwitch 6602 series switches. The OmniSwitch 6600 provides 24/48 10/100 ports in a 1.5U form factor with two expansion slots for optional two port Gigabit stacking modules and/or two port fiber or copper Gigabit uplinks and an internal slot on the back of the chassis for pluggable backup power supply.

- **OmniSwitch 6600-24 - 24 10/100 RJ45 ports**
- **OmniSwitch 6600-48 - 48 10/100 RJ45 ports**
- **OmniSwitch 6600-U24 - 24 SFP based 100BaseFX ports that accept industry standard 100BaseFX optics.**
- **OmniSwitch 6600-P24 - 24 10/100 RJ45 ports with standards-based PoE (uses external backup power supply)**

New to the OS6600 family is the reengineered OS6602 series that is based on the OS6600, but comes in a new 1U design and has a fixed configuration that includes two ports of SFP (small form plugware) for Gigabit connectivity and two ports for stacking built in. The OS6602 is completely interoperable with the OS6600 including a mixed stack virtual chassis.

- **OmniSwitch 6602-24 - 24 10/100 RJ45**
- **OmniSwitch 6602-48 - 48 10/100 RJ45**

The Alcatel enterprise 10/100 LAN offering also includes the value based 10/100 L2+ stackable switches OmniStack 6124 and 6148.

Complementing the OS6600 and OS6100 10/100 fixed configuration switches, the OmniStack 6300 series is the first Alcatel fixed configuration Gigabit Ethernet 10/100/1000 to the desktop series of switches.

Alcatel OmniSwitch 6600 Family



Alcatel's fixed configuration switches are part of the Alcatel enterprise LAN offering that includes the larger capacity, modular-based OmniSwitch 7700, 7800, and 8800 series of core switches. Together this family offers a complete edge-to-core solution with high availability, intelligent performance, and enhanced security in an easy to manage, flexible, and scalable package.

Alcatel understands the need to control service costs and provides a limited lifetime warranty on all OmniSwitch 6600 family switches.

Virtual Chassis

What is a virtual chassis? Essentially, a virtual chassis takes the best attributes of a modular chassis switch and applies them to lower cost fixed configuration switches, allowing the enterprise to manage and scale their network effectively and affordably. With the addition of the OS6602 a virtual chassis can consist of up to eight switches of either the OS6602, the OS6600 or a mix of both.

The virtual chassis provides:

- single IP address management
- easy synchronization of switch software and configurations across all switches within a single stack
- dedicated fault tolerant backplane using hardware stacking
- link aggregation across chassis
- N:1 management backup because each switch is fully capable of providing management for the virtual chassis

When a group of OS6600/OS6602 switches are configured in a virtual chassis, an automatic election takes place to elect the primary and secondary management entity. If the primary or secondary switch fail, recurrent automatic elections take place for their replacement.

Another great benefit of the virtual chassis is that it can be very quickly and simply scaled up, torn down or reconfigured to suit the needs of the enterprise.

High Availability

The OS6602/OS6600 support cost effective 1:1 backup power supplies, fault tolerant loop stacking, and virtual chassis link aggregation preventing single points of failure. Any switch within a virtual chassis that provides management functionality and automatic election of primary and secondary managers provides N:1 management redundancy.

Quality of service in the network addresses availability by ensuring mission critical applications, such as IP telephony and other delay sensitive applications, receive the expedited forwarding they require to be available and effective. The OS6600 family supports per port queuing, flow-based QoS rules and bandwidth management to help guarantee mission applications are available.



Secure Networking

Security is a primary focus of every CIO. To address this concern, the OS6600 family provides features that support a multi-layered approach to network security. Access to the network is controlled by either filtering out unwanted traffic, forcing authentication of the user, or allowing only pre-authorized devices access. Switch administration controls include support for encrypted management communication and authentication of the administrator. Further switch management granularity can be configured so that administrators only have access to features under their responsibility or expertise.

The OS6600 family also supports emerging technologies that identify and quarantine devices that do not meet administrator defined requirements. In the quarantined environment the end device has access to network resources that remediate the device and return it to a state where network access can then be granted.

