ALE | **Where Everything Connects**

# Alcatel-Lucent OmniSwitch 2220
## WebSmart Gigabit Ethernet LAN Switches

The Alcatel-Lucent OmniSwitch® 2220 Gigabit WebSmart family of switches provides a simple, secure, and smart business network at affordable prices.



OS2220-8/-P8

The OmniSwitch 2220 allows you to achieve a reliable business class network performance including security without paying for advanced network management features. These switches are a lower-priced alternative to managed switches for wired connectivity while maintaining performance, quality of service (QoS) and scalability using a simplified web management interface.



OS2220-24/-P24

The OmniSwitch 2220 family is embedded with the latest technology innovations, and offers maximum investment protection.

Deployments benefiting from the OmniSwitch 2220 family are:
• High speed desktop connectivity
• Secure wireless connectivity
• Unified communication connectivity (IP telephony, video and converged solutions)

Alcatel·Lucent
Enterprise

## Features

- 8-, 24- and 48-port, Power over Ethernet (PoE+) and non-PoE models with fixed small form factor pluggable (SFP) 1G uplink interfaces
- Reduced power consumption with energy efficient ethernet (EEE) technology
- Simplified web-based management
- Easy MAC/IP-based ACLs

### Management

- Web-based GUI (HTTP)
- SNMP v1/v2
- RMON
- Cable test diagnostics

### Security

- 802.1X RADIUS access security
- MAC filtering/port security
- Guest VLAN
- Broadcast storm recovery

### Convergence

- Enhanced voice over IP (VoIP) VLAN
- Auto VoIP VLAN for Alcatel-Lucent Entprise VoIP Phones
- IEEE 802.3af/.at PoE+ for IP phones, WLAN access points and video cameras

## Benefits

### Simple and easy configuration and management

The OmniSwitch 2220 switches are designed to be easy to deploy and used by small and medium sized businesses.

### Performance and reliability

The OmniSwitch 2220 family provides high availability and performance for both wired and 802.11ac wireless deployments.

### Network security

The OmniSwitch 2220 provides configurable Access Control Lists (ACLs) and 802.1x port-based and RADIUS server access security.

### IP telephony support

OmniSwitch 2220 switches include QoS features to prioritize delay-sensitive services such as voice and video while simplifying unified communications deployments.

## OmniSwitch 2220 8-, 24- and 48-port models

**Table 1. Available OmniSwitch 2220 models**

| Chassis | 10/100/1000 – RJ45 ports | SFP Gigabit uplink | Primary power | Backup power |
|---|---|---|---|---|
| **Non-PoE models** | | | | |
| OS2220-8 | 8 | 2 | Internal AC | N/A |
| OS2220-24 | 24 | 2 | Internal AC | N/A |
| OS2220-48 | 48 | 2*/2 | Internal AC | N/A |
| **PoE models** | | | | |
| OS2220-P8 | 8 | 2 | Internal AC | N/A |
| OS2220-P24 | 24 | 2 | Internal AC | N/A |
| OS2220-P48 | 48 | 2*/2 | Internal AC | N/A |

\* RJ45/SFP Combo ports

# Detailed product features

## Simplified management
## Configuration management interfaces
- Web based GUI (HTTP)
- Friendly port naming
- OmniVista Generic SNMP Support
- Web management applet
- Dual image storage (active/backup)

## Monitoring and troubleshooting
- Broadcast storm recovery
- Event and error logging Facility
- Port-based mirroring for troubleshooting
- Ping utility

- SNMP v1/v2 and associated MIBs
- RMON groups 1,2,3,9
- Cable test diagnostics

## Advanced security

### Access control
- RADIUS Client
- 802.1X RADIUS usage guidelines
- Guest VLAN

### QoS
- CoS WRR/WRED
- Mapping of CoS to queue
- Auto VoIP

## Layer-2 and Multicast

### Layer-2 switching
- RAM:
  ¬ 8 port: 64MB
  ¬ 24 port: 128 MB

- Flash:
  ¬ 8 port: 16 MB
  ¬ 24/48 port: 32 MB
- MAC Addresses:
  ¬ 8 port: 8k
  ¬ 24/48 port: 16k
- MSTP instances: 4
- Link Agg Groups: 2
- ACLs:  50 with 10 rules per port
- Traffic classes (4 or 8 queues)
- Up to 16k MACs
- Up to 64 VLANs
- Latency: < 4 µs

