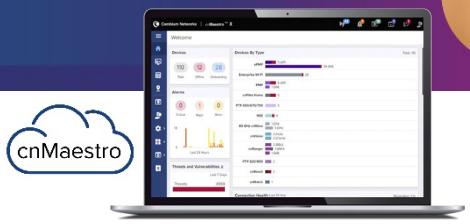
X7-55X Wi-Fi 7 Indoor Access Point

802.11be Tri-band 2+4+4 with SDR Radio Access Point and IoT support

X7-55X AP Quick Look

- Tri-radio/Tri-band Wi-Fi 7
- 6 GHz (4x4), 5 GHz (4x4), 2.4 GHz (2x2)
- 17.9 Gbps aggregate data rate
- 5 GbE uplink port
- LPI (low power indoor) mode
- IOT radio to support many protocols
- Managed by cnMaestro™
- Limited lifetime warranty



Great performance and density for Any Market

The Cambium Networks' X7-55X Wi-Fi 7 Indoor Access Point (AP) with its software definable third radio is designed to deliver high density and cutting-edge performance with flexibility for current and future demands at a price point suitable for any market. Power your network with the latest Wi-Fi technology. The IoT radio is suited to support BLE, Zigbee, Matter or Thread and accommodate for any IoT requirement.[1]

Fast Installation

The X7-55X Wi-Fi 7 AP streamlines installation, saving you time and money. Its multi-functional mounting system easily installs the access point over multiple telecom and electrical junction boxes, on a suspended drop ceiling system, or to any flat surface. The recessed Ethernet port and trim mounting bracket enables an aesthetically pleasing installation and final finish. Plus, the new Wi-Fi 7 junction box bracket is backwards compatible with the XV3-8 and XE3-4.

Cloud and On-Premises Management

X7-55X operates using Cambium's cnMaestro Network Management, accessible on both cloud and on-premises[2] platforms. Aligned with Cambium's ONE Network, cnMaestro facilitates the management of all devices through a user-friendly interface, streamlining control from backhaul to edge devices. This enables you to start managing your network right away, reducing training and troubleshooting time.

cnMaestro X Assurance[3]

Gain real-time insights into network health and troubleshoot client issues efficiently using AI-based analytics to move from reactive to proactive SLA management.

[1] Some IoT protocols will be made available in future software versions.
[2] cnMaestro On-Premises support will be available in a future release.
[3] cnMaestro X Assurance is available with cnMaestro Cloud.

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Access Point Specifications

Radios	2.4 GHz 2x2:2 with 802.11 b/g/n/ax/be 5 GHz 4x4:4 with 802.11 a/n/ac/ax/be Software definable 5 or 6 GHz 4x4:4 with 802.11 a/n/ac/ax/be
IoT Radio	Built-in BLE 5.1 or 802.15.4 IoT radio Max transmit power 20 dBm with the integrated 3 dBi omnidirectional antenna gain Zigbee, Matter, and Thread support*
Supported Data Rates	802.11be: 7.3 to 11,530 Mbps 802.11ax: 7.3 to 4,804 Mbps 802.11ac: 6.5 to 3,466 Mbps 802.11n: 6.5 to 600 Mbps 802.11a/g and a: 6 to 54 Mbps 802.11b: 1 to 11 Mbps
Max PHY Rate	2.4 GHz: 574 Mbps; 5 GHz: 5,764 Mbps; 6 GHz: 11,530 Mbps
Antenna	Omnidirectional internal antennas (peak gain): 2.4 GHz: 5 dBi; 5 GHz: 6 dBi; 6 GHz: 7 dBi; IoT 2.4GHz: 3 dBi
Maximum Radio Tx Power* (combined Tx power across all Tx chains)	2.4 GHz: 25 dBm, max EIRP: 32 dBm 5 GHz: 26 dBm, max EIRP: 35 dBm 6 GHz: 26 dBm, max EIRP: 34 dBm
MIMO Support	2x2 (2.4 GHz, 5 GHz, and 6 GHz) SU-MIMO 2x2 (2.4 GHz) MU-MIMO both in UL and DL direction 4x4 (5 GHz, and 6 GHz) MU-MIMO both in UL and DL direction
USB Interface	One USB 2.0 type A port, max 5 W power supply
Ethernet Interface	One 10/100 Mbps/ 1 / 2.5 / 5 Gbps PoE port
Power	Max power consumption 33W (802.3bt) Limited functionality according PoE delivered, see table. Typical power consumption with BLE / 802.15.4 radio enabled: 19W LLDP power negotiation support

