. . . connecting your business

LANCOM GS-2326

Managed 26-port Gigabit Ethernet switch for reliable networks

- IPv6 & IPv4 support for a smooth transition to a modern corporate network
- High performance for a reliable network infrastructure of medium-sized enterprises and branch offices
- Comfortable integration into LANCOM monitoring tools like LSM and LANmonitor
- Security due to configurable access control on all ports based on 802.1x
- Secure remote management due to TACACS+, SSH, SSL, and SNMPv3
- Energy saving functions based on 802.3az - port deactivation if no data is transferred
- 5-year warranty on all components

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Systems

This 26-port switch gets professional networks ready for the future: Along with the wide range of power management functions for energy efficiency, the LANCOM GS-2326 supports both current Internet protocols IPv4 and IPv6. The switch is also well equipped with regard to management and security: Support of the LANCOM Large Scale Monitor (LSM) and LANmonitor enable a convenient and secure remote maintenance. In addition, network access can be controlled with current technologies (802.1x, VLAN, etc.) and time-critical data can be prioritized reliably.

More performance.

The LANCOM GS-2326 offers a data throughput of 52 Gbps for full performance on the backplane. It provides optimal support of network virtualization with up to 4000 active entries for tag-based VLAN assignment: This, for instance, separates data transmissions between different LANCOM access-point SSIDs and a LANCOM router. Load balancing can be used to group up to 16 ports at a time into one of 13 trunk groups (standard compliant to IEEE 802.3ad with LACP), for example to cascade switches when the terminals are experiencing heavy traffic, or for providing optimal connectivity to network storage systems.

More security.

The LANCOM GS-2326 gives you the assurance that rogue clients cannot access your network via this switch. This is in part due to the configuration of allowed MAC addresses for each port, and also due to the secure login of clients based on IEEE 802.1x. The number of clients per port can be limited, and restrictions can be placed on the incoming and outgoing data traffic, all of which helps to ensure secure operation. The unicast/multicast/broadcast storm control functions limit the impact of attacks or malfunctions resulting from misconfigurations in the network. Rapid spanning tree enables a device to send data over an alternative route without delay if there are malfunctions in the network. Vital to IP telephony: Due to bandwidth control calls are transmitted reliably and without interruptions.

More management.

The LANCOM GS-2326 stands for ease of operation with highest security. The LANCOM Large Scale Monitor (LSM) and LANmonitor offer convenient monitoring, and even larger networks are displayed in a clearly structured manner. Ideal for professional corporate networks with centralized control over network access, the LANCOM GS-2326 supports the TACACS+ communication protocol for authentication, authorization, and accounting. The switch also features a RADIUS client to integrate seamlessly into networks with RADIUS servers. For full control over all network components, LANCOM switches are easy and conveniently monitored by the LANCOM Management System. Thanks to the SNMP protocol version 3, monitoring of the LANCOM GS-2326 can be encrypted.

Future-proof due to IPv6

With the LANCOM GS-2326, the current infrastructure of corporate networks can be progressively upgraded to the next-generation Internet protocol IPv6. Thanks to the dual-stack implementation, the switch operates in pure IPv4, pure IPv6, or in mixed networks. This means that numerous applications such as SSL, SSH, Telnet, or TFTP can also be run on IPv6 networks. Supported IPv6 functions include stateless auto-configuration, the discovery of neighboring devices, and MLD snooping.

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Quality of Service	
Priority queues	Supports eight hardware priority queues to prioritize inbound and outbound traffic
Scheduling	Strict priority and weighted round-robin (WRR); queue assignment based on DSCP and class of service (802.1p/CoS)
Classification	Port based, 802.1p VLAN priority; IPv4/IPv6 Precedence; Priority queuing of packets based on DSCP/ToS/DiffServ; classification and re-marking with ACLs, trusted QoS
Rate limiting	Ingress policer; egress shaping and rate control; control per VLAN, per port and flow based
Security	
Secure Shell Protocol (SSH)	SSH to secure incoming/outgoing Telnet connections; support of SSHv1 and v2
Secure Sockets Layer (SSL)	SSL to encrypt HTTP connections; advanced security for browser-based configuration via web interface
802.1X	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, protocol, port, DSCP/IP precedence, TCP/UDP source and destination ports, 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 ist blocked. Traffic can only be sent from isolated group to non-isolalted group.
Performance	
Switching technology	Store and forward with latency less than 4 microseconds
MAC addresses	Support of max 8K MAC addresses
Throughput	Max. 52 Gbps on the backplane
Maximum packet processing	38.69 million packets per second (mpps) at 64-byte packets
Virtual Stacking Management (VSM)	Supports stacking of up to 16 devices, several switches can be managed via one ip address (in preparation)
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 9k frames
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	
Link Aggregation Control Protocol (LACP)	Support of of 13groups containing up to 16 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 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 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
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)
DHCP Relay Agent	DHCP relay agent, supporting DHCP option 82
LLDP	Automatic discovery of network topology in layer 2 networks (Link Layer Discover Protocol) according to IEEE 802.1AB with LLDP-MED extensions

