

LANCOM LX-7500



High-end Wi-Fi 7 with extended range of features for high-demand wireless networks

The Wi-Fi 7 access point LANCOM LX-7500 is synonymous with greater security, sustainability, and automated operation of Wi-Fi infrastructures. It represents a quantum leap in terms of functionality, speed, and efficiency in large, high-traffic wireless networks. The use of the Wi-Fi exclusive 6 GHz frequencies and the additional scan radio ensure interference-free operation with minimum latency and maximum data throughput. With its innovative design, the access point can be integrated into any environment and can be put into operation with minimal effort thanks to practical mounting options.

- Wi-Fi 7 access point with 4×4 MU-MIMO tri-band Wi-Fi – parallel operation in 2.4 GHz, 5 GHz, and 6 GHz for up to 19 Gbps
- OFDMA for more efficient Wi-Fi channel utilization
- Dedicated scan radio for continuous radio field monitoring
- 1× 10 GE and 1× 2.5 GE ports, 2x PoE++ (IEEE 802.3bt)
- Dual PoE for seamless failover in the event of a power failure on one port; alternatively configurable load balancing to combine different PoE classes on the two ports
- IoT support: Bluetooth Low Energy (5.1) and USB 3.0
- Housing with protection class IP50 and UL-2043
- Innovative design incl. theft-resistant and flexible mounting plate
- Automatic wall/ceiling mounting detection
- Power-saving functions with precise consumption measurement
- Automated deployment, operation, and optimization via the LANCOM Management Cloud (LMC)
- WLAN controller support (including layer 3 tunneling)



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LANCOM Wi-Fi 7 – Holistically designed technology

LANCOM Wi-Fi 7 access points were designed with a clear vision: to make professional networks more secure and sustainable, while at the same time reducing the workload of administrators through a high degree of automation. Discover the holistically designed technology!

SECURE



- **Security scan:** radio field monitoring with dedicated scan radio
- **Dual PoE-in:** fully redundant power supply to the second switch for maximum reliability (LANCOM LX-7500)
- **Firmware Engineered in Germany:** guaranteed absents of backdoors, secure boot, and maximum reliability and future viability thanks to regular feature and security updates
- **Integrated assembly lock:** counteracts opportunist theft

SUSTAINABLE



- **LANCOM Sustainability Mode:** Reduced energy consumption in the Wi-Fi thanks to technological options and logical control
- **Energy monitoring for the entire network:** transparency regarding energy consumption, savings, CO₂ emissions, and CO₂ reduction
- **Environmentally friendly packaging:** Plastic-free packaging based on paper fibers - a contribution to uncomplicated and sorted disposal
- **Optimized scope of delivery:** avoidance of packaging waste and electronic waste as well as CO₂ pollution in logistics
- **100% recyclable housing:** 100% recyclable materials without glued individual components

AUTOMATED

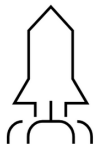


- **Cloud-managed Wi-Fi:** zero-touch commissioning, auto config, 24/7 monitoring & alerting, and Wi-Fi anomaly detection via the LANCOM Management Cloud (LMC) for less manual effort
- **Radio resource management:** self-learning automation solution LANCOM Active Radio Control 2.0 for optimized WLAN installations at the touch of a button – the scan radio allows constant radio field monitoring
- **Energy savings without risk:** Intelligent, cloud-based, dynamically adapting optimization solution LANCOM Active Power Control reduces the energy consumption of the Wi-Fi infrastructure while maintaining operational reliability

Especially when it comes to new technologies, it is important to strengthen your own decision-making authority and to rely on trustworthy partners. By choosing a LANCOM WLAN infrastructure, you are making a conscious decision to strengthen your **digital sovereignty** and thus to protect and control hardware, software, data, IT resources, and processes for greater data security, planning reliability, and risk minimization.

Further information about LANCOM Wi-Fi 7 can be found online at:
www.lancom-systems.com/products/wireless-lan/wifi-7-access-points

Technology knowledge about Wi-Fi 7 is available in the [Wi-Fi 7 white paper](#) or on the [Wi-Fi 7 technology website](#).



