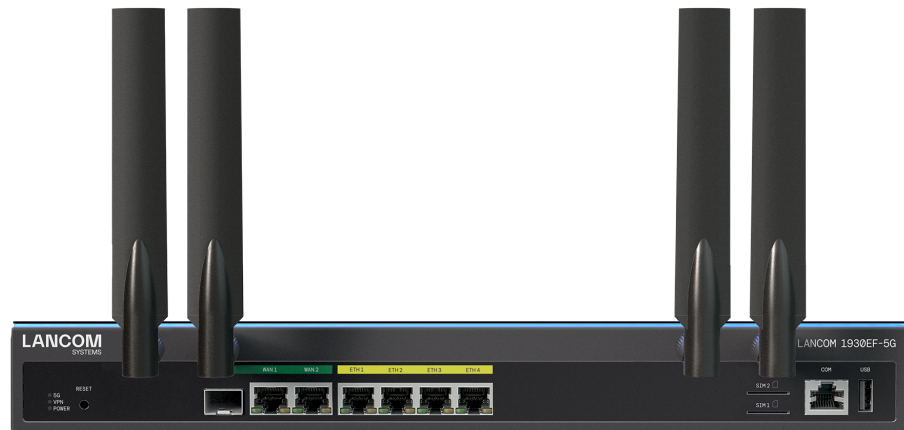


LANCOM 1930EF-5G

SD-WAN gateway with fiber, Gigabit Ethernet, and 5G



The LANCOM 1930EF-5G is the first choice for realizing flexible and fail-safe site networking for high performance requirements on the branch office side. Equipped with dual-SIM 5G mobile radio, primary operation is possible for data-intensive and latency-critical real-time applications as well as intelligent backup scenarios. In addition, the connection to fiber-optic lines via an optional module ensures high-speed Internet for business-critical data traffic. The LANCOM 1930EF-5G can be configured and managed centrally together with other network components via the LANCOM Management Cloud (LMC).

- SD-WAN – incl. zero-touch deployment and Auto-VPN via the LANCOM Management Cloud
- Multi-WAN – high-speed Internet via fiber optics (GPON and AON modules available separately) and Gigabit Ethernet for connection of external modems (1x WAN Ethernet), 1x SFP/TP combo
- Load balancing for the active/active operation of several Internet lines and maximization of the available bandwidth
- Integrated dual-SIM 5G modem for primary operation via 4G/5G or in parallel with other access types for low latency and high bandwidth for real-time applications (video streaming, telephony or AR)
- Professional telephony features thanks to integrated LANCOM VCM (Voice Call Manager) & SBC (session border controller)
- 25 simultaneous IPsec VPN connections (100 optional)
- Network virtualization with up to 64 networks on one device (ARF)
- Full-metal housing with front-facing connections and integrated 230V power supply unit for mounting in a 19" rack
- Maximum future compatibility, reliability, and security "Engineered in Germany"



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LANCOM 1930EF-5G

LANCOM SD-WAN – Next-level networking

With LANCOM SD-WAN you can manage and monitor your entire corporate network centrally, cost-effectively, quickly, and stress-free! In combination with the LANCOM Management Cloud, the SD-WAN gateway gives you all the options for an automated setup of secure VPN connections (Auto-VPN) between sites, including network virtualization. Highlight features such as High Scalability VPN (HSVPN) and Advanced Mesh VPN offer you a significant plus in scalability and efficiency for a large number of branches and applications. Furthermore, if multiple WAN connections are defined, they are automatically operated in active/active mode (load balancing), thereby increasing the available total bandwidth. With Dynamic Path Selection and Dynamic Traffic Steering, applications are also dynamically routed via the best connection at any given time.

Powerful Gigabit multi-WAN & load balancing

With the LANCOM 1930EF-5G, you can flexibly use a wide variety of Internet connections on one device: The gateway can be connected directly to a fiber optic line (FTTH) via the SFP/TP combo port and separately available SFP module (GPON / AON). In addition, the SD-WAN gateway offers high flexibility via Gigabit Ethernet for connecting external modems. With the parallel use of several Internet lines (load balancing: active/active), the LANCOM 1930EF-5G also ensures ideal load distribution of the data volume and a further increase in the bandwidth provided.

