

C-120

Dual radio, dual concurrent 4x4:4 MU-MIMO 802.11ac Wave 2 access point

Key Specifications

- Up to 800 Mbps for 2.4 GHz radio
- Up to 1.7 Gbps for 5 GHz radio
- 802.11ac Wave 2 support
- 4x4 MU-MIMO with four spatial streams per radio
- Eight integrated omnidirectional antennas
- 20/40/80/80+80 MHz channel width support
- 2x Gigabit Ethernet port
- Simultaneous MU-MIMO clients
- Full operational capacity with 802.3at PoE+
- Wall and ceiling mounting support



Ergonomic Design and High Performance

Mojo C-120 is an enterprise-grade 4x4 MU-MIMO 802.11ac AP with dual concurrent 5 GHz and 2.4 GHz band radios supporting 802.11a/n/ac Wave 2, 802.11b/g/n, four spatial streams, and data rates of up to 1.7 Gbps and 800 Mbps, respectively.

Why Choose the C-120?

C-120 is a leader in the next generation 802.11ac access point ecosystem, boasting four antennas and four spatial streams for truly unprecedented throughput and client capacity capabilities. C-120 is a must for all critical, high-density networks that expect a high volume of diverse clients with diverse needs. Common deployment scenarios include large schools, large remote offices, auditoriums, meeting rooms, and enterprise campuses.

With its Wave 2 chipset, the C-120 takes advantage of the latest modulation and beamforming techniques to transform WiFi networks and offer the speeds and reliability once thought only possible over the wire. Best of all, the C-120 offers this best-in-class performance at a similar cost of competitive 802.11ac Wave 1 access points.

Mojo Cloud Managed WiFi

C-120 is managed by the Mojo Cloud that enables a complete workflow for wireless access, security and engagement. It leverages a purpose-built cloud architecture to produce enterprise-grade wireless networks for every application required, and ensures high reliability through an automated, scalable, secure and cost effective approach.

Key Features

- 100% controller-free
- Zero-touch deployment through automatic cloud activation and configuration
- Cloud-defined operating modes for dedicated access, dedicated security or dual-mode
- Support for up to 8 distinct SSIDs per radio
- Integrated firewall, traffic shaping, QoS and BYOD controls per SSID
- Dynamic RF optimization through smart steering, band steering and optimal channel selection
- Application visibility through layer 7 deep packet inspection
- Automated device access logging
- No-WiFi VLAN monitoring for extended rogue access point detection
- Third party analytics integration with real-time data transfer
- Self-healing wireless mesh networking

What really matters

The future of WiFi requires intelligent, self-reliant access points that support high-performing, highly reliable networks without the need of antiquated controllers. This approach removes the complexity, instability and high costs associated to enterprise WiFi today.

Access

The C-120 creates WiFi networks that require less time and resources to deploy and maintain compared to traditional devices, resulting in significant cost savings.

- Mojo access points take less than two minutes to activate and configure after connecting to the cloud
- Support for up to eight individual SSID's per radio allows for maximum flexibility in network design
- Network controls like NAT, Firewall and QoS occur at the access point level, ensuring faster and more reliable networks
- Persistent scanning of all 802.11 channels results in increased insight and data about surrounding environmental factors that assist in RF optimization and client handling
- Smart steering addresses sticky client issues by automatically pushing clients with low speeds to a closer access point
- Band steering manages channel occupancy, pushing clients to the 5 GHz channel for optimal throughput
- Access points continue to broadcast and support wireless networks even if their connection with the cloud is interrupted

Security

The C-120 offers complete visibility and control of the wireless airspace that keeps the integrity of the network in check and actively protects users without manual intervention.


