

LANCOM GS-2412

12-port managed Gigabit Ethernet switch for demanding office networks



Intelligent networking is essential in smaller business premises, professional home offices, or for flexible sub-distribution in branch office infrastructures. The Gigabit access switch LANCOM GS-2412 connects up to twelve devices via ten Gigabit Ethernet ports and two SFP ports, making it a powerful solution when Layer 2+ switch management is required but no PoE power supply is needed. Thanks to its fanless design, the switch operates silently and ensures greater reliability, as there are no moving parts to wear out or fail. Depending on requirements, the LANCOM GS-2412 can be managed via a web-based GUI and CLI or centrally controlled via the LANCOM Management Cloud (LMC) for automated network management.

- Gigabit access switch with 10x 1 Gigabit Ethernet ports and 2x SFP ports
- Fanless design – ideal for noise-sensitive work environments
- 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



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High power on 12 ports

The LANCOM GS-2412 is equipped with 10x 1 Gigabit Ethernet ports 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-2412 offers quick and easy network integration as well as automatic provision of the configuration across locations with the a click of a mouse. Time-consuming individual device and switch port configurations are now a matter of the past. The targeted switch rollout via the LMC enables automatic VLAN assignment to switch ports including practical switch port profiles and therefore “zero-touch” assignment to the devices. Secure Terminal Access provides access to the command line of the LANCOM switch (“CLI tunneling”) directly from the LANCOM Management Cloud – encrypted and 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.

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 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.



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Configurable access control & secure remote management

The LANCOM GS-2412 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-2412 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.



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Security

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| 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

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| 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 |

Energy efficiency (Green Ethernet)

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| 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 |



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Layer 2 switching

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| 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 addresses |
| 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

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| 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

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| 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 |
| Easy-Configuration-Ports | Easy setup of ports for QoS and Security based on pre-defined configuration profiles |



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Management and monitoring

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| 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 assignment 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

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| Weight | 2,34 lbs (1,06 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 135 mm > W x H x D) incl. mounting brackets for 19-inch mounting, network connectors on the front |
| Fans | None; fanless design without rotating parts, high MTBF |
| Power consumption (max) | 14 W |

Software

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| LCOS version | based on LCOS SX 4.30 |
| 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 |



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Declarations of conformity*

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| 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

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|-----------------------------|--|
| 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 802.1ax, 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 |
| IEEE 802.3z | 1000Base-X Ethernet |

Supported RFC standards

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| RFC 854 | Telnet Protocol Specification |
| RFC 1213 | MIB II |
| RFC 1215 | SNMP Generic Traps |



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Supported RFC standards

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|----------|--|
| 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) |
| RFC 4668 | RADIUS Authentication Client MIB |
| RFC 4670 | RADIUS Accounting MIB |
| RFC 5519 | Multicast Group Membership Discovery MIB |

Scope of delivery

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| Manual | Printed Installation Guide (DE/EN) |
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Scope of delivery

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| Cable | Serial configuration cable, 1.5m |
| Cable | IEC power cord |
| 19" brackets | Two 19" brackets for rackmounting |

Support

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| 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 Management Cloud

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| 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 |

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LANCOM Management Cloud

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| 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 |
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Accessories*

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| 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-2412 | 61667 |
|----------------|-------|



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