Simplified Management

- **OneTouch QoS for simplified network-wide configuration of QoS policies**
- **Resource manager for backup/restore switch software and configuration**
- **Locator service to locate end devices for troubleshooting and virus containment**

It's very common today to find small IT departments tasked with managing large enterprise networks. Typically, the IT department is staffed with people of varying expertise who don't have the luxury of time or budget for extensive training. To address this situation, large networks need to be easy to install, manage, and troubleshoot. Alcatel tackles this situation by providing OmniVista, a powerful network management platform for its AOS based OmniSwitch family.

When an enterprise network uses an all AOS-based solution, training, installation, configuration and troubleshooting is minimized. For that reason, Alcatel designed the OS6600 family to have an AOS-based CLI, just like the larger modular-based OmniSwitch.

Additionally, the Web-based manager has the same look and feel across the AOS line of switches and provides a point and click method with online help to ease configuration of new features.



Alcatel OmniSwitch 6600 Family

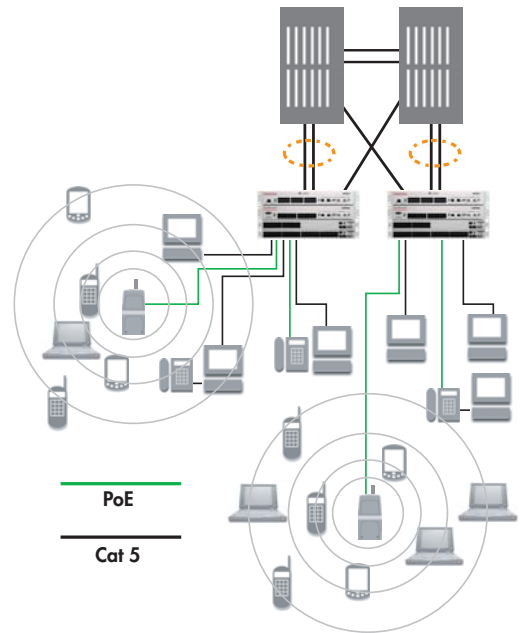


Network Applications

10/100 Advanced Workgroup

The AoS based OmniSwitch 6600 series, using the virtual chassis design, provides high availability to support mission critical applications at the edge of your network. When combined with the OmniSwitch 7000/8000 chassis-based solutions, you get the highest availability and easiest to manage edge-to-core network in the industry.

The OS6600 family's compact fixed form factor design, and modular expandability provides an easy path to scale any workgroup up to 384 10/100 ports and 16 Gigabit Ethernet ports in a single stack.

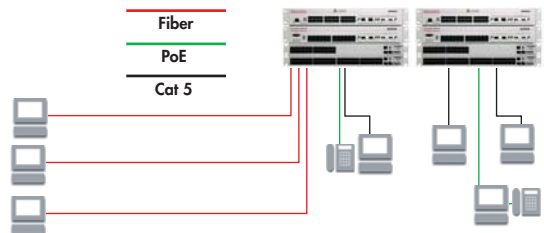


Power over Ethernet

By adding the OS6600-P24 to your existing virtual chassis, you get seamless migration to standards-based power over Ethernet capability for IP phones, wireless access points, Web cameras or any other 802.3af compliant end-devices.

Fiber to the Desktop

The OS6600-U24 offers the ability to provide 100BaseFX fiber to the desktop connectivity that is typically needed for security or extended reach needs. The OS6600-U24's SFP design is cost-effective, extremely flexible, and supports multimode or single mode fiber for distances up to 40km on a per port basis.





Product Specifications

Feature

Performance

- 24 port: switching capacity; 14 Gbps; Throughput 64 byte; 9.5 Mpps
- 48 port: switching capacity; 20 Gbps; Throughput 64 byte; 13 Mpps
- 16K MAC addresses
Max frame size: 1522 bytes

Simplified manageability

- Dual image and configuration file storage for local backup
- Certified and working directories allow automatic fallback to known good configurations
- Intuitive AOS CLI. Provides common CLI from edge to core when used with OS7000/8000
- Remote Telnet
- Port based port mirroring supports 1 session per 24 port or 2 sessions per 48 port switch
- User readable configuration files allow offline editing
- IGMPv1/v2 snooping to optimize multicast traffic
- System event logging
- RMON support statistics, history, alarms, events
- NTP - Network time protocol to synchronize network devices
- AMAP - Alcatel protocol to assist in building topology maps in OmniVista