	802.3bt (Class 6)	802.3at (Class 4)	802.3af (Class 3)	No Class detected
Radio 1 (2.4 GHz)	on	on	off	off
Radio 2 (5 GHz)	on	on	off	off
Radio 3 (SDR)	on	off	off	off
USB	on	off	off	off
IoT	on	on	off	on
Ethernet	on	on	on	on

Dimensions	240 mm x 240 mm x 50 mm (9.45 in x 9.45 in x 1.97 in)
Weight	Weight: 1,600 g (3.52 lb)
Mount Options	Drop ceiling T-bar, ceiling tile, 4" square electrical box, 4" round box, NA single gang box, EU single gang box, wall or ceiling mount
Physical Security	Kensington lock slot
LEDs	Multicolor status LED Blue: Managed from cnMaestro Green: Up and running, not managed from cnMaestro Amber: Booting
Ambient Operation Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Operating Humidity	95% RH non-condensing
Reliability	MTBF 1,335,881 hours at +25°C operating temperature and 357,922 at 50°C operating temperature

*Will be supported in future releases

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X7-55X Wi-Fi 7 Indoor Access Point

Access Point Specifications, continued

Device Management and diagnostics	cnMaestro Cloud / On-Premises management (version 5.2.1 and above)	
Local access	Web access with HTTPs / HTTP protocol	
	CLI access with SSH / telnet protocols, serial console port.	
Certifications (Compliance)	FCC, IC, CE, ANZ	EN 300 328, FCC Part 15C, RSS-247 - 2.4 GHz RF
	IEC/UL 62368-1 – Electrical Safety	EN 301 893, EN 302 502, FCC Part 15E, RSS-247 - 5 GHz RF
	EN 60601-1-2 - Medical	EN 303 687, FCC Part 15E, RSS-248 – 6 GHz RF
	EN 301 489 / EN 61000 - EMC	EN 62311 - Human Safety/RF Exposure
	UL 2043 - Plenum	WEEE, REACH, and RoHS - Environmental

Network Specifications

Security & Authentication	Open, WPA-TKIP, WPA2-AES either Enterprise and PSK, Support for ePSK in local, Cloud or RADIUS
	WPA3 with PSK (WPA3-SAE), ePSK, Enterprise, Enterprise-CNSA, OWE (Enhanced Open)
	OSEN and PMF (802.11 W)
	MAC authentication with local database or external database using RADIUS protocol
	802.1X with EAP-TTLS, EAP-TLS / MSCHAPv2, PEAPv0 / PEAPv1 / EAP-PEAP / EAP-SIM/AKA/AKA'/FAST
	MAC auth fallback to guest portal
	Hotspot WEB authentication
Fast Roaming Support	PMK, OKC, and 802.11r for fast layer-2 roaming
	Seamless L2 roaming for wireless and guest clients across APs in the same L2 network
	cnMaestro-assisted roaming for the guest clients
Wi-Fi Quality of Service	WMM (packet marking either with 802.1p or IP DSCP), WMM-PS, U-APSD
	Multicast to unicast conversion
MESH Support	Auto-discovery and self-healing wireless MESH support on 2.4 GHz, 5 GHz, and 6 GHz band
	MESH and Client SSIDs can co-exist on the same radio interface
SSID	16 SSIDs per radio, 48 SSIDs per AP
	SSID scheduling
Client Capacity	1280 clients per AP; 256 on 2.4 GHz, 512 on 5 GHz, and 6 GHz
	Max client connections limit per SSID / radio / device
Band Steering	Yes
Sticky Client Management	Option to disconnect the client on minimum SNR threshold
Data Limit	Client bitrate/time/throughput limit per SSID
Dynamic RF Channel and Power Management	Auto-channel selection
	Auto-RF dynamic channel switch based on channel utilization and Wi-Fi / non-Wi-Fi interferences
	Auto-RF dynamic power adjustment with the neighboring APs' transmit power
WIDS and WIPS	Wireless packets flood (excessive association, authentication, de-authentication, disassociation, and EAP) detection
	Rogue AP, Honeypot AP detection and termination
Wireless Users Policy Management	Standard RADIUS, Accounting, WISPr, and Cambium VSA attributes support
	COA messages (disconnect, VLAN ID, session, etc.) support
	User groups with RADIUS assigned filter rules
Wireless Devices Policy Management	Device grouping based on device fingerprinting with L2, L3, L4, and L7 access control rules

