

LCOS 10.80

# LANCOM ISG-5000

Centralized performance for medium-sized SD-WAN scenarios



Large-scale multi-service IP networks have to offer the ultimate in performance and reliability at the central site. The LANCOM ISG-5000 is the secure and future-proof heart of your VPN networking strategy, thanks to its powerful platform with state-of-the-art encryption technologies, high scalability VPN, and redundancy features. Use SD-WAN to effortlessly connect your sites, branches, and remote workers. You can also upgrade this integrated services gateway with additional features such as a hotspot, clustering, or up to 1,000 VPN channels.

- SD-WAN central site gateway
- 100 concurrent IPSec VPN connections (1,000 optional)
- Support for up to 4096 VLANs / 256 ARF contexts
- SD-WAN support with High Scalability VPN (HSVPN)
- 2x 10G SFP+ ports, 6x GE-ETH ports, RJ45 config port
- Powerful SD-WAN for medium-sized, site-distributed network infrastructures in conjunction with the LANCOM Management Cloud
- Optionally upgradeable with hotspot, content filtering or clustering features
- Maximum future compatibility, reliability, and security "Engineered in Germany"



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## **Secure site connectivity for medium-sized SD-WAN enterprise scenarios**

The LANCOM ISG-5000 is the central instance for your high-performance SD-WAN in large enterprise infrastructures. 100 integrated VPN channels based on state-of-the-art encryption technologies and demand-oriented ports (6x Gigabit Ethernet, 2x SFP+, 2x USB, RJ45 config port) deliver the best possible conditions for networking mobile employees, protecting internal company data, and taking high-performance IPsec connectivity to sensitive network segments or branches. The LANCOM VPN option upgrades the gateway to support up to 1,000 VPN channels. This ensures that your network is perfectly scalable and can grow on demand—without needing additional hardware.

## **Powerful SD-WAN greatly simplifies the management of enterprise structures**

In combination with the LANCOM Management Cloud, the LANCOM ISG-5000 provides the ideal basis for establishing a high-performance SD-WAN. For instance, it enables the highly automated configuration of a wide area network and an automatic rollout of device configurations to your individual locations. You benefit from highest levels of scalability, save on personnel costs, and keep track of the status of your network 24/7—ideal for mid-sized enterprise scenarios with multiple locations.

## **Next-generation SD-WAN: High Scalability VPN (HSVPN)**

The LANCOM ISG-5000 supports High Scalability VPN (HSVPN). The ongoing rise of digitalization, greater diversity of applications, and higher data volumes demand powerful, state-of-the-art networks. High Scalability VPN significantly improves the extensibility and efficiency of your architecture. Where previously each individual application required a separate VPN tunnel, HSVPN bundles any number of networks into a single VPN tunnel and transports them collectively to the remote site—with each network remaining secure and strictly separated from the others. The advantage for your business: Considerably fewer VPN tunnels are required, and recovery times are much faster in a failover event.

## **Maximum port flexibility**

From fiber-optic to Ethernet and USB ports: As the core of the network, this integrated services gateway offers 6 Gigabit Ethernet ports as well as 2x USB. In addition, thanks to 2 SFP+ ports with 10 Gigabit, you can increase the capacity of your data transfers to servers, network storage or switches.



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## Layer 2 features

VLAN	4.096 IDs based on IEEE 802.1q, dynamic assignment
Multicast	IGMP-Snooping, MLD-Snooping
Protocols	Ethernet over GRE-Tunnel (EoGRE), L2TPv3, ARP-Lookup, LLDP, DHCP option 82, IPv6-Router-Advertisement-Snooping, DHCPv6-Snooping, LDRA (Lightweight DHCPv6 Relay Agent), Spanning Tree, Rapid Spanning Tree, ARP, Proxy ARP, BOOTP, DHCP, LACP