- Every Mojo access point is equipped with the industry's only fully integrated wireless intrusion prevention capabilities
- Runs complete spectrum scans while simultaneously serving wireless clients without a third radio
- Mojo's patented Marker Packets™ are used to accurately detect access points on any network with the fewest false positives in the industry
- Mojo access points can be converted to a dedicated security sensor with a single click for maximum wireless protection
- VLAN monitoring enables a virtual connection to non-WiFi networks for complete network rogue detection and prevention
- Automatic prevention combines over-the-wire and over-the-air techniques to keep unauthorized clients on the network and authorized clients on it
- Access points continue to scan for wireless threats and enforce security policy even if their connection with the cloud is interrupted

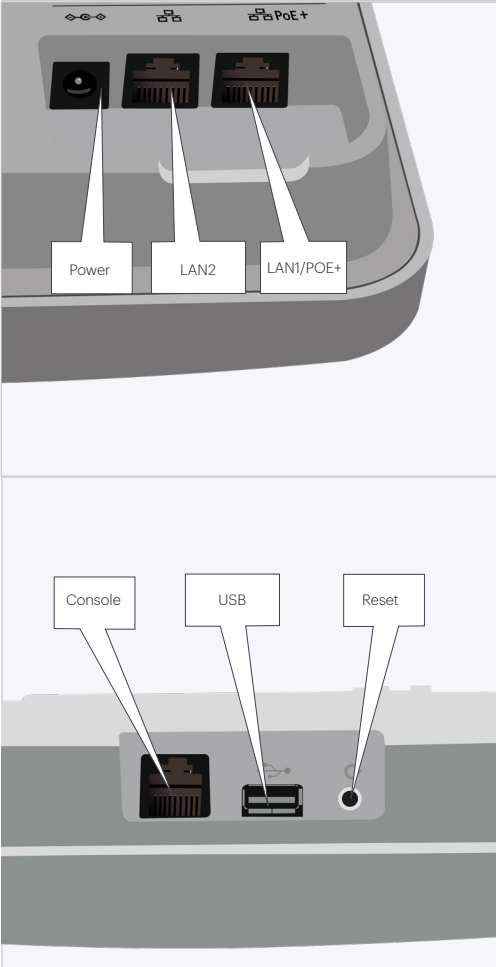
Engagement

The C-120 collects massive amounts of data and supports immersive guest network experiences that develops and reinforces the relationship between them and the brand.

- Persistent scanning of all 802.11 channels results in a comprehensive list of active wireless clients across the enterprise
- Choice statistics like location, duration, distance from access point and time of day are stored locally for every active wireless client
- Choice statistics like session duration, total data transfer up and down, data rate, smart device type and top-level domain are stored locally for every active connection
- Real-time notifications sent to third party systems that alert to the presence of enrolled devices
- Enables proximity marketing programs that trigger when certain devices are present
- Triggers automatic messaging via MMS, in-browser notifications and more

Physical Specifications

 <p>Front View</p>	Property		Specification	
	Physical Dimensions		220 mm X 220 mm X 52 mm	
	Weight		1.380 kg (2.86 lb)	
	Operating Temperature		0°C – 40°C (32°F – 104°F)	
	Storage Temperature		-25°C – 75°C (-13°F – 167°F)	
	Humidity		0-95% non-condensing	
	Max power consumption		19.1W (802.3at)	12.95W (802.3af)
			19.5W (DC plug)	8W (idle)
	Chipset		Qualcomm QCA8068	
	Processor and RAM		Qualcomm IPQ8064 1.4 GHz dual core ARM processor with 256 MB RAM and 128 MB Flash	