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Network Specifications, continued

RADIUS and Accounting Support	Per SSID based RADIUS authentication and accounting server Accounting interval with start, stop, and interim messages with standard / Cambium VSA accounting attributes Up to 3 RADIUS authentication and accounting server with failover and load balancing option Dynamic authorization and disconnect using CoA messages	
VLAN Assignment	Per SSID based 802.1q VLAN tagging Dynamic VLAN assignment from external RADIUS server, max 4096 Local VLAN pool RADIUS assigned VLAN pool ePSK assigned VLAN ID, local, cloud or RADIUS assigned	
ACL and Application Control Rules	Per SSID or device level, layer 2, 3 (IPv4 and IPv6), 4, and 7 access control rules with packet marking option Application recognition, packet marking, rate limiting, and option to drop and deny application / application category Per SSID DNS ACL option Define custom application based on IP address and monitor/control custom application traffic	
Connection Logging	Per SSID basis option to log TCP, UDP and IP connection, and DNS query NAT logging to external syslog servers	
IP Support	IPv4 and IPv6	
Tunneling Protocols	WWAN, PPPoE, L2TPv2, L2GRE, & VXLAN*	
SNMP and Syslog Support	SNMP v2 and v3 get operational mode Syslog messages to external syslog server	
DHCP Client and Server	Option to enable DHCP client on L3 VLAN interface On-board DHCP server with multiple DHCP pool options	
Analytics and location Service	Option to integrate Wi-Fi and BLE radios scan results with an external location analytics server through HTTP/HTTPs post	
Client Connection and Life Cycle Analytics (available with cnMaestro X Cloud)	Exhaustive client life cycle analytics with root cause analysis Connection success and failure analytics	Disconnection analytics Client dashboard with roaming history
EasyPass (Guest Access Service) (Features marked with an X are available with cnMaestro X)	cnMaestro hosted captive portal service Multiple authentication methods supported to on-board guest user • BYOD and IoT onboarding X • Microsoft® Azure AD & Google Workspace® login X • Voucher-based, RADIUS-based, and paid access X • Self-registration via SMS/email X • Sponsored access X • Click-through access with terms acceptance • Social login (Google®, Facebook®) • WiFi4EU (EU specific)	IP whitelist or walled garden list support Guest access on-boarding using payment gateway vendors X • PayPal® • IPpay • Quickpay Integration with the third-party captive portal vendors Session limits, data quotas, bandwidth control Custom splash pages with multi-language support Policy enforcement via RADIUS, WISPr, and cnMaestro-hosted policies
Services	L2–L7 application visibility & control, Wi-Fi calling control, WIDS/WIPS, NTP, Syslog, SNMP traps, DNS proxy, auto-off on WAN failure, Open roaming*	
API	RESTful management and statistics API presence location APIs	

