



# OS3254P

## 48-Port Gigabit L3 Managed PoE Switch with 6x10G SFP+ Ports

48x1000Base-T PoE+, 6x10G SFP+, 1xConsole RJ-45, 880W/370W PoE Budget, PoE up to 250 m, 19" rack mounting



The ORIGO OS3254P is a managed L3 switch featuring 48 x Gigabit PoE+ ports and 6 x 10G SFP+ uplinks, available with 880W or 370W PoE budget.

The OS3254P switch is designed for building and upgrading SMB and enterprise networks, delivering a modern gigabit solution with high PoE port density and 10G uplinks. It increases aggregation bandwidth while providing reliable remote power for IP cameras, wireless access points, IP phones, and other PoE-enabled devices.

All RJ-45 ports from 1 – 48 support IEEE 802.3af/at PoE standards, delivering up to 30W per port. Built-in ESD protection meets industry surge standards, guarding the switch and connected devices from damage and network instability caused by ESD and lightning-induced surges.

The switch is suitable for use in video surveillance systems (CCTV). The Extend PoE mode allows to overcome the standard Ethernet limit of 100 m and connect IP cameras at a distance of up to 250 m at speeds up to 10 Mbit/s, simplifying installation and reducing costs when building CCTV networks. Support for PD Alive and PoE Scheduling ensures automatic restart of unresponsive devices and optimization of power consumption.

The OS3254P combines powerful L3 routing (BGP, OSPF, RIP) with advanced security, QoS, and flexible VLAN features. Designed for reliable performance, it supports link aggregation, Loopback Detection, and redundancy protocols (STP/RSTP/MSTP, ERPS) to keep networks stable even in demanding environments. Built-in OAM tools provide comprehensive monitoring and troubleshooting, making network management simple and efficient.

### Key Features

- 48 x 10/100/1000Base-T 802.3af/at PoE
- 6 x 10G SFP+
- Total PoE budget option – 880W or 370W
- Adapted for CCTV: PoE up to 250m, PD Alive and PoE Scheduling
- L3 routing: RIP, OSPF, BGP
- Static IPv4/IPv6 routing
- 802.1X authentication, ACL L2-L4, Port Security
- Comprehensive QoS for traffic prioritization
- IGMP/MLD Snooping for multicast traffic management
- ERPS, STP/RSTP/MSTP, LoopBack Detection for high availability
- Management via Web GUI, CLI (Telnet, SSH, Console), and SNMP



## Specifications

### Hardware

CPU and memory	<ul style="list-style-type: none"><li>• CPU: RTL9311</li><li>• RAM: 512 MB</li><li>• Flash: 32 MB</li></ul>
Interfaces	<ul style="list-style-type: none"><li>• 48 x 10/100/1000Base-T (RJ-45) PoE</li><li>• 6 x 10GBase-X SFP+</li><li>• 1 x RJ-45 console port</li></ul>
Standards and Functions	<ul style="list-style-type: none"><li>• IEEE 802.3 10Base-T</li><li>• IEEE 802.3u 100Base-TX</li><li>• IEEE 802.3ab 1000Base-T</li><li>• IEEE 802.3z 1000Base-X</li><li>• IEEE 802.3ae 10GBase-X</li><li>• IEEE 802.3af PoE</li><li>• IEEE 802.3at PoE</li><li>• IEEE 802.3x Full Duplex Flow Control</li><li>• IEEE 802.3az Energy-Efficient Ethernet</li><li>• Auto MDI/MDIX on all copper ports</li></ul>
LEDs	<ul style="list-style-type: none"><li>• PWR<ul style="list-style-type: none"><li>- ON – power on state</li><li>- OFF – power off state</li></ul></li><li>• Link/ACT (Ports 1-54)<ul style="list-style-type: none"><li>- Always bright – terminal device connected</li><li>- Flicker – data pass</li><li>- OFF – no connection</li></ul></li><li>• SYS<ul style="list-style-type: none"><li>- Flicker – the system is working properly</li><li>- OFF – the system is being started or is abnormal</li></ul></li><li>• PoE (Ports 1–48)<ul style="list-style-type: none"><li>- On: PoE device is connected</li><li>- Blinking: Power out of range</li><li>- Off: No PoE device connected</li></ul></li></ul>
Button	<ul style="list-style-type: none"><li>• Reset</li></ul>
Power	<ul style="list-style-type: none"><li>• Power connector (AC)</li></ul>
Ventilation	<ul style="list-style-type: none"><li>• 5 fans</li></ul>
Casing	<ul style="list-style-type: none"><li>• Metal</li></ul>



