lancom-systems.com

LANCOM GS-2412P

12-port managed Gigabit Ethernet switch with Power over Ethernet for reliable office networks

Whether in quiet business premises, professional small offices, or growing branch networks, the LANCOM GS-2412P provides a powerful and silent solution for efficient network management. This fanless Gigabit access switch connects up to twelve end devices via ten Gigabit Ethernet ports and two additional SFP ports. With Power over Ethernet (PoE+) and a total output of 130 watts, up to eight PoE-powered devices can be reliably supplied with power via IEEE 802.3af/at, eliminating the need for additional power supply units or cabling. For Layer 2+ switch management, users can choose between a web-based GUI, a CLI, or the LANCOM Management Cloud (LMC) for centralized, automated device rollouts and configurations.

- → Gigabit access switch with 10x 1 Gigabit Ethernet ports (8x with PoE+) and 2x SFP ports
- → Fanless design – ideal for noise-sensitive work environments
- → PoE support as per IEEE 802.3af/at with up to 130 watts PoE budget for efficient power supply to connected devices
- → IEEE 802.3az power saving feature – port deactivation when not transferring data
- → Security with configurable access control on all ports as per IEEE 802.1X and access control lists
- → Secure remote management through TACACS+, SSH, SSL, and SNMPv3
- → Cloud-managed LAN for fast configuration and convenient management via the LANCOM Management Cloud
- → IPv6 and IPv4 support for modern enterprise networks
- → Includes: 2x 19” mounting brackets, a serial configuration cable, and an IEC power cable
- → 5-year replacement service for all components

LANCOM GS-2412P

High power output on 12 ports

The LANCOM GS-2412P is equipped with 10x 1 Gigabit Ethernet ports (thereof 8x with PoE+) and 2 SFP ports. With a data throughput of 24 Gbps on the backplane, the switch offers full performance even under load. The switch therefore forms the high-performance basis for modern network infrastructures in small and home offices.

Cloud-managed LAN with port templates and Secure Terminal Access

With the LANCOM Management Cloud (LMC) and cloud-managed LAN, the LANCOM GS-2412P can be quickly and easily integrated into the network and configured automatically and across locations at the click of a mouse. Time-consuming individual device and switch port configurations are now a thing of the past. The targeted switch rollout via the LMC enables automatic VLAN assignment to switch ports including practical switch port profiles and thus a “zero-touch” assignment to the devices. Secure Terminal Access allows direct access to the command line of the LANCOM switch (“CLI tunneling”) from the LMC - encrypted and, above all, without leaving the cloud interface. Secure Terminal Access provides expert functions as well as extensive diagnostic and troubleshooting commands for the devices. Some highlights include: “trace” and ‘ping’ commands for quick troubleshooting, access to low-level configuration parameters and detailed statistics of the LCOS SX operating system as well as secure remote access to third-party devices in the local network via the integrated SSH client.

Central power supply without additional cabling

As a powerful PoE switch, the LANCOM GS-2412P supplies connected PoE end devices with power via eight PoE+ ports. It supports the Power over Ethernet standards IEEE 802.3af and IEEE 802.3at (PoE+). Thanks to high power reserves and a total output of 130 watts, it is ideal for the efficient power supply of PoE end devices.

Fanless design for silent and reliable operation

In noise-sensitive environments, this Gigabit access switch expands the network without compromising reliability. Its fanless design with no moving parts ensures silent operation, making it ideal for offices, conference rooms, and other noise-sensitive workspaces. The passive cooling system enhances energy efficiency and eliminates potential points of mechanical failure. This not only extends the device’s service life but also maintains a high mean time between failures (MTBF), even under heavy network loads, ensuring consistent network availability. With its combination of silent operation and high reliability, this switch is a future-proof investment for professional IT infrastructures.