Faster data transfer

With Wi-Fi 7, you benefit in practice from a speed boost of up to 240% compared to Wi-Fi 6(E). This is due to the doubled maximum channel width (320 MHz instead of the previous 160 MHz) and the increased information density during transmission processes (4096 QAM instead of the previous 1024 QAM) compared to Wi-Fi 6E. The LANCOM LX-7500 thus offers a maximum transmission rate of 19 Gbps aggregated across all frequency bands.



More stable transmission quality

Multi-link operation (MLO) automatically uses the frequency band with better quality or even uses two frequency bands simultaneously. In addition, Multi-RU & Puncturing effectively mitigates the previously serious consequences of interference signals. This ensures significantly more reliable transmission and reception quality, especially in radio environments with high signal density.



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Housing design optimized for field use

The design of the LANCOM LX-7500 is the result of our decades of market experience and practical feedback from users. Its wedge-shaped design with a flattened shape ensures a discreet appearance that fits into any environment. With protection class IP50 including rubber sealing of the ports, the access point is dustproof. It also comes with certified fire resistance and low-smoke properties in the event of fire (UL-2043). The compact mounting bracket with mounting lock counteracts opportunistic theft.

Specially developed mounting options with the option of using existing drill holes from various manufacturers, as an alternative to accelerated and ergonomic attachment to T-beams on grid ceilings, save time and reduce costs.

Low-profile mounting plate

The scope of delivery includes the compact mounting plate, which is prepared for the use of existing drill holes when replacing various models on the market.

Interference-free use of the 6 GHz frequency band for modern and future applications

Take a seat in the VIP lounge in the Wi-Fi: The LANCOM LX-7500 offers an exclusive Wi-Fi radio field free of interference in the 6 GHz frequency band. While the 2.4 and 5 GHz bands can be used by other wireless technologies such as alarm systems or audio applications, the broadband 6 GHz spectrum is intended for exclusive Wi-Fi use. This enables interference-free Wi-Fi connections with minimal latency and maximum data throughput. Fast-response connections and time-critical Wi-Fi applications in particular benefit from this.

Carpooling in the radio field – OFDMA for more efficient data traffic

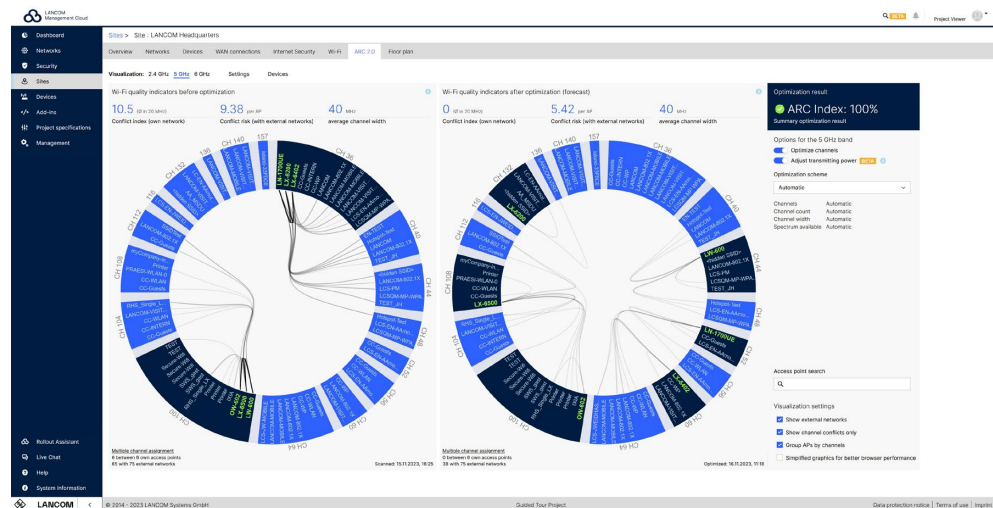
Orthogonal Frequency Division Multiple Access (OFDMA) also aims to optimize the use of the radio field: The frequency range of a Wi-Fi channel is divided into several frequency blocks within a unit of time, creating sub-channels (sub-carriers) with a narrow channel width of up to 2 MHz. This prevents small data packets, which often originate from IoT devices, from taking up and blocking an entire channel with a width of 20, 40 or even 80 MHz. In addition, the LX-7500 bundles several sub-channels and transports them together like a kind of carpool to enable the freest and smoothest possible radio traffic.



