Datasheet

C-120

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

Key Specifications

- Up to 800 Mbps for 2.4GHz radio
- Up to 1.7 Gbps for 5GHz 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
- 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
- Bandwidth agility
- LTE interference mitigation
- 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 5GHz 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 PacketsTM 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 unauthoirzed 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

Front View

Property	Specification	
Physical Dimensions	220mm X 220mm X 52mm	
Weight	1.3kg (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	21.5W (802.3at)	14.5 (802.3af)
	19.5 (DC plug)	8W (idle)
Chipset/ Processor/ RAM	Qualcomm IPQ8064 1.4GHz dual core ARM processor with 256 MB RAM and 128 MB Flash	

Port	Description	Connector Type	Speed/Protocol
Power	12V DC/802.3af (PoE)/802.3at (PoE+)	6.3 mm barrel	N/A
LAN1	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/80 Class 0 PoE/PoE+ PoE input voltage: 48V If using PoE (802.3af): • USB port and LAN2 port disabled • 2.4Ghz radio - 1x1 mode with 15dBm transmit power • 5 GHz radio -2x2 mode with 18dBm transmit power (15dBm per chain)
LAN2	Gigabit Ethernet port that can be used for wired extension for an SSID.	RJ-45	10/100/1000 Mbps Gigabit Ethernet
Reset	Reset to factory default settings	Pin hole push button	Hold down and power cycle the device to reset
USB	USB 2.0 port - For future use	For future use	For future use
Console	To establish 'Config Shell' terminal session via serial connection.	RJ-45	RS 232 Serial Bits per second: 115200 Data Bits: 8, Stop Bits: 1 Parity: None Flow Control: None

Wi-Fi Specifications

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	2400 ~ 2483.5 MHz
Modulation Type	DSSS, OFDM		
Peak Data Rates	Up to 800 Mbps (MCS 0-31)		
Antenna	Integrated modular high efficiency PIFA antenna x8 (x4 per band)		

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	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47~ 5.725 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 x8 (x4 per band)		

Maximum Aggregate Transmit Power

For 5GHz

MCS Index	Transmit Power(dBm)
802.11a (legacy)	
6Mbps	27
36Mbps	25
48Mbps	24
54Mbps	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 2.4GHz

MCS Index	Transmit Power(dBm)
802.11b (legacy)	
1Mbps - 11Mbps	27
802.11g (legacy)	
6Mbps	27
54Mbps	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	2.4GHz	5Ghz
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

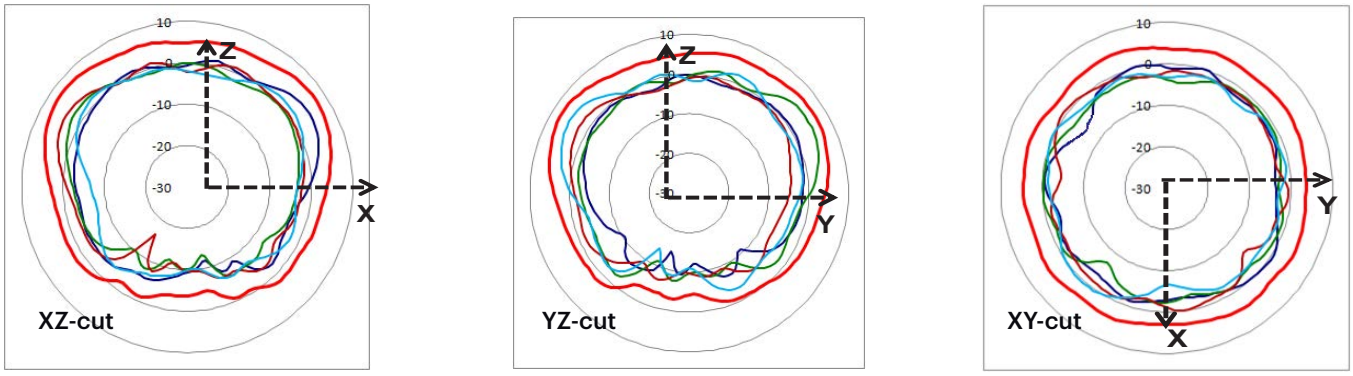
For 5GHz

MCS Index	Receive Sensitivity
802.11a (legacy)	
6Mbps	-91
36Mbps	-78
48Mbps	-75
54Mbps	-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

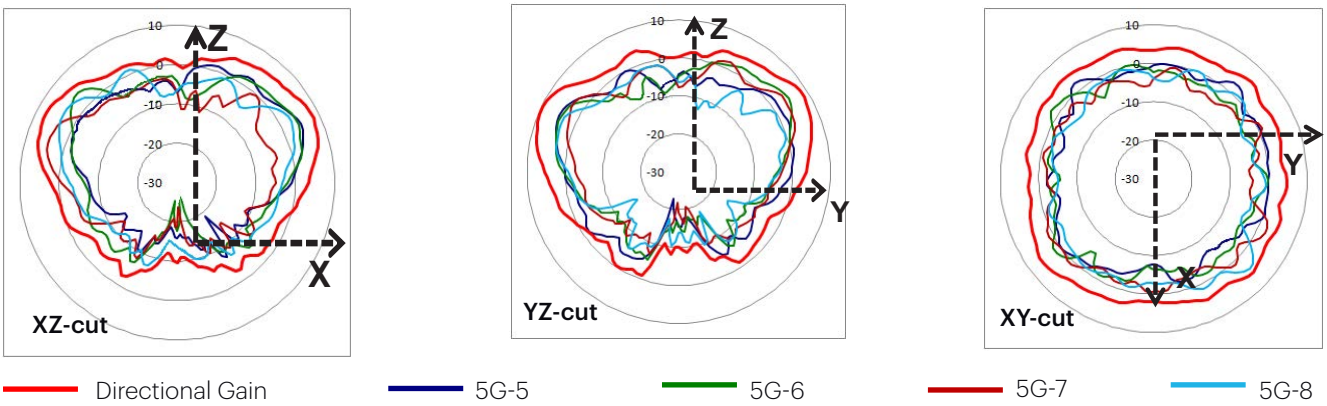
For 2.4GHz

MCS Index	Receive Sensitivity
802.11b	
1Mbps	-94
11Mbps	-86
802.11g	
6Mbps	-90
24Mbps	-81
36Mbps	-78
48Mbps	-74
54Mbps	-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)



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



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.

Regulatory Specifications

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, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Iceland, Luxembourg, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Slovakia, Slovenia, Switzerland, The Czech Republic, UK.

Safety

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

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