



## VERSATILE SINGLE RADIO 802.11A/B/G/N WIRELESS ACCESS POINT

# AP 6521

The AP 6521 is a versatile access point with the cost-efficiency of a single radio. With its WiNG 5 intelligence, this access point offers higher throughput along with direct forwarding, security, QoS services and site survivability. The AP 6521 can also serve as a virtual controller and coordinate the operation of up to 23 neighboring access points.

### UNIQUE VALUE

The AP 6521 is a multipurpose access point designed to lower the cost of deploying and operating a secure, reliable 802.11n wireless LAN (WLAN) in branch offices or headquarters facilities. The access point features a MIMO radio, superior receive and transmit sensitivity, and a GigE WAN uplink port. The embedded WiNG 5 intelligence ensures that traffic is locally forwarded along the most efficient paths without sacrificing quality of service and security implemented at the access point itself. The AP 6521 can also be used as a sensor for both 2.4 Ghz and 5.0 Ghz frequency bands for multi-band intrusion protection or troubleshooting.

### AUTOMATIC CHANNEL AND POWER OPTIMIZATION

Common problems such as building attenuation, electronic interference or sub-optimal access point placement are minimized as the SMART RF feature of the switch/controller automatically optimizes power and channel selection so each user gets always-on high-quality access and mobility.

### HIGH RELIABILITY

The AP 6521 is designed to optimize network availability through its central and pre-emptive intelligence which dynamically senses weak or failing signals, securely moves mobile users to alternate APs, and boosts signal power to automatically fill RF holes and ensure uninterrupted mobile user access.

### GAP-FREE SECURITY

Security includes layer 2-7 stateful packet filtering firewall, AAA RADIUS services, Wireless IPS-lite, VPN gateway, and location-based access control.

### FAST AND EASY DEPLOYMENT

The access ports require no configuration or manual firmware maintenance. The Motorola wireless controller discovers access points on the network and automatically downloads all configuration parameters and firmware, greatly reducing installation, maintenance and troubleshooting costs for Layer 2 and Layer 3 deployments.

### LESS IS MORE

Motorola's WiNG 5 WLAN solutions offer all the benefits of 11n—and then some. Our distributed architecture extends QoS, security and mobility services to the APs so you get better direct routing and network resilience. That means no bottleneck at the wireless controller, no latency issues for voice applications, and no jitter in your streaming video. And with our broad selection of access points and flexible network configurations, you get the network you need with less hardware to buy. Let us show you the less complicated, less expensive way to more capacity, more agility, and more satisfied users.

## DEVICE AND NETWORK ACCELERATION

Device and network performance can be accelerated through a virtual LAN feature via the switch/controller. Each AP 6521 access point can be virtualized into four unique VLANs which can be customized to

direct broadcast traffic to the intended recipient. This reduces overall network traffic while improving device performance and battery life up — to 25%. This also reduces the overall number of access points required to provide unique device services.

## FEATURES

### Full 802.11n performance with standard 802.3af

Simplifies and reduces total cost of installation using standard Power-over-Ethernet (PoE)

### Mobility

Supports fast secure roaming

### Security

This unique multi-purpose device can execute and enforce the IDS/IPS security policies configured in the Motorola wireless switch, and can also be utilized as a 24x7 dedicated sensor with Wireless IPS from AirDefense

### Application Support

Supports Call Admission Control, for optimized VoWLAN performance, as well as video streaming and data throughput for 802.11 a/b/g/n clients

## AP 6521 SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS	AP 6521 (INTERNAL ANTENNA)	AP 6521 (EXTERNAL ANTENNA)
Dimensions:	6.0 in. L x 5.5 in. W x 1.63 in. H 15.24 cm L x 13.97 cm W x 4.11 cm H	6.0 in. L x 5.5 in. W x 1.63 in. H 15.24 cm L x 13.97 cm W x 4.11 cm H
Weight:	2.0 lbs./ .91 kg	2.5 lbs./1.14 kg
Part number:	AP-6521-60010-US AP-6521-60010-WR	AP-6521-60020-US AP-6521-60020-OUS AP-6521-60020-WR
Available mounting configurations:	Ceiling-mount (to suspended ceiling T-bars, below tile); wall mount	Ceiling-mount (above tile); wall-mount
Plenum rated:	No	Yes, certified to UL 2043
LED indicators:	2 LED indicators with multiple modes indicating 2.4GHz/5 GHz Activity, Power, Adoption and Errors	
WIRELESS DATA COMMUNICATIONS AND NETWORKING		
Data rates supported:	802.11b/g: 1,2,5.5,11,6,9,12,18,24,36,48, and 54Mbps 802.11n: MCS 0-15 up to 300Mbps 802.11a: 6,9,12,18,24,36,48, and 54Mbps	
Network standard:	802.11a, 802.11b, 802.11g, 802.11n	
Wireless medium:	Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM), and Spatial Multiplexing (MIMO)	
VLANs/WLANs supported:	VLANs and WLANs are controller-dependent	
Uplink:	Auto-sensing 10/100/1000Base-T Ethernet	
RADIO CHARACTERISTICS		
Operating channels:	5GHz: All channels from 5180 MHz to 5825 MHz 2.4GHz: 2412-2472 MHz Actual operating frequencies depend on national regulatory limits	
Maximum available transmit power:	27dBm	
Transmit power Adjustment:	1dB increments	
Antenna configuration:	2x2 MIMO (transmit on two and receive on two antennas)	
Operating bands:	FCC EU 2.412 to 2.462 GHz 2.412 to 2.472 GHz 5.150 to 5.250 (UNII -1) 5.150 to 5.250 GHz 5.725 to 5.825 (UNII -3) 5.150 to 5.350 GHz 5.725 to 5.850 (ISM) 5.470 to 5.725 GHz	