## Layer 3 features

Firewall	Stateful inspection firewall including paket filtering, extended port forwarding, N:N IP address mapping, paket tagging, support for DNS targets, user-defined rules and notifications
Quality of Service	Traffic shaping, bandwidth reservation, DiffServ/TOS, packetsize control, layer-2-in-layer-3 tagging
Security	Intrusion Prevention, IP spoofing, access control lists, Denial of Service protection, detailed settings for handling reassembly, session-recovery, PING, stealth mode and AUTH port, URL blocker, password protection, programmable reset button
PPP authentication mechanisms	PAP, CHAP, MS-CHAP, and MS-CHAPv2
High availability / redundancy	VRRP (Virtual Router Redundancy Protocol)
Router	IPv4-, IPv6-, NetBIOS/IP multiprotokoll router, IPv4/IPv6 dual stack
SD-WAN Application Routing	SD-WAN Application Routing in connection with the LANCOM Management Cloud
SD-WAN dynamic path selection	SD-WAN dynamic path selection in connection with the LANCOM Management Cloud
Router virtualization	ARF (Advanced Routing and Forwarding) up to separate processing of 256 contexts
IPv4 services	HTTP and HTTPS server for configuration by web interface, DNS client, DNS server, DNS relay, DNS proxy, dynamic DNS client, DHCP client, DHCP relay and DHCP server including autodetection, NetBIOS/IP proxy, NTP client, SNTP server, policy-based routing, Bonjour-Proxy, RADIUS
IPv6 services	HTTP and HTTPS server for configuration by web interface, DHCPv6 client, DHCPv6 server, DHCPv6 relay, DNS client, DNS server, dynamic DNS client, NTP client, SNTP server, Bonjour-Proxy, RADIUS
Dynamic routing protocols	RIPv2, BGPv4, OSPFv2, LISP (Locator/ID Separation Protocol)
IPv4 protocols	DNS, HTTP, HTTPS, ICMP, NTP/SNTP, NetBIOS, PPPoE (server), RADIUS, RADSEC (secure RADIUS), RTP, SNMPv1,v2c,v3, TFTP, TACACS+, IGMPv3
IPv6 protocols	NDP, stateless address autoconfiguration (SLAAC), stateful address autoconfiguration (DHCPv6), router advertisements, ICMPv6, DHCPv6, DNS, HTTP, HTTPS, PPPoE, RADIUS, SMTP, NTP, BGP, LISP, Syslog, SNMPv1,v2c,v3, MLDv2, PIM, NPTv6 (NAT66)
Multicast Routing	PIM (Protocol Independent Multicast), IGMP proxy, MLD proxy
WAN operating mode	VDSL, ADSL1, ADSL2 or ADSL2+ additional with external DSL modem at an ETH port



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## Layer 3 features

**WAN protocols** PPPoE, Multi-PPPoE, GRE, EoGRE, PPTP (PAC or PNS), L2TPv2 (LAC or LNS), L2TPv3 with Ethernet-Pseudowire and IPoE (using DHCP or no DHCP), RIP-1, RIP-2, VLAN, IPv6 over PPP (IPv6 and IPv4/IPv6 dual stack session), IP(v6)oE (autokonfiguration, DHCPv6 or static)

**Tunneling protocols (IPv4/IPv6)** 6to4, 6in4, 6rd (static and over DHCP), Dual Stack Lite (IPv4-in-IPv6-Tunnel), 464XLAT

## Security

**Intrusion Prevention** Monitoring and blocking of login attempts and port scans

**IP spoofing** Source IP address check on all interfaces: only IP addresses belonging to the defined IP networks are allowed

**Access control lists** Filtering of IP or MAC addresses and preset protocols for configuration access

**Denial of Service protection** Protection from fragmentation errors and SYN flooding

**General** Detailed settings for handling reassembly, PING, stealth mode and AUTH port

**URL blocker** Filtering of unwanted URLs based on DNS hitlists and wildcard filters. Extended functionality with Content Filter Option

**Password protection** Password-protected configuration access can be set for each interface

**Alerts** Alerts via e-mail, SNMP traps and SYSLOG

**Authentication mechanisms** PAP, CHAP, MS-CHAP and MS-CHAPv2 as PPP authentication mechanism

**Adjustable reset button** Adjustable reset button for 'ignore', 'boot-only' and 'reset-or-boot'

## High availability / redundancy

**VRRP** VRRP (Virtual Router Redundancy Protocol) for backup in case of failure of a device or remote station.

**FirmSafe** For completely safe software upgrades thanks to two stored firmware versions, incl. test mode for firmware updates

**Load balancing** Static and dynamic load balancing over up to 4 WAN connections (incl. client binding). Channel bundling with Multilink PPP (if supported by network operator)

**VPN redundancy** Backup of VPN connections across different hierarchy levels, e.g. in case of failure of a central VPN concentrator and re-routing to multiple distributed remote sites. Any number of VPN remote sites can be defined (the tunnel limit applies only to active connections). Up to 32 alternative remote stations, each with its own routing tag, can be defined per VPN connection. Automatic selection may be sequential, or dependant on the last connection, or random (VPN load balancing)

