



# OS3120P/250W

## 20-Port L2 Managed L2 PoE Switch

16x1000Base-T PoE+, 2x100/1000Base-X SFP, 2xCombo 1000Base-T/SFP, 1xConsole RJ-45, 250W PoE budget, PoE up to 250 m, 19" rack mounting



The ORIGO OS3120P/250W is a high-performance L2 managed switch with 16 x 10/100/1000Base-T PoE+ ports, 2 x 100/1000Base-X SFP ports and 2 x Combo 100/1000Base-T/SFP ports.

The ORIGO OS3120P/250W is recommended for building of the networks of small, medium, and large enterprises, retail business, budgetary organizations and education institutions that require managed gigabit solution to connect the workplaces and provide remote power supply for IP cameras, wireless access points, IP phones, and other PoE-enabled devices.

The OS3120P/250W supports IEEE 802.3af/at PoE standards, providing up to 30W per port with a total PoE power budget of 250W. 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 OS3120P/250W supports also a static routing, advanced VLAN functionality, Port Security, 802.1X authentication and ACL. IGMP/MLD Snooping function allows to operate with multicasting applications effectively, and QoS is used to provide a priority transmission of multimedia traffic.

To increase network performance and resiliency, the OS3120P/250W supports Link Aggregation Control Protocol (LACP), the redundant connections by means of STP/RSTP/MSTP, Loopback Detection and ERPS, providing fast network recovery if one of the ring links fails.

### Key Features

- 16x10/100/1000Base-T PoE ports
- 2x100/1000Base-X SFP ports
- 2xCombo 100/1000Base-T/SFP ports
- 250W PoE budget
- Adapted for CCTV: PoE up to 250m, PD Alive and PoE Scheduling
- Static routing
- 802.1X, ACL, Port Security
- 802.1Q VLAN, Voice VLAN, Surveillance VLAN
- ERPS, STP/RSTP/MSTP, Loopback Detection for enhanced network reliability
- Management via Web UI, Console, Telnet, SSH, SNMP



## Product Specifications

### Hardware Specifications

CPU and memory	<ul style="list-style-type: none"><li>• CPU: RTL8382M</li><li>• RAM: 128 MB</li><li>• Flash: 16 MB</li></ul>
Interfaces	<ul style="list-style-type: none"><li>• 16 x 10/100/1000Base-T (RJ-45) PoE</li><li>• 2 x 100/1000Base-X SFP</li><li>• 2 x Combo 100/1000Base-T/SFP</li><li>• 1 Console RJ-45 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 802.3u 100Base-FX</li><li>• IEEE 802.3z 1000Base-X</li><li>• IEEE 802.3af PoE</li><li>• IEEE 802.3at PoE</li><li>• IEEE 802.3x Flow Control</li><li>• Auto MDI/MDIX</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 (port 1 – 20)<ul style="list-style-type: none"><li>- Always bright– terminal device is connected</li><li>- Blinking green – data pass</li><li>- Off – no connection</li></ul></li><li>• SYS<ul style="list-style-type: none"><li>- Blinking – the switch is working correctly</li><li>- Off – the switch is booting up or a failure has occurred</li></ul></li></ul>



	<ul style="list-style-type: none"><li>• PoE (Ports 1 – 16)<ul style="list-style-type: none"><li>- Always bright – PoE device is connected</li><li>- Blinking – Output power on PoE port is close to maximum</li><li>- Off – PoE device is not connected</li></ul></li></ul>
Buttons	<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>• 2 Fans</li></ul>
Case	<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>

## Performance

Switching Capacity	<ul style="list-style-type: none"><li>• 40 Gbps</li></ul>
Packet Forwarding Rate	<ul style="list-style-type: none"><li>• 14.88 Mpps</li></ul>
Packet Buffer	<ul style="list-style-type: none"><li>• 512 KB</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>• 8K entries</li></ul>
Routing Table	<ul style="list-style-type: none"><li>• 512 entries (IPv4/IPv6)</li></ul>
L3 Forwarding Table	<ul style="list-style-type: none"><li>• 512 entries (IPv4/IPv6)</li></ul>
Jumbo Frame	<ul style="list-style-type: none"><li>• 9 216 bytes</li></ul>

