Alcatel·Lucent Enterprise

Alcatel-Lucent OmniSwitch 6870

Premium stackable Gigabit and Multi-gigabit LAN switch family

The Alcatel-Lucent OmniSwitch® 6870, built on the innovative OmniFabric architecture, is designed to make networks more secure, flexible, and intelligent. With comprehensive protocol support, OmniFabric enables seamless interoperability across various network environments, ensuring readiness for Zero Trust network deployment.

OS6870-P48Z

OS6870-P24M

OS6870-V12

OS6870-48

Key Features and Benefits

Multi-Technology Fabric

- Flexible Fabric Options: The first solution to support SPBM, VxLAN-EVPN, and MPLS within the Alcatel-Lucent OS (AOS) unified service manager framework. This flexibility allows users to select the most suitable fabric for their needs, making deployment easy across diverse infrastructures.
- Simplified Network Management: OmniVista® Cirrus simplifies network management, allowing seamless functionality across different fabric technologies.

Robust Security

- Data Protection with MACsec Encryption: OmniFabric integrates MACsec to secure user data at Layer 2, maintaining data integrity without adding network complexity.
- Secure Boot for Trusted Operations: Secure Boot ensures that only trusted, manufacturer-approved software runs on devices, reducing the risk of malware or unauthorized code. This feature protects against a wide range of security threats, helping organizations meet compliance requirements for data integrity and privacy.

AI-Enabled Flow Telemetry

- Detailed Traffic Insights: The flow-based telemetry engine built into OmniSwitch 6870 provides comprehensive visibility into network traffic at the application level. This capability is essential for proactive management, delivering granular insights that empower network administrators to optimize and secure data flows.

- AI-Powered Optimization: Powered by the AI-driven OmniVista Network Advisor, OmniSwitch 6870 can automatically identify risks, resolve issues, and optimize performance, helping to prevent disruptions. This proactive management approach reduces downtime and troubleshooting time, ensuring a resilient network.

Why Choose OmniSwitch 6870?

The OmniSwitch 6870 combines versatile fabric support, strong security, and AI intelligence to create a flexible, secure, and low-maintenance platform tailored to meet a wide range of customer needs. This platform offers enhanced security, operational simplicity, and adaptable performance for the demands of modern network environments.

With Alcatel-Lucent OmniVista® Network Management System, you choose how you want to manage your network either on-premises or from the cloud to increase IT efficiency and business agility.

Highlights	
Premium models	• 24 10GbE Multi-gigabit ports or 48 5GbE Multi-gigabit, up to 95W 802.3bt PoE with 600W, 1200W and 2000W redundant PSU options • 12 1/10/25G ports with AC/DC PSU options • All premium models have fixed 2 x 200G VFL stacking ports and an uplink module slot • Uplink module options of 2 100G ports or 6 25/50G ports. License required for 50G speed • All ports support 256-bit MACsec
Advanced models	• 24/48 2.5GbE Multi-gigabit ports, up to 60W 802.3bt PoE with 600W and 1200W redundant PSU options • 24/48 1GbE ports with AC/DC PSU options • All advanced models have fixed 2 100G VFL stacking ports and 4 or 6 1/10/25G uplink ports • All user and uplink ports support 256-bit MACsec[1]
All models	• OmniFabric: SPB, VxLAN-EVPN[2] and MPLS[2] • Secure boot[2] • Streaming network telemetry[2] and DPI[2] • 1588v2 End-to-End Transparent Clock • Field replaceable redundant PSU both primary and backup • Mix and match any supported PoE PSU redundancy to meet the PoE budget requirement while providing continues system operation • The lowest power consumption level in similar class in term of wattage per switching capacity. • Virtual chassis up to 8 with any model mix • VFL stacking port can be used for uplink port in non-VC operation • 1RU compact size with EMP (out-of-band management), console and USB ports • Manage through Alcatel-Lucent OmniVista Cirrus Network Management System help visualize full wired-wireless network to increase IT efficiency and business agility

1. MACsec not supported on OS6870-24 port 25/26 & OS6870-48 port 49/50
2. Will be supported in a later AOS release

Alcatel-Lucent OmniSwitch 6870 models

The OmniSwitch 6870 family offers customers an extensive selection of fixed-configuration switches with up to 95 watts of PoE per port and power supply options that can power a wide range of next-gen Ethernet edge PoE devices, be it pan-tilt-zoom cameras or Wi-Fi 6 /6E/7 devices. All models are in an 1RU form factor and are 19-inch rack-mountable.

OmniSwitch 6870 family comprises of four advanced and three premium models. Premium models have modular uplink slot that can support 6 x 25G/50G or 2 x 100G uplink modules and have 2 x 200G fixed virtual chassis ports. Advanced models support fixed 2 x 100G virtual chassis ports and fixed 4 x 25G or 6 x 25G SFP28 uplinks. All virtual chassis ports can also act as uplink ports.

All OS6870 models can form virtual chassis with each other and support 256-bit MACsec on all ports. All PoE models support upto 60/95 watts of IEEE 802.3 bt compliant PoE. All OmniSwitch 6870 models have an USB 2.0 port, a RJ45 console port and an RJ45 Ethernet management (EMP) port.

Table 1. OmniSwitch 6870 Gigabit switch configurations

Gigabit models	Gigabit ports	Uplinks & VFL ports	Supported power supplies	PoE budget With 1 PS	PoE budget With 2 PS	The bundle offered
Advanced models						
OS6870-24	24 x 10M/100M/1G RJ45, Full duplex 256-bit MACsec supported	4 x 1/10/25G SFP28, 2 x 40/100G QSFP28 256-bit MACsec supported on SFP28	OS6870-BP, OS6870-BP-D	N/A	N/A	OS6870-24-##
OS6870-48	48 x 10M/100M/1G RJ45, Full duplex 256-bit MACsec supported	4 x 1/10/25G SFP28, 2 x 40/100G QSFP28 256-bit MACsec supported on SFP28	OS6870-BP, OS6870-BP-D	N/A	N/A	OS6870-24D

Table 2. OmniSwitch 6870 Multi-gigabit switch configurations

Models	Multi-gigagbit ports	Uplinks & VFL ports	Supported power supplies	PoE budget With 1 PS	PoE budget With 2 PS	The bundle offered
Advanced models						
OS6870-P24Z	24 x 10M/100M/1G/2.5G RJ45, Full duplex, 802.3bt PoE 256-bit MACsec supported	6 x 1/10/25G SFP28, 2 x 40/100G QSFP28 256-bit MACsec supported	OS870-BPPH	375W	921W	OS6870-PH24Z-##
			OS6870-BPPX	739W @ 115VAC	1440W @ 115VAC	OS6870-PX24Z-##
				921W @ 230VAC	1440W @ 230VAC	
OS6870-P48Z	48 x 10M/100M/1G/2.5G RJ45, Full duplex, 802.3bt PoE 256-bit MAC supported	6 x 1/10/25G SFP28, 2 x 40/100G QSFP28 256-bit MACsec supported	OS6870-BPPH	339W	885W	OS6870-PH48Z-##
			OS6870-BPPX	703W @ 115VAC	1612W @ 115VAC	OS6870-PX48Z-##
				885W @ 230VAC	1976W @ 230VAC	
Models	**Multi-gigagbit and fiber ports**	**Uplinks and VFL ports**	**Supported power supplies**	**PoE budget With 1 PS**	**PoE budget With 2 PS**	**The bundle offered**
Premium models						
OS6870-P48M	48 x 10M/100M/1G/2.5G/5G RJ45, Full duplex, 802.3bt PoE 95W 256-bit MACsec supported	Modular, 2 x 40/100/200G QSFP56 256-bit MACsec supported	OS6870-BPPH	216W	762W	OS6870-PH48M-##
			OS6870-BPPX	580W @ 115VAC	1490W @ 115VAC	OS6870-PX48M-##
				762W @ 230VAC	1854W @ 230VAC	
			OS6870-BPXL	580W @115 VAC	1490W @115 VAC	OS6870-PXL48M-##
				1490W @230 VAC	3309W @230 VAC	

