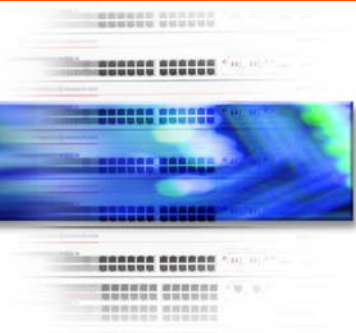




OmniSwitch 6800 Family

Best value in advanced
Gigabit Ethernet switching



The Alcatel OmniSwitch 6800 family of Ethernet switches are advanced, stackable, fixed configuration, triple-speed (10/100/1,000) switches. They provide wire rate layer-2 forwarding and layer-3 routing with advanced services. The OS6800 increases network performance, improves application response times, secures the LAN, and enhances user productivity by maximizing network capacity and services over existing category 5/5E/6 cabling.

With triple-speed capability, built-in combo ports (four 10/100/1,000 and four mini-GBIC) and support for optional wire speed, two port, 10 Gigabit Ethernet modules, the small to large enterprise can now simultaneously protect its current investment in legacy end devices while providing seamless migration in the future.



OmniSwitch OS6800-48

A compact, one unit (1U) high form factor, virtual chassis design and a comprehensive set of features makes the OS6800 perfect for the following applications:

- Enterprise workgroups / LAN wiring closets
- Edge deployments and branch offices
- L3 aggregation / distribution layer switches in three-tier networks
- Small enterprise core switching
- Quality of service (QoS) for mission critical applications
- Data center server clusters



OmniSwitch OS6800-24



OmniSwitch OS6800-U24

The currently offered OmniSwitch 6800 switches are:

OS6800-24: Gigabit Ethernet L3 stackable fixed configuration chassis in a 1U form factor with 20 10/100/1,000 RJ-45 ports, two stacking ports plus four combo ports.*

OS6800-48: Gigabit Ethernet L3 stackable fixed configuration chassis in a 1U form factor with 44 10/100/1,000 RJ-45 ports, two stacking ports plus four combo ports* and 10 Gig support.



OmniSwitch OS6800-48 rear view
(Shown with optional 10G and back up power connector modules)

OS6800-U24: Gigabit Ethernet L3 standalone fixed configuration chassis in a 1U form factor with 20 miniGBIC (SFP) ports plus four combo ports* and 10 Gig support.

Future models will include stackable 24 and 48 port models with standards based, power over Ethernet (PoE) and 10 Gig support.



OmniSwitch OS6800 power shelf
(Shown with eight OS6800-BPS power supplies inserted)

The OS6800 family uses a modular external backup power solution that provides redundant chassis and PoE power on a 1:1 basis.

*Combo ports on all models consist of four 10/100/1,000 RJ-45 and four mini-GBIC

Alcatel OmniSwitch 6800 Family



The OmniSwitch 6800 family is Alcatel's first advanced, fixed-configuration Gigabit Ethernet to the desktop family of switches and complements the existing portfolio of Alcatel enterprise fixed-configuration switches including:

- **OmniStack 6100 family switches: Layer 2+ 10/100 stackable**
- **OmniStack 6300 family switches: Layer 2+ 10/100/1,000 standalone**
- **OmniSwitch 6600 family switches: Layer 3 10/100 stackable**

Alcatel's fixed configuration switches are part of the larger Alcatel enterprise portfolio that includes the modular-based OmniSwitch 7700, 7800, and 8800 series of core switches. Together, this portfolio 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 offer investment protection and provides a limited lifetime hardware warranty on OS6100, OS6300, OS6600, and OS6800 families of switches.

Gigabit Ethernet

Many people get stuck on the term "Gigabit to the Desktop" because their focus is purely on speed and not on the other tangible benefits this class of switch can offer. The OS6800 provides an advanced, high performance feature set that is secure and easy to manage and provides the necessary network services to ensure the enterprise's mission critical applications are always available and meet user satisfaction needs.

