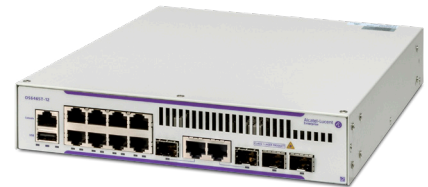


Alcatel-Lucent OmniSwitch 6465T

Extended Temperature Ethernet Switches

The [Alcatel-Lucent OmniSwitch® 6465T](#) is a family of extended temperature, value, Layer 3 Gigabit Ethernet switches. These switches are versatile in nature and can be deployed in a variety of environments such as residential and business metro Ethernet access offered by service providers, in smart cities/buildings or for transportation deployments.



OmniSwitch 6465T-12



OmniSwitch 6465T-P12

OmniSwitch 6465T switches are a family of extended temperature, compact, gigabit Ethernet switches that are ideal for residential/metro Ethernet triple play applications. The PoE switches offer a value, power-efficient access for powering smart building subsystems such as lighting, CCTV and HVAC. The switches run on the widely deployed and field-proven Alcatel-Lucent Operating System (AOS) that offers high security, reliability, performance and easy management. These switches are designed to operate in an extended temperature range offering reliable operation in -10°C to 60°C ambient temperature range.

The OmniSwitch 6465T 12-port models are designed with an optimized size, low-power consumption and a rich software feature set. This extended temperature PoE model can provide power to a range of new age devices from IP cameras on toll booths to LED lights and building management gateways in smart buildings. These switches are easy to deploy and offer out-of-the-box plug-and-play, zero-touch provisioning, network automation and disaster recovery options. These switches support IEEE 1588v2 PTP for the nanosecond-level precision timing requirements of devices and applications. With support for MACsec on all ports, OmniSwitch 6465T enables end-to-end encrypted networks. The OmniSwitch 6465T family offers advanced system and network level resiliency features and convergence through standardized protocols in a space efficient form factor. OmniSwitch 6465T models can operate with out fan up to 45°C ambient temperature.

Datasheet

[Alcatel-Lucent OmniSwitch 6465T](#)

| Features | Benefits |
|--|---|
| Extended temperature range | Operates at an extended temperature range from -10°C to +60°C offering a reliable operation over a wider temperature range |
| Virtual chassis to connect multiple switches for creating a single chassis-like entity | Increases system redundancy, resiliency and system scalability while simplifying deployment, operations and management of the network |
| Delivers redundant ring topologies using industry standard protocols | Field upgradable, highly redundant network solution maximizes network uptime |
| Switch backup and restore | Simplifying switch replacement in field and minimizing network downtime using USB drive. Encryption of USB ensures optimal security. |
| IEEE 1588v2 PTP support | Support for peer-to-peer and end-to-end transparent clock provides precise nanosecond time synchronization for devices on industrial networks |
| Simplified installation and service provisioning | Out-of-the-box Zero-touch provisioning and network automation with automatic protocol and topology discovery |
| Layer 2 security with MACsec | MACsec encryption support provides a secure network access ensuring data confidentiality and integrity |

Alcatel-Lucent OmniSwitch 6465T models

The Alcatel-Lucent OmniSwitch 6465T-12 and 6465T-P12 models are power and acoustically optimized, with a half-rack width, and have a fixed configuration chassis in a 1 RU form factor. All models can operate without fan up to 45°C ambient temperature and with fan can operate up to 60°C. Both models have an internal power supply. PoE model is 802.3af/802.3at compliant and offers 115 W of power for PoE attached devices.