OS6870-P24M	24 x 10M/100M/1G/2.5G/5G/10G RJ45, Full duplex, 802.3bt PoE 95W 256-bit MAC supported	Modular, 2 x 40/100/200G QSFP56 256-bit MACsec supported	OS6870-BPPH	242W	788W	OS6870-PH24M-##
			OS6870-BPPX	606W @ 115VAC	1516W @ 115VAC	OS6870-PX24M-##
				788W @ 230VAC	1880W @ 230VAC	
			OS6870-BPXL	606W @115VAC	1516W @115VAC	OS6870-PXL24M-##
				1516W @230VAC	2280W @230VAC	
OS6870-V12	12 x 1/10/25G SFP28 256-bit MACsec supported	Modular, 2 x 40/100/200G QSFP56 256-bit MACsec supported	OS6870-BPH	NA	NA	OS6870-V12-##
			OS6870-BP-D	NA	NA	OS6870-V12D

OS6870 supports unbalanced PoE load-sharing. Two different PoE PSUs can be combined in one device to provide the system and PoE redundancy. Please refer to OmniSwitch 6870 Hardware Guide for the detail.

Table 3. OmniSwitch 6870 product specifications

Criteria	Advanced and premium models
USB port (Type-A)	1
Out-of-band EMP port (RJ45)	1
Console port (RJ45)	1
Fans	Non-PoE models : 2 + 1 redundant, fixed PoE and V12 models : 3 + 1 redundant, fixed
Altitude	13,000 ft
Operating temperature	0°C to 45°C (32°F to 113°F)
Storage temperature	-40°C to 85°C (-40°F to 185°F)
Humidity (operating and storage)	5% to 95% non-condensing
Air flow	Front-to-back
Dimensions (H x W x D)	**OS6870-P48Z, OS6870-P24Z, OS6870-P48M, OS6870-P24M** 4.4 cm x 44 cm x 44.2 cm 1.73 in x 17.32 in x 17.40 in **OS6870-24, OS6870-48, OS6870-V12** 4.4 cm x 44 cm x 35 cm 1.73 in x 17.32 in x 13.78 in
Port LEDs	• RJ45 ports: two LEDs per port ¬ PoE LED: amber: link/activity. Off: No PoE ¬ Speed LED: Solid: link, Blinking: activity Amber: 10G speed Magenta: 5G speed Blue: 2.5G speed Green: 100M/1G speed Off: Link down • Fiber ports: one LED per port ¬ Solid: link, Blinking: activity Amber: VC Green: Uplink • EMP port: ¬ Solid green: link, Blinking green: activity

Criteria	Advanced and premium models
System LEDs	• OK1: green/yellow operational status of the switch • VC: green/yellow master or slave role in VC configuration • PS: green: normal operation, amber: fault • VC ID 1-4: VC ID will be denoted by adding the numbers of the LEDs that are lit up. For example: if 1, 3, 4 are lit up, VC ID is 8.

OmniSwitch 6870 uplink modules

The premium models on OS6870 support optional modules for uplinks. These modules are not included in the default shipping bundle and should be purchased separately.

OS6870-CNI-U2

OS6870-LNI-U6

Table 4. OmniSwitch 6870 uplink modules configuration

Uplink module	Description
OS6870-LNI-U6	6 x 1/10/25/50G SFP56, 256-bit MACsec supported. Purchase OS6870-SW-PERF license separately to enable 50G speed.
OS6870-CNI-U2	2 x 40/100G QSFP28, 256-bit MACsec supported.

Table 5. OmniSwitch 6870 performance specifications

Criteria	Advanced and premium modes (OS6870)
Switching capacity (Aggregated)	OS6870-V12: 2,000 Gb/s OS6870-P48M: 1,880 Gb/s OS6870-P24M: 1,880 Gb/s OS6870-P48Z: 940 Gb/s OS6870-P24Z: 820 Gb/s OS6870-48 : 696 Gb/s OS6870-24 : 648 Gb/s
Throughput	OS6870-V12: 1,488 Mpps OS6870-P48M: 1,398.8 Mpps OS6870-P24M: 1,398.8 Mpps OS6870-P48Z: 699.4 Mpps OS6870-P24Z: 610.1 Mpps OS6870-48 : 517.9 Mpps OS6870-24 : 482.1 Mpps
Packet buffer	8MB
File system flash	32 GB
DRAM	8 GB
VLANs	4,000
MAC addresses	128 K
Max IPv4 routes	116 K
Max IPv6 routes	58 K
Max ARP	64K
Jumbo frames	9216 bytes
VFL ports capacity	Premium Models : 400 Gb/s or 800 Gb/s aggregate Advanced Models: 200 Gb/s or 400 Gb/s aggregate
Maximum number of units in a virtual chassis	8

Power supplies

All OmniSwitch 6870 models support 1+1 hot-swappable redundant. The primary and backup power supply units are internal and removable to allow for easier maintenance and replacement. The family also supports balanced and unbalanced load sharing for PoE. Any supported PoE PSU can be mixed to fulfill the PoE budget while providing the system redundancy.

The Advance models can provide up to 1976W of PoE per switch and the premium models can provide up to 2280W per switch. Please refer to Table 2 for the available PoE budget.