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Holistic, automated Wi-Fi optimization with LANCOM Active Radio Control 2.0

Scan, analyze, and optimize - that's all it takes to make your Wi-Fi more efficient, even in locations with data-intensive applications, high user densities, or interfering external networks. The LANCOM Active Radio Control 2.0 (ARC 2.0) automation solution does exactly this job for you! Even under complex conditions, you get a holistic, self-learning optimization of your Wi-Fi installation with improved channel distribution, channel bandwidth utilization, and transmission power. ARC 2.0 can also prioritize access points managed via the LANCOM Management Cloud according to their usage in order to provide capacity exactly where it is needed based on real usage behavior. This saves your IT administrators manual work and gets the best out of your Wi-Fi installation!



Reduced overall energy consumption thanks to LANCOM Active Power Control

In light of rising energy costs and the increasing quest for sustainable solutions in society, LANCOM Active Power Control offers the ideal answer for your network infrastructure. This intelligent, cloud-based optimization solution adapts dynamically and reduces the energy consumption of your Wi-Fi infrastructure without compromising operational security. In „Sustainability Mode“, the functionalities of the access points are reduced to a minimum during idle phases, resulting in lower PoE power consumption. Centralized energy monitoring provides you with transparency about your energy consumption.



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Flexible operation via LANCOM Management Cloud, modern web interface or WLAN controller

Choose freely between operation via the LANCOM Management Cloud, stand-alone via WEBconfig or a WLAN controller! In cloud mode, the LANCOM LX-7500 becomes part of a user-friendly, holistic and automated network management system. Even in stand-alone operation, the LX-7500 offers fast configuration and comprehensive management and monitoring thanks to the intuitive, clear web interface of the new WEBconfig. As a third option, management can also be selected centrally via a WLAN controller.

Dual PoE-in ensures greater reliability and investment protection

The LANCOM LX-7500 can be operated flexibly on each of the two PoE ports (10GE / 2.5GE) via Power over Ethernet (PoE) according to IEEE 802.3bt. For unrestricted operation, a corresponding PoE switch in accordance with IEEE 802.3bt, also known as a PoE++ switch, is ideally used.

The dual PoE-in functionality enables the simultaneous use of both PoE ports in order to create power supply redundancy in addition to data redundancy. Maximum reliability is achieved by redundant cabling of the LANCOM LX-7500 to one PoE++-capable port on each of two independent IEEE 802.3bt-capable switches.

Alternatively, the dual PoE-in technology is suitable for bundling the power supply of two PoE+ (IEEE 802.3at) switches to provide sufficient power for unrestricted operation of the LANCOM LX-7500.

Professional IoT support

With the LANCOM LX-7500, you can easily immerse yourself in the world of the Internet of Things (IoT). Support for Bluetooth Low Energy (5.1) and USB 3.0 opens up many possibilities for you to communicate with modern BLE sensors in devices or objects and to use innovative applications such as asset tracking or digital signage. You can easily operate solutions for electronic shelf labels and other IoT applications via the optionally available LANCOM Wireless ePaper USB.