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IPv6	
IPv4/IPv6 dual stack	IPv4 and IPv6 in parallel to support migration
IPv6 mechanisms	■ IPv6 host mode ■ Dual IPv6/ IPv4 stack ■ IPv6 neighbor and router discovery (ND) ■ IPv6 stateless address auto-configuration ■ Path maximum transmission unit (MTU) discovery ■ Duplicate address detection (DAD) ■ ICMP version6
IPv6 QoS	Prioritization of IPv6 packets in hardware
IPv6 ACL	Drop or rate limiting of IPv6 packets due to ACLs in hardware
Multicast Listener Discovery	MLD snooping to limit multicast packets to ports with receivers
IPv6 services	Web interface/SSL, Telnet/ SSH, ping, Simple Network Time Protocol (SNTP), Trivial File Transfer Protocol (TFTP), SNMP, RADIUS, Syslog, DNS Client, protocol-based VLANs
Interfaces	
Ethernet	■ 24 TP ports 10/100/1000 mbps ■ 2 SFP slots for supported modules ('mini-GBIC') with 100/1000 mbps ■ 26 concurrent Ethernet ports in total
Console port	RJ45 configuration port for command line access
Management	
WEBconfig	Integrated web server with setup wizard for the configuration via Internet browsers with HTTP or HTTPS. Web interface with system dashboard, configuration menu, maintenance and monitoring functions
LANconfig	Supported by LANconfig (LANCOM management software): automatic detection, display of device properties, opening of web configuration
Large Scale Monitor (LSM)	The LANCOM Large Scale Monitor (LSM) is a professional tool for monitoring medium-sized to large-scale networks with 25 to 1,000 network components. Designed especially for LANCOM components including WLAN access points, controllers, switches, and routers, this system based on open-source components additionally allows for the monitoring of third-party products such as servers and printers. Problems in the network are clearly displayed in tables or graphical floor plans, and they trigger alert messages via e-mail if certain threshold values are not maintained.
LANmonitor	Monitoring application for Microsoft Windows for (remote) surveillance and logging of the device and port status
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 8 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
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
Remote Monitoring	Integrated RMON software agent supports 4 RMON groups (history, statistics, alarms and events) for enhanced traffic management, monitoring and analysis
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)

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Management	
s-flow	Standard for monitoring of high-speed-networks. Visualization of network use, accounting an analysation to protect your network against dangers
Hardware	
Power supply	Internal power supply unit (110–230 V, 50-60 Hz)
Environment	Temperature range 0–40° C; humidity 10–90%; non-condensing
Housing	Robust metal housing, 19' 1U (440 x 44 x 209 mm) with removable mounting brackets, network connectors on the front
Fans	None; fanless design without rotating parts, high MTBF
Power consumption (max)	23 Watts
Declarations of conformity*	
CE	EN 60950-1, EN 55022, EN 55024
FCC	FCC Part 15 (CFR47) Class A
*) Note	You will find all declarations of conformity in the products section of our website at www.lancom-systems.eu
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 802.3ad	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	
RFC 854	Telnet Protocol Specification
RFC 1213	MIB II
RFC 1215	SNMP Generic Traps
RFC 1493	Bridge MIB
RFC 1769	Simple Network Time Protocol (SNMP)
RFC2021	Remot Network Monitoring MIB v2 (RMONv2)
RFC 2233	Interface MIB
RFC 2613	SMON MIB
RFC 2617	HTTP Authentication
RFC 2665	Ethernet-Like MIB
RFC 2674	802.1p and IEEE 802.1q Bridge MIB
RFC 2818	Hypertext Transfer Protocol Secure (HTTPS)

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Supported RFC standards	
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	802.3 MAU MIB
RFC 4133	Entitiy 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	
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	5 years, support via Hotline and Internet KnowledgeBase
Advance Replacement	LANCOM Next Business Day Service Extension CPE, item no. 61411
Accessories	
1000Base-SX SFP module	LANCOM SFP-SX-LC1, item no. 61556
1000Base-LX SFP module	LANCOM SFP-LX-LC1, item no. 61557
Item number(s)	
LANCOM GS-2326 (EU)	61470 (EU)
LANCOM GS-2326 (UK)	61471 (UK)
LANCOM GS-2326 (US)	61479 (US)