

Switches



LANCOM GS-3510XP

10-port Multi Gigabit Ethernet access switch with Power over Ethernet for smaller offices

The LANCOM GS-3510XP is a reliable basis in smaller network infrastructures for integrating components with high performance requirements, such as Wi-Fi 6 access points. Equipped with 4x 2.5G and 4x 1G Ethernet ports as well as 2x 10G SFP+ uplink ports, it networks up to 10 devices optionally with Power over Ethernet (130-watt PoE budget) for installations without additional power supplies or power cabling. With a fanless and therefore silent design, it is predestined for use in small and home offices or at the edge of a network in larger installations. Basic layer-3 functions such as static routing and a DHCP server offer intelligent management with numerous security functions.

- › Fully managed access switch with 4x 2.5G, 4x 1G Ethernet downlink ports and 2x 10G SFP+ uplink ports
- › PoE support as per IEEE 802.3af/at for the efficient and centralized supply of power (130 watt) to all devices connected to it
- › Basic layer-3 features like static routing and a DHCP server
- › Security with configurable access control on all ports as per IEEE 802.1X
- › Ideal in combination with Wi-Fi 6 access points like the LX-6400 and LX-6402
- › Secure remote management through TACACS+, SSH, SSL, and SNMPv3
- › SD-LAN—for quick and easy configuration via the LANCOM Management Cloud
- › IPv6 and IPv4 support for modern enterprise networks
- › 5-year warranty on all components
- › Fanless design

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High performance on 10 ports

The LANCOM GS-3510XP is equipped with 4x 2.5G ports, 4x 1G Ethernet ports and 2x 10G SFP+ uplink ports. With a data throughput of 68 Gbps on the backplane, it offers full performance even under load. This switch is a high-performance basis for modern network infrastructures in small and home offices.

A high-performance basis for Wi-Fi 6

Thanks to 4 high-performance 2.5-Gigabit Ethernet ports, the LANCOM GS-3510XP is the ideal LAN-side basis for integrating the new Wi-Fi 6 standard into modern infrastructures. The increased data rates when using Wi-Fi 6 requires 2.5-Gigabit Ethernet, as the potential performance requirements exceed those of a 1-Gigabit Ethernet port. Given a sufficient PoE supply, this switch enables the operation of up to 4 Wi-Fi 6 access points or other network components with high performance requirements—without additional electrical installations.

Centralized power supply without additional electrical installations

The LANCOM GS-3510XP is a high-performance PoE switch that directly powers PoE devices connected to it; there is no need for additional power supply units or cabling. It supports the two Power-over-Ethernet standards, IEEE 802.3af and IEEE 802.3at (PoE+). It has high power-output reserves and an overall PoE budget of 130 watts for all 8 ethernet ports makes it an effective power supply for PoE devices, even with its fanless and thus silent design.

Configurable access control

The LANCOM GS-3510XP excludes rogue clients from gaining unauthorized access to the network. This is ensured by secured access control on all ports as per IEEE 802.1X (port-based, single-based, multi-based, and MAC-based).

Secure remote management

Secure communication protocols such as SSH, SSL and SNMPv3 make the LANCOM GS-3510XP ideal for professional remote network management. The switch also support the TACACS+ protocol for authentication, authorization, and accounting. This optimized solution promises maximum security for multi-site network management and monitoring.

Static routing for fast data exchange

The LANCOM GS-3510XP supports the basic layer-3 feature static routing and thus the shift of certain routing tasks from the router to the switch. Administrator-predefined network routes, through one or multiple network segments, enable fast data transfer especially in scenarios with high data volumes and relieve the router accordingly. Newly available router capacities can then additionally be used to manage external data traffic. As a result, the entire network efficiency is increased.

DHCP server functionality

As a DHCP server, the switch is able to independently and automatically assign IP addresses to clients. The LANCOM GS-3510XP supports this basic layer-3 function and thus takes over the IP management of the connected network.

SD-LAN—days become minutes

The LANCOM GS-3510XP offers fast and easy network integration and automatic configuration assignment with the LANCOM Management Cloud—without manual configuration. In this way, even complex networking scenarios are easy to administer. SD-LAN eliminates the need for a single device configuration for holistic network orchestration. In addition, automatic VLAN assignment to the desired switch ports is possible. The configurations can be coordinated with each other across locations and network architectures, and at the same time rolled out or updated at the click of a mouse.

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IPv6 and IPv4 support

Thanks to its dual-stack implementation, the LANCOM GS-3510XP operates in pure IPv4, pure IPv6 or in mixed networks. Applications such as SSL, SSH, Telnet or TFTP can continue to be operated on IPv6 networks. Supported IPv6 features includes stateless auto configuration, neighbor detection, and MLD snooping.