**Line monitoring** Line monitoring with LCP echo monitoring, dead-peer detection and up to 4 addresses for end-to-end monitoring with ICMP polling



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## VPN

IPSec over HTTPS	Enables IPsec VPN based on TCP (at port 443 like HTTPS) which can go through firewalls in networks where e. g. port 500 for IKE is blocked. Suitable for client-to-site connections and site-to-site connections. IPSec over HTTPS is based on the NCP VPN Path Finder technology
Number of VPN tunnels	Max. number of concurrent active IPSec, PPTP (MPPE) and L2TPv2 tunnels: 100 (200 / 500 / 1000 with VPN-500 / VPN-1000 Option). Unlimited configurable connections. Configuration of all remote sites via one configuration entry when using the RAS user template or Proadaptive VPN.
Hardware accelerator	Integrated hardware accelerator for 3DES/AES encryption and decryption
1-Click-VPN Client assistant	One click function in LANconfig to create VPN client connections, incl. automatic profile creation for the LANCOM Advanced VPN Client
1-Click-VPN Site-to-Site	Creation of VPN connections between LANCOM routers via drag and drop in LANconfig
IKE, IKEv2	IPSec key exchange with Preshared Key or certificate (RSA signature, ECDSA-Signature, digital signature)
Smart Certificate	Convenient generation of digital X.509 certificates via an own certification authority (SCEP-CA) on the webpage or via SCEP.
Certificates	X.509 digital multi-level certificate support, compatible with Microsoft Server / Enterprise Server and OpenSSL. Secure Key Storage protects a private key (PKCS#12) from theft.
Certificate rollout	Automatic creation, rollout and renewal of certificates via SCEP (Simple Certificate Enrollment Protocol) per certificate hierarchy
Certificate revocation lists (CRL)	CRL retrieval via HTTP per certificate hierarchy
OCSP Client	Check X.509 certifications by using OCSP (Online Certificate Status Protocol) in real time as an alternative to CRLs
OCSP Server / Responder	Offers validity information for certificates created with Smart Certificate via OCSP
XAUTH	XAUTH client for registering LANCOM routers and access points at XAUTH servers incl. IKE-config mode. XAUTH server enables clients to register via XAUTH at LANCOM routers. Connection of the XAUTH server to RADIUS servers provides the central authentication of VPN-access with user name and password. Authentication of VPN-client access via XAUTH and RADIUS connection additionally by OTP token
RAS user template	Configuration of all VPN client connections in IKE ConfigMode via a single configuration entry
Proadaptive VPN	Automated configuration and dynamic creation of all necessary VPN and routing entries based on a default entry for site-to-site connections.
Algorithms	3DES (168 bit), AES-CBC and -GCM (128, 192 or 256 bit), RSA (1024-4096 bit), ECDSA (P-256-, P-384-, P-521-curves) and Chacha20-Poly 1305. OpenSSL implementation with FIPS-140 certified algorithms. MD-5, SHA-1, SHA-256, SHA-384 or SHA-512 hashes
NAT-Traversal	NAT-Traversal (NAT-T) support for VPN over routes without VPN passthrough
LANCOM Dynamic VPN	Enables VPN connections from or to dynamic IP addresses. The IP address is communicated via the ICMP or UDP protocol in encrypted form. Dynamic dial-in for remote sites via connection template



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## VPN

Dynamic DNS	Enables the registration of IP addresses with a Dynamic DNS provider in the case that fixed IP addresses are not used for the VPN connection
Specific DNS forwarding	DNS forwarding according to DNS domain, e.g. internal names are translated by proprietary DNS servers in the VPN. External names are translated by Internet DNS servers
Split DNS	Allows the selective forwarding of traffic for IKEv2 depending on the addressed DNS domain.
IPv4 VPN	Connecting private IPv4 networks
IPv4 VPN over IPv6 WAN	Use of IPv4 VPN over IPv6 WAN connections
IPv6 VPN	Connecting private IPv6 networks
IPv6 VPN over IPv4 WAN	Use of IPv6 VPN over IPv4 WAN connections
Radius	RADIUS authorization and accounting, outsourcing of VPN configurations in external RADIUS server in IKEv2, RADIUS CoA (Change of Authorization)
High Scalability VPN (HSVPN)	Transmission of multiple, securely separated networks within a VPN tunnel
Advanced Mesh VPN	On demand dynamic VPN tunnel establishment between branches
IKEv2-EAP	VPN clients can be authenticated with IKEv2-EAP against a central database like Microsoft Windows Server or RADIUS Server
Two-factor authentication	Two-factor authentication with LANCOM Advanced VPN Client via IKEv2 EAP-OTP