Table 6.1. OmniSwitch 6870 power supplies

PS models	OS6870-BP	OS6870-BP-D	OS6870-BPPH	OS6870-BPPX
Description	Modular AC power supply. Provides system power to one OS6870 non-PoE switch	Modular DC power supply. Provides system power to one OS6870 non-PoE switch	Modular 600-W AC PoE power supply. Provides system and PoE power to one OS6870 PoE switch	Modular 1200W AC PoE power supply. Provides system and PoE power to one OS6870 PoE switch
Dimensions (H x W x L)	3.9 cm x 7.35 cm x 18.5 cm (1.54 in x 2.89 in x 7.28 in)	3.9 cm x 7.35 cm x 18.5 cm (1.54 in x 2.89 in x 7.28 in)	3.98 cm x 7.3 cm x 18.5 cm (1.57 in x 2.87 in x 7.28 in)	3.98 cm x 7.3 cm x 18.5 cm (1.57 in x 2.87 in x 7.28 in)
Weight	0.787 kg (1.74 lb)	0.787 kg (1.74 lb)	0.85 kg (1.87 lb)	0.85 kg (1.87 lb)
Max with 1 PSU	N/A	N/A	600W	1200W
Max with 2 PSUs	N/A	N/A	1200W	2400W
Input voltage/ current	100V to 120 Vrms AC/4A 200V to 240Vrms AC/2A	-42 to -60 V DC/8A	100V to 120Vrms AC/8.5A 200V to 240Vrms AC/4.5A	100V to 120Vrms AC/12A 200V to 240Vrms AC/8.5A
Max output power/current	250W- 12V/20.8A	250W- 12V/20.8A	600W - 54.5V/11A	1000W - 54.5V/18.5A 1200W - 54.5V/22.02A
Fans	1	1	1	1

PS models	OS6870-BPXL	OS6870-BPH
Description	Modular 2000W AC PoE power supply. Provides system and PoE power to one OS6870-P48M or OS6870-P24M switch	Modular AC system power supply. Provides system power to one OS6870-V12 switch
Dimensions (H x W x L)	3.98 cm x 7.3 cm x 18.5 cm (1.57 in x 2.87 in x 7.28 in)	3.9 cm x 7.35 cm x 18.5 cm (1.54 in x 2.89 in x 7.28 in)
Weight	0.9 kg (1.98 lb)	0.85 kg (1.87 lb)
Input voltage/current	100V to 120Vrms AC/12A 200V to 240Vrms AC/9.9A	100V to 120Vrms AC/7.6A 200V to 240Vrms AC/4A
Max output power/ current	1000W - 54.5V/18.4A 2000W - 54.5V/36.7A	550W - 12V/45.8A
Fans	1	1

Detailed product features

Simplified manageability and configuration

- Intuitive CLI in a scriptable BASH environment via console, Telnet or Secure Shell (SSH) v2 over IPv4/IPv6
- Powerful WebView Graphical Web Interface via HTTP and HTTPS over IPv4/IPv6
- Network Automation and Programmability Abstraction Layer with Multivendor (NAPALM) support
- Fully programmable RESTful web services interface with XML and JSON support. API enables access to CLI and individual mib objects
- Integrated with Alcatel-Lucent OmniVista® products for network management
- File upload using USB, TFTP, FTP, SFTP or SCP using IPv4/IPv6
- Human-readable ASCII-based configuration files for off-line editing, bulk configuration and out-of-the-box auto-provisioning
- Non-volatile memory for start-up configuration
- Multiple microcode image support with fallback recovery
- Dynamic Host Configuration Protocol (DHCP) relay for IPv4/IPv6

- IEEE 802.1AB Link Layer Discover Protocol (LLDP) with Media Endpoint Discover (MED) extensions
- Network Time Protocol (NTP)
- DHCPv4 and DHCPv6 server managed by Alcatel-Lucent VitalQIP® DNS/DHCP IP Address Management
- Access to the AOS console via USB Adapter with Bluetooth technology provides wireless management access to the OmiSwitch 6870, eliminating the use of console cables

Cloud ready with Alcatel-Lucent OmniVista Cirrus

- OmniVista® Cirrus offers a secure, resilient and scalable cloud-based network management. It offers hassle free network deployment and easy service roll-out with advanced analytics for smarter decision making. It provides IT friendly Unified Access with secure authentication and policy enforcement for users and devices.

Monitoring and troubleshooting

- Local (on the flash) and remote server logging (Syslog): event and command logging
- IP tools: ping and trace route
- Dying Gasp support via SNMP and syslog messages
- Loopback IP address support for management per service
- Management virtual routing and forwarding (VRF) support
- Policy- and port-based mirroring
- Remote port mirroring
- sFlow v5 and Remote Monitoring (RMON)
- Unidirectional Link Detection (UDLD), Digital Diagnostic Monitoring (DDM), and Time Domain Reflectometry (TDR)

Resiliency and high availability

- Unified management, control and virtual chassis technology
- Virtual Chassis 1+N redundant supervisor manager
- Virtual Chassis In-Service Software Upgrade (ISSU)
- Smart continuous switching technology
- ITU-T G.8032/Y1344 2010: Ethernet Ring Protection
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) encompasses IEEE 802.1D Spanning Tree Protocol (STP) and IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- Per-VLAN spanning tree (PVST+) and 1x1 STP mode
- IEEE 802.3ad/802.1AX Link Aggregation Control Protocol (LACP) and static LAG groups across modules
- Virtual Router Redundancy Protocol (VRRP) with tracking capabilities
- IEEE protocol auto-discovery
- Bidirectional Forwarding Detection (BFD) for fast failure detection and reduced re-convergence times in a routed environment
- Redundant and hot-swappable power supplies
- Built-in CPU protection against malicious attacks
- Split Virtual Chassis protection: Auto-detection and recovery of Virtual Chassis splitting due to one or more VFL or stack element failures

Advanced security

Access control

- Alcatel-Lucent Access Guardian framework for comprehensive user-policy-based NAC
- Autosensing IEEE 802.1X multi-client, multi-VLAN support for bridging and SPBM/VxLAN services
- MAC-based authentication for non-IEEE 802.1X hosts
- Web based authentication (captive portal): a customizable web portal residing on the switch
- User Network Profile (UNP) simplifies NAC by dynamically providing pre-defined policy configuration to authenticated clients — VLAN, ACL, BW
- Secure Shell (SSH) with public key infrastructure (PKI) support
- Terminal Access Controller Access-Control System Plus (TACACS+) client
- Centralized Remote Access Dial-In User Service (RADIUS) and Lightweight Directory Access Protocol (LDAP) administrator authentication
- Centralized RADIUS for device authentication and network access control authorization
- Learned Port Security (LPS) or MAC address lockdown
- Access Control Lists (ACLs); flow-based filtering in hardware (Layer 1 to Layer 4)
- DHCP v4 and v6 Snooping, DHCP IP and Address Resolution Protocol (ARP) spoof protection
- DHCPv6 guard and DHCPv6 Client guard
- ARP poisoning detection
- IP v4 and v6 Source Filtering as a protective and effective mechanism against ARP attacks
- Bring Your Own Device (BYOD) provides on-boarding of Guest, IT/non-IT issued and silent devices. Restriction/Remediation of traffic from non-compliant devices. Uses RADIUS CoA to dynamically enforce User Network Profiles based on Authentication, Profiling, Posture check of devices.
- Role-based authentication for routed domains
- MACsec 256-bit
- MACsec Clear Tag

Switch software security

- AOS secured diversified code solution is available on OmniSwitch 6870, hardening it at both the software source code and binary executable levels to enhance overall network security.
- AOS secured diversified code protects networks from intrinsic vulnerabilities, code exploits, embedded malware, and potential back doors that could compromise mission critical operations.
- AOS secured diversified code is a proactive, defense approach toward network security that continuously defines and implements value-add capabilities to address both current and future threats.