All ports of OmniSwitch 6465T-12 and OmniSwitch 6465T-P12 are capable of IEEE 1588v2 and MACsec. OmniSwitch 6465T switches can form a virtual chassis between any models creating a single chassis-like entity using 1G SFP ports. Up to four switches can be connected in a virtual chassis configuration with option to scale up to eight in future. For forming virtual chassis connections, any SFP transceiver or SFP+ Direct attach cables can be used on 1G SFP ports.

| Models | Gigabit ports (RJ45) | Gig combo ports | 100/1000 SFP ports | Primary power | Backup power | Description |
|-------------|----------------------|-----------------|--------------------|---------------|--------------|--|
| OS6465T-12 | 8 | 2 | 2 | Internal AC | N/A | Fixed-configuration half-rack width chassis with eight 10/100/1000 Base-T ports, two Gigabit combo ports and two 100/1000 Base-X SFP ports. |
| OS6465T-P12 | 8 | 2 | 2 | Internal AC | N/A | Fixed-configuration half-rack width chassis with eight 10/100/1000 Base-T PoE+ ports, two Gigabit combo ports and two 100/1000 Base-X SFP ports. |

Technical specifications

| Product matrix | OS6465T-12 | OS6465T-P12 |
|---------------------------|--------------------------------|--------------------------------|
| File system flash | 1 GB | 1 GB |
| RAM | 1 GB | 1 GB |
| Fans* | 2 | 2 |
| USB Port | 1 (type A, USB 2.0) | 1 (type A, USB 2.0) |
| Console | 1 (RS232 RJ45) | 1 (RS232 RJ45) |
| IEEE 1588v2 capable ports | 12 | 12 |
| MACsec capable ports | 12 | 12 |
| Operating conditions | | |
| Operating temperature | -10°C to 60°C (14°F to 140°F) | -10°C to 60°C (14°F to 140°F) |
| Storage temperature | -40°C to 85°C (-40°F to 185°F) | -40°C to 85°C (-40°F to 185°F) |

* Fans run only if switch is operated at an ambient temperature of +45°C to +60°C. Fans remain off when switch is operating at -10°C to 45°C

| Product matrix | OS6465T-12 | OS6465T-P12 |
|--|--------------------------|--------------------------|
| Humidity (operating & storage) | 5% to 95% non-condensing | 5% to 95% non-condensing |
| Altitude | 13,000 ft | 13,000 ft |
| MTBF (Hours)* | 1,953,053 | 1,298,328 |
| Power Supply efficiency | 85% | 85% |
| Acoustic (-10°C to 45°C) (dB) | Silent | Silent |
| Acoustic (45°C to 60°C) (dB) | 56 dBA | 56 dBA |
| System power consumption (idle)** | 8.5 W | 8.5 W |
| System power consumption (full load)** | 16 W | 19 W |
| Heat dissipation (BTU)** | 54.6 | 64.8 |
| PoE power budget | NA | 115 W |
| Performance | | |
| Switching capacity (aggregated) | 24 Gb/s | 24 Gb/s |
| Forwarding capacity | 17.9 Mb/s | 17.9 Mb/s |
| Physical characteristics | | |
| Switch width | 21.7 cm (8.55 in.) | 21.7 cm (8.55 in.) |
| Switch height | 4.4 cm (1.73 in.) | 4.4 cm (1.73 in.) |
| Switch depth | 28 cm (11.05 in.) | 28 cm (11.05 in.) |
| Weight | 1.7 Kg (3.8 lb) | 2.0 Kg (4.46 lb) |

* MTBF calculations are done at ambient temperature of 25°C

** Power consumption measured at the 120 V AC outlet. Full load measurement does not include PoE power consumption. Heat dissipation: 1 watt = 3.41214 BTU/h

Product specifications and measurements

Per-port LEDs

- Non-PoE ports - green: Link/activity
- PoE ports - amber: Link/activity

System LEDs

- OK: Green/amber operational status of the switch
- VC: Green/amber master or slave role in VC configuration. Number of blinks identify stacking unit number
- PWR: Green/amber - status for the primary power supply

Scalability numbers and speeds

- Wire rate at layer 2 and layer 3 on all ports
- Jumbo frame size: 9216 bytes (for 1 Gb/s)
- Total number of MAC addresses: 16 K
- Total number of IPv4 routes: 128
- Number of VLANs: 4000

Virtual chassis

- Maximum number of units in a VC: 4
- Remote VC connection: Using SFP-GIG-SX, SFP-GIG-LX