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| Security | |
|--|---|
| Secure Shell Protocol (SSH) | SSH for a secure remote configuration |
| Secure Sockets Layer (SSL) | SSL to encrypt HTTP connections; advanced security for browser-based configuration via web interface |
| IEEE 802.1X | IEEE 802.1X access control on all ports; RADIUS for authentication, authorization and accounting with MD5 hashing; guest VLAN; dynamic VLAN assignment |
| Private VLAN edge | Layer 2 isolation between clients in the same VLAN ("protected ports"); support multiple uplinks |
| Port security | Locking of MAC addresses to ports; limiting of the number of learned MAC addresses |
| IP source guard | Blocking access for illegal IP addresses on specific ports |
| Access control lists | Drop or rate limitation of connections based on source and destination MAC addresses, VLAN ID, IP address (IPv4/IPv6), protocol, port, DSCP/IP precedence, TCP/UDP source and destination ports, IEEE 802.1p priority, ICMP packets, IGMP packets, TCP flag |
| RADIUS/TACACS+ | Authentication, authorization and accounting of configuration changes by RADIUS or TACACS+ |
| Storm Control | Multicast/Broadcast/Unicast storm suppression |
| Isolated Group | Allows certain ports to be designated as protected. All other ports are non-isolated. Traffic between isolated group members is blocked. Traffic can only be sent from isolated group to non-isolated group. |
| Performance | |
| Switching technology | Store and forward with latency less than 4 microseconds |
| MAC addresses | Support of max 16K MAC addresses |
| Throughput | Max. 68 Gbps on the backplane |
| Maximum packet processing | 102 million packets per second (mpps) at 64-byte packets |
| VLAN | Port based and IEEE 802.1q tag based VLAN with up to 4,096 VLAN and up to 4,000 active VLANs; Supports ingress and egress packet filter in port based VLAN |
| Jumbo frame support | Jumbo frame support with up to 10240 bytes |
| Layer 3 features | |
| Static routing (IPv4/IPv6) | Hardware based static routing (IPv4/IPv6) |
| DHCP Server | DHCP Server per VLAN |
| Layer 2 switching | |
| Spanning Tree Protokoll (STP) / Rapid STP / Multiple STP | Standard Spanning Tree according to IEEE 802.1d with fast convergence support of IEEE 802.1w (RSTP); using Multiple Spanning Tree instances by default according to IEEE 802.1s (MSTP) |
| Link Aggregation Control Protocol (LACP) | Support of 26 groups containing up to 4 ports each according to IEEE 802.3ad |
| VLAN | Support for up to 4K VLANs simultaneously (out of 4096 VLAN Ids); matching due to port, IEEE 802.1q tagged VLANs, MAC addresses, IP subnet and Private VLAN Edge function ("protected ports") |
| Voice VLAN | Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS |
| IGMP multicasts | IGMP v1, v2, v3 to limit bandwidth-intensive multicast traffic to ports with requesters; supports 1024 multicast groups; source-specific multicasting |
| IGMP querier | Support of multicast domains of snooping switches in the absence of a multicast router |
| IGMP proxy | IGMP proxy to pass IGMP messages through |
| Generic VLAN registration | VLAN registration with GVRP according to IEEE 802.1q for automatic delivery of VLANs in bridged domains |
| DHCP Relay Agent | Relay of DHCP broadcast request to different LANs |
| Supported DHCP options | <ul style="list-style-type: none"> > DHCP option 66 > DHCP option 67 > DHCP option 82 |