VLAN support

- 255 VLANs with 4,094 VLAN tag value support
- Per port, 802.1Q, DHCP, IPX and authenticated VLAN support

Routing protocol support

- RIPv1/v2
- OSPF
- VRRP
- RDP

High availability

- 802.1w Rapid Recovery Spanning Tree allows sub-second failover to redundant link
- 802.1d Spanning Tree for loop free topology and link redundancy
- Fast forwarding mode on user ports to bypass 30 second delay for Spanning Tree
- Static and 802.3ad dynamic link aggregation supports automatic configuration of link aggregates with other switches (up to six aggregates with up to eight links per aggregate)
- Broadcast storm control
- Redundant 1:1 power supply

Quality of service

- 4 hardware queues per port and strict priority queue servicing to support mission critical applications
- Layer 2: SA/DA MAC/MAC Group, SA/DA VLAN, SA/DA slot/port/group, SA/DA Interface type
- Layer 3 (IP only): SA/DA IP address/group, Multicast address & Group (accept or deny), IP Protocol
- Layer 4: source/Dest TCP/UDP port & and TCP/UDP Protocol
- 802.1p stamping per port, TOS/DSCP stamping on a packet based on SA/DA (slot/port, IP address, IP protocol, L4 port)
- QoS remapping: 802.1p to 802.1p (per port only)
- IP-TOS to 802.1p (Global rule), DSCP to 802.1p (Global rule)
- Classification per port, 802.1p (CoS) value, MAC SA/DA, ToS precedence, DSCP value, IP SA/DA, TCP/UDP port
- 802.1p (CoS), ToS, DSCP marking to label mission critical packets with QoS information
- Egress flow-based rate limiting

Alcatel OmniSwitch 6600 Family



Product Specifications

Feature

Advanced security

- 802.1x industry standard port-based authentication challenges users with a name and password before allowing network access
- Learned port security or MAC address lockdown allows only known devices to have network access, preventing unauthorized network device access
- RADIUS admin authentication prevents unauthorized switch management
- Secure Shell (SSH), Secure Socket Layer (SSL) and SNMPv3 for encrypted remote management communication
- Access control lists to filter out unwanted traffic, including denial of service attacks (ACLs per MAC SA/DA, IP SA/DA, TCP/UDP port)

Operating environment

Total heat dissipation

OS6600-24: 226 BTU/hr

OS6600-P24: 413 BTU/hr

OS6600-U24: 330 BTU/hr

OS6602-24: 151 BTU/hr

OS6600-48: 326 BTU/hr

OS6602-48: 226 BTU/hr

Storage temperature: 14 to 158 °F (-10 to 70 °C)

Operating temperature: 32 to 113 °F (0 to 45 °C)

Humidity: 5% to 95% (Non-condensing)

Operating altitude: Sea level to 10,000 feet (3 km)

Noise level

OS6600 series: 56 dB

OS6602 series: 47 dB

Number of power supplies supported

All models support a primary power supply and backup power supply for chassis power

OS6600-P24 external power supply module supports 1 additional internal power supply for PoE power

OS6600-BPS-P provides 2 power supplies; 1 for backup chassis power and 1 for backup PoE power

OS6600 AC power supply

Input power: 162 watts AC

Input voltage: 85 ~ 270 VAC

Input current: 1.8 Amps AC @ 90VAC or 0.704 Amp AC @ 230 VAC

Input frequency: 47 to 63 (± 3%) HZ

OS6602 AC power supply

Input power: 140 watts AC

Input voltage: 100 to 240 VAC

Input current: 1.4 Amps AC @ 100 VAC or 0.61 Amps AC @ 230 VAC

Input frequency: 47 to 63 Hz (±3%)