The OS6800 also addresses the need for future proofing and Gigabit migration because it maximizes the bandwidth capabilities of existing cabling plants, supports legacy 10/100 devices, and offers room for growth with optional 10G connectivity. With the value the OS6800 offers, the enterprise can invest in the future at prices they can afford today.

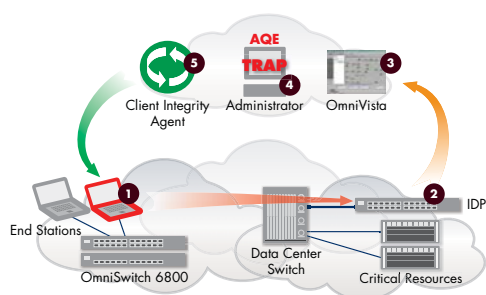
Additionally, the OS6800's capabilities are not just for desktop connectivity. With a 160 Gbps switching capacity and a 40 Gbps stacking bandwidth, the OS6800 can be a very cost-effective distribution layer, server aggregation, or core switch.

Secure Networking

The OmniSwitch 6800 can support a distributed security approach, enhance emerging security technologies, and help secure the LAN edge using proactive and reactive strategies.



One proactive solution is to perform a host integrity check, which ensures attached devices are running administrator defined credentials. A host integrity check solution is significantly enhanced by the OS6800 because it can automatically move hosts that pass inspection dynamically into their proper VLAN based on the user, regardless of where they are physically, or move them into a protected environment where they could maintain limited access to network resources for remediation.



AQE Sequence of Events

- 1 Infected station attacks server (e.g., port scan)
- 2 IDP identifies the attack and source of attack
- 3 IDP notifies OmniVista of type of attack and source of attack
- 4 Trap or syslog event appears and network administrator is offered predetermined responses:
 - Shut down faulty user port
 - Create ACL on (port/VLAN/switch/network)
 - Move faulty MAC to quarantine VLAN (network wide)
- 5 Response is activated in the network

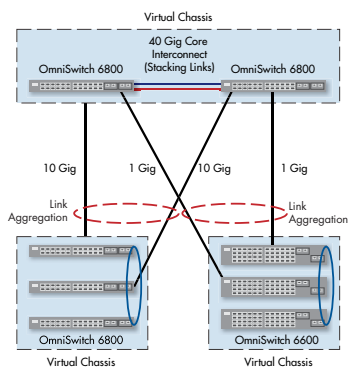
Since every security threat cannot be anticipated, the enterprise also needs a reactive security solution that can respond quickly and effectively. When the group mobility feature in the OS6800 is combined with the Alcatel Quarantine Engine (AQE) and supported intrusion detection systems (IDS), the network can automatically detect attacks and take protective action such as writing a rule that drops the device's traffic, turning off the device's connectivity to the network or quarantine it to a protected environment.

High Availability

A high performance network means nothing if it's not available for use. The OmniSwitch 6800 virtual chassis minimizes downtime, reduces operational complexity and cost, and increases availability for mission-critical applications.

A virtual chassis takes the best availability attributes of a modular chassis like redundant management, fault tolerant backplane and link aggregation including 10 Gig that can be configured across physical switch boundaries. These attributes remove single points of failure that other stackable switches do not address.

A cost effective, highly available, scalable, and reconfigurable network can be achieved when the virtual chassis benefits of the OS6800 are deployed in conjunction with the OS6600 family.



Advanced QoS

Quality of service is vital for ensuring mission critical applications receive expedited forwarding which reduces the chance of critical data flows getting lost, interrupted, or experiencing excessive delay. The OS6800 provides the necessary hardware queues, intelligence and granularity to properly identify, mark, and prioritize data flows ensuring mission critical applications run smoothly.

Alcatel OmniSwitch 6800 Family



Simplified Manageability

The group mobility feature inherent in the OS6800 also provides plug and play mobility for the wired user by removing physical limitations. The OS6800 can use device information, data traffic or user identity to automatically and dynamically keep the user connected seamlessly to their resources, regardless of their location on the campus. Marketing, finance, operations and sales could all be in the same meeting at a common physical location, yet have secure and dynamic access to their respective network resources.