Mounting	<ul style="list-style-type: none"><li>• Desktop</li><li>• 19" rackmount</li></ul>
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### Performance

Switching Capacity	<ul style="list-style-type: none"><li>• 216 Gbps</li></ul>
Packet Forwarding Rate	<ul style="list-style-type: none"><li>• 160.71 Mpps</li></ul>
Packet Buffer	<ul style="list-style-type: none"><li>• 2 MB</li></ul>
Transfer Mode	<ul style="list-style-type: none"><li>• Store-and-forward</li></ul>
MAC Address Table	<ul style="list-style-type: none"><li>• 32K entries</li></ul>
Routing Table Size	<ul style="list-style-type: none"><li>• 12K entries (IPv4/IPv6)</li></ul>
L3 Forwarding Table	<ul style="list-style-type: none"><li>• 12K entries (IPv4/IPv6)</li></ul>
Jumbo Frame	<ul style="list-style-type: none"><li>• 12 KB</li></ul>

### PoE

PoE Standard	<ul style="list-style-type: none"><li>• IEEE 802.3af</li><li>• IEEE 802.3at</li></ul>
PoE Ports	<ul style="list-style-type: none"><li>• Ports 1-48</li></ul>
Max. Power per Port:	<ul style="list-style-type: none"><li>• 30W</li></ul>
PoE Power Budget	<ul style="list-style-type: none"><li>• 880W (OS3254P/880W)</li><li>• 370W (OS3254P/370W)</li></ul>
PoE Mode	<ul style="list-style-type: none"><li>• Type A</li></ul>
PoE Transmission Distance	<ul style="list-style-type: none"><li>• Up to 100 m<ul style="list-style-type: none"><li>- Data rate: up to 1000 Mbps</li></ul></li><li>• Up to 250 m<sup>1</sup><ul style="list-style-type: none"><li>- Data rate: up to 10 Mbps</li></ul></li></ul>
Management and Monitoring	<ul style="list-style-type: none"><li>• PoE Scheduling: Allows scheduled enabling/disabling of PoE on specific ports</li><li>• PD Alive: Continuously monitors PoE-powered devices (PDs) and automatically restarts unresponsive devices</li></ul>

### Software

L2 Features	<ul style="list-style-type: none"><li>• Flow Control</li><li>• Link Aggregation<ul style="list-style-type: none"><li>- Static</li><li>- 802.3ad</li><li>- Up to 64 groups per device / up to 8 ports per group</li></ul></li></ul>
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<sup>1</sup>Data and power transmission over distances of up to 250 m is possible with a switch port speed limited to 10 Mbps. The connected device should also support speeds of up to 10 Mbps.