QoS

- Priority queues: Eight hardware-based queues per port for flexible QoS management
- Traffic prioritization: Flow-based QoS
- Flow-based traffic policing and bandwidth management
- 32-bit IPv4/128-bit IPv6 non-contiguous mask classification
- Egress traffic shaping
- DiffServ architecture
- Congestion avoidance: Support for end- to-end head-of-line (E2E-HOL) blocking prevention, and IEEE 802.3x Flow Control (FC)

Layer-3 routing and multicast

IPv4 routing

- Multiple VRF
- Static routing
- Routing Information Protocol (RIP) v1 and v2
- Open Shortest Path First (OSPF) v2 with Graceful Restart
- Intermediate System to Intermediate System (IS-IS) with Graceful Restart
- Border Gateway Protocol (BGP) v4 with Graceful Restart
- Generic Routing Encapsulation (GRE) and IP/IP tunneling
- Virtual Router Redundancy Protocol (VRRPv2)
- DHCP relay (including generic UDP relay)
- Address Resolution Protocol (ARP)
- Policy Based Routing (PBR)
- Server Load Balancing (SLB)
- DHCPv4 server

IPv6 routing

- Multiple VRF
- Internet Control Message Protocol version 6 (ICMPv6)
- Static routing
- Routing Information Protocol Next Generation (RIPng)
- Open Shortest Path First (OSPF) v3 with Graceful Restart
- Intermediate System to Intermediate System (IS-IS) with Graceful Restart
- Multi-Topology IS-IS
- BGP v4 multiprotocol extensions for IPv6 routing (MP-BGP)
- Graceful Restart extensions for OSPF and BGP
- Virtual Router Redundancy Protocol version 3 (VRRPv3)
- Neighbor Discovery Protocol (NDP)
- Policy-based routing and server load balancing
- DHCPv6 server
- DHCPv6 relay & UDPv6 relay

IPv4/IPv6 multicast

- Internet Group Management Protocol (IGMP) v1/v2/v3 snooping
- Protocol Independent Multicast–Sparse-Mode (PIM-SM), Source Specific Multicast (PIM-SSM)
- Protocol Independent Multicast–Dense-Mode (PIM-DM), Bidirectional Protocol Independent Multicast (PIM-BiDir)
- Distance Vector Multicast Routing Protocol (DVMRP)
- Multicast Listener Discovery (MLD) v1/v2 snooping
- PIM to DVMRP gateway support

Fluent network for voice, video and data

- Session Initiation Protocol (SIP) detection, session monitoring and tracking
- Provides real-time conversation quality information contained in the SIP packets concerning packet loss, delay, jitter, MOS score, R-Factor in real time
- SIP profile for QOS, priority tuning for end-to-end processing
- Multicast DNS Relay: Bonjour protocol support for wired Airgroup
- IoT Device Profiling

Advanced Layer-2 services

- Ethernet services support using IEEE 802.1ad Provider Bridges (also known as Q-in-Q or VLAN stacking)
- Ethernet OAM (802.1ag): Connectivity Fault Management (L2 ping & Link trace)
- Ethernet in First mile: Link OAM (802.3ah)
- Ethernet Loopback Test
- Transparent Bridging
- CPE testhead
- Fabric virtualization services IEEE 802.1aq Shortest Path Bridging (SPB-M) and VxLAN
- In-band management for SPB-M
- Ethernet network-to-network interface (NNI) and user network interface (UNI)
- Service Access Point (SAP) profile identification
- Service VLAN (SVLAN) and Customer VLAN (CVLAN) support
- VLAN translation and mapping including CVLAN to SVLAN
- Port mapping
- DHCP Option 82: Configurable relay agent information
- Multiple VLAN Registration Protocol (MVRP)
- HA-VLAN for Layer 2 clusters such as MS-NLB and active-active Firewall clusters
- Jumbo frame support
- Bridge Protocol Data Unit (BPDU) blocking
- STP Root Guard

Data center networking

- IEEE 802.1aq Shortest Path bridging (SPB-M)
- RFC 7348 Virtual eXtensible Local Area Network (VxLAN)

Software Defined Networking (SDN)

- Programmable AOS RESTful API
- Software-controlled VxLAN hardware VTEP gateway

Supported standards

IEEE standards

- IEEE 802.1D STP
- IEEE 802.1p CoS
- IEEE 802.1Q VLANs
- IEEE 802.1ab (LLDP)
- IEEE 802.1ag (OA&M)
- IEEE 802.1AE MACsec
- IEEE 802.1ad Provider Bridges Q-in-Q/VLAN stacking
- IEEE 802.1ak (Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1aq Shortest Path Bridging (SPB)
- IEEE 802.1s MSTP
- IEEE 802.3i 10BASE-T
- IEEE 802.1w RSTP
- IEEE 802.3x Flow Control
- IEEE 802.3z Gigabit Ethernet
- IEEE 802.3ab 1000Base-T
- IEEE 802.3ac VLAN Tagging
- IEEE 802.3ad/802.1AX Link Aggregation
- IEEE 802.3ae 10 GigE
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at PoE Plus
- IEEE 802.3az Energy Efficient Ethernet (EEE)
- IEEE 802.3bz 2.5/5 GigE
- IEEE 802.3ba 40GBASE-X
- IEEE 802.1x-2004
- IEEE 1588-2008 (PTP)*

ITU-T recommendations

- ITU-T G.8032/Y.1344 2010: Ethernet Ring Protection (ERPv2)
- ITU-T Y.1731 OA&M fault and performance management

IETF RFCs

IPv4

- RFC 2003 IP/IP Tunneling
- RFC 2131 Dynamic Host Configuration Protocol (DHCPv4)
- RFC 2784 GRE Tunneling
- RFC 4022/2452 MIB for IPv4 TCP
- RFC 4087 IP Tunnel MIB
- RFC 4113/2454 MIB for IPv4 UDP
- RFC 4292/4293 IPv4 MIBs

OSPF

- RFC 1765 OSPF Database Overflow
- RFC 1850/2328 OSPF v2 and MIB
- RFC 2154 OSPF MD5 Signature
- RFC 2370/3630 OSPF Opaque LSA
- RFC 2740/5340 OSPFv3 for IPv6
- RFC 3101 OSPF NSSA Option
- RFC 3623/5187 OSPF Graceful Restart
- RFC 5838 MIB for OSPFv3
- RFC 4552 Authentication for OSPFv3

RIP

- RFC 1058 RIP v1
- RFC 1722/1723/2453/1724 RIP v2 and MIB
- RFC 1812/2644 IPv4 Router Requirements
- RFC 4822 RIPv2 Cryptographic Authentication

BGP

- RFC 1269/1657/4273 BGP v3 and v4 MIB
- RFC 1403/1745 BGP/OSPF Interaction
- RFC 1771-1774/2842/2918/3392/4271 BGP v4
- RFC 1965 BGP AS Confederations
- RFC 1966 BGP Route Reflection
- RFC 1997/1998/4360 BGP Communities Attribute
- RFC 2042/5396 BGP New Attribute
- RFC 2385 BGP MD5 Signature
- RFC 2439 BGP Route Flap Damping
- RFC 2545 BGP-4 Multiprotocol Extensions for IPv6 Routing
- RFC 2858/4760 Multiprotocol Extensions for BGP-4
- RFC 3065 BGP AS Confederations
- RFC 4456 BGP Route Reflection
- RFC 4486 Subcodes for BGP Cease Notification
- RFC 4724 Graceful Restart for BGP
- RFC 3392/5492/5668/6793 BGP 4-Octet ASN
- RFC 5082 Generalized TTL Security Mechanism (GTSM)