Fully future-proof with 5G

Thanks to the two included SIM card slots and high-performance 5G technology, the LANCOM 1930EF-5G is ideal for intelligent backup scenarios, primary operation, or parallel operation in active/active mode with other access types. Highest availability and best bandwidths for the use of real-time applications such as video streaming or augmented reality (AR) in combination with lowest latencies make the branch router the ideal node in environments with high data traffic.

Secure communication via VPN

With virtual private networks (VPN), you use the public medium of the Internet as a communication path and secure the connection in such a way that the communication still remains completely inaccessible to external parties. This SD-WAN gateway offers you 25 integrated IPSec VPN channels for secure encryption, so that the protection of internal company data is always guaranteed when connecting mobile employees, home offices, or branch offices. With the LANCOM VPN Option, you can also upgrade the device to up to 100 VPN channels, so that the infrastructure can easily grow with your needs without additional hardware.



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LANCOM 1930EF-5G

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 |
| 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 |
| SD-WAN Zero Touch Deployment | Zero touch commissioning of the device in conjunction with the LANCOM Management Cloud |
| Router virtualization | ARF (Advanced Routing and Forwarding) up to separate processing of 64 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

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|------------------------------------|---|
| 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 | 25 tunnels active simultaneously (50 / 100 with VPN-50 / VPN-100 Option) when combining IPSec with PPTP (MPPE) and L2TPv2 tunnels, 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 |
| Realtime clock | Integrated, buffered realtime clock to save the date and time during power failure. Assures timely validation of certificates in any case |
| Random number generator | Generates real random numbers in hardware, e. g. for improved key generation for certificates immediately after switching-on |
| 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 |
| 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 |



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VPN

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| 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 |
| 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 |

Performance

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| Routing-Performance | Data regarding the overall routing performance can be found inside the LANCOM tech paper "Routing-Performance" on www.lancom-systems.com |
|---------------------|--|

VoIP

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|---|---|
| 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 |



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VoIP

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|---------------------------------|---|
| 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. |
| 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 μ -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). |

Cellular radio

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| Supported standards | 5G, LTE, UMTS and HSPA support (mode of transmission automatically or manually adjustable), 2G/GSM is not supported |
| Supported 5G modes | 5G standalone (SA), 5G non-standalone (NSA) |
| Supported mobile bands (5G) | n1 (2100 MHz), n2 (1900 MHz), n3 (1800 MHz), n5 (850 MHz), n7 (2600 MHz), n8 (900 MHz), n12 (700 MHz), n13 (700 MHz), n14 (700 MHz), n18 (850 MHz), n20 (800 MHz), n25 (1900 MHz), n26 (850 MHz), n28 (700 MHz), n29 (700 MHz), n30 (2300 MHz), n38 (2600 MHz), n40 (2300 MHz), n41 (2500 MHz), n48 (3500 MHz), n66 (2100 MHz), n70 (2000 MHz), n71 (600 MHz), n75 (1500 MHz), n76 (1500 MHz), n77 (3700 MHz), n78 (3500 MHz), n79 (4700 MHz) |
| Supported mobile bands (4G) | B1 (2100 MHz), B2 (1900 MHz), B3 (1800 MHz), B4 (1700 MHz), B5 (850 MHz), B7 (2600 MHz), B8 (900 MHz), B12 (700 MHz), B13 (700 MHz), B14 (700 MHz), B17 (700 MHz), B18 (850 MHz), B19 (850 MHz), B20 (800 MHz), B25 (1900 MHz), B26 (850 MHz), B28 (700 MHz), B29 (700 MHz), B30 (2300 MHz), B32 (1500 MHz), B34 (2000 MHz), B38 (2600 MHz), B39 (1900 MHz), B40 (2300 MHz), B41 (2500 MHz), B42 (3500 MHz), B43 (3700 MHz), B48 (3500 MHz), B66 (1700 MHz), B71 (600 MHz) |
| Supported mobile bands (3G) | Band 1 (2100 MHz), Band 2 (1900 MHz), Band 4 (1700 MHz), Band 5 (850 MHz), Band 8 (900 MHz), Band 19 (800 MHz) |
| Diversity support | Receive diversity on the aux antenna (3G); MIMO (4x4) for LTE (4G); MIMO (4x4) for 5G |
| Supported SIM card formats* | Mini-SIM (2FF), Micro-SIM (3FF) via adaptor, Nano-SIM (4FF) via adaptor |