## Multicast
- IGMPv1/v2 snooping to optimize multicast traffic

## Technical specifications

**8/24/48 port models**

| Port | OS2220-8 | OS2220-P8 | OS2220-24 | OS2220-P24 | OS2220-48 | OS2220-P48 |
|---|---|---|---|---|---|---|
| RJ-45 10/100/1000 ports | 8 | 8 | 24 | 24 | 48 | 48 |
| 1G Combo/SFP uplink ports | 0/2 | 0/2 | 0/2 | 0/2 | 2/2 | 2/2 |
| PoE ports | 0 | 8 | 0 | 24 | 0 | 48 |
| 802.3af/at ports | 0 | 8 | 0 | 24 | 0 | 48 |
| Switching capacity | 20 Gb/s | 20 Gb/s | 52 Gb/s | 52 Gb/s | 100 Gb/s | 100 Gb/s |
| **Dimensions** | | | | | | |
| Width | 27.94 cm (11.0 in) | 27.94cm (11.0 in) | 44.0 cm (17.32 in) | 44.0 cm (17.32 in) | 44.0 cm (17.32 in) | 44.0 cm (17.32 in) |
| Height | 4.4 cm (1.73 in) | 4.4 cm (1.73 in) | 4.4 cm (1.73 in) | 4.4 cm (1.73 in) | 4.4 cm (1.73 in) | 4.4 cm (1.73 in) |
| Depth | 17 cm (6.69 in) | 17 cm (6.69 in) | 24 cm (9.44 in) | 24 cm (9.44 in) | 35 cm (13.77 in) | 35 cm (13.77 in) |
| **Operating conditions** | | | | | | |
| Operating temperature | 0℃ to +45℃ 32°F to +113°F | 0℃ to +45℃ 32°F to +113°F | 0℃ to +45℃ 32°F to +113°F | 0℃ to +45℃ 32°F to +113°F | 0℃ to +45℃ 32°F to +113°F | 0℃ to +45℃ 32°F to +113°F |
| Storage temperature | -25℃ to +70℃ -13°F to +158F | -25℃ to +70℃ -13°F to +158F | -25℃ to +70℃ -13°F to +158F | -25℃ to +70℃ -13°F to +158F | -25℃ to +70℃ -13°F to +158F | -25℃ to +70℃ -13°F to +158F |
| Humidity (operating and storage) | 5% - 95% | 5% - 95% | 5% - 95% | 5% - 95% | 5% - 95% | 5% - 95% |
| Fan (variable speed)* | Fan-less | 1 fan | Fan-less | 2 fans | 3 fans | 3 fans |
| Acoustic (dB) | 0 db (A) | <40db (A) | 0db (A) | <40db (A) | <40db (A) | <40db (A) |
| MTBF (hours) | 1,209,148 | 1,104,816 | 987,125 | 656,251 | 487,878 | 425,531 |
| PoE power budget (watts) | N/A | 75 W | N/A | 192 W | N/A | 384 W |

## Indicators

### System LEDs
- Power LED
- Reset button

### Per-port LEDs
- 10/100/1000: link/activity
- 10/100/1000: PoE activity
- SFP: Link/activity

## Compliance and certifications

### Commercial

#### Electromagnetic Emission
- FCC Class A (http://www.fcc.gov)
- CE Class A, include EN55022 (CISPR 22) / 55024 / 50082-1 (http://www.cenelec.org/)
- VCCI Class A (http://www.vcci.or.jp/vcci_e/)

#### Safety Agency Approvals
- UL/cUL (http://www.ul.com)
- CE (include EN60950-1) (http://www.cenelec.org/)
- CB (http://www.iecee.org/cbscheme/default.htm)
- IEC 60825-1 Laser, IEC 60825-2 Laser
- CDRH Laser

## Supported standards

### IEEE standards
- IEEE 802.3 – 10BASE-T
- IEEE 802.3u – 100BASE-T
- IEEE 802.3ab – 1000BASE-T
- IEEE 802.1AB – LLDP
- IEEE 802.1D – Spanning Tree
- IEEE 802.1p – Ethernet Priority with User Mapping
- IEEE 802.1Q – Virtual LANs w/ Port-based VLANs
- IEEE 802.1S – Multiple Spanning Tree
- IEEE 802.1W – Rapid Spanning Tree
- IEEE 802.1X – Port Based Authentication
- IEEE 802.3ac – VLAN Tagging
- IEEE 802.3ad – Link Aggregation (w/LACP)
- IEEE 802.3x – Flow Control

## RFCs
- RFC 768 – UDP
- RFC 783 – TFTP
- RFC 791 – IP
- RFC 792 – ICMP
- RFC 793 – TCP
- RFC 826 – Ethernet ARP
- RFC 894 – Transmission of IP data-gram over Ethernet networks
- RFC 951 – BOOTP
- RFC 1034 – Domain names – concepts and facilities
- RFC 1035 – Domain names – implementation and specification
- RFC 1321 – Message digest algorithm
- RFC 1534 – Interop. between BootP & DHCP
- RFC 2030 – Simple Network Time Protocol (SNTP) V4
- RFC 2131 – DHCP Client
- RFC 2347 – TFTP option extension
- RFC 2348 – TFTP blocksize option
- RFC 2865 – RADIUS Client
- RFC 3164 – BSD syslog protocol
- RFC 3580 – 802.1X RADIUS Usage Guidelines
- RFC 5424 – Syslog protocol

## Ordering information

| Model number | Description |
| --- | --- |
| OS2220-8 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 8 x 10/100/1000 Base-T ports, 2 fixed SFP (1G) ports with internal power supply. |
| OS2220-P8 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 8 x 10/100/1000 PoE Base-T ports, 2 fixed SFP (1G) ports with internal power supply (75W power budget) |
| OS2220-24 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 24 x 10/100/1000 Base-T ports, 2 fixed SFP (1G) with internal power supply. |
| OS2220-P24 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 24 x 10/100/1000 PoE Base-T ports, 2 fixed SFP (1G) with internal power supply (192W PoE budget) |
| OS2220-48 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 48 x 10/100/1000 Base-T ports, 2 RJ45/SFP combo and 2 fixed SFP ports (1G) with internal power supply. |
| OS2220-P48 | Gigabit Ethernet WebSmart chassis in a 1U form factor with 48 x 10/100/1000 PoE Base-T ports, 2 RJ45/SFP combo and 2 x fixed SFP (1G) with internal power supply. (384W PoE budget) |

The above model numbers contain All models above include an AC power supply with a country-specific power cord, user manuals access card and hardware for mounting in a 19" rack.

| Transceivers | Description |
| --- | --- |
| SFP-GIG-T | 1000Base-T Gigabit Ethernet Transceiver SFP |
| SFP-GIG-SX | 1000Base-SX Gigabit Ethernet optical transceiver SFP |
| SFP-GIG-LX | 1000Base-LX Gigabit Ethernet optical transceiver SFP |

Alcatel·Lucent
Enterprise