*Will be supported in future releases

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Standards

Wi-Fi Protocols	802.11 b: BPSK, QPSK, CCK 802.11 a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11 ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM 802.11 ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM and 1024-QAM 802.11be: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM 20/40/80/160/320 MHz, DSSS, OFDM, OFDMA, MIMO, UL/DL MU-MIMO Multi-link operation (MLO)*, multi-resource units Target wait time (TWT), BSS coloring, long OFDM symbol, transmit beamforming (TxBF) 802.11n/ac packet aggregation: A-MPDU, A-MSDU Maximum ratio combining (MRC), cyclic delay/shift diversity (CDD/CSD), Space-time block coding (STBC), low-density parity check (LDPC) Passpoint 3.0 IEEE 802.11 a/b/g/n/ac/ax/be - d/e/h/i/k/r/u/v/w

* Will be supported in future releases

Regulatory Information

Frequency Bands	2.412 GHz to 2.484 GHz ISM	5.925 GHz to 6.425 GHz U-NII-5
	5.150 GHz to 5.250 GHz U-NII-1	6.425 GHz to 6.525 GHz U-NII-6
	5.250 GHz to 5.350 GHz U-NII-2A	6.525 GHz to 6.875 GHz U-NII-7
	5.470 GHz to 5.725 GHz U-NII-2C	6.875 GHz to 7.125 GHz U-NII-8
	5.725 GHz to 5.855 GHz U-NII-3	
	5.855 GHz to 5.895 GHz U-NII-4	
Channels List	2.4 GHz channels: 1 to 13	
	5 GHz channels: 36 to 64, 100 to 144, 149 to 177	
	6 GHz channels: 1 to 233	

EIRP limitations apply to the listed countries.
ROW Individual country limits may apply. Please contact your regional sales manager for country-specific regulations.

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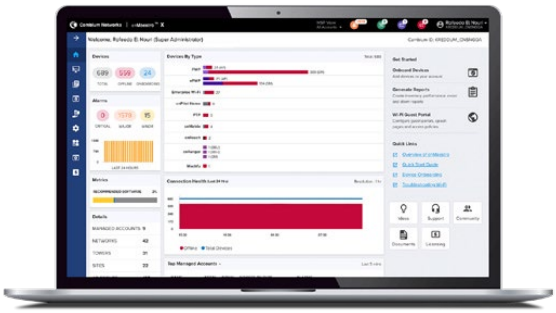
Management



cnMaestro uses a distributed intelligence architecture with cloud-first management and edge-intelligent APs that self-optimize for the RF environment. cnMaestro delivers a single pane-of-glass management for Cambium broadband fixed wireless, cnMatrix Ethernet Switches, enterprise-grade Wi-Fi APs, NSE Service Edge, and residential service provider routers.

cnMaestro can be deployed on cloud or on-premises via a virtual machine.

To serve a growing market for advanced management and services functionality, Cambium Networks offers cnMaestro in two management tiers:

cnMaestro X

Paid subscription that includes:

- Advanced device management capabilities
- Deep packet inspection (DPI) application visibility and Control for 2,400+ apps
- RESTful management and statistics API
- Presence location push APIs
- Graphic reports
- Webhooks
- Market Apps
- Cambium Care Pro for 24x7 technical support
- Accelerated access to L2 engineers and regular software updates

Assists

- Assesses the network's configuration and identifies weak security settings and proposes a fix to ensure the network configuration is up to the top security industry standards

X Assurance

- Helps to quickly identify network-wide connectivity issues by isolating every element of the client's lifecycle, either radio or network related
- Gives an overview quality index of the network and highlights each element's contribution to easily identify the worst offender
- Provides insight of probable causes and proposes fixes for the administrator to apply
- Provides individual client connectivity visibility throughout the entire lifecycle of its connection to easily identify each connection's result and highlight the failure reason, should there be any

EasyPass Portal with Additional Options

- Self-registration: Form-based access
- Sponsored guest: Guest ambassador-based access
- Paid access: Monetize the Wi-Fi access
- Microsoft Azure: Corporate user login
- Google Login: Web login using Google accounts

cnMaestro Essentials

License-free cloud management that delivers a disruptive total cost of ownership (TCO) for organizations of all sizes. Includes EasyPass for OneClick or voucher-based connection as well as WiFi4EU access.

