



AP-7131

The industry's first 802.11n access point with tri-radio design



FEATURES

802.11n support with 3X3 MIMO

Delivers maximum wireless network throughput to support virtually any enterprise application, including voice and video

Tri-radio, dual-band design

Supports 802.11a/b/g/n access, MESH, Wireless IPS Sensor

Multi Mode Rogue AP detection: On-board IDS, Mobile unit assist mode, dedicated Wireless IPS sensor radio

Around the clock network protection through instant identification and reporting of unauthorized users

The re-defined access point: a true wired network replacement

The 802.11a/b/g/n AP-7131 Access Point delivers the throughput, coverage and resiliency required to enable a wireless enterprise. The tri-radio expandable design provides simultaneous support for three major networking functions: high-speed wireless voice and data services for client access, self-healing mesh networking and non-data applications including Wireless IPS sensor functionality for around the clock protection of the wireless and wired network. The fully DFS compliant 802.11n Draft 2.0 AP-7131 offers speeds of up to 600 Mbps per Access Point — six times the bandwidth of an 802.11a/g access point. The Adaptive AP architecture allows the device to offer two modes of operation, without changing the firmware — either as a stand-alone access point or as a wireless switch adopted access point for centralized management. The ability to self-configure in an 802.3af environment further simplifies deployment. The elegant industrial design

with an optional snap-on antenna façade enables enterprise wide deployment — from the warehouse to the front lobby.

Standalone Access Point: wired and wireless 'Enterprise in a box' for the SME

As a standalone access point, the AP-7131 provides small and medium-sized businesses with a consolidated wired and wireless networking infrastructure, all in a single device. The integrated router, gateway, firewall, DHCP and AAA Radius servers, VPN, hot-spot gateway, Power-over-Ethernet (PoE) simplify and reduce the costs associated with networking by eliminating the need to purchase and manage multiple pieces of equipment.

Centrally managed Access Point: Adaptive AP Mode

The AP-7131 is also designed to meet the needs of large, distributed enterprises by converging the functionality of a thick access point and thin access

Adaptive AP mode

Can be controlled with a wireless switch to enable central management from the NOC, and in the event of loss of connectivity, resumes functionality as a standalone access point

Integrated router, DHCP server, Stateful Packet Inspection Firewall, AAA server, NAT, and Hotspot Gateway

Eliminates need to purchase and manage additional equipment; simplifies provisioning of network services and public access

Mesh networking

Allows wireless extension of existing wired or wireless networks in remote or outdoor locations

802.11i, WPA2 and WPA; IPsec encryption

End-to-end enterprise class wired and wireless security

Wi-Fi Multimedia (WMM™) Quality of Service (QoS) and voice prioritization

Superior performance for demanding mission critical applications, including voice and video

WAN and LAN Ethernet ports

Single device solution for both wired and wireless networking

Java™ web-based graphical user interface; SNMPv3; command line interface (CLI)

Flexible management options; easy-to-use “anytime, anywhere” management

Integrated VPN

Cost-effective secure site-to-site communications

Power-over-Ethernet (PoE) support

Intelligent power management enables self-configuration based on available power

DFS compliance

Increased throughput through greater channel availability in the 5 GHz bands

port into a single device. This mode enables the deployment of a fully featured intelligent access point that can be centrally configured and managed via a Motorola wireless switch in either corporate headquarters or a network operations center (NOC). In the event the connection between the AP-7131 and the wireless switch is lost, a Remote Site Survivability (RSS) feature ensures the delivery of uninterrupted wireless services at the local or remote site. All traffic between the adaptive access points and the wireless switch is secured through an IPsec tunnel. And compatibility with Motorola’s RF Management Suite allows you to centrally plan, deploy, monitor, and secure large AP-7131 deployments.

Mesh: cost-effective networking for challenging locations

Mesh functionality enables the cost-effective wireless extension of the enterprise network to areas where Ethernet or fiber cabling is cost-prohibitive or otherwise impractical. Mesh functionality includes multi-node, multi-link networks as well as simple point-to-point bridging to connect two wired networks. Self-healing ensures continuity of service in the event of a wired or wireless network failure. The self-forming highly resilient, VLAN and WMM QoS-aware mesh technology enables enterprises to wirelessly extend reliable high-performance voice and data services to workers in remote and outdoor locations.