Port	Description	Connector Type	Speed/Protocol
Power	12V DC/802.3at (PoE+)	5.5 mm overall diameter/2.1 mm center pin/hole	N/A
LAN2	Gigabit Ethernet port that can be used for wired extension for an SSID.	RJ-45	10/100/1000 Mbps Gigabit Ethernet
LAN1/ PoE+	Gigabit Ethernet port used to connect to the wired LAN and communicate with the Mojo Cloud or Server. This port can also be used to power the device using the 802.3at (PoE+)/ 802.3af (PoE) standard.	RJ-45	10/100/1000 Mbps Gigabit Ethernet 802.3af/at Class 0 PoE/PoE+ PoE input voltage: 48V If using PoE (802.3af): <ul style="list-style-type: none"> • USB port and LAN2 port disabled • 2.4 GHz radio - 1x1 mode with 15 dBm transmit power • 5 GHz radio - 1x1 mode with 15 dBm transmit power
Console	Establish 'config shell' terminal session via serial connection	RJ45	<ul style="list-style-type: none"> • RS 232 Serial (115200 bits per second) • Data bits:8; Stop bits: 1 • Parity: None • Flow Control: None
USB	USB 2.0 port	Not in use	Not in use
Reset	Reset to factory default settings	Pin hole push button	Hold down and power cycle the device to reset

Operational Specifications

Input Power	12V DC (5.5mm overall diameter/2.1mm center pin/hole)/802.3af (PoE)/802.3at (PoE+)
Number of Radios	2 radios; One 2.4GHz and 5GHz radio each for simultaneous dual band client access.
Max Clients Supported	512 clients per radio (dependent upon use cases)
MIMO	4 X 4 for 2.4/5GHz Radios
Number of Spatial Streams	4 for 2.4/5GHz Radios
RF Transmit Power	27dBm per radio (max); Actual power for Tx will depend on Country Regulatory Domain
80+80MHz Non-Contiguous Channel Bonding	Yes
Simultaneous MU-MIMO Clients	64
Users in a MU-MIMO group with a 2x2 client	3
Bandwidth Agility	Yes

Small Cells Interference Mitigation (pico-cells, femtocells, microcells)	Supported
Frequency Bands	2.4-2.4835 GHz, 4.9-5.0GHz, 5.15-5.25 GHz; (UNII-1), 5.25-5.35 GHz, 5.47-5.6 GHz, 5.650-5.725 GHz (UNII-2), 5.725-5.85 GHz (UNII-3)
Dynamic Frequency Selection	Supported in compliance to all latest amendments from FCC, CE, IC, CB, TELEC, KCC regarding certifications.

Frequency, Modulation, and Data Rates

IEEE 802.11b/g/n			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
		2400 ~ 2483.5 MHz	2400 ~ 2473.5 MHz
Modulation Type	DSSS, OFDM		
Peak Data Rates	Up to 800 Mbps (MCS 0-31)		
Antenna	Integrated modular high efficiency PIFA antenna x4 (peak gain: 4.84 dBi)		

IEEE 802.11a/n/ac			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
		4.92 ~ 5.08 GHz 5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47 ~ 5.725 GHz 5.725 ~ 5.825 GHz	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.725 ~ 5.825 GHz
Dynamic Frequency Selection	DFS and DFS2		
Modulation Type	OFDM		
Peak Data Rates	Up to 1.7 Gbps (MCS 0-31)		
Antenna	Integrated modular high efficiency PIFA antenna x4 (peak gain: 5.71 dBi)		

Maximum Aggregate Transmit Power

For 5 GHz

MCS Index	Transmit Power(dBm)
802.11a (legacy)	
6 Mbps	27
36 Mbps	25
48 Mbps	24
54 Mbps	24
802.11n HT20 (legacy)	
MCS 0,1,8,9,16,17, 24,25	27
MCS 2,3,10,11,18,19,26,27	26
MCS 4, 5, 12, 13, 20, 21, 28, 29	25
MCS 6, 14, 22, 30	24
MCS 7, 15, 23, 31	23
802.11n HT40	
MCS 0,1,8,9,16,17,24,25	25
MCS 2,3,10,11,18,19,26,27	24
MCS 4,5,12,13,20,21,28,29	23
MCS 6,7,14,15,22,23,30,31	22
802.11ac 256QAM VHT80	
3/4 Code Rate	21
5/6 Code Rate	20