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LANCOM 1930EF-5G

Cellular radio

Dual-SIM support

Supported

*) Note

LANCOM Systems recommends the use of a standard SIM (2FF / Mini-SIM)

Interfaces

WAN: Ethernet

10/100/1000 Mbps Gigabit Ethernet

Ethernet ports

6 individual 10/100/1000 Mbps Ethernet ports, 2 of them are set to WAN; up to 3 ports can be operated as additional WAN ports. Ethernet ports can be electrically disabled within LCOS configuration. The ports support energy saving according to IEEE 802.3az

SFP slot

Slot for Small Form-factor Pluggable Gigabit Ethernet transceivers ('mini-GBIC'). Compatible to optional LANCOM SFP modules for fiber connections over short distances (SX) or long distances (LX). By default a WAN port that can be configured as a LAN port

Port configuration

Each Ethernet port can be freely configured (LAN, DMZ, WAN, monitor port, off). LAN ports can be operated as a switch or separately. Additionally, external DSL modems or termination routers can be operated as a WAN port with load balancing and policy-based routing. DMZ ports can be operated with their own IP address range without NAT

USB 2.0 host port

USB 2.0 hi-speed 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 (RJ45): 9,600 - 115,000 baud

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

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

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



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LANCOM 1930EF-5G

Management and monitoring

| | |
|--------|--|
| SD-WAN | SD-WAN – automatic WAN configuration via the LANCOM Management Cloud |
|--------|--|

Hardware

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|-------------------------|--|
| Weight | 5,50 lbs (2,50 kg) |
| Power supply | Internal power supply unit (110–230 V, 50-60 Hz) |
| Environment | Temperature range 0–40°C; humidity 0–95%; non-condensing |
| Housing | Robust metal housing, network connectors on the front, 1U (345 x 44 x 253 mm > W x H x D) with removable mounting brackets |
| Fans | 1 silent fan |
| waste heat (max.) | 92 BTU/h |
| Power consumption (max) | 27 watt |

Declarations of conformity*

| | |
|-------------------|---|
| Europe/EFTA | CE |
| IPv6 | IPv6 Ready Gold |
| Country of Origin | Made in Germany |
| *) Note | You will find all declarations of conformity on our website at www.lancom-systems.com/doc |

Scope of delivery

| | |
|----------|---|
| Manual | Quick Installation Guide (DE/EN) |
| Cable | 1 Ethernet cable, 3 m |
| Cable | EU version: IEC power cord, WW version: country-specific IEC power cords are separately available |
| Antennas | Four 2 dBi 5G/LTE/UMTS-antennas |

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 www.lancom-systems.com/support-conditions or at www.lancom.de/rma . |
| Security updates | Up to 2 years after End of Sale of the device (but min. 3 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) |



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Support

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| 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 Basic M | 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. 10721 |
| LANcare Advanced M | 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. 10731 |
| LANcare Direct Advanced 24/7 M | 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. 10779, 10780 or 10781) |
| LANcare Direct 24/7 M | 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. 10755, 10756 or 10757) |
| LANcare Direct Advanced 10/5 M | 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. 10767, 10768 or 10769) |
| LANcare Direct 10/5 M | 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. 10743, 10744 or 10745) |

Software

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|-----------------------------|--|
| 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. |

Options

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|------------------------------|---|
| VPN | LANCOM VPN-50 Option (50 channels), item no. 61405 |
| VPN | LANCOM VPN-100 Option (100 channels), item no. 61407 |
| LANCOM Content Filter | LANCOM Content Filter +10 user (additive up to 500), 1 year subscription, item no. 61590 |
| LANCOM Content Filter | LANCOM Content Filter +25 user (additive up to 500), 1 year subscription, item no. 61591 |
| LANCOM Content Filter | LANCOM Content Filter +100 user (additive up to 500), 1 year subscription, item no. 61592 |
| LANCOM Content Filter | LANCOM Content Filter +10 user (additive up to 500), 3 year subscription, item no. 61593 |