Along with improved productivity and greater user satisfaction, group mobility allows self-service, reducing IT operational costs. Once initial rules for classification are defined, further configuration or intervention is not necessary.

The OS6800's virtual chassis design (up to eight switches) provides all the benefits of managing a chassis-based switch including: single IP address, simple and quick software upgrades and switch configuration changes, and a common look and feel with the modular OmniSwitch solutions.

Your IT person abandoned web management a long time ago because it was too slow, inefficient, and incapable. WebView is different since updates happen instantly across the network, removing the biggest obstacle to simple, fast management.

Alcatel's WebView gives true "real-world" capabilities back to web browser element management and allows IT staff of varying abilities to quickly master and configure new features. The web interface provides point and click ease with quick access to "help." WebView is full featured and can configure and manage all switch features.

The AOS-based OS6800 uses an intuitive CLI that is common across the OmniSwitch line. A common and easy to use interface from the edge to the core reduces total cost of ownership by reducing training costs, simplifying and speeding up deployment, and making troubleshooting efforts more routine.

When the Alcatel enterprise network management solution OmniVista is used as the primary management tool, a small IT staff can effectively and efficiently manage a large network of Alcatel wired and wireless enterprise solutions, further reducing the man hours and support staff requirements.

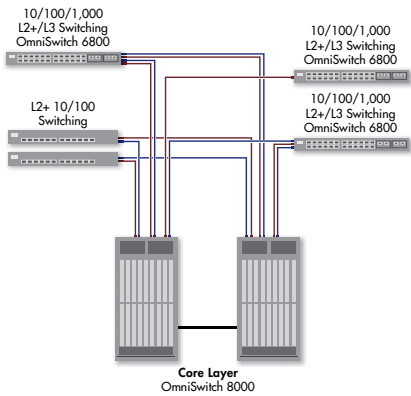


OmniVista benefits include:

- PolicyView with OneTouch QoS centralizes and simplifies QoS configuration network wide.
- Resource Manager automates and centralizes management of switch software network wide with:
 - Bulk operations
 - Backup and restore
- SecureView simplifies and centralizes control of switch administration policies. Provides a high degree of granularity in access privileges.

Gigabit to the Desktop Migration

The OmniSwitch 6800 series of switches provide a migration path to Gigabit on the LAN edge where high-speed and extensive features are needed. The OmniSwitch 6800 has the features necessary to provide intelligent, secure, and available networking for the most demanding applications and user satisfaction requirements.

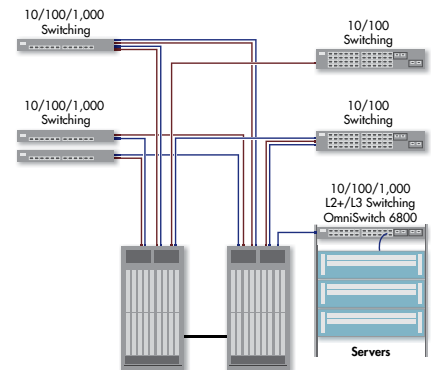


Gigabit to the Desktop Migration

- **Dynamic user mobility with authentication allows the user to connect securely anywhere and have access to their resources without admin intervention or reconfiguration of the network.**
- **802.1x, used in conjunction with emerging security technologies, provides a method to verify an end user and their device status. It then allows admission or quarantines the device to a safe environment where the deficiencies can be remedied.**
- **Support for the Alcatel Quarantine Engine (AQE). AQE works with OmniVista and emerging IDS/IPS systems to automatically identify the source of network-based attacks and react with admin defined actions including quarantining the device, turning off the switch port, or writing a filter rule to drop the offending traffic.**
- **High-speed throughput with 10 Gigabit Ethernet capability for the most demanding applications like video, real time imaging transfer, or large database transactions.**