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# AP 6521 SPECIFICATIONS CHART (continued)

USER ENVIRONMENT	AP 6521 (INTERNAL ANTENNA)	AP 6521 (EXTERNAL ANTENNA)
Operating temperature:	32°F to 104° F/0°C to 40° C	
Storage temperature:	-40°F to 158° F/-40°C to 70° C	
Operating humidity:	5%-95% (non-condensing)	
Operating altitude:	8,000 ft./2438 m	
Storage altitude:	15,000 ft./4572 m	
Electrostatic discharge:	+/- 15 kV (Air), +/- 8 kV (contact)	

## POWER SPECIFICATIONS

Operating voltage:	802.3af supply: 48 VDC @ 12.95W (typical), 36 VDC to 57 VDC (range)
Operating current:	270mA rms at 48V
Integrated Power-over-Ethernet support:	Standards-based IEEE 802.3af

## MAXIMUM RADIO TRANSMIT POWER:

BAND	SINGLE ANTENNA COMPOSITE TRANSMIT POWER	DUAL ANTENNA COMPOSITE TRANSMIT POWER
2400MHZ	+27 dBm	+30 dBm
5200MHZ	+22 dBm	+25 dBm

## TYPICAL OPERATIONAL RMS POWER CONSUMPTION

Option1	DC VOLTAGE	DC AMPS	DC POWER CONSUMPTION
1	48V	270mA	12.95W
2	48V	209mA	10.00W

## ANTENNA PORT SPECIFICATON

Type:	Integrated 2.4 GHz and 5.2 GHz Dual-Antenna Elements	Two RP-SMA connectors for external antennas (not included)
Band:	2.4 GHz to 2.5 GHz; 4.9 GHz to 5.180 GHz (actual operating frequencies depend on regulatory rules and certification agency)	

## INTERNAL ANTENNA INFORMATION

INTERNAL ANTENNA DESCRIPTION	VALUES
Peak gain, 2.4GHz band	3.0dBi
Peak gain, 5.2GHz band	6.0dBi

## REGULATORY

Product safety certifications:	UL 60950, cUL, EU EN 60950, TUV and UL 2043 (external antenna)
Radio approvals:	FCC (USA), Industry Canada, CE (Europe)

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**PRODUCT SPEC SHEET**  
AP 6521

**CONDUCTED RECEIVER SENSITIVITY  
(ANTENNA ELEMENT NOT INCLUDED)**

(maximum) at antenna housing connector, 2400MHz band

Rate/MCS	Mode	Sensitivity (dBm)
1	Legacy	-95
2	Legacy	-95
5.5	Legacy	-95
11	Legacy	-92
6	Legacy	-96
9	Legacy	-96
12	Legacy	-95
18	Legacy	-93
24	Legacy	-89
36	Legacy	-86
48	Legacy	-82
54	Legacy	-81
MCS0	HT20	-96
MCS1	HT20	-94
MCS2	HT20	-91
MCS3	HT20	-88
MCS4	HT20	-85
MCS5	HT20	-81
MCS6	HT20	-79
MCS7	HT20	-78
MCS8	HT20	-93
MCS9	HT20	-90
MCS10	HT20	-87
MCS11	HT20	-85
MCS12	HT20	-82
MCS13	HT20	-77
MCS14	HT20	-76
MCS15	HT20	-74
MCS0	HT40	-92
MCS1	HT40	-90
MCS2	HT40	-88
MCS3	HT40	-85
MCS4	HT40	-82
MCS5	HT40	-78
MCS6	HT40	-76
MCS7	HT40	-75
MCS8	HT40	-89
MCS9	HT40	-86
MCS10	HT40	-84
MCS11	HT40	-81
MCS12	HT40	-78
MCS13	HT40	-73
MCS14	HT40	-72
MCS15	HT40	-70

**CONDUCTED RECEIVER SENSITIVITY  
(ANTENNA ELEMENT NOT INCLUDED)**

(maximum) at antenna housing connector, 5200MHz band

Rate/MCS	Mode	Sensitivity (dBm)
6	Legacy	-94
9	Legacy	-93
12	Legacy	-93
18	Legacy	-91
24	Legacy	-87
36	Legacy	-84
48	Legacy	-80
54	Legacy	-79
MCS0	HT20	-94
MCS1	HT20	-92
MCS2	HT20	-90
MCS3	HT20	-86
MCS4	HT20	-84
MCS5	HT20	-79
MCS6	HT20	-78
MCS7	HT20	-76
MCS8	HT20	-91
MCS9	HT20	-88
MCS10	HT20	-86
MCS11	HT20	-83
MCS12	HT20	-80
MCS13	HT20	-75
MCS14	HT20	-74
MCS15	HT20	-72
MCS0	HT40	-90
MCS1	HT40	-88
MCS2	HT40	-86
MCS3	HT40	-83
MCS4	HT40	-80
MCS5	HT40	-76
MCS6	HT40	-74
MCS7	HT40	-73
MCS8	HT40	-88
MCS9	HT40	-85
MCS10	HT40	-82
MCS11	HT40	-80
MCS12	HT40	-76
MCS13	HT40	-72
MCS14	HT40	-71
MCS15	HT40	-69

For more information on how the AP 6521 can benefit your business, please visit us on the web at [motorola.com/wlan](http://motorola.com/wlan) or access our global contact directory at [www.motorola.com/enterprisemobility/contactus](http://www.motorola.com/enterprisemobility/contactus)

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