

LANCOM 1800EFW

Site networking with fiber optics, Ethernet & Wi-Fi 6



Powerful performance for smaller company sites with high data volumes: Equipped with fast Wi-Fi 6, this SD-WAN gateway reliably integrates mobile end devices into the network in parallel in the 5 GHz and 2.4 GHz bands. For fast Internet, it uses the performance of modern fiber optic connections via its integrated SFP port. The greatest possible versatility with regard to the Internet lines available at the site is ensured via the Gigabit Ethernet WAN port. With award-winning LANCOM IPsec VPN and SD-WAN, 5 (optionally 25) sites and mobile employees are securely interconnected.

- High-speed Internet via fiber optics (GPON and AON modules available separately) and Gigabit Ethernet
- Dual-band concurrent Wi-Fi 6 with up to 1,200 Mbps at 5 GHz and up to 575 Mbps at 2.4 GHz
- SD-WAN – incl. zero-touch deployment, Auto-VPN, and Auto-VLAN via the LANCOM Management Cloud
- 5 integrated IPsec VPN channels (25 optional)
- Network virtualization with up to 16 networks on one device (ARF)
- Maximum future compatibility, reliability, and security "Engineered in Germany"



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LANCOM 1800EFW

High-speed Internet via fiber optics or Gigabit Ethernet

The high-performance VPN router LANCOM 1800EFW enables direct connection to a fiber-optic line (FTTH) via its SFP port using a separately available SFP module (GPON / AON). It also offers maximum versatility via Gigabit Ethernet for connection to external modems. It is therefore suitable for all fields of application and industries and forms the basis for reliable, high-performance networking.

Professional integration of wireless clients

The LANCOM 1800EFW offers wireless LAN in the Wi-Fi 6 standard (IEEE 802.11ax) and can supply both clients in the 2.4 GHz frequency band and modern end devices in the 5 GHz band with fast Wi-Fi. Wi-Fi 6 technology enables transmission rates of up to 1,200 Mbps in 5 GHz and up to 575 Mbps in 2.4 GHz in parallel. Wireless clients are professionally integrated into the network - perfect for home offices and small businesses, as the router provides optimal Wi-Fi coverage without the need for additional hardware.

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.

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 five 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 25 VPN channels, so that the infrastructure can easily grow with your needs without additional hardware.

Advanced Routing & Forwarding

The LANCOM 1800EFW provides up to 16 securely isolated and separately routed IP contexts. This is an elegant way of routing all IP applications via a central router and securely separating the various communication channels.