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Wi-Fi product specification

Frequency band 2.4 GHz, 5 GHz and 6 GHz	2400-2483.5 MHz (ISM), 5150-5700 MHz (depending on country-specific restrictions), 5925-6425 MHz
Integrated Antenna Gain (peak gain)	up to 6 dBi in 2.4 GHz, up to 5 dBi in 5 GHz and up to 6 dBi in 6 GHz
Data rates IEEE 802.11be	→ up to 11530 MBit/s according to IEEE 802.11be with MCS13/QAM-4096 at 6 GHz, 4x4 MIMO and 320 MHz channel width → up to 5765 MBit/s according to IEEE 802.11be with MCS13/QAM-4096 at 5 GHz, 4x4 MIMO and 160 MHz channel width → up to 1150 MBit/s according to IEEE 802.11ax with MCS11/QAM-1024 at 2.4 GHz, 4x4 MIMO and 40 MHz channel width
Data rates IEEE 802.11ax	→ up to 4800 MBit/s according to IEEE 802.11ax with MCS11/QAM-1024 at 6 GHz, 4x4 MIMO and 160 MHz channel width → up to 4800 MBit/s according to IEEE 802.11ax with MCS11/QAM-1024 at 5 GHz, 4x4 MIMO and 160 MHz channel width → up to 1150 MBit/s according to IEEE 802.11ax with MCS11/QAM-1024 at 2.4 GHz, 4x4 MIMO and 40 MHz channel width
Data rates IEEE 802.11ac/n	1733 Mbps according to IEEE 802.11ac (fallback to 6.5 Mbps).
Data rates IEEE 802.11n	600 Mbps according to IEEE 802.11n (fallback to 6.5 Mbps).
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)
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)
Output power per radio chain (additional regulatory limits depending on country setting may apply)	→ 2,4 GHz: 11b 20dBm; 11g 54 MBit 20dBm; HT20/40 MCS7 20dBm; VHT40 MCS9 19dBm; HE40 MCS11 18dBm → 5 GHz: HT20 MCS0 22dBm; HT20 MCS7 20dBm; VHT80 MCS9 19dBm; HE80 MCS11 18 dBm; EHT160 MCS13 17dBm → 6 GHz: HE20 MCS0 22dBm; HE80 MCS9 19dBm; HE80 MCS11 18dBm; HE160 MCS11 18dBm; EHT320 MCS13 17dBm
Radio channels 6 GHz	Up to 24 non-overlapping channels (EU; 20 MHz channel width)
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), configurable maximum transmit power
Radio channels 2.4 GHz	Up to 13 channels, max. 3 non-overlapping (depending on country-specific restrictions), configurable maximum transmit power
Environment Scan	This AP is equipped with an additional Scan Radio, which allows a continuous scan of the WiFi environment.
Multi-SSID	Up to 32; time-controlled activation and deactivation of Wi-Fi networks
Concurrent Wi-Fi clients	Up to 512 clients per WiFi radio
Hotspot	Support for the Cloud-managed Hotspot in combination with the LANCOM Management Cloud; Support for Frederix Hotspot (in combination with LANCOM Management Cloud)



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Supported Wi-Fi standards

IEEE standards	IEEE 802.11be, IEEE 802.11ax, IEEE 802.11ac Wave 2, IEEE 802.11n, IEEE 802.11a, IEEE 802.11g, IEEE 802.11b, IEEE 802.11i, IEEE 802.1X, IEEE 802.11h, IEEE 802.11d, IEEE 802.11v
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Standard IEEE 802.11be

Supported features	MLO (supported via future software update), Preamble Puncturing (supported via future software update), OFDMA Multi-RUs, QAM-4096, 320 MHz channel bandwidth in 6 GHz
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Standard IEEE 802.11ax

Supported features	4x4 DL-/UL-MU-MIMO, DL-/UL-OFDMA, triggered target-wake-time, BSS coloring, QAM-1024, 80 MHz channels, 160 MHz channels
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Standard IEEE 802.11ac

Supported features	4x4 MIMO, 80 MHz channels, 160 MHz channels, MU-MIMO, QAM-256
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Standard IEEE 802.11n

Supported features	4x4 MIMO, 40-MHz channels, 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
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Operating modes

Modes	Standalone, WLC-managed or LANCOM Management Cloud managed
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Wi-Fi security

Encryption options	IEEE 802.1X (WPA3-Enterprise, WPA2-Enterprise), WPA3-Personal, IEEE 802.11i (WPA2-Personal), WEP, LEPS-U (Private PSK, only possible with WPA2), LEPS-MAC
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Encryption algorithms	AES-CCMP, AES-GCMP, TKIP, RC4
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EAP types (authenticator)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-FAST
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Roaming