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Options

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|--|--|
| LANCOM Content Filter | LANCOM Content Filter +25 user (additive up to 500), 3 year subscription, item no. 61594 |
| LANCOM Content Filter | LANCOM Content Filter +100 user (additive up to 500), 3 year subscription, item no. 61595 |
| LANCOM BPjM Filter | LANCOM BPjM Filter Option, 5 years subscription, item no. 61418 |
| LANCOM Public Spot | Hotspot option for LANCOM products, versatile access (via voucher, e-mail, SMS), including a comfortable setup wizard, secure separation of guest access and internal network, item no. 60642 |
| LANCOM Public Spot (10 bulk) | Hotspot option for LANCOM products, versatile access (via voucher, e-mail, SMS), including a comfortable setup wizard, secure separation of guest access and internal network (10 bulk), item no. 61312 |
| 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, 2100EF, WLCs, and current central-site gateways, item no. 61638 |
| LANCOM WLC Basic Option for Routers | LANCOM WLC Basic Option for Routers for up to 6 managed LANCOM access points or WLAN routers, item no. 61639 |
| LANCOM WLC AP Upgrade +6 | LANCOM WLC AP Upgrade +6 Option, enables your WLC to manage 6 Access Points/WLAN router (additive up to 30) in addition, item no. 61629 |
| 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 L Option | Comfortable administration of cluster devices like one single device — even at networks across locations, item no. 61658 |

LANCOM Management Cloud

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|-----------------------------|--|
| LANCOM LMC-C-1Y LMC License | LANCOM LMC-C-1Y License (1 Year), enables the management of one category C device for one year via the LANCOM Management Cloud, item no. 50106 |
| LANCOM LMC-C-3Y LMC License | LANCOM LMC-C-3Y License (3 Years), enables the management of one category C device for three years via the LANCOM Management Cloud, item no. 50107 |
| LANCOM LMC-C-5Y LMC License | LANCOM LMC-C-5Y License (5 Years), enables the management of one category C device for five years via the LANCOM Management Cloud, item no. 50108 |

Accessories

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|----------------------------|---|
| LANCOM DECT 510 IP (EU) | Professional DECT base station for up to 6 DECT phones, network integration and configuration via LANCOM VoIP router, 4 simultaneous calls possible, highest voice quality, power supply via PoE or power supply unit, item no. 61901 |
| External antenna | AirLancer O-360Q-5G, omnidirectional outdoor antenna MIMO (4x4), for all 4G/5G bands (700-3800 MHz), item no. 61234 |
| 1000Base-BX20-U SFP module | LANCOM SFP-AON-1, item no. 60200 |
| GPON ONT SFP module | LANCOM SFP-GPON-1, Compatible for the use on FTTH-lines of Deutsche Telekom, item no. 60199 |



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Accessories

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|---|---|
| XGS-PON ONT SFP module | LANCOM SFP-XGSPON-1, item no. 60207 |
| 1000Base-BX20 SFP module pair | LANCOM SFP-BiDi1550-SC1, item no. 60201 |
| 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 |
| SFP copper module 1G | LANCOM SFP-CO1, item no. 61494 |
| SFP copper module 1G (Bulk 10) | LANCOM SFP-CO1 (Bulk 10), item no. 60186 |
| LANCOM Wireless ePaper USB | Control of ESL displays from the manufacturer SES-imagotag in the 2.4 GHz frequency band, item no. 62225 |
| 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 |
| LANCOM Power Cord (UK) | IEC power cord, UK plug, item no. 61650 |
| LANCOM Power Cord (US) | IEC power cord, US plug, item no. 61651 |
| LANCOM Power Cord (CH) | IEC power cord, CH plug, item no. 61652 |
| 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)

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| LANCOM 1930EF-5G (EU) | 62145 |
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