IS-IS

- RFC 1142/1195/3719/3787/5308 IS-IS v4
- RFC 2763/2966/3567/3373 Adjacencies and route management
- RFC 5120 M-ISIS: Multi Topology IS-IS
- RFC 5306 Graceful Restart
- RFC 5309/draft-ietf-isis-igp-p2p-over-lan Point to point over LAN
- RFC 6329 IS-IS Extensions Supporting IEEE 802.1aq SPB
- RFC 5304 IS-IS Cryptographic Authentication
- RFC 5310 IS-IS Generic Cryptographic Authentication

IP Multicast

- RFC 1075/draft-ietf-idmr-dvmrp-v3-11.txt DVMRP
- RFC 2362/4601/5059 PIM-SM
- RFC 2365 Multicast
- RFC 2710/3019/3810/MLD v2 for IPv6
- RFC 2715 PIM and DVMRP interoperability
- RFC 2933 IGMP MIB
- RFC 3376 IGMPv3 (includes IGMP v2/v1)
- RFC 3569 Source-Specific Multicast (SSM)
- RFC 3973 Protocol Independent Multicast- Dense Mode (PIM-DM)
- RFC 4541 Considerations for IGMP and MLD Snooping Switches
- RFC 5015 BiDIR PIM
- RFC 5060 Protocol Independent Multicast MIB
- RFC 5132 Multicast Routing MIB
- RFC 5240 PIM Bootstrap Router MIB

IPv6

- RFC 1981 Path MTU Discovery
- RFC 2460 IPv6 Specification
- RFC 2461 NDP
- RFC 2464 IPv6 over Ethernet
- RFC 2465 MIB for IPv6: Textual Conventions (TC) and General Group
- RFC 2466 MIB for IPv6: ICMPv6 Group
- RFC 2711 Router Alert Option
- RFC 3056 6to4 Tunnels
- RFC 3315 Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
- RFC 3484 Default Address Selection
- RFC 3493/2553 Basic Socket API
- RFC 3542/2292 Advanced Sockets API
- RFC 3587/2374 Global Unicast Address Format
- RFC 3595 TC for IPv6 Flow Label
- RFC 3596/1886 DNS for IPv6
- RFC 4007 Scoped Address
- RFC 4022/2452 MIB for IPv6 TCP
- RFC 4087 IP Tunnel MIB
- RFC 4113/2454 MIB for IPv6 UDP
- RFC 4193 Unique Local Addresses
- RFC 4213/2893 Transition Mechanisms
- RFC 4291/3513/2373 Addressing Architecture (uni/any/multicast)
- RFC 4292/4293 IPv6 MIBs
- RFC 4301/2401 Security Architecture
- RFC 4302/2402 IP Authentication Header
- RFC 4303/2406 IP Encapsulating Security Payload (ESP)
- RFC 4308 Cryptographic Suites for IPSec
- RFC 4443/2463 ICMPv6
- RFC 4861/2461 Neighbor Discovery
- RFC 4862/2462 Stateless Address Auto-configuration
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6

Manageability

- RFC 854/855 Telnet and Telnet options
- RFC 959/2640 FTP
- RFC 1350 TFTP Protocol
- RFC 1155/2578-2580 SMI v1 and SMI v2
- RFC 1157/2271 SNMP
- RFC 1212/2737 MIB and MIB-II
- RFC 1213/2011-2013 SNMP v2 MIB
- RFC 1215 Convention for SNMP Traps
- RFC 1573/2233/2863 Private Interface MIB
- RFC 1643/2665 Ethernet MIB
- RFC 1867 Form-based File Upload in HTML
- RFC 1901-1908/3416-3418 SNMP v2c
- RFC 2096 IP MIB
- RFC 2131 DHCP Server/Client
- RFC 2388 Returning Values from Forms: multipart/form-data
- RFC 2396 Uniform Resource Identifiers (URI): Generic Syntax
- RFC 2570-2576/3410-3415/3584 SNMP v3
- RFC 2616 /2854 HTTP and HTML
- RFC 2667 IP Tunneling MIB
- RFC 2668/3636 IEEE 802.3 MAU MIB
- RFC 2674 VLAN MIB
- RFC 3023 XML Media Types
- RFC 3414 User-based Security Model
- RFC 3826 (AES) Cipher Algorithm in the SNMP User-based Security Model

* Supported on selected models

- RFC 4122 A Universally Unique IDentifier (UUID) URN Namespace
- RFC 4234 Augmented BNF for Syntax Specifications: ABNF
- RFC 4251 Secure Shell Protocol Architecture
- RFC 4252 The Secure Shell (SSH) Authentication Protocol
- RFC 4253 SSH Transport Layer Protocol
- RFC 4254 SSH Connection Protocol
- RFC 4627 JavaScript Object Notation (JSON)
- RFC 5424 The Syslog protocol
- RFC 6585 Additional HTTP Status Codes

Security

- RFC 1321 MD5
- RFC 1826/1827/4303/4305 Encapsulating Payload (ESP) and crypto algorithms
- RFC 2104 HMAC Message Authentication
- RFC 2138/2865/2868/3575/2618 RADIUS Authentication and Client MIB
- RFC 3576 Dynamic Authorization Extensions to RADIUS
- RFC 2139/2866/2867/2620 RADIUS Accounting and Client MIB
- RFC 2228 FTP Security Extensions
- RFC 2284 PPP EAP
- RFC 2869/2869bis RADIUS Extension
- RFC 3162 RADIUS and IPv6
- RFC 4301 Security Architecture for IP
- RFC 5517 Private VLAN

QoS

- RFC 896 Congestion Control
- RFC 1122 Internet Hosts
- RFC 2474/2475/2597/3168/3246
- DiffServ
- RFC 2697 srTCM
- RFC 2698 trTCM
- RFC 3635 Pause Control

Others

- RFC 791/894/1024/1349 IP and IP/Ethernet
- RFC 792 ICMP
- RFC 768 UDP
- RFC 793/1156 TCP/IP and MIB
- RFC 2581 TCP Congestion Control
- RFC 826 ARP
- RFC 919/922 Broadcasting Internet Datagram
- RFC 925/1027 Multi-LAN ARP/Proxy ARP
- RFC 950 Subnetting
- RFC 951 BOOTP
- RFC 1151 RDP
- RFC 1191 Path MTU Discovery
- RFC 1256 ICMP Router Discovery
- RFC 1305/2030/5905 NTP v4 and Simple NTP
- RFC 1493 Bridge MIB
- RFC 1518/1519 CIDR
- RFC 1541/1542/2131/3396/3442 DHCP
- RFC 1757/2819 RMON and MIB
- RFC 4502 RMON MIB v2
- RFC 2131/3046 DHCP/BootP Relay
- RFC 2132 DHCP Options
- RFC 2251 LDAP v3
- RFC 2338/3768/2787 VRRP and MIB
- RFC 3021 Using 31-bit Prefixes
- RFC 3060 Policy Core
- RFC 3176 sFlow
- IETF draft "IP/IPVPN services with IEEE 802.1aq SPB networks"
- RFC 7348 Virtual extensible Local Area Network (VxLAN)