Roaming	IAPP (Inter Access Point Protocol), Fast Roaming (802.11r), OKC, Pre-Authentication, 802.11k
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LANCOM Active Radio Control

LANCOM Active Radio Control™ 2.0	automated optimization of WLAN channels, channel bandwidth and transmit power, controlled by the LANCOM Management Cloud
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Band Steering	active steering of clients between the 2.4 GHz and 5 GHz band
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LANCOM Active Power Control

LANCOM Active Power Control	LANCOM Sustainability Mode and energy consumption monitoring for the whole network, controlled by the LANCOM Management Cloud
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Bluetooth Low Energy (BLE)

Support of Bluetooth Low Energy technology (BLE)	The device can scan the environment for BLE devices and can forward the resulting scan data via a REST API.
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Layer 2 functions

VLAN	4096 VLAN IDs, static assignment to SSIDs, dynamic Assignment via LEPS-U/LEPS-MAC or 802.1X (RADIUS)
Quality of Service	WME based on IEEE 802.11e
Bandwidth limitation	per SSID, per Client
Multicast	IGMP-Snooping, Multicast-to-Unicast-conversion on WLAN interfaces
Protocols	LLDP, Proxy ARP, LACP, L2TPv3

Network

Protocols	IPv4, IPv6, dual stack
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Interfaces

Ethernet ports	→ ETH1: 10/100/1000/2.5/5/10 GBASE-T (RJ45/8P8C), PoE-in 802.3bt (Dual PoE; configurable for hitless failover when powered by 2x 802.3bt or load balancing when powered by 2x 802.3at), reduced operation mode when powered by 802.3at only → ETH2: 10/100/1000/2.5 GBASE-T (RJ45/8P8C), PoE-in 802.3bt (Dual PoE; configurable for hitless failover when powered by 2x 802.3bt or load balancing when powered by 2x 802.3at), reduced operation mode when powered by 802.3at only
USB 3.0 host port	USB 3.0 host port (USB-A)

Supported IoT Modules

IoT USB modules	LANCOM Wireless ePaper USB, SES-imagotag Retail IoT Connector, Hanshow HS_C09978 ESL Controller, SoluM EGU200NA0X ESL GEN2 USB Gateway
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Hardware

Power consumption	max. 37W
Environment	Temperature range 0–40 °C. Humidity 0–90 %; non-condensing
Housing	robust housing made of polycarbonate and aluminium, protection class IP50, kensington-lock, 270 x 270 x 65 mm
orientation sensor	integrated orientation sensor (accelerometer) to detect the Access Points mounting position.



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Management and monitoring

Management	LANCOM Management Cloud, WLAN-Controller, WEBconfig, LANconfig, LL2M, external Syslog, Packet Capturing, TACACS+
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Monitoring	LANCOM Management Cloud, WLAN-Controller, WEBconfig, LANmonitor, SNMP
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Conformity*

Europe/EFTA	CE
Australia / New Zealand	RCM
Applicable for use in medical environments (EN 60601-1-2)	conforms to EN 60601-1-2
fire test	conforms to UL2043 (plenum rated)
Country of Origin	Engineered in Germany, Made in Taiwan
*) Note	The full text of the specific Declaration of Conformity is available at the following Internet address: www.lancom-systems.com/doc

Scope of delivery

Documentation	Installation Guide (DE/EN); Mounting Instructions (DE/EN)
Mounting	Robust low profile mounting plate, secure attachment of the device with Click-Lock

Accessories

LANCOM PoE++ Injector	1-port PoE injector with up to 5 Gigabit support, integrated power supply, compatible with the standard IEEE 802.3af/at/bt (up to 65W), item no. 61779 (EU)
LANCOM LX-7000 Universal Mount (Bulk 5)	universal mounting plate for LANCOM LX-7000 series, compatible with drill hole pattern of LANCOM LN mount and other widely used AP models, item no. 61914
LANCOM LX-7000 T-Bar Mount (Bulk 5)	Mounting kit for quick and easy mounting of LANCOM LX-7000 series APs on suspended ceilings, AL profile width 22-24 mm, item no. 61915

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

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

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.