Compliance and certifications

Commercial safety

- UL 60950-1, 2nd Ed.
- UL62368-1
- UL 2043 (plenum rated)
- IEC 60950-1; all national deviations
- IEC 62368-1; all national deviations
- EN 60950-1; all deviations
- CAN/CSA-C22.2 No. 60950-1-03
- CAN/CSA-C22.2 No. 62368-1
- NOM-019 SCFI, Mexico
- AS/NZ TS-001 and 60950:2000, Australia
- UL-AR, Argentina
- AS/NZ 62368-1
- UL-GS Mark, Germany
- CU, EAC, Russia
- ANATEL, Brazil
- CCC, China
- KCC Korea
- BSMI, Taiwan
- EN 60825-1 Laser
- C Mark, Morocco
- EN 60825-2 Laser
- CDRH Laser

- RoHS and WEEE directives compliant
- REACH directive

Commercial EMI/EMC

- 47 CRF FCC Part 15: 2015 Subpart B (Class A)VCCI (Class A, with UTP Cables)
- ICES-003:2012 Issue 5, Class A
- AS/NZS 3548 (Class A) – C-Tick
- CE marking for European countries (Class A)
- CE Emission
 - EN50581 (RoHS Recast)
 - EN 55032 (EMI & EMC requirement)
 - EN 55024/EN 55035 (Immunity Characteristics)
 - EN 61000-3-2(Harmonic Current emissions)
 - EN 61000-3-3
 - EN 61000-4-2
 - EN 61000-4-3
 - EN 61000-4-4
 - EN 61000-4-5 (Surge Immunity, Class 4)
 - EN 61000-4-6
 - EN 61000-4-8
 - EN 61000-4-11
 - IEE802.3: Hi-pot Test (2.25 KV DC on all Ethernet Ports)

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
- 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
- Integrated with Nokia 5620 SAM™ for network management
- Full configuration and reporting using SNMPv1/2/3 to facilitate third-party network management over IPv4/IPv6
- 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 Nokia VitalQIP® DNS/DHCP IP Address Management
- Access to the AOS console via USB Adapter with Bluetooth technology provides wireless management access, eliminating the need of console cables

Cloud ready with 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
- Policy- and port-based mirroring
- Remote port mirroring
- sFlow v5 and Remote Monitoring (RMON)
- Unidirectional Link Detection (UDLD), Digital Diagnostic Monitoring (DDM)

Resiliency and high availability

- Unified management, control and virtual chassis technology
- Virtual chassis 1+N redundant supervisor manager
- 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
- Dual-home link support for sub-second link protection without STP
- Virtual Router Redundancy Protocol (VRRP) with tracking capabilities
- IEEE protocol auto-discovery
- 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

Switch software security

- AOS secured diversified code solution is available on OmniSwitch 6465T, 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.

Access control

- Alcatel-Lucent Access Guardian framework for comprehensive user-policy-based NAC
- Autosensing IEEE 802.1X multi-client, multi-VLAN support
- 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 Snooping, DHCP IP and Address Resolution Protocol (ARP) spoof protection

*Future support

- ARP poisoning detection
- IP Source Filtering as a protective and effective mechanism against ARP attacks
- LLDP Security mechanism for rogue device detection and restriction

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, IEEE 802.1Qbb Priority-based Flow Control (PFC) and IEEE 802.3x Flow Control (FC)
- Auto-QoS support for Generic Object Oriented Substation Events (GOOSE) messages

Layer-3 routing and multicast

IPv4 routing

- Static routing
- Virtual Router Redundancy Protocol (VRRPv2)
- DHCP relay (including generic UDP relay)
- Address Resolution Protocol (ARP)
- Policy-based routing and server load balancing
- DHCPv4 server

IPv6 routing

- Internet Control Message Protocol version 6 (ICMPv6)
- Static routing
- Virtual Router Redundancy Protocol version 3 (VRRPv3)
- Neighbor Discovery Protocol (NDP)*
- Policy-based routing and server load balancing
- DHCPv6 server