## VoIP

Number of local subscribers	10 (up to 40 with VoIP +10 Option)
Number of simultaneous VoIP connections	Up to 100 external VoIP connections depending on code conversion, echo canceling and load
Functionality	Hold/Request, Swap, Transfer, Call Forwarding (CFU, CFB, CFNR), number display/suppression (CLIP, CLIR), suppression of second call (Busy on Busy), immediate outgoing line, hunt groups, call diversion, overlap dialing
Hunt groups	Hunt group cascades, Call diversion, simultaneously or sequentially. Automatic forwarding after timeout or when busy/unreachable
Call router	Central switching of all incoming and outgoing calls. Number translation by mapping, numeral replacement and number supplementation. Configuration of line and route selection incl. line backup. Routing based on calling and called number, SIP domain and line. Blocking of telephone numbers or blocks of telephone numbers. Inclusion of local subscribers into the number range of an upstream PBX. Supplement/remove line-related prefixes or switchboard numbers.
SIP proxy	Up to 25 SIP-provider accounts (up to 55 with VoIP +10 Option), up to 4 SIP PBXs incl. line backup. SIP connections from/to internal subscribers, SIP providers and SIP PBXs. Automatic bandwidth management and automatic configuration of the firewall for SIP connections.



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## VoIP

SIP trunk	Call switching based on extension numbers to/from VoIP PBXs/VoIP providers (support of the VoIP-DDI functions compliant with ITU-T Q.1912.5). Mapping of entire VoIP telephone number blocks
Session Border Controller (SBC)	Separation of insecure and secure networks, QoS, management of signaling and voice data, transcoding
Media protocols	RTP, SIPS and SRTP
SIP-Codec support	SIP only: G.711 $\mu$ -law/A-law (64 kbps), G.722, G.723, G.726, G.729, iLBC, PCM (16, 20 und 24 Bit, Mono und Stereo), OPUS, AAC (LC, HE HEV2), MPEG Layer II, ADPCM 4SB. DTMF support (Inband, RFC2833, SIP-INFO)
Autoprovisioning	Automatic network and VoIP integration of LANCOM DECT 510 IP base station
SIP ALG	The SIP ALG (Application Layer Gateway) acts as a proxy for SIP communication. For SIP calls the ALG opens the necessary ports for the corresponding media packets. Automatic address translation (STUN is no longer needed).

## Interfaces

Ethernet ports	6 ETH ports (10/100/1000 Mbps Ethernet), and two SFP+ ports (10 GBit/s); up to 5 ports can be operated as additional WAN ports with load balancing. Ethernet ports can be electrically disabled within LCOS configuration
Port configuration	Each Ethernet port can be freely configured (LAN, DMZ, WAN, monitor port, off). Additionally, external DSL modems or termination routers can be operated as a WAN port with load balancing and policy-based routing.
USB 3.0 host port	2x USB 3.0 host port for connecting USB printers (USB print server), serial devices (COM port server), USB data storage (FAT file system); bi-directional data exchange is possible
Serial interface	Serial configuration interface / COM port (RJ-45): 9,600 - 115,000 baud. Supports internal COM port server and allows for transparent asynchronous transmission of serial data via TCP

## Management and monitoring

Management	LANCOM Management Cloud, LANconfig, WEBconfig, LANCOM Layer 2 management (emergency management)
Management functions	Alternative boot configuration, voluntary automatic updates for LCMS and LCOS, individual access and function rights up to 16 administrators, RADIUS and RADSEC user management, remote access (WAN or (W)LAN, access rights (read/write) adjustable separately), SSL, SSH, HTTPS, Telnet, TFTP, SNMP, HTTP, access rights via TACACS+, scripting, timed control of all parameters and actions through cron job
FirmSafe	Two stored firmware versions, incl. test mode for firmware updates
automatic firmware update	configurable automatic checking and installation of firmware updates
Monitoring	LANCOM Management Cloud, LANmonitor, WLANmonitor
Monitoring functions	Device SYSLOG, SNMPv1,v2c,v3 incl. SNMP-TRAPS, extensive LOG and TRACE options, PING and TRACEROUTE for checking connections, internal logging buffer for firewall events
Monitoring statistics	Extensive Ethernet, IP and DNS statistics; SYSLOG error counter, accounting information exportable via LANmonitor and SYSLOG, Layer 7 Application Detection including application-centric tracking of traffic volume