Find out more about cnMaestro

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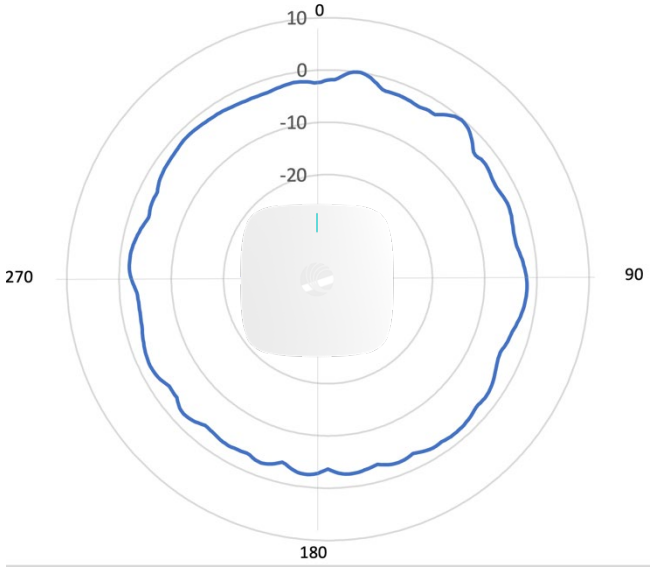
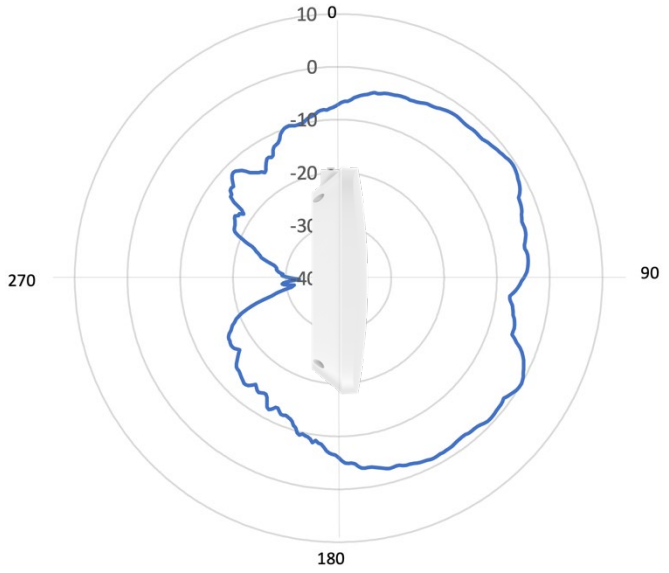
Antenna Patterns

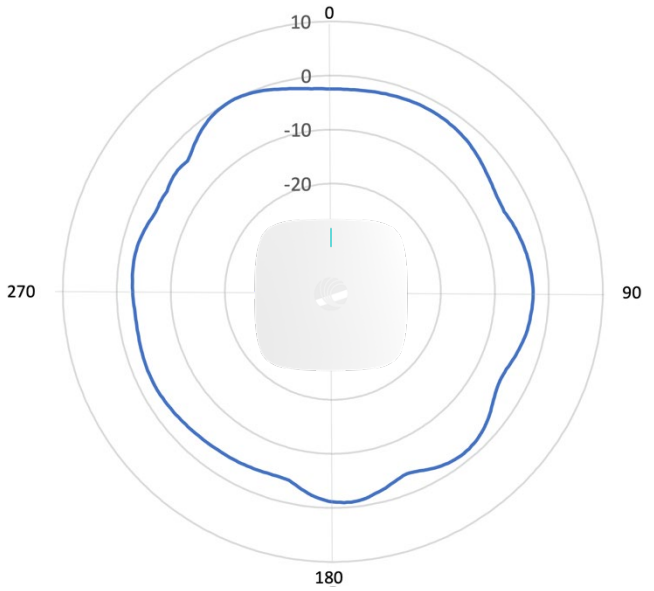
5 GHz Antenna Normalized Azimuth Gain [dB]