	<ul style="list-style-type: none"><li>• Load Balance<ul style="list-style-type: none"><li>- src-mac</li><li>- dst-mac</li><li>- src-ip</li><li>- dst-ip</li></ul></li><li>• Loopback Detection</li><li>• ERPS</li><li>• MRPP</li><li>• ULPP</li><li>• ULSM</li><li>• Spanning Tree Protocol<ul style="list-style-type: none"><li>- 802.1D STP</li><li>- 802.1w RSTP</li><li>- 802.1s MSTP (64 instances)</li><li>- Root Guard (Restriction)</li><li>- BPDU Guard (Restriction)</li></ul></li><li>• LLDP</li><li>• LLDP-MED</li><li>• Port Mirroring<ul style="list-style-type: none"><li>- One-to-One</li><li>- Many-to-One</li><li>- Flow-based</li><li>- CPU-based</li><li>- Ingress/egress/both</li><li>- RSPAN</li></ul></li></ul>
VLAN	<ul style="list-style-type: none"><li>• 802.1Q, 4094 VLAN</li><li>• Port-based VLAN</li><li>• MAC-based VLAN</li><li>• Protocol-based VLAN (802.1v)</li><li>• Subnet-based VLAN</li><li>• Private VLAN</li><li>• VLAN Filtering</li><li>• Voice VLAN</li><li>• GVRP<ul style="list-style-type: none"><li>- Supports up to 4K groups</li></ul></li><li>• GMRP</li><li>• Double VLAN (Q-in-Q)<ul style="list-style-type: none"><li>- Selective Q-in-Q</li><li>- Port-based Q-in-Q</li></ul></li></ul>

	<ul style="list-style-type: none"> <li>• VLAN Translation</li> <li>• Multicast VLAN</li> </ul>
L2 Multicast	<ul style="list-style-type: none"> <li>• IGMP Snooping <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3</li> <li>- Supports up to 4K groups</li> <li>- IGMP Snooping Fast Leave</li> <li>- IGMP Proxy</li> <li>- IGMP Authentication (RADIUS)</li> </ul> </li> <li>• MLD Snooping <ul style="list-style-type: none"> <li>- MLD v1/v2</li> <li>- Supports up to 4K groups</li> </ul> </li> <li>• Multicast Source/Destination (DCSCM)</li> </ul>
L3 Features	<ul style="list-style-type: none"> <li>• Maximum number of IP interfaces: 32</li> <li>• 8K ARP entries</li> <li>• Static routing for IPv4/IPv6 <ul style="list-style-type: none"> <li>- 12K IPv4 routes</li> <li>- 12K IPv6 routes</li> </ul> </li> <li>• Gratuitous ARP</li> <li>• RIPv1/v2</li> <li>• OSPFv2</li> <li>• BGPv4</li> </ul>
QoS	<ul style="list-style-type: none"> <li>• 802.1p</li> <li>• CoS based on: <ul style="list-style-type: none"> <li>- DSCP</li> <li>- VLAN ID</li> <li>- IP Precedence</li> <li>- IP ACL/ MAC ACL/ IPv6 ACL</li> <li>- IPv6 Flow Labels</li> </ul> </li> <li>• Queue Handling <ul style="list-style-type: none"> <li>- Strict Priority (SP)</li> <li>- Weighted Round Robin (WRR)</li> <li>- Weighted Deficit Round Robin (WDRR)</li> </ul> </li> <li>• Port-based bandwidth control</li> <li>• Supports up to 8 egress queues per port</li> </ul>
Security	<ul style="list-style-type: none"> <li>• Port Security <ul style="list-style-type: none"> <li>- Supports up to 32K MAC addresses per port</li> </ul> </li> <li>• Port Isolation</li> <li>• Storm Control</li> </ul>

	<ul style="list-style-type: none"> <li>• Dynamic ARP Inspection</li> <li>• ARP Spoofing Protection             <ul style="list-style-type: none"> <li>- Max. 1K entries</li> </ul> </li> <li>• ARP Scanning Prevention</li> <li>• ARP Guard</li> <li>• DoS Attack Prevention</li> <li>• DHCP Snooping</li> <li>• DHCPv6 Snooping</li> <li>• IPv6 SAVI</li> <li>• Security RA</li> <li>• CPU Protection</li> </ul>
AAA	<ul style="list-style-type: none"> <li>• 802.1X Authentication:             <ul style="list-style-type: none"> <li>- Port-Based</li> <li>- MAC-Based</li> </ul> </li> <li>• Guest VLAN</li> <li>• IPv6 RADIUS Server</li> <li>• RADIUS/TACACS+ Authentication</li> </ul>
Access Control Lists (ACL)	<ul style="list-style-type: none"> <li>• Up to 4K ACL entries</li> <li>• ACL based on:             <ul style="list-style-type: none"> <li>- VLAN</li> <li>- MAC address</li> <li>- IPv4 address</li> <li>- DSCP</li> <li>- ToS</li> <li>- TCP/UDP port number</li> <li>- User-defined ACL</li> </ul> </li> <li>• Time-based ACL</li> </ul>
OAM	<ul style="list-style-type: none"> <li>• Cable Diagnostics</li> <li>• ULDP (Unidirectional Link Detection Protocol)</li> <li>• 802.3ah Ethernet Link OAM</li> <li>• 802.1ag Connectivity Fault Management (CFM)</li> <li>• DDM (Digital Diagnostics Monitoring)</li> <li>• Watchdog</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Web-based UI</li> <li>• CLI</li> <li>• Telnet</li> <li>• SSH</li> <li>• FTP</li> </ul>