Enterprise-class manageability and end-to-end security

AP-7131’s stateful firewall supports key standards-based security protocols ensuring enterprise-level protection for the wired and wireless network infrastructure, as well as for data in transmission over the wireless LAN. Only authorized users are granted access to your network, protecting your network perimeter and your resources. The powerful

feature set enables security to be administered by either local, non-technical staff or remote IT professionals at your headquarters or NOC. The AP-7131 can also function as a Wireless Intrusion Protection System (IPS) sensor, enabling automatic 24x7 monitoring of your wireless network.

End-to-end solution: from 802.11n network design to everyday support

Motorola provides full life-cycle support for your 802.11n mobility deployment, from network design to day-to-day support. Motorola’s RF Management suite provides a comprehensive planning tool that enables the easy creation of a well-designed 802.11n wireless LAN, eliminating the high cost associated with an iterative trial-and-error approach and multiple site surveys. Motorola Professional Services offer expertise to assist with assessment through implementation of your mobility solution. Once your Motorola mobility solution is deployed, our responsive Customer Services keep your solution up and running, with maximum uptime — reducing your total cost of ownership.

A rapid return on investment (ROI)

You can count on this multi-function multi-purpose device to deliver a rapid return on investment. The AP-7131 can be deployed as a standalone or centrally managed device to provide wireless voice and data services, mesh backhaul and Wireless IPS sensor functionality, all in one device. This built-in flexibility simplifies the mobility architecture. There is less equipment to purchase and manage, reducing capital and operational expenditures.

For more information on how your enterprise can benefit from the AP-7131, please visit us on the web at www.motorola.com/ap7131 or access our global contact directory at www.motorola.com/enterprise/contactus

SPECIFICATION SHEET

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AP-7131 Specifications

802.11n Draft 2.0 Capabilities		Network Standards:	802.11a, 802.11b, 802.11g, 802.3, 802.11n Draft 2.0
3X3 MIMO with 2 Spatial Streams		Data Rates Supported:	802.11g: 1,2,5,5,11,6,9,12,18,24,36,48, and 54Mbps 802.11a: 6,9,12,18,24,36,48, and 54Mbps 802.11n: MCS 0-15 up to 300Mbps
20 MHz and 40 MHz Channels		Operating Channels:	All channels from 4920 MHz to 5825 MHz Chan 1-13 (2412-2472 MHz) Chan 14 (2484 MHz) Japan only Actual operating frequencies depend on regulatory
300 Mbps Data Rates per Radio		Maximum Available Transmit Power:	20dBm
Packet Aggregation (AMSDU, AMPDU)		Transmit Power Adjustment:	1dB increments
Reduced Interframe Spacing		Antenna Configuration:	3x3 MIMO (transmit and receive on all three antennas)
802.11 DFS		Operating Bands:	FCC 2.412 to 2.462 GHz 5.150 to 5.250 (UNII -1) 5.725 to 5.825 (UNII -3) 5.725 to 5.850 (ISM) EU 2.412 to 2.472 GHz 5.150 to 5.250 GHz 5.150 to 5.350 GHz 5.470 to 5.725 GHz (Country Specific) Japan 2.412 to 2.484GHz 4.900 to 5.000 GHz 5.150 to 5.250 GHz
MIMO Power Save (Static and Dynamic)		Regulatory	
Physical Characteristics		Product Safety Certifications:	UL / cUL 60950-1, IEC / EN60950-1, UL2043, RoHS
Dimensions:	5.50 in. L x 8.00 in. W x 1.10 in. H 13.97 cm L x 20.32 cm W x 2.79 cm H	Radio Approvals:	FCC (USA), Industry Canada, CE (Europe), TELEC (Japan)
Weight:	2.22 lbs/9.98 kg	Part Numbers	
Housing:	Metal, plenum-rated housing (UL2043)	AP-7131-60020-WR	AP-7131 Single Radio 802.11n Access Point, Plastic Facade, with QIG
Available Mounting:	No additional hardware required to mount	AP-7131-60028-WR	AP-7131 Single Radio 802.11n Access Point, 6 element Façade antenna Module, with QIG
Configurations:	Above drop ceiling, under ceiling or on wall	AP-7131-66040-WR	AP-7131 Dual Radio 802.11n Access Point, Plastic Facade, with QIG
LEDs:	6 top mounted LEDs, 1 bottom mounted LED, with multiple modes indicating 802.11a/g/n activity, power, Ethernet adoption and errors	AP-7131-66048-WR	APN Dual Radio 802.11n Access Point, 6 element Façade antenna Module, with QIG
Uplink:	2 ports (GE1, GE2) Auto-sensing 10/100/1000 Base-T Ethernet	50-14000-247R	AP-7131 Power Supply
Antenna Connectors:	RP-SMA	AP-PSBIAS-1P3- AFR	Single Port PoE Injector - High Power
Console Port:	RJ45 Console Port	ML-2452-PTA3M3-036	3 Port MIMO Antenna
User Environment		ML-2452-PTA2M3X3-1	Façade with 6 element antenna Module
Operating Temperature:	-4°F to 122°F/-20°C to 50°C		
Storage Temperature:	-40°F to 158°F/-40°C to 70°C		
Operating Humidity:	5 to 95% RH non-condensing		
Operating Altitude:	8000 ft./2438 m @ 82°F/28°C		
Storage Altitude:	15000 ft./4572 m @ 53°F/12°C		
Electrostatic Discharge:	15kV air, 8kV contact		
Power Specifications			
Operating Voltage:	38-54V DC		
Operating Current:	Not to exceed 600mA @ 48VDC		
Integrated PoE Support:	802.3af, 802.3at (draft)		
Radio Specifications			
Wireless Medium:	Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM), and Spatial multiplexing (MIMO)		