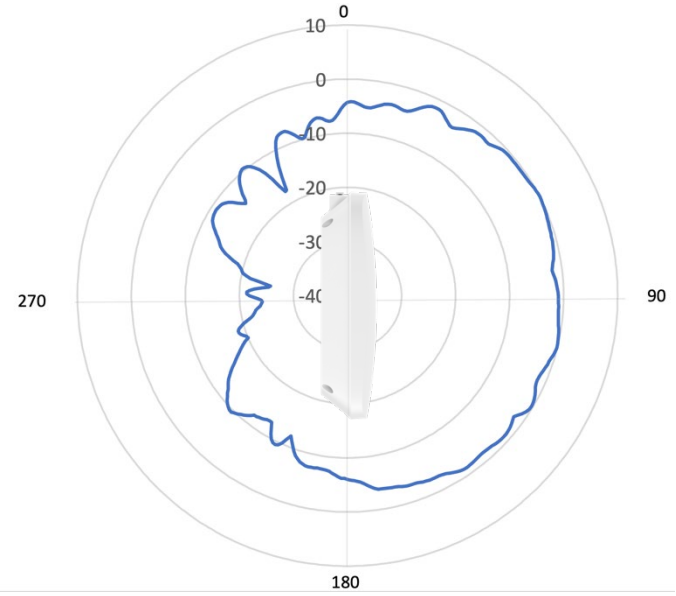
5 GHz Antenna Normalized Elevation Gain [dB]



2 GHz Antenna Normalized Azimuth Gain [dB]



2 GHz Antenna Normalized Elevation Gain [dB]



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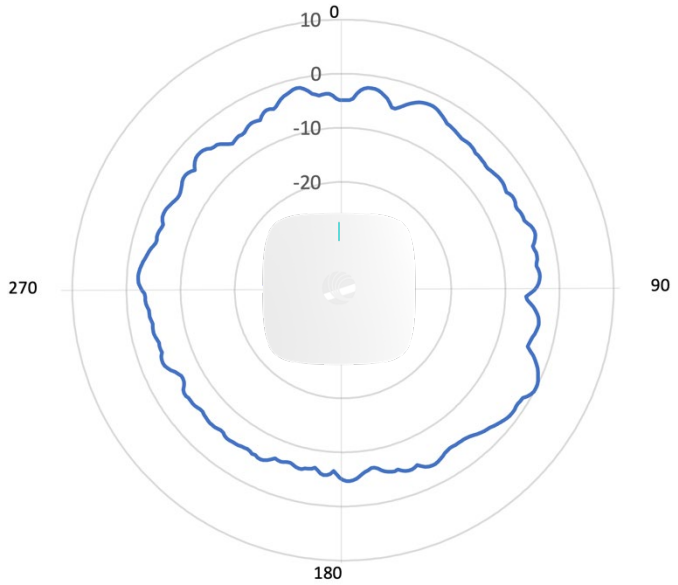
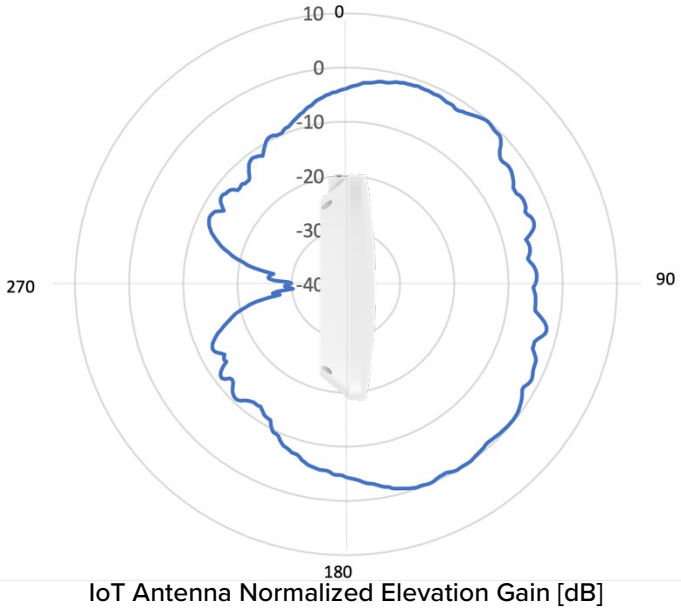
Antenna Patterns, continued