OmniSwitch 6870 specifications

Table 7. Power consumption, acoustics and weight

Switch module	Power consumption - idle (W)	Power consumption - full load (W)	Heat dissipation (BTU/h)	Acoustic (dB)	MTBF	Weight (kg/lb)	Weight - fully populated (kg/lb)
OS6870-24	71	100.9	344	39.8	557,717 h	5.27 kg (11.61 lb)	6.84 kg (15.08 lb)
OS6870-48	73	105.2	359	39.8	533,368 h	5.49 kg (12.10 lb)	7.06 kg (15.57 lb)
OS6870-P24Z	90.2	173.6	592	41.6	414,986 h	6.94 kg (15.30 lb)	8.64 kg (19.05 lb)
OS6870-P48Z	92.4	215	734	40.1	374,799 h	7.26 kg (16.01 lb)	8.96 kg (19.75 lb)
OS6870-P24M	219.6	313.2	1069	48.2	386,437 h	7.43 kg (16.38 lb)	9.13 kg (20.13 lb)
OS6870-P48M	251.8	343.9	1173	46.9	349,827 h	7.44 kg (16.40 lb)	9.14 kg (20.15 lb)
OS6870-V12	73	157.8	538	41.1	507,909 h	5.37 kg (11.84 lb)	7.07 kg (15.59 lb)

The power consumption measured with redundant PSU on all models. OS6870-P24M, P48M and V12 models are equipped with OS6870-CNI-U2 module.
Heat dissipation is calculated for power consumption at full load. 1 watt ≈ 3.41214 BTU/h.
The acoustic level measured per ISO7779. The measurement is done with 1 PSU @ 50% PoE load.
MTBF is measured 25 °C ambient temperature with one AC power supply as per Telcordia SR-332 issue 4 standard.
Fully populated weight measured with redundant PSU on all models.

Table 8. OmniSwitch 6870 compliance and certifications

Compliance type	Certification
Commercial EMI/EMC	• 47 CRF FCC Part 15: 2015 Subpart B (Class A) • ICES–003:2012 Issue 5, Class A ANSI C63.4-2009 • VCCI (Class A, with UTP Cables) • AS/NZS 3548 (Class A) – C-Tick CE marking for European countries (Class A, with UTP Cables) • CE Emission ¬ EN 55032 (EMI & EMC) ¬ EN 55035 ¬ EN 50581 (RoHS Recast) ¬ EN 61000-3-2 ¬ EN 61000-3-3 ¬ EN 61000-4-2 ¬ EN 61000-4-3 ¬ EN 61000-4-4 ¬ EN 61000-4-5 ¬ EN 61000-4-6 ¬ EN 61000-4-8 ¬ EN 61000-4-11 • IEEE 802.3: Hi-Pot Test (2250 V DC on all Ethernet ports)

Compliance type	Certification
Safety	• IEC 62368-1 • UL 60950-1, 2nd Edition • IEC 60950-1/EN 60950-1, all national deviations • UL 62368-1/IEC 62368-1 • EN 60825-1 Laser • EN 60825-2 Laser • CDRH Laser • CAN/CSA-22-2, 62368-1 • NOM-019 SCFI, Mexico • CAN/CSA 62368-1 • AS/NZ TS-001 and 60950:2000, Australia • UL-AR, Argentina • AS/NZ 62368-1 • UL-GS Mark, Germany • CCC, China • ANATEL, Brazil • BSMI, Taiwan • KCC, Korea • RoHS & WEEE directives compliant • TEC, India

Ordering information

Part number	Description
OS6870-24-##	This is a bundle offer that includes one unit of OS6870-24 and one unit of OS6870-BP. Gigabit Ethernet L3 fixed configuration chassis in a 1U form factor with 24 RJ-45 10/100/1000 Base-T ports, two 40/100G QSFP28 VFL/stacking ports, four SFP28 (1G/10G/25G) ports, USB, RJ45 console and EMP. All RJ-45 and SFP28 ports support 256-bit MACsec. The bundle includes one 250W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870-24D	This is a bundle offer that includes one unit of OS6870-24 and one unit of OS6870-BP-D. Gigabit Ethernet L3 fixed configuration chassis in a 1U form factor with 24 RJ-45 10/100/1000 Base-T ports, two 40/100G QSFP28 VFL/stacking ports, four SFP28 (1G/10G/25G) ports, USB, RJ45 console and EMP. All RJ-45 and SFP28 ports support 256-bit MACsec. The bundle includes one 250W DC power supply, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870-48-##	This is a bundle offer that includes one unit of OS6870-48 and one unit of OS6870-BP. Gigabit Ethernet L3 fixed configuration chassis in a 1U form factor with 48 RJ-45 10/100/1000 Base-T ports, two 40/100G QSFP28 VFL/stacking ports, four SFP28 (1G/10G/25G) ports, USB, RJ45 console and EMP. All RJ-45 and SFP28 ports support 256-bit MACsec. The bundle includes one 250W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.

