



# ZEBRA AP 6521E

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

The AP 6521E is a versatile access point with the cost-efficiency of a single radio. With its WiNG Express intelligence, this access point offers higher throughput along with direct forwarding, security, QoS services and site survivability. The AP 6521E can also serve as a virtual controller and coordinate the operation of up to 24 additional access points.

### ENTERPRISE-GRADE WIRELESS FOR MIDSIZE BUSINESSES

WiNG Express brings the power of enterprise award-winning WiNG 5 architecture to midsize businesses. With WiNG Express, smaller businesses now have access to the latest wireless technology and always-on capability trusted by large enterprise businesses. In addition, the portfolio contains purpose built enterprise-grade products for midsize businesses that will allow customers to scale their network with their business.

### WiNG EXPRESS FAST PROVISIONING

WiNG Express products can be configured and deployed in about 5 minutes. After powering on the access point, user can connect to "WiNGExpress" SSID and go to [www.zebra.com/wingexpress.com](http://www.zebra.com/wingexpress.com) to configure the access point. Once an access point is configured, the user can enable the virtual controller feature and let the access point configure and manage additional access points by simply adding them to the network.

### WiNG EXPRESS USER INTERFACE

WiNG Express is Zebra's powerful enterprise-class WLAN operating system wrapped in an easy-to-use and easy to understand graphical user interface that makes end-to-end deployment and management of WLAN network easy for midsize businesses. The user interface provides a concise menu with time tracked network and client information. As such, WiNG Express User Interface empowers smaller businesses with valuable information available to enterprise customers in a meaningful way, allowing your business to leverage wireless applications to drive business.

### UNIQUE VALUE

The AP 6521E 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 Express 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 6521E can also sense on either 2.4 Ghz or 5.0 Ghz frequency bands for rouge devices.

### AUTOMATIC REAL-TIME WIRELESS OPTIMIZATION

Common problems such as building attenuation, electronic interference or sub-optimal access point placement are minimized as the SMART power and channel configuration option automatically optimizes power and channel selection so each user gets optimal high-quality access and mobility.

### VIRTUAL CONTROLLER

### WiNG EXPRESS

For midsize businesses, the WiNG Express portfolio provides the ability to deploy an enterprise-grade network that is affordable and scalable with ease. Businesses with up to 25 access points get the power of centralized management — without the need to purchase and manage a controller. Deployment of WiNG Express Manager can help deploy a network with different WiNG Express Access Points and scale with more than 25 access points. For features supported by the WiNG Express portfolio, please see the WiNG Express portfolio brochure.

AP 6521E allows network services to scale securely without configuring additional access points. When enabled, virtual controller automatically configures its peer access points on the local network and allows users to manage all access points from a single access point. Meaning customers can scale their wireless network up to 25 access points on the same network without the need to configure each access point individually.

### FAST AND EASY DEPLOYMENT

The access ports require no configuration or manual firmware maintenance. The WiNG Express Manager discovers WiNG Express 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.

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

## AP 6521E SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS		WIRELESS DATA COMMUNICATIONS AND NETWORKING	
<b>Dimensions:</b>	AP 6521E (INTERNAL ANTENNA) : 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 AP 6521E (EXTERNAL ANTENNA) ): 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	<b>Data rates supported:</b>	802.11b/g: 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
<b>Weight:</b>	AP 6521E (INTERNAL ANTENNA) : 2.0 lbs./.91 kg AP 6521E (EXTERNAL ANTENNA) ): 2.5 lbs./1.14 kg	<b>Network standard:</b>	802.11a, 802.11b, 802.11g, 802.11n
<b>Part number:</b>	AP 6521E (INTERNAL ANTENNA) : AP-6521E-60010-US AP-6521E-60010-WR AP 6521E (EXTERNAL ANTENNA) ): AP-6521E-60020-US AP-6521E-60020-WR	<b>Wireless medium:</b>	Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM), and Spatial Multiplexing (MIMO)
<b>Available mounting configurations:</b>	AP 6521E (INTERNAL ANTENNA) : Ceiling-mount (to suspended ceiling T-bars, below tile); wall mount AP 6521E (EXTERNAL ANTENNA) ): Ceiling-mount (above tile); wall-mount	<b>VLANs/WLANs supported:</b>	VLANs and WLANs are controller-dependent
<b>Plenum rated:</b>	AP 6521E (INTERNAL ANTENNA) : No AP 6521E (EXTERNAL ANTENNA) ): Yes, certified to UL 2043	<b>Uplink:</b>	Auto-sensing 10/100/1000Base-T Ethernet
		USER ENVIRONMENT	
		<b>Operating temperature:</b>	32°F to 104° F/0°C to 40° C
		<b>Storage temperature:</b>	-40°F to 158° F/-40°C to 70° C
		<b>Operating humidity:</b>	5%-95% (non-condensing)
		<b>Operating altitude:</b>	8,000 ft./2438 m
		<b>Storage altitude:</b>	15,000 ft./4572 m
		<b>Electrostatic discharge:</b>	+/- 15 kV (Air), +/- 8 kV (contact)
		MAXIMUM RADIO TRANSMIT POWER:	
		<b>SINGLE ANTENNA</b>	+27 dBm (2400MHZ)
		<b>COMPOSITE TRANSMIT POWER</b>	+22 dBm (5200MHZ)