OS6602 DC power supply

Input power range: 136.8 watts DC to 115.2 watts DC rated

Input voltage range: 36 to 72 VDC Nominal input voltage: 48 VDC

Input current range: 3.8 Amps DC to 1.6 Amps DC rated

OS6600 PoE power supply

Input power: 379.5 watts AC

Input voltage: 88 ~ 264 VAC

Input current: 3.3 Amps AC @ 115 VAC or 1.65 Amps AC @ 230 VAC

Input frequency: 47 to 63 (± 3%) HZ

Note: the maximum power available for the PoE is 210 watts DC

Warranty

Limited lifetime hardware warranty: Limited to the original owner, and will be provided for up to five years after product's End of Sales announcement. Faulty parts will be replaced within five (5) business days-AVR (Advance Replacement) RMA

Service and support

Please contact your Alcatel representative



Form Factor

Description	OS6600-24/48	OS6600-P24	OS6600-U24	OS6602-24/48
Form Factor	1.5U, 24/48 10/100 RJ-45 ports with 2 expansion slots	1.5U, 24/48 10/100 RJ-45 ports with PoE support and 2 expansion slots	1.5U, 24 100BaseFX SFP ports with 2 expansion slots	1.0U, 24/48 10/100 RJ-45 ports with 2 Gigabit stack ports and 2 Gigabit miniGBIC ports built in
Dimensions (HxWxD)	(2.6x17.12x13.94)In (6.6x17.12x35.4)Cm	(2.6x17.12x14.6)In (6.6x43.48x37)Cm	(2.6x17.12x13.94)In (6.6x43.48x35.4)Cm	(1.74x17.32x16.11)In (4.42x44x40.92)Cm
Weight	6600-24 12.46 lbs 6600-48 13.66 lbs	6600-P24 13 lbs	6600-U24 12.46 lbs	6602-24 12 lbs 6602-48 13.66 lbs
Modular expansion	YES, 2 port Gigabit miniGBIC module, 2 port stacking module	YES, 2 port Gigabit miniGBIC module, 2 port stacking module	YES, 2 port Gigabit miniGBIC module, 2 port stacking module	N/A
Console Connector	DB-9	RJ-45	RJ-45	RJ-45
PoE Support	NO	YES	NO	NO
100Base Fiber support	NO	NO	YES, 100BaseFX SFP	NO
(Optional) Backup Power	Internal, requires OS6600-BPS	External, requires OS6600-BPS-P, provides chassis and PoE backup power	Internal, requires OS6600-BPS	Internal, requires OS6602-BPS. Also supports DC backup using the OS6602-BPS-DC

Certifications/Safety

Safety Standards

AS/NZS 3260 (Australia Safety Standard); CAN/CSA-C22.2 no.60950-00; CB Report and Cert. (International safety of ITE) with all national deviations (IEC 950); CE Marking per Low Voltage Directive (LVD) (European Safety Directive); CDRH Letter of Approval (US FDA Approval); 21 CFR 1040 (part of Laser Certification per EN 60825-1 & EN 60825-2); EN60825-1 (Laser Evaluation) & EN60825-2 (Laser Evaluation); 1994, A11: 1996 (European Safety of Lasers Products); EN60950: 2000/A1-4, A11+Deviations (European Safety of ITE); ETS 300 019 Storage Class 1.1/ Transportation Class 2.3/Stationary Use Class 3.1; FCC 21 CFR Subpart J (US Safety of Laser Products); GOST (Russian Federation Certificate); TS 001; TUV GS Mark (German Notified Body) EN 60950; UL-AR: Argentina Certification & S Mark (Argentina Safety Approval); UL 60950

EMC Standards

AS/NZS 3548 (Australia Emissions) Class A/B*; BSMI, Class A; CE Marking per EMC Directive; CISPR22: 1997 Class A&B* (International Emissions); CNS 13438:1997 Class A (Taiwan Emissions); FCC 47 CFR Part 15, Subpart B&J, Class A/B*; 89/336/EEC EMC Directive (European Requirements); EN50082-1; EN55022: 1998 Class A/B* (European Emissions); EN55024: 1998 includes EN61000-4-2, 3, 4, 5, 6, 7, 11 (European Immunity); EN60555-2; EN61000-3-2 (European Harmonics & Flicker); EN61000-3-3 (European Harmonics & Flicker); EN61000-4-2; EN61000-4-3; EN61000-4-4; EN61000-4-5; N61000-4-6; EN61000-4-8; EN61000-4-11; ICES-003 Class A&B*; IEC 1000-3-2; IEC 60950; MIC Mark (Korean Emissions & Immunity Approval); NOM/NYCE (Mexican Product Safety & EMC Authorities); NOM-019-SCFI 1994 & NOM-019-SCFI-1998; VCCI Class A&B* (Japan Emissions); VCCI-V3/97.04, Class A & B*