IPv4/IPv6 multicast

- Internet Group Management Protocol (IGMP) v1/v2/v3 snooping
- Multicast Listener Discovery (MLD) v1/v2 snooping

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, ITU-T Y.1731): Connectivity Fault Management (L2 ping & Link trace)
- Ethernet in first mile: Link OAM (802.3ah)
- 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*
- Customer Provider Edge (CPE) test head traffic generator and analyzer tool
- TR-101 Point-to-Point Protocol over Ethernet (PPPoE) Intermediate Agent allowing for the PPPoE network access method
- Service Assurance Agent (SAA) for proactively measuring network health, reliability and performance.
- Jumbo frame support
- Bridge Protocol Data Unit (BPDU) blocking
- STP Root Guard

Supported standards

IEEE standards

- IEEE 802.1D STP
- IEEE 802.1p CoS
- IEEE 802.1Q VLANs
- IEEE 802.1ab (LLDP)
- IEEE 802.1ag (OAM)
- IEEE 802.3ah (OAM)
- IEEE 802.1ad Provider Bridges Q-in-Q/ VLAN stacking
- IEEE 802.1ak (Multiple VLAN Registration Protocol (MVRP))
- 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 802.3af Power over Ethernet
- IEEE 802.3at PoE Plus
- IEEE 802.1ae MAC Security
- IEEE 1588-2008 (PTP)

ITU-T recommendations

- ITU-T G.8032/Y.1344 2010: Ethernet Ring Protection (ERPv2)

IETF RFCs

IPv4

- RFC 2131 Dynamic Host Configuration Protocol (DHCPv4)
- RFC 4022/2452 MIB for IPv4 TCP
- RFC 4113/2454 MIB for IPv4 UDP
- RFC 4292/4293 IPv4 MIBs

RIP

- RFC 1058 RIP v1
- RFC 1722/1723/2453/1724 RIP v2 and MIB
- RFC 1812/2644 IPv4 Router Requirements
- RFC 2080 RIPng for IPv6

IP Multicast

- RFC 2365 Multicast
- RFC 2710/3019/3810/MLD v2 for IPv6
- RFC 2933 IGMP MIB
- RFC 3376 IGMPv3 (includes IGMP v2/v1)
- RFC 4541 Considerations for IGMP and MLD Snooping Switches
- RFC 5132 Multicast Routing MIB

IPv6

- RFC 1981 Path MTU Discovery
- RFC 2460 IPv6 Specification
- RFC 2464 IPv6 over Ethernet
- RFC 2465 MIB for IPv6: Textual Conventions (TC) and General Group
- RFC 2466 MIB for IPv6: ICMPv6 Group
- 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

*Future support

- 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 4443/2463 ICMPv6
- RFC 4861/2461 Neighbor Discovery
- RFC 4862/2462 Stateless Address Autoconfiguration*
- 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 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
- 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 4627 JavaScript Object Notation (JSON)
- 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 2139/2866/2867/2620 RADIUS Accounting and Client MIB
- RFC 2228 FTP Security Extensions
- RFC 2284 PPP EAP
- RFC 2869/2869bis RADIUS Extension
- RFC 4301 Security Architecture for IP

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 826 ARP
- RFC 919/922 Broadcasting Internet Datagram
- RFC 925/1027 Multi-LAN ARP/Proxy ARP
- RFC 2681
- RFC 950 Subnetting
- RFC 951 BOOTP
- RFC 1151 RDP
- RFC 1191 Path MTU Discovery
- RFC 1256 ICMP Router Discovery
- RFC 1305/2030 NTP v3 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 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
- RFC 4562 MAC-Forced Forwarding