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WLAN product specifications

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|---|---|
| Frequency band 2.4 GHz and 5 GHz | 2400-2483.5 MHz (ISM), 5150-5350 MHz and 5470-5725 MHz (depending on country-specific restrictions) |
| Data rates IEEE 802.11ax | → up to 1200 Mbps according to IEEE 802.11ax with MCS11/QAM-1024 at 5 GHz, 2x2 MIMO and 80 MHz channel width → up to 575 Mbps according to IEEE 802.11ax with MCS11/QAM-1024 at 2.4 GHz, 2x2 MIMO and 40 MHz channel width |
| Data rates IEEE 802.11ac/n | 867 Mbps according to IEEE 802.11ac with MCS9 (fallback to 6,5 Mbps with MCS0). Compatible to IEEE 802.11ac/n/a, IEEE 802.11ac/n, IEEE 802.11n/a compatibility mode or pure IEEE 802.11ac, pure IEEE 802.11n, pure IEEE 802.11a modulator and data rates selectable |
| Data rates IEEE 802.11n | 300 Mbps according to IEEE 802.11n with MCS15 (fallback to 6,5 Mbps with MCS0). Compatible to IEEE 802.11a/n, IEEE 802.11g/n, IEEE 802.11b/g/n or IEEE 802.11b/g compatibility mode or pure IEEE 802.11n, pure IEEE 802.11a, IEEE 802.11g or pure IEEE 802.11b mode and data rates selectable |
| Data rates IEEE 802.11a/h | 54 Mbps (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection), fully compatible with TPC (adjustable power output) and DFS (automatic channel selection, radar detection) and data rates selectable |
| Data rates IEEE 802.11b/g | 54 Mbps to IEEE 802.11g (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection) compatible to IEEE 802.11b (11, 5.5, 2, 1 Mbps, Automatic Rate Selection), IEEE 802.11b/g compatibility mode or pure IEEE 802.11g or pure IEEE 802.11b and data rates selectable |
| Output power at radio module, 2.4 GHz and per chain | → IEEE 802.11b: +25 dBm @ 1 MBit/s, +25 dBm @ 11 MBit/s → IEEE 802.11g: +25 dBm @ 6 MBit/s, +24 dBm @ 54 MBit/s → IEEE 802.11n: +25 dBm @ MCS0/20 MHz, +23 dBm @ MCS7/20 MHz → IEEE 802.11ac/ax: +22 dBm @ MCS9/40 MHz, +20 dBm @ MCS11/40 MHz |
| Output power at radio module, 5 GHz and per chain | → IEEE 802.11a: +25 dBm @ 6 MBit/s, +22 dBm @ 54 MBit/s → IEEE 802.11n: +25 dBm @ MCS0/20 MHz, +22 dBm @ MCS7/20 MHz → IEEE 802.11ac/ax: +19 dBm @ MCS9/80 MHz, +18 dBm @ MCS11/80 MHz |
| Receiver sensitivity, 2.4 GHz | → IEEE 802.11b: -98 dBm @ 1 MBit/s, -90 dBm @ 11 MBit/s → IEEE 802.11g: -95 dBm @ 6 MBit/s, -76 dBm @ 54 MBit/s → IEEE 802.11n: -94 dBm @ MCS0/20 MHz, -74 dBm @ MCS7/20 MHz → IEEE 802.11ac/ax: -67 dBm @ MCS9/40 MHz, -61 dBm @ MCS11/40 MHz |
| Receiver sensitivity, 5 GHz | → IEEE 802.11a: -94 dBm @ 6 MBit/s, -75 dBm @ 54 MBit/s → IEEE 802.11n: -93 dBm @ MCS0/20 MHz, -73 dBm @ MCS7/20 MHz → IEEE 802.11ac/ax: -63 dBm @ MCS9/80 MHz, -57 dBm @ MCS11/80 MHz |
| Radio channels 5 GHz | Up to 16 non-overlapping channels (available channels and further obligations such as automatic DFS dynamic channel selection depending on national regulations) |
| Radio channels 2.4 GHz | Up to 13 channels, max. 3 non-overlapping (depending on country-specific restrictions) |
| antenna connectors | Two reverse SMA antenna connectors (RP-SMA female) for external WLAN antennas |
| Multi-SSID | Up to 14 independent WLAN networks; time-controlled activation and deactivation of WLAN networks |



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WLAN product specifications

Concurrent WLAN clients Up to 127 clients (recommended)

Supported WLAN standards

IEEE standards IEEE 802.11ax (Wi-Fi 6), IEEE 802.11ac Wave 2 (Wi-Fi 5), IEEE 802.11n (Wi-Fi 4), IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, IEEE 802.11i, IEEE 802.1X, IEEE 802.11h, IEEE 802.11d, IEEE 802.11v

Standard IEEE 802.11ax (Wi-Fi 6)

Supported features 2x2 DL-/UL-MU-MIMO, DL-/UL-OFDMA, triggered target-wake-time, BSS coloring, QAM-1024, 80 MHz channels

Standard IEEE 802.11ac (Wi-Fi 5)

Supported features 2x2 MIMO, 80 MHz channels, MU-MIMO, QAM-256

Standard IEEE 802.11n (Wi-Fi 4)

Supported features 2x2 MIMO, 40 MHz channel, 20/40MHz coexistence mechanisms in the 2.4 GHz band, MAC aggregation, Block Acknowledgement, STBC (Space Time Block Coding), LDPC (Low Density Parity Check), MRC (Maximal Ratio Combining), Short Guard Interval

WLAN operating modes

Modes WLAN access point (standalone, WLC or LANCOM Management Cloud managed)