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| Interfaces | |
|-------------------------------|--|
| Ethernet | <ul style="list-style-type: none"> > 4 TP ports 10/100/1000 Mbps > 4 TP ports 100/1000/2500 Mbps > 2 SFP+ ports 1/10 Gbps > 10 concurrent Ethernet ports in total |
| Console port | RJ45 configuration port for command line access |
| Management and monitoring | |
| Management | LANconfig, WEBconfig, LANCOM Management Cloud, Industry Standard CLI |
| Command Line Interface (CLI) | Configuration and status display from the command line with console application and direct connection to console port, via Telnet or SSH |
| Monitoring | LANmonitor, LANCOM Management Cloud |
| Remote Monitoring | Integrated RMON software agent supports 4 RMON groups (history, statistics, alarms and events) for enhanced traffic management, monitoring and analysis |
| Port Mirroring | Traffic can be mirrored from on port to another for investigation with network analyzer or RMON probe. Up to 9 ports can be mirrored to a single mirror port. Single sessions can be selected |
| Security | Access rights (read/write) can be set up separately, access control list |
| SNMP | SNMP management via SNMPv1, v2c or v3 with support of traps. User-based security model for SNMPv3 (USM) |
| Diagnosis | Diagnosis from the switch with PING and cable diagnosis |
| Firmware update | <ul style="list-style-type: none"> > Update via WEBconfig and browser (HTTP/HTTPS) > Update via TFTP and LANconfig > Dual firmware image to update during operation |
| Secure Copy | Securely import and export files |
| DHCP client | Automatic assignement of the management IP address by DHCP |
| SNTP | Automatic time settings with Simple Network Time Protocol (SNTP) |
| s-flow | Standard for monitoring of high-speed-networks. Visualization of network use, accounting an analysis to protect your network against dangers |
| Hardware | |
| Weight | 5,18 lbs (2,35 kg) |
| Power supply | Internal power supply unit (100 – 240 V, 50 – 60 Hz) |
| Environment | Temperature range 0 – 40° C; humidity 10 – 90%; non-condensing |
| Housing | Robust metal housing, 19" 1U (220 x 44 x 242 mm > W x H x D) with removable mounting brackets, network connectors on the front |
| Fans | None; fanless design without rotating parts, high MTBF |
| Power consumption (max) | 165W |
| Power consumption (idle) | 15W |
| PoE Budget | 130W |
| Heat power (max) | 120 BTU/h |
| Software | |
| Software Lifecycle Management | <p>Following the official announcement of a product's discontinuation by means of the LANCOM price list, during an existing LANCOM warranty you will receive:</p> <ul style="list-style-type: none"> > For 2 years: free updates to the operating system, including new features and other updates with general improvements > For 2 years: critical security fixes based on the last applicable firmware version > For 5 years: free technical manufacturer support |
| Anti-backdoor policy | Products from LANCOM are free of hidden access paths (backdoors) and other undesirable features for introducing, extracting or manipulating data. The trust seal "IT Security made in Germany" (ITSMIG) and certification by the German Federal Office for Information Security (BSI) confirm the trustworthiness and the outstanding level of security |

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Declarations of conformity*

| | |
|-------------------|---|
| CE | EN 60950-1, EN 55022, EN 55024 |
| FCC | FCC Part 15 (CFR47) Class A |
| Country of origin | Software designed in Germany, Assembled in Taiwan |
| *) Note | You will find all declarations of conformity in the products section of our website at www.lancom-systems.com |

Supported IEEE standards

| | |
|--------------|--|
| IEEE 802.1AB | Link Layer Discovery Protocol (LLDP) |
| IEEE 802.1AB | LLDP-MED |
| IEEE 802.1ad | Q-in-Q tagging |
| IEEE 802.1d | MAC Bridging |
| IEEE 802.1d | Spanning Tree |
| IEEE 802.1p | Class of Service |
| IEEE 802.1q | VLAN |
| IEEE 802.1s | Multiple Spanning Tree Protocol (MSTP) |
| IEEE 802.1w | Rapid Spanning Tree Protocol (RSTP) |
| IEEE 802.1X | Port Based Network Access Control |
| IEEE 802.3 | 10Base-T Ethernet |
| IEEE 802.3ab | 1000Base-TX Ethernet |
| IEEE 802.3ad | Link Aggregation Control Protocol (LACP) |
| IEEE 802.3ae | 10 Gigabit Ethernet over fiber |
| IEEE 802.3af | Power over Ethernet (PoE) |
| IEEE 802.3at | Power over Ethernet Plus (PoE+) |
| IEEE 802.3az | Energy Efficient Ethernet |
| IEEE 802.3u | 100Base-T Ethernet |
| IEEE 802.3x | Flow Control |
| IEEE 802.3z | 1000Base-X Ethernet |