Efficient energy saving and layer 2 switching for stable network infrastructures

Thanks to energy-saving functions in accordance with IEEE 802.3az (Energy Efficient Ethernet), the switch automatically disables unused ports and reactivates them instantly – without delay or packet loss – as soon as they are needed again. This effectively conserves valuable energy resources. However, efficient networks require more than just energy savings. Powerful Layer 2 switching with MAC-based data forwarding ensures a stable network infrastructure. Spanning Tree Protocols (STP, RSTP, MSTP) enable a redundant yet loop-free network topology, while Link Aggregation (LACP, IEEE 802.1ax) allows bundling of up to 16 ports per group for improved load balancing. For flexible

LANCOM GS-2412P

network segmentation, the Gigabit access switch supports up to 4,096 VLANs, while Voice VLAN prioritizes voice data to ensure optimized Quality of Service (QoS). Additionally, DHCP relay (options 66, 67, 82) simplifies IP address assignment across different network segments.

Configurable access control & secure remote management

The LANCOM GS-2412P stops 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, multi, and MAC-based) or by ACLs (access control lists). Thanks to secure communication protocols such as SSH, SSL, and SNMPv3, professional remote management of the network is possible. The switch also supports the TACACS+ protocol for authentication, authorization, and accounting. This optimized solution promises maximum security for multi-site network management and monitoring.

IPv6 and IPv4 support

Thanks to its dual-stack implementation, the LANCOM GS-2412P can be used in pure IPv4, pure IPv6, or mixed networks. Numerous applications such as SSL, SSH, Telnet, or TFTP can thus also be run over IPv6 networks. IPv6 features such as stateless autoconfiguration, neighbor device discovery, and MLD snooping round out the IPv6 features.

LANCOM GS-2412P

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 e.g. 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 8K MAC addresses
Throughput	Max. 24 Gbps on the backplane
Maximum packet processing	14,88 million packets per second (mpps) at 64-byte packets
VLAN	Port based and IEEE 802.1q tag based VLAN with up to 4,093 VLAN; Supports ingress and egress packet filter in port based VLAN
Jumbo frame support	Jumbo frame support with up to 9k frames

PoE with IEEE 802.3at	
Ports	8x IEEE 802.3at PoE ports (compatible to IEEE 802.3af powered devices), limited by the maximum PoE power supplied
Power	130 W total power with dynamic load balancing on all ports

LANCOM GS-2412P

Energy efficiency (Green Ethernet)	
Energy detection	Energy efficiency according to IEEE 802.3az. Automatically turns off power on Gigabit Ethernet RJ-45 port when detecting link down or Idle of client. Active mode is resumed without loss of any packets when the switch detects the link up
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for short cable
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 13 groups containing up to 16 ports each according to IEEE 802.1ax
VLAN	Support for up to 4K VLANs simultaneously (out of 4096 VLAN Ids); matching due to port, IEEE 802.1q tagged VLANs or MAC adresses
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 256 multicast groups; source-specific multicasting
IGMP querier	Support of multicast domains of snooping switches in the absence of a multicast router
IGMP Snooping	IGMP Snooping to identify multicast groups and prevent unnecessary traffic
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	→ DHCP option 66 → DHCP option 67 → DHCP option 82
Interfaces	
Ethernet	→ 10 TP ports 10/100/1000 Mbps → 2 SFP ports 100/1000 Mbps → 12 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

LANCOM GS-2412P

Management and monitoring	
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
Easy-Configuration-Ports	Easy setup of ports for QoS and Security based on pre-defined configuration profiles
Port Mirroring	Traffic can be mirrored from on port to another for investigation with network analyzer or RMON probe. Up to 25 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	→ 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 analysation 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 (220 x 45 x 242 mm > W x H x D) with mounting brackets for 19-inch mounting, network connectors on the front
Fans	None; fanless design without rotating parts, high MTBF
Power consumption (max)	160 W

Software	
LCOS version	based on LCOS SX 4.30

LANCOM GS-2412P

Software	
Lifecycle Management	After discontinuation (End of Sale), the device is subject to the LANCOM Lifecycle Management. Details can be found at: www.lancom-systems.com/lifecycle
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