Server Aggregation

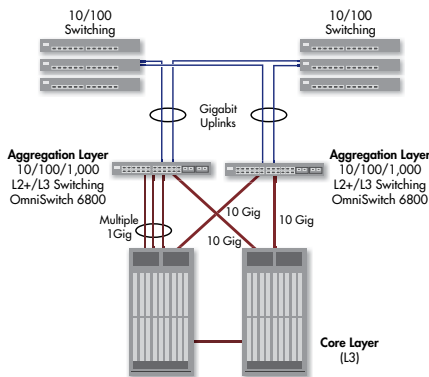
OS6800's small form factor, high performance and rich features set make it a great server aggregation switch, especially for space-constrained data centers where the switch can be installed in the same rack as the servers.



Server Aggregation

L3 Aggregation/Distribution

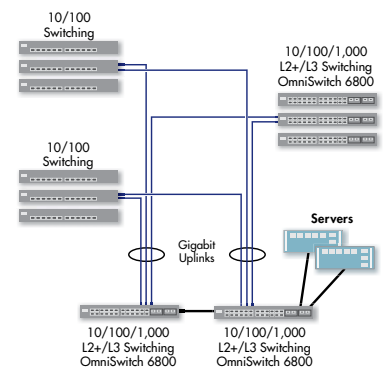
The OmniSwitch 6800 placed in the distribution layer of three-tier networks provides high capacity, wire speed L2 switching, L3 routing and intelligent services near the edge of the network.



L3 Aggregation/Distribution

Small Enterprise Core

Even though the OS6800 only stands 1.75 inches tall, its 160 Gbps of switching capacity rivals some of today's conventional modular core chassis solutions. Combined with full L3 routing protocols, advanced network services and wire speed 10 gigabit capability, the OS6800 makes a very capable and cost-effective core switch.



Small Enterprise Core

Alcatel OmniSwitch 6800 Family



Product Specifications

Features

Simplified Manageability

- Dual image and dual configuration file storage provides backup
- Intuitive Alcatel CLI with familiar interface reducing training costs
- Easy to use point and click web based element manager with built-in help for easy configuration of new technology features
- Remote telnet management or secure shell
- Port based, port mirroring for troubleshooting, supports four sessions with four source-to-one destination configuration
- Human readable ASCII based config files for offline editing and bulk configuration
- IGMPv1/v2/v3 snooping to optimize multicast traffic
- BootP/DHCP client allows auto-config of switch IP information to simplify deployment
- Auto-negotiating 10/100/1,000 ports automatically configure port speed and duplex setting
- Auto MDI/MDIX automatically configures transmit and receive signals to support straight thru and crossover cabling
- DHCP relay to forward client requests to a DHCP server
- SNMPv1/v2/v3
- Integration with SNMP manager OmniVista for network wide management
- Supports RFC 2819 RMON group (1-Statistics, 2-History, 3-Alarm & Events)
- Network Time Protocol (NTP) for network wide time synchronization
- Alcatel Mapping Adjacency Protocol (AMAP) for building topology maps within OmniVista

VLAN Support

- 1,024 VLANs
- 4,094 VLAN tag value support
- Per port, 802.1Q and policy-based VLAN including authenticated VLAN

High Availability

- 802.1w rapid recovery spanning tree allows sub-second failover to redundant link
- Alcatel per-VLAN spanning tree (1x1)
- 802.1d spanning tree for loop free topology and link redundancy
- 802.1s multiple spanning tree*
- Fast forwarding mode on user ports to bypass 30-second delay for spanning tree
- Static and 802.3ad dynamic link aggregation that supports automatic configuration of link aggregates with other switches.
- Broadcast storm control
- Redundant 1:1 power provided by the OS6800-BPS
- Redundant 1:1 chassis/PoE power provided by the OS6800-BPS-P