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## Management and monitoring

IPerf	IPerf is a tool for measurements of the bandwidth on IP networks (integrated client and server)
SLA-Monitor (ICMP)	Performance monitoring of connections
Netflow	Export of information about incoming and outgoing IP traffic
SD-LAN	SD-LAN – automatic LAN configuration via the LANCOM Management Cloud
SD-WAN	SD-WAN – automatic WAN configuration via the LANCOM Management Cloud

## Hardware

Weight	3,5 kg
Power supply	Internal power supply unit (100–240 V, 50-60 Hz)
Environment	Temperature range 0–40° C; humidity 0–85%; non-condensing
Housing	Robust metal housing, 19" 1 HU (440 x 44 x 269,2 mm, W x H x D), with removable mounting brackets, network connectors on the front
Fans	2
Power consumption (max.)	60 watt

## Declarations of conformity\*

Europe/EFTA	CE
North America	FCC/IC
IPv6	IPv6 Ready Gold
*) Note	You will find all declarations of conformity on our website at <a href="http://www.lancom-systems.com/doc">www.lancom-systems.com/doc</a>

## Scope of delivery

Manual	Hardware Quick Reference (DE/EN), Installation Guide (DE/EN)
Cable	1 Ethernet cable, 3 m
Cable	EU version: IEC power cord

## Support

Warranty extension	Free warranty extension up to 3 years (replacement service for defects) For details, please refer to the service and support conditions at <a href="http://www.lancom-systems.com/support-conditions">www.lancom-systems.com/support-conditions</a> or at <a href="http://www.lancom.de/rma">www.lancom.de/rma</a> .
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## Support

Security updates	Up to 2 years after End of Sale of the device (but min. 3 years, see <a href="http://www.lancom-systems.com/product-tables">www.lancom-systems.com/product-tables</a> ), can be extended by purchasing LANcare products
Software updates	Regular free updates including new features as part of the LANCOM Lifecycle Management ( <a href="http://www.lancom-systems.com/lifecycle">www.lancom-systems.com/lifecycle</a> )
Manufacturer support	Technical manufacturer support as part of a support contract (LANcommunity partner, LANcare Direct, or LANcare Premium Support)
LANcare Basic L	Security updates until EOL (min. 5 years) and 5 years replacement service with shipment of the replacement device within 5 days after arrival of the defective device (8/5/5Days), item no. 10722
LANcare Advanced L	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. 10732
LANcare Direct Advanced 24/7 L	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. 10782, 10783 or 10784)
LANcare Direct 24/7 L	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. 10758, 10759 or 10760)
LANcare Direct Advanced 10/5 L	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. 10770, 10771 or 10772)
LANcare Direct 10/5 L	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. 10746, 10747 or 10748)

## Software

Lifecycle Management	After discontinuation (End of Sale), the device is subject to the LANCOM Lifecycle Management. Details can be found at: <a href="http://www.lancom-systems.com/lifecycle">www.lancom-systems.com/lifecycle</a>
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.

## Options

VPN	LANCOM VPN-200 Option (200 channels), item no. 61404
VPN	LANCOM VPN-500 Option (500 channels), item no. 61402
VPN	LANCOM VPN-1000 Option (1000 channels), item no. 61403



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## Options

LANCOM Content Filter	LANCOM Content Filter +10 user (additive up to 1,000), 1 year subscription, item no. 61590
LANCOM Content Filter	LANCOM Content Filter +25 user (additive up to 1,000), 1 year subscription, item no. 61591
LANCOM Content Filter	LANCOM Content Filter +100 user (additive up to 1,000), 1 year subscription, item no. 61592
LANCOM Content Filter	LANCOM Content Filter +10 user (additive up to 1,000), 3 year subscription, item no. 61593
LANCOM Content Filter	LANCOM Content Filter +25 user (additive up to 1,000), 3 year subscription, item no. 61594
LANCOM Content Filter	LANCOM Content Filter +100 user (additive up to 1,000), 3 year subscription, item no. 61595
LANCOM BPjM Filter	LANCOM BPjM Filter Option, 5 years subscription, item no. 61418
LANCOM Public Spot XL	Hotspot option for LANCOM WLC-4100, WLC-4025(+), LANCOM 9100(+) VPN, LANCOM 7100(+) VPN, LANCOM ISG-1000, LANCOM ISG-4000, and LANCOM ISG-8000 for user authentication (recommended up to 2,500), versatile access (via voucher, e-mail, SMS), including a comfortable setup wizard, item no. 61624
LANCOM Public Spot PMS Accounting Plus	Extension of the LANCOM Public Spot (XL) Option for the connection to hotel billing systems with FIAS interface (such as Micros Fidelio) for authentication and billing of guest accesses for 178x/19xx routers, WLCs, and current central-site gateways, item no. 61638
LANCOM VoIP +10 Option	Upgrade for LANCOM VoIP router with 10 additional internal VoIP numbers (additionally up to 40) and 10 external SIP lines (additionally up to 55) item no. 61423
LANCOM VPN High Availability Clustering XL Option	Comfortable administration of cluster devices like one single device — even at networks across locations, item no. 61637
*) Note	Further details on LANCOM Service Packs are available at the following Internet address: <a href="http://www.lancom-systems.com/products/services-and-support">www.lancom-systems.com/products/services-and-support</a>