Declarations of conformity*	
Europe/EFTA	CE
North America	FCC/IC
*) Note	The full text of the specific Declaration of Conformity is available at the following Internet address: www.lancom-systems.com/doc

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 Protocoll (RSTP)
IEEE 802.1X	Port Based Network Access Control
IEEE 802.3	10Base-T Ethernet
IEEE 802.3ab	1000Base-TX Ethernet
IEEE 802.1ax, incl. 802.3ad	Link Aggregation Control Protocol (LACP)
IEEE 802.3az	Energy Efficient Ethernet
IEEE 802.3u	100Base-T Ethernet
IEEE 802.3x	Flow Control

LANCOM GS-2412P

Supported IEEE standards	
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 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)
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 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)

LANCOM GS-2412P

Supported RFC standards	
RFC 4668	RADIUS Authentication Client MIB
RFC 4670	RADIUS Accounting MIB
RFC 5519	Multicast Group Membership Discovery MIB

Scope of delivery	
Manual	Printed Installation Guide (DE/EN)
Cable	Serial configuration cable, 1.5m
Cable	IEC power cord
19" brackets	Two 19" brackets for rackmounting

Support	
Warranty extension	Free warranty extension up to 5 years (replacement service for defects), for details, please refer to the service and support conditions at: www.lancom-systems.com/support-conditions or at www.lancom-systems.com/rma
Security updates	Up to 2 years after End of Sale of the device (but min. 5 years, see www.lancom-systems.com/product-tables), can be extended by purchasing LANcare products
Software Updates	Regular free updates including new features as part of the LANCOM Lifecycle Management www.lancom-systems.com/lifecycle)
Manufacturer support	For LANcommunity partners up to the End of Life of the device. For end customers with LANcare Direct or LANcare Premium Support during the LANcare validity
LANcare Advanced S	Security updates until EOL (min. 5 years) and 5 years NBD advance replacement with delivery of the replacement device within one business day (8/5/NBD), item no. 10730
LANcare Direct Advanced 24/7 S	Direct, prioritized 10/5 manufacturer support incl. 24/7 emergency hotline and security updates for the device, NBD advance replacement with delivery of the device on the next business day (24/7/NBD), guaranteed first response times (SLA) of max. 30 minutes for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10776, 10777 or 10778)
LANcare Direct 24/7 S	Direct, prioritized 10/5 manufacturer support incl. 24/7 emergency hotline and security updates for the device, guaranteed first response times (SLA) of max. 30 minutes for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years(item no. 10752, 10753 or 10754)
LANcare Direct Advanced 10/5 S	Direct, prioritized 10/5 manufacturer support and security updates for the device, NBD advance replacement with delivery of the device on the next business day (10/5/NBD), guaranteed first response times (SLA) of max. 2 hours for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10764, 10765 or 10766)
LANcare Direct 10/5 S	Direct, prioritized 10/5 manufacturer support and security updates for the device, guaranteed first response times (SLA) of max. 2 hours for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10740, 10741 or 10742)

lancom-systems.com

LANCOM GS-2412P

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 transceiver module	LANCOM SFP-SX-LC1, item no. 61556
1000Base-SX SFP transceiver module	LANCOM SFP-SX2-LC1, item no. 60183
1000Base-LX SFP transceiver module	LANCOM SFP-LX-LC1, item no. 61557
1000Base-LX SFP BiDi transceiver module	LANCOM SFP-BiDi1550-SC1, item no. 60201
LANCOM Power Cord (UK)	IEC power cord, UK plug, item no. 61650
LANCOM Power Cord (CH)	IEC power cord, CH plug, item no. 61652
LANCOM Power Cord (US)	IEC power cord, US plug, item no. 61651
LANCOM Power Cord (AU)	IEC power cord, AU plug, item no. 61653
*) Note	Support for third-party accessories (SFP and DAC) is excluded and cannot be granted

Item number(s)	
LANCOM GS-2412P	61668

LANCOM Systems GmbH
A Rohde & Schwarz Company
Adenauerstr. 20/B2
52146 Wuerselen | Germany
info@lancom.de | www.lancom-systems.com