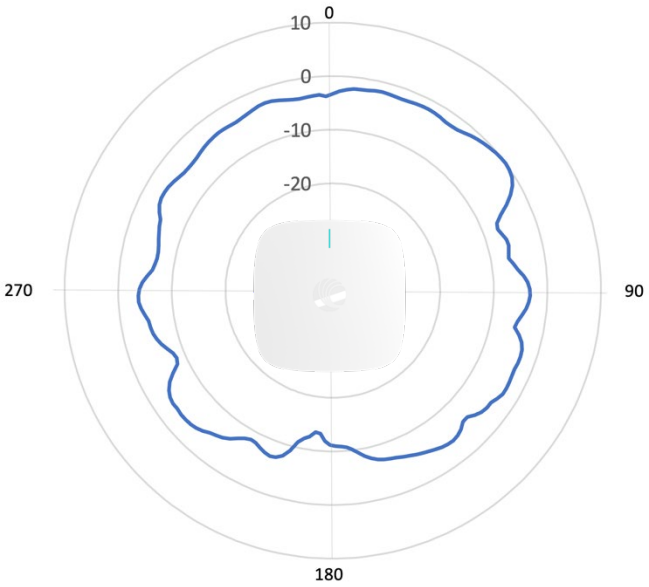
6 GHz Antenna Normalized Azimuth Gain [dB]



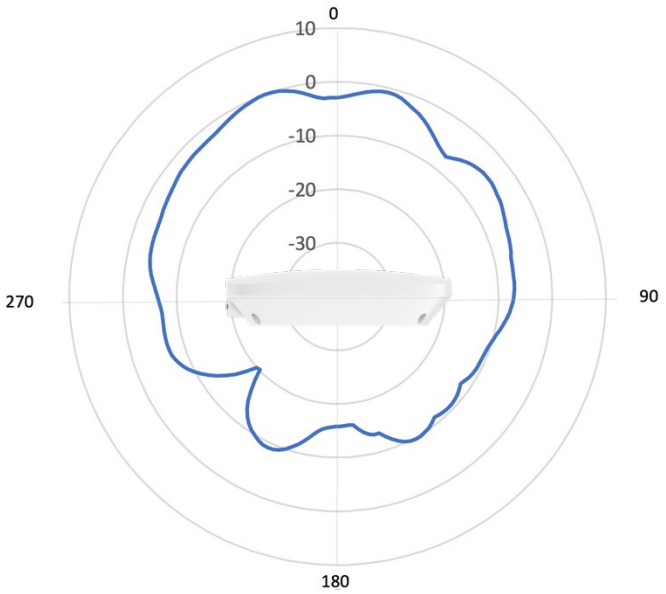
6 GHz Antenna Normalized Elevation Gain [dB]



IoT Antenna Normalized Azimuth Gain [dB]



IoT Antenna Normalized Elevation Gain [dB]



X7-55X Wi-Fi 7 Indoor Access Point

Access Point pictures

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X7-55X Wi-Fi 7 Indoor Access Point