Quality of Service

- 802.1p, TOS, DSCP marking
- QoS mapping: 802.1p to TOS/DSCP, TOS to 802.1p/DSCP, DSCP to 802.1p/TOS
- Classification per port, 802.1p(COS) value, MAC SA/DA, Ethertype, TOS precedence, DSCP value, ICMP code and type, IP SA/DA, IP protocol, TCP/UDP port range
- Eight egress queues per port to support strict and hybrid queuing (strict + weighted round robin queuing algorithm). Two egress queues are reserved for system use.
- Ingress bandwidth rate limiting per port/flow in 64 Kb increments
- Egress bandwidth rate limiting per port in 1 Mb increments

Advanced Security

- 802.1x industry standard port based authentication challenges users with a password before allowing network access
- Authenticated VLAN that challenges users with username and password and supports dynamic VLAN access based on user
- Support for host integrity check and remediation VLAN
- Support for Alcatel Quarantine Engine and quarantine VLAN
- Learned Port Security (LPS) or MAC address lockdown allows only known devices to have network access preventing unauthorized network device access
- RADIUS and LDAP admin authentication prevents unauthorized switch management
- Secure Shell (SSH), Secure Socket Layer (SSL) and SNMPv3 for encrypted

* Check for availability



Product Specifications

Features

- remote management communication
- Access control lists to filter out unwanted traffic including denial of service attacks
- Access control lists (ACLs) are per port, MAC SA/DA, IP SA/DA, ICMP type and code, EtherType, TCP/UDP port

Performance

- Switching capacity: 160 Gbps 48 port, 120 Gbps 24 port, 80 Gbps U24
- Stacking capacity: 40 Gbps
- Wire rate forwarding for 10/100/1,000/10,000 port speeds
- Jumbo frames up to 9 KB
- 16 K MAC addresses

Routing Protocols

- RIPv1/v2
- OSPF ECMP
- VRRP
- PIM-SM
- DVMRP

User Ports

- 24 or 48 10/100/1,000BaseT RJ-45 ports on the front panel. The last four 10/100/1,000 RJ-45 ports are combo ports. Each copper port is capable of auto-MDI/MDI-X sensing. The 10/100/1,000BaseT ports will operate in full/half duplex mode when the speed is 10/100 Mbps. When operating in 1,000 Mbps only full duplex mode is supported.
- OS6800-U24: 24 SFP (miniGBIC) ports that support Gigabit optical transceivers. The last four SFP ports are combo ports.

Stacking ports

- OS6800-24, OS6800-48: 2 built in stacking ports that provide 10 Gbps full-duplex bandwidth per stacking port. OS6800 supports a fault tolerant looped stacking configuration.

Combo Ports

- OS6800-24, OS6800-48: Four Gigabit Ethernet SFP (MiniGBIC) combo ports located on the front panel. User configuration can determine if the MiniGBIC or 10/100/1,000 port will operate if link is detected on a one for one port basis. The mini-GBIC ports support full duplex mode only. Redundancy is provided if operational link fails.
- OS6800-U24: Four 10/100/1,000BaseT combo ports located on the front panel. Each copper port is capable of auto-MDI/MDI-X sensing. When operating in 1,000 Mbps only full duplex mode is supported. The 10/100/1,000BaseT ports will operate in full/half duplex mode when the speed is 10/100. Redundancy is provided if operational link fails.

10 Gig Uplinks

- OS6800-48, OS6800-U24 supports optional one or two port 10 Gig module that plugs into the rear of the chassis. Each 10 Gig port supports industry standard XFP based 10 GigE optical transceivers.