**LED indicators:** 2 LED indicators with multiple modes indicating 2.4GHz/5 GHz Activity, Power, Adoption and Errors

**DUAL ANTENNA** +30 dBm (2400MHZ)  
**COMPOSITE** +25 dBm (5200MHZ)  
**TRANSMIT POWER**

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## RADIO CHARACTERISTICS

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**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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## POWER SPECIFICATIONS

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**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

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## TYPICAL OPERATIONAL RMS POWER CONSUMPTION

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Option1: 1

**DC VOLTAGE** 48V

**DC AMPS** 270mA

**DC POWER CONSUMPTION** 12.95W

Option1: 2

**DC VOLTAGE** 48V

**DC AMPS** 209mA

**DC POWER CONSUMPTION** 10.00W

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## INTERNAL ANTENNA INFORMATION

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**INTERNAL ANTENNA** VALUES

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## ANTENNA PORT SPECIFICATON

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**Type:** AP 6521E (INTERNAL ANTENNA)  
:  
Integrated 2.4 GHz and 5.2 GHz Dual-Antenna Elements  
AP 6521E (EXTERNAL ANTENNA ):  
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)

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## REGULATORY

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**Product safety certifications:** UL 60950, cUL, EU EN 60950, TUV and UL 2043 (external antenna)

**Radio approvals:** FCC (USA), Industry Canada, CE ( Europe)

DESCRIPTION

Peak gain, 2.4GHz band 3.0dBi

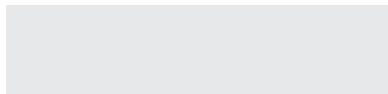
Peak gain, 5.2GHz band 6.0dBi

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

(maximum) at antenna housing connector, 2400MHz band			(maximum) at antenna housing connector, 5200MHz band		
Rate/MCS	Mode	Sensitivity (dBm)	Rate/MCS	Mode	Sensitivity (dBm)
1	Legacy	-95	6	Legacy	-94
2	Legacy	-95	9	Legacy	-93
5.5	Legacy	-95	12	Legacy	-93
11	Legacy	-92	18	Legacy	-91
6	Legacy	-96	24	Legacy	-87
9	Legacy	-96	36	Legacy	-84
12	Legacy	-95	48	Legacy	-80
18	Legacy	-93	54	Legacy	-79
24	Legacy	-89	MCS0	HT20	-94
36	Legacy	-86	MCS1	HT20	-92
48	Legacy	-82	MCS2	HT20	-90
54	Legacy	-81	MCS3	HT20	-86
MCS0	HT20	-96	MCS4	HT20	-84
MCS1	HT20	-94	MCS5	HT20	-79
MCS2	HT20	-91	MCS6	HT20	-78
MCS3	HT20	-88	MCS7	HT20	-76
MCS4	HT20	-85	MCS8	HT20	-91
MCS5	HT20	-81	MCS9	HT20	-88
MCS6	HT20	-79	MCS10	HT20	-86
MCS7	HT20	-78	MCS11	HT20	-83
MCS8	HT20	-93	MCS12	HT20	-80
MCS9	HT20	-90	MCS13	HT20	-75
MCS10	HT20	-87	MCS14	HT20	-74
MCS11	HT20	-85	MCS15	HT20	-72
MCS12	HT20	-82	MCS0	HT40	-90
MCS13	HT20	-77	MCS1	HT40	-88
MCS14	HT20	-76	MCS2	HT40	-86
MCS15	HT20	-74	MCS3	HT40	-83
MCS0	HT40	-92	MCS4	HT40	-80

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

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



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