## PoE

PoE Standards	<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 1-16</li></ul>
Max. Power Consumption per Port	<ul style="list-style-type: none"><li>• 30W</li></ul>
PoE budget	<ul style="list-style-type: none"><li>• 250W</li></ul>
PoE Mode	<ul style="list-style-type: none"><li>• Type A</li></ul>
PoE Distance	<ul style="list-style-type: none"><li>• 100 m<ul style="list-style-type: none"><li>- Data rate – up to 1000 Mbps</li></ul></li></ul>

	<ul style="list-style-type: none"><li>• 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 8 groups per device / up to 8 ports per group</li></ul></li><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></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>• 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>- Supports Mirroring for Tx/Rx/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</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><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>- Up to 512 groups</li><li>- IGMP Snooping Fast Leave</li><li>- IGMP Proxy</li></ul></li></ul>

	<ul style="list-style-type: none"><li>• MLD Snooping<ul style="list-style-type: none"><li>- MLD v1/v2</li><li>- Up to 512 groups</li></ul></li><li>• Multicast Source/Destination (DCSCM)</li></ul>
L3 Features	<ul style="list-style-type: none"><li>• Up to 16 IP interfaces</li><li>• 8K ARP entries</li><li>• Static routing entries<ul style="list-style-type: none"><li>- 512 for IPv4</li><li>- 512 for IPv6</li></ul></li><li>• Gratuitous ARP</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 Label</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>• Bandwidth Control</li><li>• 8 Egress Queues</li></ul>
Security	<ul style="list-style-type: none"><li>• SSH v1/v2</li><li>• SSL<ul style="list-style-type: none"><li>- TLS 1.0/1.1/1.2 support</li><li>- IPv4/IPv6 access support</li></ul></li><li>• Port Security<ul style="list-style-type: none"><li>- Up to 8K MAC address per port</li></ul></li></ul>

	<ul style="list-style-type: none"><li>• Port Isolation</li><li>• Storm Control</li><li>• Dynamic ARP Inspection</li><li>• ARP Spoofing Attack Prevention</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>• 1.5K 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>- Packet content defined by user</li></ul></li><li>• Time-based ACL</li></ul>

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OAM	<ul style="list-style-type: none"><li>• Cable diagnostics</li><li>• ULDP (Unidirectional Link Detection Protocol)</li><li>• Dying Gasp</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 v1/v2</li><li>• FTP</li><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 for 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>• DNS Client for IPv4/IPv6</li></ul>

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## Physical Parameters

Dimensions (L x W x H)	<ul style="list-style-type: none"><li>• 440 x 207 x 44 mm</li></ul>
Weight	<ul style="list-style-type: none"><li>• 2.94 kg</li></ul>
Package Dimensions	<ul style="list-style-type: none"><li>• 37 x 23 x 8 cm</li></ul>
Gross Weight	<ul style="list-style-type: none"><li>• 3.56 kg</li></ul>

## Operating Conditions

Power	<ul style="list-style-type: none"><li>• 100-240V AC, 50/60 Hz</li></ul>
Max Power Consumption	<ul style="list-style-type: none"><li>• 218.9W</li></ul>
Heat Dissipation	<ul style="list-style-type: none"><li>• 279.80W (955.36 BTU/h) (PoE on)</li><li>• 29.97W (102.36 BTU/h) (PoE off)</li></ul>
Surge Protection	<ul style="list-style-type: none"><li>• Common mode <math>\pm 4</math>KV</li><li>• Differential mode <math>\pm 2</math>KV</li></ul>
Electrostatic Standard	<ul style="list-style-type: none"><li>• Contact <math>\pm 6</math>KV</li><li>• Air <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>• OS3120P/250W Switch</li><li>• Power Cord</li><li>• RJ-45 Console Cable</li><li>• 19" rack mounting kit</li><li>• Quick Installation Guide</li></ul>
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## Ordering Information

OS3120P/250W	L2 Managed PoE Switch, 16x1000Base-T, 2x1000Base-X SFP, 2xCombo 1000Base-T/SFP, PoE up to 250m
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