Ordering Information

Regulatory Model	X7-55X
X7-55X-0A00-CA	X7-55X Indoor Tri-band Wi-Fi 7 AP 2+4+4 with SDR, 5GbE. IoT radio. CA
X7-55X-0A00-EU	X7-55X Indoor Tri-band Wi-Fi 7 AP 2+4+4 with SDR, 5GbE. IoT radio. EU
X7-55X-0A00-RW	X7-55X Indoor Tri-band Wi-Fi 7 AP 2+4+4 with SDR, 5GbE. IoT radio, 6 GHz oper. disabled. ROW
X7-55X-0A00-US	X7-55X Indoor Tri-band Wi-Fi 7 AP 2+4+4 with SDR, 5GbE. IoT radio. US
X7-55X-0A06-RW	X7-55X Indoor Tri-band Wi-Fi 7 AP 2+4+4 with SDR, 5GbE. IoT radio, 6 GHz oper. enabled. ROW
N000000L142A	PoE, 60W, 56V, 5GbE DC Injector, Indoor, Energy Level 6 Supply, accepts C5 connector
C000000L141A	PoE, 60W, 56V, 10GbE DC Injector, Indoor, Energy Level 6 Supply
AX-X7-1BRKT-WW	Mounting Bracket for X7 series enterprise access point. Compatible with X7 series, XE3-4, XV3-8
AX-X7-DBRKT-WW	Adjustable Angle Mounting Bracket for X7 series enterprise access point.

cnMaestro X Subscriptions

MSX-SUB-X7-55X-1	cnMaestro X 1-Year subscription for one X7-55X AP. Creates one device Tier3 slot. Includes Cambium Care Pro support. Order CCADV-UPG-X7-55X-1 for NBD advanced replacement hardware support.
MSX-SUB-X7-55X-3	cnMaestro X 3-Year subscription for one X7-55X AP. Creates one device Tier3 slot. Includes Cambium Care Pro support. Order CCADV-UPG-X7-55X-3 for NBD advanced replacement hardware support.
MSX-SUB-X7-55X-5	cnMaestro X 5-Year subscription for one X7-55X AP. Creates one device Tier3 slot. Includes Cambium Care Pro support. Order CCADV-UPG-X7-55X-5 for NBD advanced replacement hardware support.

Cambium Care Support

CCPRO-SUP-X7-55X-1	Cambium Care Pro, 1-year support for one X7-55X. 24x7 TAC support, SW updates
CCPRO-SUP-X7-55X-3	Cambium Care Pro, 3-year support for one X7-55X. 24x7 TAC support, SW updates
CCPRO-SUP-X7-55X-5	Cambium Care Pro, 5-year support for one X7-55X. 24x7 TAC support, SW updates
CCADV-SUP-X7-55X-1	Cambium Care Advanced, 1-year support for one X7-55X Wireless AP. 24x7 TAC support, SW updates, and NBDS advance replacement for HW
CCADV-SUP-X7-55X-3	Cambium Care Advanced, 3-year support for one X7-55X Wireless AP. 24x7 TAC support, SW updates, and NBDS advance replacement for HW
CCADV-SUP-X7-55X-5	Cambium Care Advanced, 5-year support for one X7-55X Wireless AP. 24x7 TAC support, SW updates, and NBDS advance replacement for HW
CCADV-UPG-X7-55X-1	Cambium Care Advanced Add-on to cnMaestro X, 1-year support for one X7-55X. 24x7 TAC support, SW updates, and NBDS advance replacement for HW
CCADV-UPG-X7-55X-3	Cambium Care Advanced Add-on to cnMaestro X, 3-year support for one X7-55X. 24x7 TAC support, SW updates, and NBDS advance replacement for HW
CCADV-UPG-X7-55X-5	Cambium Care Advanced Add-on to cnMaestro X, 5-year support for one X7-55X. 24x7 TAC support, SW updates, and NBDS advance replacement for HW

Limited Lifetime Warranty

Cambium Networks X7-55X Wi-Fi 7 Access Point includes a limited lifetime hardware warranty for a period of 5 years after end of sale

ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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