Supported RFC standards

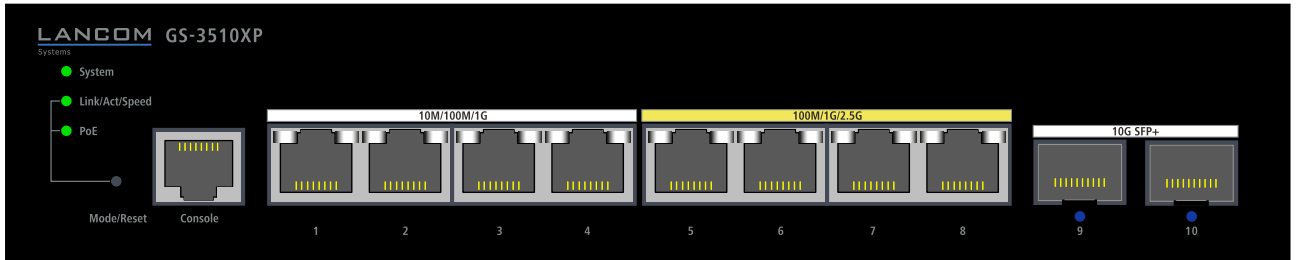
| | |
|----------|--|
| RFC 854 | Telnet Protocol Specification |
| RFC 1213 | MIB II |
| RFC 1215 | SNMP Generic Traps |
| RFC 1493 | Bridge MIB |
| RFC 1769 | Simple Network Time Protocol (SNTP) |
| RFC 2021 | Remote Network Monitoring MIB v2 (RMONv2) |
| RFC 2233 | Interface MIB |
| RFC 2460 | Internet Protocol Version 6 (IPv6) |
| RFC 2613 | SMON MIB |
| RFC 2617 | HTTP Authentication |
| RFC 2665 | Ethernet-Like MIB |
| RFC 2674 | IEEE 802.1p and IEEE 802.1q Bridge MIB |
| RFC 2818 | Hypertext Transfer Protocol Secure (HTTPS) |
| RFC 2819 | Remote Network Monitoring MIB (RMON) |

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| Supported RFC standards | |
|--|--|
| RFC 2863 | Interface Group MIB using SMIv2 |
| RFC 2933 | IGMP MIB |
| RFC 3019 | MLDv1 MIB |
| RFC 3414 | User based Security Model for SNMPv3 |
| RFC 3415 | View based Access Control Model for SNMP |
| RFC 3587 | IPv6 Global Unicast Address Format |
| RFC 3621 | Power Ethernet MIB |
| RFC 3635 | Ethernet-Like MIB |
| RFC 3636 | IEEE 802.3 MAU MIB |
| RFC 4133 | Entity MIBv3 |
| RFC 4188 | Bridge MIB |
| RFC 4251 | The Secure Shell Protocol Architecture (SSH) |
| RFC 4291 | IP Version 6 Addressing Architecture |
| RFC 4443 | Internet Control Message Protocol (ICMPv6) |
| RFC 4668 | RADIUS Authentication Client MIB |
| RFC 4670 | RADIUS Accounting MIB |
| RFC 5519 | Multicast Group Membership Discovery MIB |
| Scope of delivery | |
| Manual | Hardware Quick Reference (DE/EN), Installation Guide (DE/EN) |
| Cable | Serial configuration cable, 1.5m |
| Cable | IEC power cord |
| 19" brackets | Two 19" brackets for rackmounting |
| Support | |
| Warranty | 5 years, support via hotline and Internet KnowledgeBase |
| LANCOM Warranty Advanced Option S | Option for replacement of a defective device, item no. 10715 |
| LANCOM Management Cloud | |
| LANCOM LMC-A-1Y LMC License | LANCOM LMC-A-1Y License (1 Year), enables the management of one category A device for one year via the LANCOM Management Cloud, item no. 50100 |
| LANCOM LMC-A-3Y LMC License | LANCOM LMC-A-3Y License (3 Years), enables the management of one category A device for three years via the LANCOM Management Cloud, item no. 50101 |
| LANCOM LMC-A-5Y LMC License | LANCOM LMC-A-5Y License (5 Years), enables the management of one category A device for five years via the LANCOM Management Cloud, item no. 50102 |
| Accessories | |
| 1000Base-SX SFP module | LANCOM SFP-SX-LC1, item no. 61556 |
| 1000Base-LX SFP module | LANCOM SFP-LX-LC1, item no. 61557 |
| 10GBase-SX SFP module | LANCOM SFP-SX-LC10, item no. 61485 |
| 10GBase-LX SFP module | LANCOM SFP-LX-LC10, item no. 61497 |
| 10G multi gigabit Ethernet copper module | LANCOM SFP-CO10-MG, Art.-Nr.: 60170 |
| 10G Direct Attach Cable 1m | LANCOM SFP-DAC10-1m, Art.-Nr.: 61495 |
| 10G Direct Attach Cable 3m | LANCOM SFP-DAC10-3m, Art.-Nr.: 60175 |
| LANCOM Power Cord (UK) | IEC power cord, UK plug, item no. 61650 |
| LANCOM Power Cord (CH) | IEC power cord, CH plug, item no. 61652 |

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| Accessories | |
|------------------------|---|
| LANCOM Power Cord (US) | IEC power cord, US plug, item no. 61651 |
| LANCOM Power Cord (AU) | IEC power cord, AU plug, item no. 61653 |
| Item number(s) | |
| LANCOM GS-3510XP | 61849 |



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