Indicators

- **LEDs per port:**
 - 10/100/1,000: speed, link/activity
 - SFP: link/activity
 - XFP: link/activity
 - PoE ports: speed, link/activity/PoE applied
- **System LEDs:**
 - System (OK) (chassis HW/SW status)
 - PWR (internal power supply status)
 - FAN (fan status)
 - TEMP (overtemp)
 - PRI (virtual chassis primary)
 - BPS (backup power status)
 - XFP 1 & 2 (10 Gig link status)

Physical Dimensions

- 17.32 x 16.73 x 1.73 in (W x D x H)
- 44 x 42.5 x 4.4 cm (W x D x H)

Weight

- OS6800-48: 14.41 lbs/6.54 Kg

Alcatel OmniSwitch 6800 Family



Product Specifications

Features

- OS6800-24: 13.88 lbs/6.30 Kg
- OS6800-U24: 13.16 lbs/5.97 Kg

Connectors/ Cabling

- Management: one RJ-45 console interface configured as DTE for operation, diagnostics, status, and configuration information. Ship kit includes RJ-45 to DB-9 connector adaptor
- AC power connector and BPS connector slot on rear of chassis

Operating Environment

- Operating temperature: 0 to 40 C
- Storage temperature: -20 to 70 C
- Operating relative humidity: 10 to 90% non-condensing
- Storage relative humidity: 10 to 95% non-condensing

Heat Dissipation

- OS6800-48: 44.782 Btu/hour
- OS6800-24: 41.228 Btu/hour
- OS6800-U24: 39.271 Btu/hour

Acoustic

- 50 dB for non-PoE switch, 55 dB for PoE switch; standard: ISO 7779: 1999(E)

MTBF

- OS6800-48: 116,760 hours @ 25 C
- OS6800-24: 162,221 hours @ 25 C
- OS6800-U24: 172,373 hours @ 25 C

Standards

IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3x, IEEE802.3ab, IEEE802.3af, IEEE802.3ae, IEEE802.1D, IEEE802.1q, IEEE802.3ad, IEEE802.1x, IEEE802.1w, IEEE802.1s*, IEEE802.1p

EMC

FCC CRF Title 47 Subpart B (Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
VCCI (Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
AS/NZS 3548 (Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
BSMI (Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
CCC (China, Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
CE marking for European countries (Class A & Class B limits. Note: Class A with UTP cables & Class B with STP cables)
EN 55022: 1995 w/A1 & A2 (Emission Standard)
EN 61000-3-3: 1995
EN 61000-3-2: 2000
EN 55024: 1998 (Immunity Standards)
EN 61000-4-2: 1995
EN 61000-4-3: 1995
EN 61000-4-4: 1995
EN 61000-4-5: 1995 (Surge Level 4)
EN 61000-4-6: 1996
EN 61000-4-8: 1993
EN 61000-4-11: 1994
IEEE802.3: Hi-Pot Test (2250 VDC on all Ethernet ports)

Safety

US UL 60950
Canada CSA 60950
Germany TUV, GS Mark for Germany
Australia c-Tick for Australia
China CCC
CB Certification (per IEC 60950)

* Check for availability



Product Specifications

Features

Shock & drop MIL-STD-810

Number of power supplies OS6800 family supports one internal AC power supply for chassis and PoE power (PoE capable switches) and an optional external connector module on rear of chassis for use with the backup power supply solution

Input voltage & current ratings 3 A @ 100-240 VAC / 50-60 Hz, or DC -48 V, 8 A

PoE power PoE capable switches provide a maximum of 15.4 watts per port (802.3af standard) and a maximum of 300 watts of power per switch. Maximum simultaneous power on every port:

- 24 ports: 12.5 watts
- 48 ports: 6.25 watts

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

Ordering Info

Part Number	Description
OS6800-24	Gigabit Ethernet L3 stackable fixed configuration chassis in a 1U form factor with 20 10/100/1,000 RJ-45 ports, two stacking ports plus four combo ports. Combo ports consist of four additional 10/100/1,000 RJ-45 and four mini-GBIC ports. Combo ports are labeled 21-24 and either copper or fiber can be used on a one for one basis. MiniGBIC ports support Gigabit Ethernet MiniGBIC (SFP) optical transceivers, which can be ordered separately. Optional stacking cable, advanced routing and security software, and backup power supported. Optional items can be purchased/ordered separately. Comes with user manuals on CD-ROM, 19" rack mounts, RJ-45 to DB-9 adaptor, and country specific power cord.
OS6800-48	Gigabit Ethernet L3 stackable fixed configuration chassis in a 1U form factor with 44 10/100/1,000 RJ-45 ports, two stacking ports plus four combo ports and 10 Gig support. Combo ports consist of four additional 10/100/1,000 RJ-45 ports plus four mini-GBIC ports. Combo ports are labeled 45-48 and either copper or fiber can be used on a one for one basis. MiniGBIC ports support Gigabit Ethernet MiniGBIC (SFP) optical transceivers, which can be ordered separately. Optional stacking cable, advanced routing and security software, and backup power supported. Optional items can be purchased/ordered separately. Comes with user manuals on CD-ROM, 19" rack mounts, RJ-45 to DB-9 adaptor, and country specific power cord.
OS6800-U24	Gigabit Ethernet L3 standalone fixed configuration chassis in a 1U form factor with 20 mini-GBIC (SFP) ports plus four combo ports and 10 Gig support. Combo ports consist of four 10/100/1,000 RJ-45 and four additional mini-GBIC ports. Combo ports are labeled 21-24 and either copper or fiber can be used on a one for one basis. MiniGBIC ports support Gigabit Ethernet MiniGBIC (SFP) optical transceivers, which can be ordered separately. Comes with user manuals on CD-ROM, 19" rack mounts, RJ-45 to DB-9 adaptor, and country specific power cord.
OS6800-CBL-30CM	OS6800 30 centimeter stacking cable
OS6800-CBL-60CM	OS6800 60 centimeter stacking cable
OS6800-CBL-3M	OS6800 3 meter stacking cable

Alcatel OmniSwitch 6800 Family



Ordering Info

Part Number	Description
OS6800-BPS-MOD	OS6800 DC-DC convertor module. One required per OS6800 for backup power connection only.
OS6800-BP-B	OS6800 backup power supply bundle. Includes an external 2.5U chassis that can support OS6800-BPS and/or OS6800-BPS-P modular power supplies. Ships with one OS6800-BPS, country specific power cord, OS6800-BPS-MOD and chassis connection cable.
OS6800-BPS	OS6800 modular 225w backup power supply. Provides backup power to one non-PoE switch. Ships with chassis connection cable and country specific power cord.
MiniGBIC	MINIGBIC-LH-70 1000BaseLH MiniGBIC Transceiver (SFP MSA) Supports single mode fiber over 1550nm wavelength with LC connector. Supports 9 micron single mode fiber up to a maximum distance of 70km. MINIGBIC-LX 1000BaseLX MiniGBIC Transceiver (SFP MSA) Supports single mode fiber over 1310nm wavelength with LC connector. Supports 9 micron single mode fiber up to a maximum distance of 10km. MINIGBIC-SX 1000BaseSX MiniGBIC Transceiver (SFP MSA) - Supports multimode fiber over 850nm wavelength with LC connector. Supports 62.5 micron multimode fiber up to 300m or 50.0 micron up to 550m.
OS6800-SW-AR	OS6800 advanced routing software. Includes support for OSPF, PIM-SM and DVMRP
OS6800-AS	OS6800 Authentication Software w/MD5
OS6800-SW-SBR-N	OS6800 OmniSwitch 6800 Authentication Services software bundled with Funk Software's Steel-Belted Radius Enterprise Edition for Microsoft Windows
OS6800-SW-SBR-S	OmniSwitch 6800 Authentication Services software bundled with Funk Software's Steel-Belted Radius Enterprise Edition for Sun Solaris

OS6800 Service and Support

Part Number	Description
SupportBasic	One year 7x24 phone support, includes eService web access and free software releases
SupportPlus	One year 7x24 phone support, includes eService web access, free S/W releases and next business day arrival of replacement hardware
SupportPremier	One year 7x24 phone support, includes eService web access, free software releases and same day hardware and labor replacement M-F 8-5pm EST

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