For 2.4 GHz

MCS Index	Transmit Power(dBm)
802.11b (legacy)	
1 Mbps - 11 Mbps	27
802.11g (legacy)	
6 Mbps	27
54 Mbps	24
802.11n HT20 (legacy)	
MCS 0,1,8,9,16,17, 24,25	27
MCS 2,3,10,11,18,19,26,27	26
MCS 4, 5, 12, 13, 20, 21, 28, 29	25
MCS 6, 14, 22, 30	24
MCS 7, 15, 23, 31	23
802.11n HT40	
MCS 0,1,8,9,16,17,24,25	25
MCS 2,3,10,11,18,19,26,27	24
MCS 4,5,12,13,20,21,28,29	23
MCS 6,7,14,15,22,23,30,31	22

Country-Wise Max Transmit Powers (dBm)

Countries	2.4 GHz	5 GHz
Australia	20	23
Canada	30	23
India	20	20
Israel	20	20
Japan	20	20
UAE	20	17
USA	20	23

Note:

The actual transmit power will be the lowest of:

- Value specified in the Device Template
- Maximum value allowed in the regulatory domain
- Maximum power supported by the radio

Receive Sensitivity

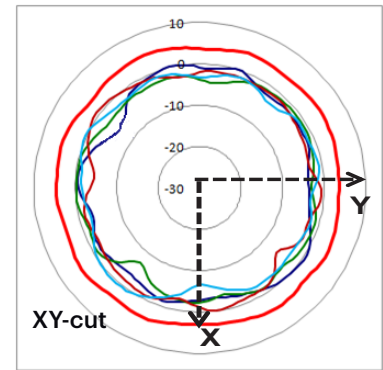
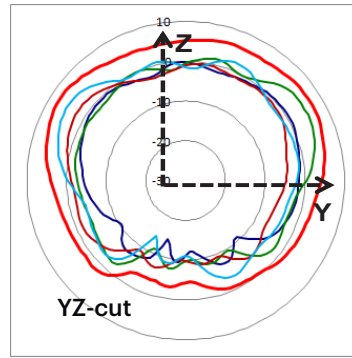
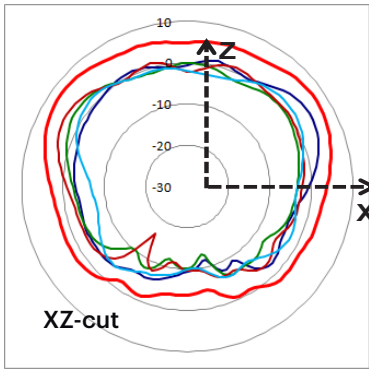
For 5 GHz

MCS Index	Receive Sensitivity
802.11a (legacy)	
6 Mbps	-91
36 Mbps	-78
48 Mbps	-75
54 Mbps	-73
802.11n HT20 (legacy)	
MCS 0,8	-91
MCS 1,9	-88
MCS 2,10	-85
MCS 3,11	-81
MCS 4,12	-77
MCS 5,13	-74
MCS 6,14	-72
MCS 7,15	-71
802.11n HT40	
MCS 0,8	-87
MCS 1,9	-85
MCS 2,10	-82
MCS 3,11	-78
MCS 4,12	-74
MCS 5,13	-70
MCS 6,14	-69
MCS 7,15	-68
802.11ac 256QAM VHT80	
MCS 0	-84
MCS 1	-82
MCS 2	-79
MCS 3	-75
MCS 4	-71
MCS 5	-67
MCS 6	-66
MCS 7	-65
MCS 8	-60
MCS 9	-58

For 2.4 GHz

MCS Index	Receive Sensitivity
802.11b	
1 Mbps	-94
11 Mbps	-86
802.11g	
6 Mbps	-90
24 Mbps	-81
36 Mbps	-78
48 Mbps	-74
54 Mbps	-73
802.11n HT20	
MCS 0,8	-90
MCS 1,9	-87
MCS 2,10	-84
MCS 3,11	-80
MCS 4,12	-77
MCS 5,13	-73
MCS 6,14	-71
MCS 7,15	-69
802.11n HT40	
MCS 0,8	-86
MCS 1,9	-84
MCS 2,10	-81
MCS 3,11	-77
MCS 4,12	-74
MCS 5,13	-70
MCS 6,14	-68
MCS 7,15	-66