*OS6602 series switches are Class A certified only



Standards

Standards (abridged)	RFC 791 IP	RFC 2011 SNMPv2 MIB for the IP using SMIv2
IEEE 802.1D Spanning Tree Protocol	RFC 792 ICMP	RFC 2012 SNMPv2 MIB for the TCP using SMIv2
IEEE 802.1D-1998 Priority and Dynamic Multicast Filtering	RFC 793 TCP	RFC 2013 SNMPv2 MIB for the UDP using SMIv2
IEEE 802.1p	RFC 826 ARP	RFC 2096 IP Forwarding MIB
IEEE 802.1Q VLAN Tagging	RFC 854 Telnet	RFC 2138 RADIUS
IEEE 802.1w Rapid Reconfiguration (Fast Spanning Tree)	RFC 903 Reverse ARP	RFC 2233 Interfaces MIB
IEEE 802.1x Port-based network access control	RFC 925 Multi-LAN ARP/Proxy ARP	RFC 2236 IGMP & IGMPv2
IEEE 802.3 10BaseT Ethernet	RFC 1058 RIPv1	RFC 2328 OSPFv2
IEEE 802.3ab 1000BaseT twisted-pair Gigabit Ethernet	RFC 1191 Path MTU Discovery	RFC 2338 VRRP
IEEE 802.3ad Dynamic link aggregates	RFC 1493 Bridge MIB	RFC 2453 RIPv2
IEEE 802.3af Power over Ethernet	RFC 1519 Classless Inter-Domain Routing (CIDR)	RFC 2644 IP router requirements
IEEE 802.3u 100BaseTX, 100BaseFX Fast Ethernet	RFC 1542 BOOTP	RFC 2665 Ethernet MIB
IEEE 802.3x Full Duplex with Flow Control	RFC 1587 OSPF NSSA Option	RFC 2674 VLAN Management MIB
IEEE 802.3z 1000BaseX fiber optic Gigabit Ethernet	RFC 1724 RIP v2 MIB	RFC 2737 (Entity MIB using SMIv2) Version2
RFC 768 UDP	RFC 1757 RMON (groups 1, 2, 3, and 9)	RFC 2819 Remote Network Monitoring MIB
	RFC 1765 OSPF Database Overflow	RFC 2863 Interfaces Group MIB
	RFC 1812 IP router requirements	RFC 2933 IGMP v2 MIB
	RFC 1850 OSPF2 MIB	
	RFC 1907 MIB-II	



Ordering Information

Model Number	Description
OS6600-24	OS6600 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002]. 24 port 10/100 chassis with two open slots for optional expansion modules and one slot in back for an optional redundant and hot swappable backup AC power supply. Advanced Routing software is orderable separately as a no cost option. Authentication software is sold separately.
OS6600-P24	OS6600 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002]. 24 port 10/100 chassis that supports 802.3af compliant power over Ethernet, with two open slots for optional expansion modules. Chassis and PoE backup power is supplied by the OS6600-BPS-P external backup power module. Advanced Routing software is orderable separately as a no cost option. Authentication software is sold separately.
OS6600-U24	OS6600 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002] 24 port 100Base-FX SFP chassis with two open slots for optional expansion modules and one slot in back for an optional redundant and hot swappable backup AC power supply. SFP ports accept industry standard 100Base-FX optical transceivers which are sold separately. Advanced Routing software is orderable separately as a no cost option. Authentication software sold separately.
OS6602-24	OS6602 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002] 24 port 10/100 chassis with 2 ports Gig SFP and 2 ports stacking built in and one slot in back for an optional redundant and hot swappable backup AC or DC power supply. Stacking cable must be ordered separately. Advanced Routing software is orderable separately as a no cost option. Authentication software is sold separately.
OS6602-48	OS6602 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002] 48 port 10/100 chassis with 2 ports Gig SFP and 2 ports stacking built in and one slot in back for an optional redundant and hot swappable backup AC or DC power supply. Stacking cable must be ordered separately. Advanced Routing software is orderable separately as a no cost option. Authentication software is sold separately.
OS6600-48	OS6600 chassis w/SSL (DES,3DES,RC2,RC4). [ECCN 5A002] 48 port 10/100 chassis with two open slots for optional expansion modules and one slot in back for an optional redundant and hot swappable backup AC power supply. Advanced Routing software is orderable separately as a no cost option. Authentication software is sold separately.
OS6600-BPS	Hot Swappable AC Backup Power Supply for the OmniSwitch 6600 series switch. Backup power supply is optional. Country specific power cord required
OS6602-BPS	Hot Swappable AC Backup Power Supply for the OmniSwitch 6602 series switch. Backup power supply is optional. Country specific power cord required.
OS6602-BPS-DC	DC Backup Power Supply for the OmniSwitch 6602 series switch. Backup power supply is optional.
OS6600-STK-KIT	Stacking Kit for the OmniSwitch 6600 switches, includes one 2 port stacking module and one 30cm in length stacking cable. Same stacking module as the OS6600-RST-KIT, but with a short cable.