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Receiver Sensitivity					Receiver Sensitivity (cont.)						
Operating Band	Operating Modes	Data Rate	Typical Receive Sensitivity per Antenna in 3x3 Configuration (dBm)		Operating Band	Operating Modes	Data Rate	Typical Receive Sensitivity per Antenna in 3x3 Configuration (dBm)			
2.4 GHz	802.11b	1 Mb/s	-91.4		5 GHz	802.11a	6 Mb/s	-89.0			
		2 Mb/s	-90.2				9 Mb/s	-89.1			
		5.5 Mb/s	-88.9				12 Mb/s	-88.9			
		11 Mb/s	-86.7				18 Mb/s	-87.7			
2.4 GHz	802.11g	6 Mb/s	-89.6				24 Mb/s	-84.7			
		9 Mb/s	-89.5				36 Mb/s	-81.7			
		12 Mb/s	-89.3				48 Mb/s	-77.5			
		18 Mb/s	-87.5				54 Mb/s	-75.9			
		24 Mb/s	-85.1								
		36 Mb/s	-81.3								
		48 Mb/s	-77.7								
		54 Mb/s	-76.4								
2.4 GHz	802.11n Draft 2.0 (HT20)	MCS0	-88.9				5 GHz		802.11n Draft 2.0 (HT20)	MCS0	-88.9
		MCS1	-87.6				MCS1	-87.3			
		MCS2	-84.7				MCS2	-85.1			
		MCS3	-82.0				MCS3	-82.2			
		MCS4	-78.5		MCS4	-78.7					
		MCS5	-75.2		MCS5	-74.6					
		MCS6	-73.9		MCS6	-73.1					
		MCS7	-71.9		MCS7	-71.6					
		MCS8	-88.5		MCS8	-88.0					
		MCS9	-85.8		MCS9	-85.5					
		MCS10	-82.0		MCS10	-82.9					
		MCS11	-80.0		MCS11	-80.5					
		MCS12	-76.4		MCS12	-76.7					
		MCS13	-73.0		MCS13	-72.5					
		MCS14	-70.9		MCS14	-70.9					
MCS15	-68.6		MCS15	-68.9							
2.4 GHz	802.11n Draft 2.0 (HT40)	MCS0	-82.7		5 GHz		802.11n Draft 2.0 (HT40)	MCS0	-85.2		
		MCS1	-80.3		MCS1	-83.9					
		MCS2	-76.5		MCS2	-81.2					
		MCS3	-75.9		MCS3	-78.5					
		MCS4	-70.4		MCS4	-75.2					
		MCS5	-68.9		MCS5	-71.4					
		MCS6	-65.1		MCS6	-69.5					
		MCS7	-63.3		MCS7	-67.7					
		MCS8	-82.3		MCS8	-84.6					
		MCS9	-79.9		MCS9	-82.2					
		MCS10	-76.3		MCS10	-79.0					
		MCS11	-75.8		MCS11	-76.6					
		MCS12	-69.6		MCS12	-73.1					
		MCS13	-68.4		MCS13	-68.9					
		MCS14	-65.3		MCS14	-67.2					
MCS15	-61.5		MCS15	-65.2							



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