	<ul style="list-style-type: none"> <li>• TFTP</li> <li>• System Log</li> <li>• SNMP v1/v2c/v3</li> <li>• SNMP Traps</li> <li>• SNTP</li> <li>• NTP</li> <li>• Firmware Backup/Upgrade</li> <li>• Ping/Traceroute (IPv4/IPv6)</li> <li>• DHCP Server</li> <li>• DHCPv6 Server</li> <li>• BootP/DHCP Client</li> <li>• DHCP Relay</li> <li>• DHCPv6 Relay</li> <li>• DHCP Option 82, 43, 60, 61, 67</li> <li>• IPv4/IPv6 DNS Client</li> </ul>
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### Physical Parameters

Dimensions (W × D× H)	• 440 x 330 x 44 mm
Weight	• 5.38 kg
Package Dimensions	• 49.5 x 41.5 x 7.2 cm
Gross Weight	• 6.1 kg

### Operating Conditions

Power Input	• 100-240V AC, 50/60 Hz
Max Power Consumption	<ul style="list-style-type: none"> <li>• OS3254P/880W: 1021W</li> <li>• OS3254P/370W: 469.3W</li> </ul>
Standby Power Consumption	• 39.9W
Heat Dissipation	<ul style="list-style-type: none"> <li>• OS3254P/880W:               <ul style="list-style-type: none"> <li>- 999.37W (3412 BTU/h) – PoE ON</li> <li>- 59.96W (204.72 BTU/h) – PoE OFF</li> </ul> </li> <li>• OS3254P/370W:               <ul style="list-style-type: none"> <li>- 437.72W (1494,45 BTU/h) – PoE ON</li> <li>- 59.96W (204.72 BTU/h) – PoE OFF</li> </ul> </li> </ul>
MTBF (hours)	• > 50 000



Surge Protection	<ul style="list-style-type: none"><li>• <math>\pm 4</math> kV (common mode)</li><li>• <math>\pm 2</math> kV (differential mode)</li></ul>
Electrostatic Discharge (ESD) Protection	<ul style="list-style-type: none"><li>• Contact discharge: <math>\pm 6</math> kV</li><li>• Air discharge: <math>\pm 8</math> kV</li></ul>
Temperature	<ul style="list-style-type: none"><li>• Operating: 0 to 40 °C</li><li>• Storage: -40 to 70 °C</li></ul>
Humidity	<ul style="list-style-type: none"><li>• Operating: 10% to 90% (non-condensing)</li><li>• Storage: 5% to 90% (non-condensing)</li></ul>

### Package Contents

Package Contents	<ul style="list-style-type: none"><li>• OS3254P Switch</li><li>• Power Cord</li><li>• RJ-45 Console Cable</li><li>• Rack-Mount Kit</li><li>• Quick Installation Guide</li></ul>
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### Order Info

OS3254P/880W	Managed L3 PoE Switch, 48 × 1000Base-T, 6 × 10GBase-X SFP+, PoE up to 250m  <i>880W PoE Budget</i>
OS3254P/370W	Managed L3 PoE Switch, 48 × 1000Base-T, 6 × 10GBase-X SFP+, PoE up to 250m  <i>370W PoE Budget</i>