## LANCOM Management Cloud

LANCOM LMC-D-1Y LMC License	LANCOM LMC-D-1Y License (1 Year), enables the management of one category D device for one year via the LANCOM Management Cloud, item no. 50109
LANCOM LMC-D-3Y LMC License	LANCOM LMC-D-3Y License (3 Years), enables the management of one category D device for three years via the LANCOM Management Cloud, item no. 50110
LANCOM LMC-D-5Y LMC License	LANCOM LMC-D-5Y License (5 Years), enables the management of one category D device for five years via the LANCOM Management Cloud, item no. 50111

## Accessories

1000Base-BX20-U SFP module	LANCOM SFP-AON-1, item no. 60200
GPON ONT SFP module	LANCOM SFP-GPON-1, item no. 60199
1000Base-BX20 SFP module pair	LANCOM SFP-BiDi1550-SC1, item no. 60201



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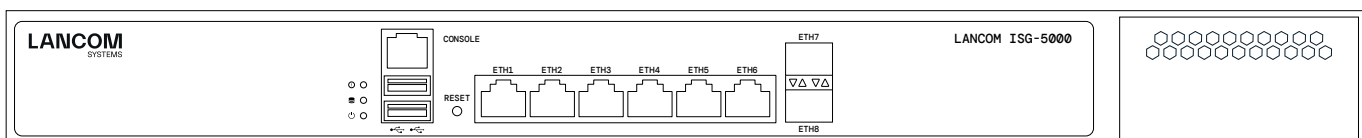
# LANCOM ISG-5000

## Accessories

1000Base-SX SFP module, 550 m	LANCOM SFP-SX-LC1, item no. 61556
1000Base-SX SFP module, 550 m (Bulk 10)	LANCOM SFP-SX-LC1 (Bulk 10), item no. 60184
1000Base-SX SFP module, 2 km	LANCOM SFP-SX2-LC1, item no. 60183
1000Base-LX SFP module	LANCOM SFP-LX-LC1, item no. 61557
1000Base-LX SFP module (Bulk 10)	LANCOM SFP-LX-LC1 (Bulk 10), item no. 60185
10GBASE-SR/SW SFP module	LANCOM SFP-SX-LC10, item no. 61485
10GBASE-LR/LW SFP module	LANCOM SFP-LX-LC10, item no. 61497
10GBASE-ER SFP module	LANCOM SFP-LR40-LC10, item no. 60182
Direct attach cable	LANCOM SFP-DAC10-1m, item no. 61495
Direct attach cable	LANCOM SFP-DAC10-3m, item no. 60175
SFP copper module 1G	LANCOM SFP-CO1, item no. 61494
SFP copper module 1G (Bulk 10)	LANCOM SFP-CO1 (Bulk 10), item no. 60186
VPN Client Software	LANCOM Advanced VPN Client for Windows 7,8/8.1,10,11 - single license, item no. 61600
VPN Client Software	LANCOM Advanced VPN Client for Windows 7,8/8.1,10,11 - 10 licenses, item no. 61601
VPN Client Software	LANCOM Advanced VPN Client for Windows 7,8/8.1,10,11 - 25 licenses, item no. 61602
VPN Client Software	LANCOM Advanced VPN Client for Mac OS X (10.5 Intel only, 10.6 or higher), single license, item no. 61606
VPN Client Software	LANCOM Advanced VPN Client for Mac OS X (10.5 Intel only, 10.6 or higher), 10 licenses, item no. 61607
*) Note	Support for third-party accessories (SFP and DAC) is excluded and cannot be granted

## Item number(s)

LANCOM ISG-5000 (EU)	61079
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