Security

Encryption options WPA3-Personal, IEEE 802.1X (WPA3-Enterprise, WPA2-Enterprise), IEEE 802.11i (WPA2-Personal), WPA2™, WPA, WEP, IEEE 802.11w (Protected Management Frames), LEPS-MAC (LANCOM Enhanced Passphrase Security MAC), LEPS-U (LANCOM Enhanced Passphrase Security User)

Encryption AES-CCMP AES-GCMP, TKIP, RC4 (only used by WEP)

EAP types (authenticator) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-FAST

RADIUS/EAP-server User administration MAC-based, rate limiting, passphrases, VLAN user based, authentication of IEEE 802.1X clients via EAP-TLS, EAP-TTLS, EAP-MD5, EAP-GTC, PEAP, MSCHAP, MSCHAPv2, Dynamic Peer Discovery

Others WLAN protocol filters, IP-redirection of any packet received over the WLAN interface, IEEE 802.1X supplicant, client detection ("rogue WLAN client detection"), Wireless Intrusion Detection System (WIDS), RADIUS CoA (Change of Authorization)

LANCOM Active Radio Control

Client Management Steering of WLAN clients to the ideal access point using 802.11k and 802.11v

Band Steering Steering of 5GHz clients to the corresponding high-performance frequency band

Managed RF Optimization* Selection of optimal WLAN channels by the administrator



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LANCOM Active Radio Control

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| Airtime Fairness | Improved utilization of the WLAN bandwidth |
| Adaptive Transmission Power | Automatic adjustment of the transmission power for Wi - Fi backup scenarios |
| *) Note | Only in installations with WLAN controller |

Roaming

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| Roaming | IAPP (Inter Access Point Protocol), IEEE 802.11r (Fast Roaming), OKC (Opportunistic Key Caching) |
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Layer 2 features

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| 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 |
| OAM | Ethernet link OAM 802.3ah, IEEE 802.1ag CFM |

Layer 3 features

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|-------------------------------|---|
| Firewall | Stateful inspection firewall including packet filtering, extended port forwarding, N:N IP address mapping, packet tagging, support for DNS targets, user-defined rules and notifications |
| Quality of Service | Traffic shaping, bandwidth reservation, DiffServ/TOS, packet size control, layer-2-in-layer-3 tagging, support for 8 QoS queues (6 free configurable) |
| 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-, 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 16 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, NTP client, SNTP server, policy-based routing, Bonjour-Proxy, RADIUS |



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Layer 3 features

| | |
|---------------------------------|---|
| 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, 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), VRRPv3 |
| 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 |
| 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, Dual Stack Lite, 464XLAT |

Security

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| 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

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| VRRP | VRRP (Virtual Router Redundancy Protocol VRRPv2 and VRRPv3) for backup in case of failure of a device or remote station. |
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High availability / redundancy

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

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 | Max. number of concurrent active IPSec, PPTP (MPPE) and L2TPv2 tunnels: 5 (25 with VPN 25 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 |
| 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 |



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VPN

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| 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 |
| MOBIKE | IKEv2 VPN clients can seamlessly switch between different networks (e.g. from WLAN to mobile radio) without having to re-establish the VPN tunnel |
| 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 |



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VPN

*) Only with VPN 25 option

Performance

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

VoIP

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

WAN: Ethernet 10/100/1000 Mbps Gigabit Ethernet

Ethernet ports 4 individual 10/100/1000 Mbps Ethernet ports; up to 3 ports can be operated as additional WAN ports with load balancing. 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 an additional LAN port that can be configured as a WAN 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), LANCOM Wireless ePaper USB stick, USB data storage (FAT file system); bi-directional data exchange is possible

Serial interface Serial configuration interface / COM port (USB-C): 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

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



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Management and monitoring

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

Hardware

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| Weight | 0,99 lbs (450 g) |
| Environment | Temperature range 0–35° C; humidity 0–95%; non-condensing |
| Housing | Robust synthetic housing, rear connectors, ready for wall mounting, Kensington lock; 210 x 45 x 140 mm (W x H x D) |
| Fans | 1 silent fan |
| waste heat (max.) | 120 BTU/h |
| Power consumption (max./idle) | 30 watt / 12 watt |

Declarations of conformity*

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|-------------------------|---|
| Europe/EFTA | CE |
| Australia / New Zealand | RCM |
| 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

