

## Switches



## LANCOM GS-3126XP

Layer 3 lite access switch with PoE for cost-efficient networking scenarios

When the highest cost efficiency and top performance are required in large scenarios with many network components, the LANCOM GS-3126XP is the ideal choice: Power over Ethernet support on all 24 Gigabit Ethernet ports and basic layer-3 functions such as static routing and DHCP provide intelligent management and numerous security features. Orchestrated via the LANCOM Management Cloud and SD-LAN, configuration is dynamic, automated, and efficient.

- Fully managed access switch with 24x 1G Gigabit Ethernet downlink ports und 2x 10G SFP+ uplink ports
- Basic layer 3 features like static routing and DHCP server
- IEEE 802.3af/at PoE support with 185 watts for efficient power supply of connected devices
- Energy-saving functions as per IEEE 802.3az with port deactivation if no data is transferred
- Security with configurable access control on all ports as per IEEE 802.1X
- Secure remote management through TACACS+, SSH, SSL, and SNMPv3
- SD-LAN – automatic switch configuration via the LANCOM Management Cloud
- IPv6 and IPv4 support for modern enterprise networks
- 5-year warranty on all components

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## High power output on 26 ports

The LANCOM GS-3126XP is equipped with 24 Gigabit Ethernet ports and 2 SFP+ uplink ports supporting transfer rates of up to 10 Gbps. In addition, with a data throughput of 88 Gbps on the backplane, it offers full performance even at high workload. This makes the access switch the powerful foundation for modern network infrastructures in all industries and applications.

## Static routing for fast data exchange

The LANCOM GS-3126XP 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-3126XP supports this basic layer-3 function and thus takes over the IP management of the connected network.

## Centralized power supply without additional electrical installations

The LANCOM GS-3126XP is a high-performance PoE switch that directly powers PoE devices connected to it: there is no need of additional power supply units or cabling. It supports the Power over Ethernet standards IEEE 802.3af and IEEE 802.3at (PoE+). Thanks to high power reserves with a total output of 185 watts, it is therefore ideal for efficient power supply of PoE terminals with high energy requirements.

## Software-defined LAN

The LANCOM Management Cloud opens the way to the most advanced switch management: Software-defined LAN (SD-LAN). SD-LAN orchestrates the port profiles for each switch and automatically assigns the necessary network configuration, e.g. the required VLANs. At the click of a mouse, switch configurations that are fully customized to each site's network architecture are simultaneously rolled-out or updated.

## Efficient power-saving features

Featuring Energy Efficient Ethernet technology, the LANCOM GS-3126XP provides optimum energy efficiency even at fast data rates. Thanks to numerous power-saving features based on the IEEE 802.3az standard, ports that are not transferring data are switched off automatically. This valuable feature saves precious resources.

## IPv6 and IPv4 support

Thanks to the dual-stack implementation, the LANCOM GS-3126XP operates in pure IPv4, pure IPv6, or in mixed networks. Applications such as SSL, SSH, Telnet, and TFTP can continue to be operated on IPv6 networks. Supported IPv6 features include stateless auto-configuration, the discovery of neighboring devices, and MLD snooping.

## Configurable access control

The LANCOM GS-3126XP 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, multi, and MAC-based).

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## Secure remote management

Secure communication protocols such as SSH, SSL and SNMPv3 mean that the LANCOM GS-3126XP is ideal for professional remote network management. 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.

## SD-LAN - days become minutes

The LANCOM GS-3126XP 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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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 32K MAC addresses
Throughput	Max. 88 Gbps on the backplane
Maximum packet processing	130 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"> <li>&gt; DHCP option 66</li> <li>&gt; DHCP option 67</li> <li>&gt; DHCP option 82</li> </ul>
Interfaces	
Ethernet	<ul style="list-style-type: none"> <li>&gt; 24 TP ports 10/100/1000 Mbps</li> <li>&gt; 2 SFP+ ports 1/10 Gbps</li> <li>&gt; 26 concurrent Ethernet ports in total</li> </ul>

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Interfaces	
Console port	RJ45 configuration port for command line access
Management and monitoring	
Management	LANconfig, WEBconfig, LANCOM Management Cloud
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 27 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"> <li>&gt; Update via WEBconfig and browser (HTTP/HTTPS)</li> <li>&gt; Update via TFTP and LANconfig</li> <li>&gt; Dual firmware image to update during operation</li> </ul>
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	
Weight	6,60 lbs (2,7 kg)
Power supply	Internal power supply unit (100 – 240 V, 50 – 60 Hz)
Environment	Temperature range 0 – 40° C; short term temperature conditions 0 – 50°C; humidity 10 – 90%; non-condensing
Housing	Robust metal housing, 19" 1U (442 x 44 x 211 mm > W x H x D) with removable mounting brackets, network connectors on the front
Fans	1
Power consumption (max)	230 W
Power consumption (idle)	31 W
Heat power (max)	320 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"> <li>&gt; For 2 years: free updates to the operating system, including new features and other updates with general improvements</li> <li>&gt; For 2 years: critical security fixes based on the last applicable firmware version</li> <li>&gt; For 5 years: free technical manufacturer support</li> </ul>
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*	
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 <a href="http://www.lancom-systems.com">www.lancom-systems.com</a>

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## 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 802.3az	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)
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

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Supported RFC standards	
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 M	Option for replacement of a defective device within one working day, item no. 10716
LANCOM Management Cloud	
LANCOM LMC-B-1Y LMC License	LANCOM LMC-B-1Y License (1 Year), enables the management of one category B device for one year via the LANCOM Management Cloud, item no. 50103
LANCOM LMC-B-3Y LMC License	LANCOM LMC-B-3Y License (3 Years), enables the management of one category B device for three years via the LANCOM Management Cloud, item no. 50104
LANCOM LMC-B-5Y LMC License	LANCOM LMC-B-5Y License (5 Years), enables the management of one category B device for five years via the LANCOM Management Cloud, item no. 50105
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
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
Item number(s)	
LANCOM GS-3126XP	61848