Ordering information

| Part number | Description |
|-------------------------------------|---|
| OmniSwitch 6465T models | |
| OS6465T-12 | OS6465T-12: Gigabit Ethernet chassis. 8 RJ45 10/100/1000 BaseT, 2 SFP/RJ45 combo, 2 SFP ports. 1RU by 1/2 rack width, internal AC PSU. Operating temp -10° C to 60° C. Includes power cord, manuals/software access cards, RJ45 to DB9 adaptor |
| OS6465T-P12 | OS6465T-P12: Gigabit Ethernet chassis. 8 RJ45 10/100/1000 BaseT PoE+, 2 SFP/RJ45 combo, 2 SFP ports. 1RU by 1/2 rack width, internal AC PSU. Operating temp -10° C to 60° C. Includes power cord, manuals/software access cards, RJ45 to DB9 adaptor. |
| OmniSwitch 6465T licenses | |
| OS-SW-MACSEC | Site license to enable MACsec on applicable OS6465, OS6560, OS6860, OS6865, OS6900, OS9900 models. One license per customer at no cost |
| OmniSwitch 6465T Accessories | |
| OS6465T-CBL-60 | 60 centimeters long SFP+ direct stacking cable for OS6465T models |
| OS6465T-CBL-1M | 1-meter long SFP+ direct stacking cable for OS6465T models |
| OS6465T-CBL-3M | 3-meter long SFP+ direct stacking cable for OS6465T models |
| Gigabit transceivers | |
| SFP-GIG-LH70 | 1000Base-LH transceiver with an LC interface for single mode fiber over 1550 nm wavelength. Typical reach of 70 km. |
| SFP-GIG-LH40 | 1000Base-LH transceiver with an LC interface for single mode fiber over 1310 nm wavelength. Typical reach of 40 km. |
| SFP-GIG-LX | 1000Base-LX transceiver with an LC interface for single mode fiber over 1310 nm wavelength. Typical reach of 10 km. |
| SFP-GIG-SX | 1000Base-SX transceiver with an LC interface for multimode fiber over 850 nm wavelength. Typical reach of 300 m. |
| SFP-GIG-EXTND | 1000Base-SX transceiver with an LC interface for single mode fiber over 850 nm wavelength. Typical reach of 2 km. |
| SFP-GIG-T | 1000Base-T Gigabit ethernet transceiver Supports category 5, 5E, and 6 copper cabling up to 100m. |
| 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 550 m at Gigabit speed and 2 km at 100 Mb/s speed. |
| SFP-DUAL-BX-D | Dual Speed 100Base-BXD or 1000Base-BXD SFP transceiver with an LC type connector. This bidirectional transceiver is designed for use over single mode fiber optic on a single strand link up to 10 km. Transmits 1550 nm and receives 1310 nm optical signal. |
| SFP-DUAL-BX-U | Dual Speed 100Base-BXU or 1000Base-BXU SFP transceiver with an LC type connector. This bidirectional transceiver is designed for use over single mode fiber optic on a single strand link up to 10 km. Transmits 1310 nm and receives 1550 nm optical signal. |
| 100 Megabit transceivers | |
| SFP-100-LC-MM | 100Base-FX SFP transceiver with an LC type interface. This transceiver is designed for use over multimode fiber optic cable. |
| SFP-100-LC-SM15 | 100Base-FX SFP transceiver with an LC type interface. This transceiver is designed for use over single mode fiber optic cable up to 15 km. |
| SFP-100-LC-SM40 | 100Base-FX SFP transceiver with an LC type interface. This transceiver is designed for use over single mode fiber optic cable up to 40 km. |
| SFP-100-BXLC-D | 100Base-BX SFP transceiver with an LC type interface. Designed for use over single mode fiber optic on a single strand link up to 20KM point-to point. This transceiver is normally used in the central office OLT) Tx-1550 nm and Rx-1310 nm optical signal |
| SFP-100-BXLC-U | 100Base-BX SFP transceiver with an LC type interface. Designed for use over single mode fiber optic on a single strand link up to 20 km point to point. This transceiver is normally used in the client ONU) Tx-1310 nm and Rx-1550 nm optical signal |

Warranty

The OmniSwitch 6465T family comes with a Limited Lifetime Hardware 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/>