Part number	Description
OS6870-48D	This is a bundle offer that includes one unit of OS6870-48 and one unit of OS6870-BP-D. Gigabit Ethernet L3 fixed configuration chassis in a 1U form factor with 48 RJ-45 10/100/1000 Base-T ports, two 40/100G QSFP28 VFL/stacking ports, four SFP28 (1G/10G/25G) ports, USB, RJ45 console and EMP. All RJ-45 and SFP28 ports support 256-bit MACsec.
OS6870PH24Z-##	This is a bundle offer that includes one unit of OS6870-P24Z and one unit of OS6870-BPPH. Fixed-configuration chassis in a 1U form factor with 24 10M/100M/1G/2.5G multi-gigabit 60W bt PoE ports, two 40/100G QSFP28 VFL/stacking ports and six 1G/10G/25G SFP28 ports. All ports support 256-bit MACsec. Bundle includes one 600W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PX24Z-##	This is a bundle offer that includes one unit of OS6870-P24Z and one unit of OS6870-BPPX. Fixed-configuration chassis in a 1U form factor with 24 10M/100M/1G/2.5G multi-gigabit 60W bt PoE ports, two 40/100G QSFP28 VFL/stacking ports and six 1G/10G/25G SFP28 ports. All ports support 256-bit MACsec. Bundle includes one 1200W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PH48Z-##	This is a bundle offer that includes one unit of OS6870-P48Z and one unit of OS6870-BPPH. Fixed-configuration chassis in a 1U form factor with 48 10M/100M/1G/2.5G multi-gigabit 60W bt PoE ports, two 40/100G QSFP28 VFL/stacking ports and six 1G/10G/25G SFP28 ports. All ports support 256-bit MACsec. Bundle includes one 600W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PX48Z-##	This is a bundle offer that includes one unit of OS6870-P48Z and one unit of OS6870-BPPX. Fixed-configuration chassis in a 1U form factor with 48 10M/100M/1G/2.5G multi-gigabit 60W bt PoE ports, two 40/100G QSFP28 VFL/stacking ports and six 1G/10G/25G SFP28 ports. All ports support 256-bit MACsec. Bundle includes one 1200W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870-V12-##	This is a bundle offer that includes one unit of OS6870-V12 and one unit of OS6870-BPH. Fixed-configuration chassis in a 1U form factor with 12 1G/10G/25G SFP28 ports, two 100/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one system 550W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter. Uplink module needs to be ordered separately.
OS6870-V12D	This is a bundle offer that includes one unit of OS6870-V12 and one unit of OS6870-BP-D. Fixed-configuration chassis in a 1U form factor with 12 1G/10G/25G SFP28 ports, two 100/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one system 250W DC power supply, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter. Uplink module needs to be ordered separately.
OS6870PH24M-##	This is a bundle offer that includes one unit of OS6870-P24M and one unit of OS6870-BPPH Fixed-configuration chassis in a 1U form factor with 24 10M/100M/1G/2.5G/5G/10G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 600W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PX24M-##	This is a bundle offer that includes one unit of OS6870-P24M and one unit of OS6870-BPPX. Fixed-configuration chassis in a 1U form factor with 24 10M/100M/1G/2.5G/5G/10G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 1200W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PXL24M-##	This is a bundle offer that includes one unit of OS6870-P24M and one unit of OS6870-BPXL. Fixed-configuration chassis in a 1U form factor with 24 10M/100M/1G/2.5G/5G/10G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 2000W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PH48M-##	This is a bundle offer that includes one unit of OS6870-P24M and one unit of OS6870-BPPH Fixed-configuration chassis in a 1U form factor with 48 10M/100M/1G/2.5G/5G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 600W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OS6870PX48M-##	This is a bundle offer that includes one unit of OS6870-P48M and one unit of OS6870-BPPX. Fixed-configuration chassis in a 1U form factor with 48 10M/100M/1G/2.5G/5G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 1200W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.

Part number	Description
OS6870PXL48M-##	This is a bundle offer that includes one unit of OS6870-P48M and one unit of OS6870-BPXL. Fixed-configuration chassis in a 1U form factor with 48 10M/100M/1G/2.5G/5G multigigabit 95W bt PoE ports, two 100G/200G QSFP56 VFL/stacking ports and one uplink module expansion slot. All ports support 256-bit MACsec. The bundle includes one 2000W AC power supply, country-specific power cord, user manuals access card, hardware for mounting in a 19" rack and a RJ45 to DB9 console adapter.
OmniSwitch 6870N uplink modules	
OS6870-LNI-U6	OS6870-LNI-U6: One uplink module for OS6870-P24M / OS6870-P48M / OS6870-V12 switch with six 10G/25G/50G SFP56 ports. All ports support 256-bit MACsec. Purchase OS6870-SW-PERF license separately to enable 50G speed.
OS6870-CNI-U2	OS6870-CNI-U2: One uplink module for OS6870-P24M / OS6870-P48M / OS6870-V12 switch with 2 x 40G/100G QSFP28 ports. All ports support 256-bit MACsec.
OmniSwitch 6870N power supplies	
OS6870-BPPH-##	OS6870-BPPH modular 600W AC PoE backup power supply. Provides system and PoE backup power to one OS6870 PoE switch
OS6870-BPPX-##	OS6870-BPPX modular 1200W AC PoE backup power supply. Provides system and PoE backup power to one OS6870 PoE switch
OS6870-BPXL-##	OS6870-BPXL modular 2000W AC PoE power supply. Provides system and PoE power to one OS6870-P48M or OS6870-P24M switch
OS6870-BPH-##	OS6870-BPH modular 550W AC system power supply. Provides system power to one OS6870-V12 switch.
OS6870-BP-D	OS6870-BPD modular 250W DC system power supply. Provides system power to one OS6870-24, OS6870-48 or OS6870-V12.
OS6870-BP-##	OS6870-BP modular 250W AC power supply. Provides system power to OS6870-24 or OS6870-48 switches
OmniSwitch 6870 software	
OS-SW-MACSEC	Site license to enable MACsec on OS6870 models. One license per customer at no cost.
OS6870-SW-PERF	Performance software license enables the OS6870-LNI-U6 ports to operate at 50G speed.
OmniSwitch 6870 accessories	
OS6-REAR-MNT2	Mounting brackets to stabilize the rear of OS6870 and OS6860N in a 19 rack.
1G transceivers	
SFP-GIG-T	1000Base-T Gigabit Ethernet Transceiver (SFP MSA). SFP works at 1000 Mb/s speed and full-duplex mode
SFP-GIG-SX	1000Base-SX Gigabit Ethernet optical transceiver (SFP MSA)
SFP-GIG-LX	1000Base-LX Gigabit Ethernet optical transceiver (SFP MSA)
SFP-GIG-LH40	1000Base-LH Gigabit Ethernet optical transceiver (SFP MSA). Typical reach of 40 km on 9/125 µm SMF
SFP-GIG-LH70	1000Base-LH Gigabit Ethernet optical transceiver (SFP MSA). Typical reach of 70 km on 9/125 µm SMF
SFP-DUAL-MM-N	Dual Speed 100Base-FX or 1000Base-X Ethernet optical transceiver (SFP MSA). Supports multimode fiber over 1310nm wavelength (nominal) with an LC connector. Typical reach of 550m at Gigabit speed and 2km at 100 Mb/t speed
SFP-GIG-EXTND	Extended 1000Base-SX Gigabit Ethernet optical transceiver(SFP MSA). Multimode fiber over 850nm wavelength (nominal) LC connector. Reach of up to 2 km on 62.5/125 m MMF and 50/125 m MMF.
SFP-GIG-BX-D	1000Base-BX SFP bi-directional transceiver with an LC interface. Works on single mode fiber optic on a single strand link up to 10 km. Transmits 1490 nm and receives 1310 nm optical signal.
SFP-GIG-BX-U	1000Base-BX SFP bi-directional transceiver with an LC interface. Works on single mode fiber optic on a single strand link up to 10 km. Transmits 1310 nm and receives 1490 nm optical signal.
SFP-GIG-BX-D%%	1000Base-BX SFP bi-directional transceiver with an LC interface. Works on single mode fiber optic on a single strand link. %% denotes length in KM. Available lengths are 20 & 40 Km. Transmits 1490 nm and receives 1310 nm optical signal.
SFP-GIG-BX-U%%	1000Base-BX SFP bi-directional transceiver with an LC interface. Works on single mode fiber optic on a single strand link. %% denotes length in KM. Available lengths 20 & 40 Km.. Transmits 1310 nm and receives 1490 nm optical signal.