Radiation Pattern for 2G antennas (Ant 1,2,3,4)

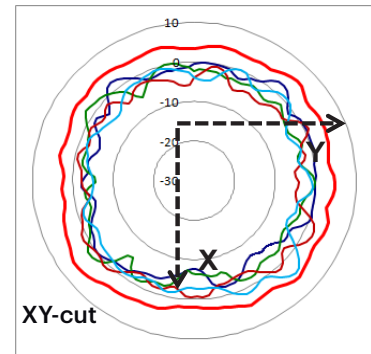
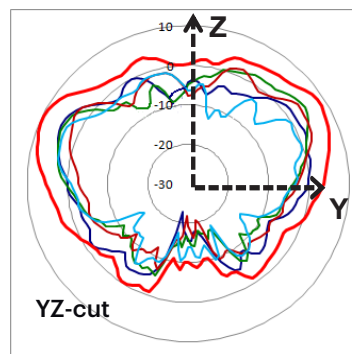
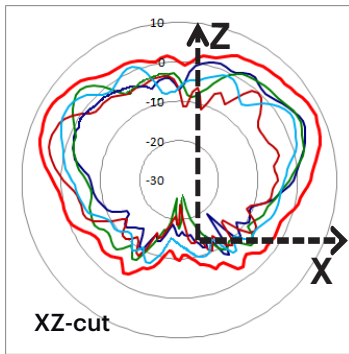


— Directional Gain

— 2G-1 — 2G-2

— 2G-3 — 2G-4

Radiation Pattern for 5G antennas (Ant 5,6,7,8)



— Directional Gain

— 5G-5 — 5G-6

— 5G-7 — 5G-8

RF and Electromagnetic

Country	Certification
USA	FCC Part 15.247, 15.407
Canada	IC
Europe	CE EN300.328, EN301.893 Countries covered under Europe certification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom

Safety

Country	Certification
USA	UL 60950
Canada	cUL 60950
European Union (EU)	EN 60950, RoHS

About Mojo Networks, Inc.

Mojo Networks is redefining the modern WiFi platform. Imagine the scalability to set up millions of access points with a few clicks, all from your smartphone. Envision an Internet experience that engages users with your business to drive results. Stay secure on the same WiFi cloud powering Fortune 500s, Global 2000s and the highest levels of government. And enjoy the cost savings of a cloud-first solution without the pricey markup of proprietary hardware. Welcome to the era of prolific connectivity. Founded in 2003, Mojo Networks (formerly known as AirTight Networks), serves customers in the Fortune 500, Global 2000 and large carriers around the world. Set up a free trial of Mojo Networks today at www.mojonetworks.com.

Ordering Information

Access Point

Part Number	Description
C-120-CLDP-XYR	C120 4x4:4 dual-radio 802.11ac wave-2 access point with internal antennas and "X" Year enterprise cloud subscription and support

Power Options

Part Number	Description
PI-PLUS	One port 802.3at PoE+ injector for C120, C130, W68, C110 PS-C110-UN C-130 AC power supply

Mounting Options

Part Number	Description
C120-MNT-15-16	AP mount kit for Interlude (15/16", 24mm) T-grid rails for C-100, C-110, C-120, C-130
C120-MNT-9-16	AP mount kit for Suprafine (9/16", 15mm) T-grid rails for C-100, C-110, C-120, C-130
C120-MNT-INTSIL	AP mount kit for Interlude and Silhouette T-grid rails for C-100, C-110, C-120, C-130
C130-MNT-FLAT	AP mount kit for flat surface installation (wall, hard ceiling) for C-130

Warranty

C-120 access point includes Lifetime Limited Warranty. For additional information please see <http://www.mojonetworks.com/lifetime-limited-warranty>