Alcatel OmniSwitch 6600 Series



Ordering Information

Model Number	Description
OS6600-RST-KIT	Redundant stacking kit for the OmniSwitch 6600 switches, includes one 2 port stacking module and one 1 meter in length stacking cable. Same stacking module as the OS6600-STK-KIT, but with a longer cable.
OS6600-3M-KIT	Extended length stacking kit for the OmniSwitch 6600, includes one 2 port stacking module and one 3 meter in length stacking cable. Same stacking module as the OS6600-STK-KIT, but with a longer cable.
OS6600-CBL-1M	OS6600 1 meter stacking cable. Compatible with OS6602 series switches
OS6600-CBL-30CM	OS6600 30 centimeter stacking cable. Compatible with OS6602 series switches
OS6600-CBL-3M	OS6600 3 meter stacking cable. Compatible with OS6602 series switches
OS6600-GNI-C2	2 port Copper Gigabit Ethernet expansion module with 2 RJ-45 connectors.
OS6600-GNI-U2	2 port mini-GBIC universal Gigabit Ethernet expansion module. Requires mini-GBIC transceiver.
SFP-100-LC-MM	100BaseFM multimode 62.5/125 and 50/125 micron fiber, supports distances up to 2km; uses LC connectors
SFP-100-LC-SM15	100BaseFS single mode 9/125 nm fiber, supports distances up to 15 km; uses LC connectors.
SFP-100-LC-SM40	100BaseFS single mode 9/125 nm fiber, supports distances up to 40 km; uses LC connectors.
SFP-100-MTRJ-MM	100BaseFM multimode 62.5/125 and 50/125-micron fiber, supports distances up to 2km; uses MTRJ connectors.
OS6600-SW-AR	OS6600 Advanced Routing Software. Includes support for OSPF.
OS6600-SW-AS	OS6600 Authenticated Software w/MD5. [ECCN 5D002] OmniSwitch 7000 Authentication Services software is for Authenticated VLANs and administrative access (user or user partitioned commands) utilizing a remote AAA server. Support is provided for standards-based RADIUS and standards-based LDAP v3 for authorization, authorization and accounting, and RSA ACE/Server direct for authentication based on one-time password tokens (SecurID).
OS6600-SW-SBR-N	Authenticated SBR-MS sw w/MD5, RC4, MD4, DES. [ECCN 5D002] OmniSwitch 6600 Authentication Services software bundled with Funk Software's Steel-Belted Radius Enterprise Edition for Microsoft Windows.
OS6600-SW-SBR-S	Authenticated SBR-Sun sw w/MD5, RC4, MD4, DES. [ECCN 5D002] OmniSwitch 6600 Authentication Services software bundled with Funk
MiniGBIC-SX	MiniGBIC Transceiver (SFP MSA) – 1000Base-SX for Multimode fiber
MiniGBIC-LX	MiniGBIC Transceiver (SFP MSA) – 1000Base-LX for singlemode fiber
MiniGBIC-LH-70	MiniGBIC Transceiver (SFP MSA) – 1000Base-LH for singlemode fiber

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