Part number	Description
10G transceivers	
SFP-10G-SR	10 Gigabit optical transceiver (SFP+). Supports multimode fiber over 850 nm wavelength (nominal) with an LC connector. Typical reach of 300 m
SFP-10G-LR	10 Gigabit optical transceiver (SFP+). Supports monomode fiber over 1310 nm wavelength (nominal) with an LC connector. Typical reach of 10 km
SFP-10G-ER	10 Gigabit optical transceiver (SFP+). Supports monomode fiber over 1550 nm wavelength (nominal) with an LC connector. Typical reach of 40 km
SFP-10G-ZR	10 Gigabit optical transceiver (SFP+). Supports data transmission at 1550 nm over up to 80km single mode fiber. LC connector type.
SFP-10G-LRM	10 Gigabit optical transceiver (SFP+). Supports multimode fiber over 1310 nm wavelength (nominal) with an LC connector. Typical reach of 220 m on FDDI-grade (62.5 µm)
SFP-10G-GIG-SR	Dual-speed SFP+ optical transceiver. Supports multimode fiber over 850 nm wavelength (nominal) with an LC connector. Supports 1000Base-SX and 10GBase-SR
SFP-10G-GIG-LR	Dual-speed SFP+ optical transceiver. Supports monomode fiber over 1310 nm wavelength (nominal) with an LC connector. Typical reach of 10 Km. Supports 1000BASE-LX and 10GBASE-LR
SFP-10G-T	10 Gigabit copper transceiver (SFP+). 10GBase-T 10 Gigabit ethernet Transceiver (SFP MSA) - Supports category 6a/7 cabling copper cabling up to 30m. This transceiver supports 10Gbs full-duplex mode only.
SFP+ Direct attached cables	
SFP-10G-C1M	10 Gigabit direct attached copper cable (1 m, SFP+)
SFP-10G-C3M	10 Gigabit direct attached copper cable (3 m, SFP+)
SFP-10G-C7M	10 Gigabit direct attached copper cable (7 m, SFP+)
25G transceivers	
SFP-25G-SR	25 Gigabit optical transceiver (SFP28). Supports link lengths of 70m on OM3 and 100m on OM4 multimode fiber cables. LC connector type.
SFP-25G-ESR	25 Gigabit optical transceiver (SFP28). Supports multimode fiber over 850nm wavelength nominal with an LC connector. Typical reach of 300m on OM4 MMF
SFP-25G-CLR	25 Gigabit optical transceiver (SFP28). Supports link lengths of 2Km over singlemode fiber cables. LC connector type.
SFP-25G-LR	25 Gigabit optical transceiver (SFP28). Supports link lengths of 10Km over singlemode fiber cables. LC connector type.
25G SFP28 direct attached cables	
SFP-25G-A20M	25 Gigabit SFP28 direct attached active optical cable. 20 m.
SFP-25G-C1M	25 Gigabit direct attached copper cable 1m, SFP28)
SFP-25G-C3M	25 Gigabit direct attached copper cable 3m, SFP28)
SFP-25G-C5M	25 Gigabit direct attached copper cable 7m, SFP28)
40G transceivers	
QSFP-40G-SR	Four channel 40 Gigabit optical transceiver QSFP+). Supports link lengths of 100m and 150m respectively on OM3 and OM4 multimode fiber cables. Single MPO receptacle
QSFP-40G-LR	Four channel 40 Gigabit optical transceiver QSFP+). Supports single mode fiber over 1310nm wavelength. Typical reach 10 km. Duplex LC receptacles
QSFP-40G-SR-BD	Dual channel 40 Gigabit optical transceiver QSFP+). Supports multimode fiber over 850nm wavelength nominal) with duplex LC connector. Supports link lengths up to 100 meters on OM3 MMF or 150 meters on OM4 MMF
QSFP-4X10G-SR	40 Gigabit to 4 x 10 Gigabit Multifiber Push-On (MPO) fiber splitter transceiver
40G QSFP+ direct attached cables	
QSFP-40G-AOC20M	40 Gigabit QSFP+ direct attached active optical cable. 20 m.
QSFP-40G-C1M	40 Gigabit direct attached copper cable 1m, QSFP+
QSFP-40G-C3M	40 Gigabit direct attached copper cable 3m, QSFP+
QSFP-40G-C40CM	40 Gigabit direct attached copper cable 40 cm, QSFP+

Part number	Description
QSFP-40G-C7M	40 Gigabit direct attached copper cable 7m, QSFP+
50G transceivers	
SFP-50G-SR	50 Gigabit optical transceiver (SFP56). Supports link lengths of 100M on OM4 MMF. Duplex LC LC connector
SFP-50G-FR	50 Gigabit optical transceiver (SFP56). Supports link lengths of 2Km over singlemode cables. LC connector.
SFP-50G-LR	50 Gigabit optical transceiver (SFP56). Supports link lengths of 10Km over singlemode cables. Comply with SFF-8432 with duplex LC connector.
50G direct attached cables	
SFP-50G-C50CM	50 Gigabit direct attached cable, (SFP56, 50cm)
SFP-50G-C1M	50 Gigabit direct attached cable, (SFP56, 1m)
SFP-50G-C3M	50 Gigabit direct attached cable, (SFP56, 3m)
100G transceivers	
QSFP-100G-SR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 70m on OM3 and 100m on OM4 multimode fiber cables. LC connector type.
QSFP-100G-CLR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 2Km over singlemode fiber cables. LC connector type.
QSFP-100G-LR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 10Km over singlemode fiber cables. LC connector type.
QSFP-100G-CWDM4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 2Km over singlemode fiber cables. LC connector type.. CWDM4
100G direct attach cables	
QSFP-100G-A20M	100 Gigabit QSFP28 direct attached active optical cable. 20 m.
QSFP-100G-C1M	100 Gigabit direct attached copper cable 1m, QSFP28
QSFP-100G-C3M	100 Gigabit direct attached copper cable 3m, QSFP28
QSFP-100G-C5M	100 Gigabit direct attached copper cable 5m, QSFP28
200G transceivers	
QSFP-200G-SR4	200 Gigabit optical transceiver (QSFP56). Supports link length of 70m on OM3 MMF, 100m on OM4 MMF. MPO-12 connector
QSFP-200G-FR4	200 Gigabit optical transceiver (QSFP56). Supports link length 1 for 2km FR4; 2 for 500m FR4 Lite. Duplex LC receptacles
200G direct attached cables	
QSFP-200G-A20M	200 Gigabit direct attached active optical cable. (QSFP56, 20m)
QSFP-200G-C50CM	200 Gigabit direct attached cable, (QSFP56, 50cm)
QSFP-200G-C1M	200 Gigabit direct attached cable, (QSFP56, 1m)
QSFP-200G-C3M	200 Gigabit direct attached cable, (QSFP56, 3m)

Please replace the "##" in the part number with the country-specific power cord (for example, OS6870-P24M-US will come with a power cord for the USA). 11 different power cord options are available. Please consult the price list for all power cord options offered.

Warranty

The OmniSwitch 6870 family comes with a Hardware Limited Lifetime Warranty.

Services and support

For more information about our Professional services, Support services, and Managed services, please go to https://www.al-enterprise.com/en/services.

Please visit our website to learn more.

https://www.al-enterprise.com/en/products/switches/omniswitch-6870

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