LANCOM Management Cloud

LANCOM LMC-A-1Y LMC License	LANCOM LMC-A-1Y License (1 Year), enables the management of one category A device for one year via the LANCOM Management Cloud, item no. 50100
LANCOM LMC-A-3Y LMC License	LANCOM LMC-A-3Y License (3 Years), enables the management of one category A device for three years via the LANCOM Management Cloud, item no. 50101
LANCOM LMC-A-5Y LMC License	LANCOM LMC-A-5Y License (5 Years), enables the management of one category A device for five years via the LANCOM Management Cloud, item no. 50102



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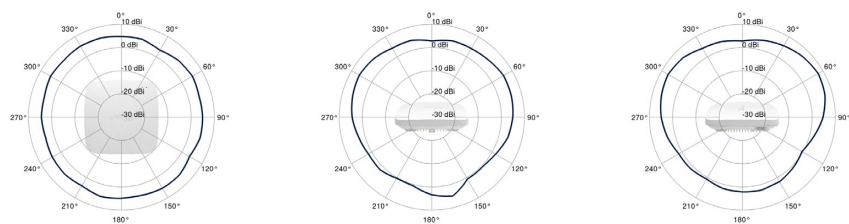
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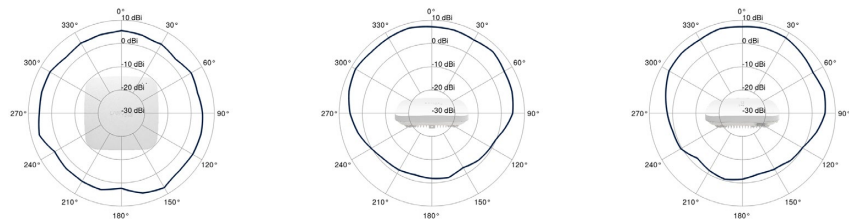
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Antenna Gain

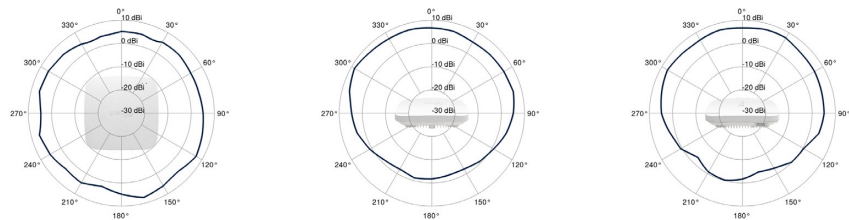
antenna pattern, 2.4 GHz



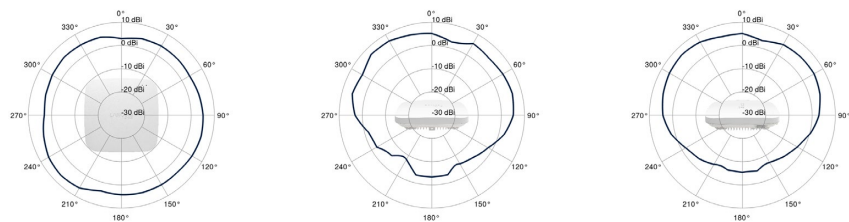
antenna pattern, 5.2 GHz



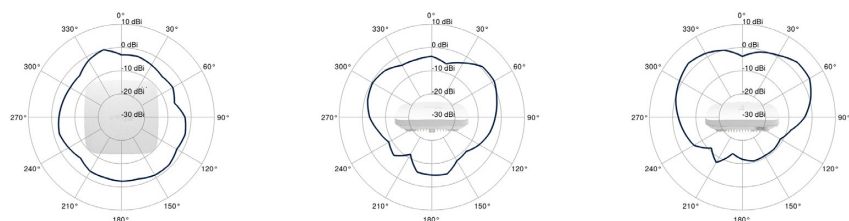
antenna pattern, 5.6 GHz



antenna pattern, 6 GHz



antenna pattern, BLE





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Antenna Gain

antenna pattern, scan radio