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|-------------------|---|
| Manual | Quick Installation Guide (DE/EN) |
| Cable | 2 Ethernet cables, 3m |
| Antennas | Two 3 dBi dipole antennas (Gain depends on frequency.) |
| Power supply unit | External power adapter (230 V), NEST 12 V/2.5 A DC/S, coaxial power connector 2.1/5.5 mm, temperature range from 0 to +40° C, LANCOM item no. 111884 (EU) |



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Support

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| 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) |
| 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 S | 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. 10720 |
| 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) |

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-25 Option (25 channels), item no. 60083 |
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Options

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| LANCOM Content Filter | LANCOM Content Filter +10 user (additive up to 100), 1 year subscription, item no. 61590 |
| LANCOM Content Filter | LANCOM Content Filter +25 user (additive up to 100), 1 year subscription, item no. 61591 |
| LANCOM Content Filter | LANCOM Content Filter +100 user (additive up to 100), 1 year subscription, item no. 61592 |
| LANCOM Content Filter | LANCOM Content Filter +10 user (additive up to 100), 3 year subscription, item no. 61593 |
| LANCOM Content Filter | LANCOM Content Filter +25 user (additive up to 100), 3 year subscription, item no. 61594 |
| LANCOM Content Filter | LANCOM Content Filter +100 user (additive up to 100), 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 All-IP Lizenz Option | Upgrade option for the operation of the LANCOM routers with All-IP connections, support of PBX systems and telephony devices as well as voice & fax services, incl. Voice Call Manager, item no. 61419 |
| 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 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 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-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 |
| XGS-PON ONT SFP module | LANCOM SFP-XGSPON-1, item no. 60207 |
| 1000Base-BX20 SFP module pair | LANCOM SFP-BiDi1550-SC1, item no. 60201 |



LCOS 10.90

LANCOM 1800EFW

Accessories

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|---|---|
| 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 |
| 19" Rack Mount | 19" rack mount adaptor, item no. 61501 |
| 19" Rack Mount | 19" rack mount plus adaptor, item no. 61644 |
| LANCOM Wall Mount | For simple, theft-proof mounting of LANCOM devices with plastic housings, item no. 61349 |
| LANCOM Wall Mount (White) | For simple, theft-proof mounting of LANCOM devices with plastic housings, item no. 61345 |
| 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 |
| *) Note | Support for third-party accessories (SFP and DAC) is excluded and cannot be granted |

Item number(s)

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|---------------------|-------|
| LANCOM 1800EFW (EU) | 62139 |
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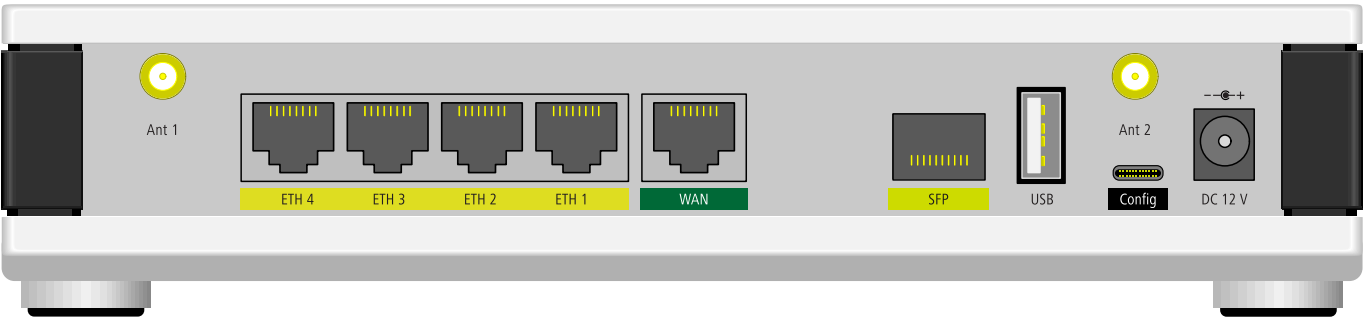


LCOS 10.90

LANCOM 1800EFW

Item number(s)

LANCOM 1800EFW (WW) 62128



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