Altitude 4532 Access Point Data Sheet

High Performance, Dual Radio, Independent 2x3 MIMO 802.11 abgn (2.4/5GHz) Access Point

Performance

- 2x3 MIMO
- 802.11 abgn (2.4/5GHz)
- 24 dBm Max Output
- GigE Uplink

Form Factor

- Dual Radio
- Independent AP
- Wall or Ceiling Mount

Features

- Multiple Modes of Operation
- Layer 2-7 Stateful Packet Filtering Firewall
- Wireless IPS
- VPN Gateway
- SMART RF
- Internal and External Antenna Options
- Hotspot
- Guest Access

Multiple Modes of Operation: The Altitude™ 4532 supports three modes of operation. First, the device can operate as a traditional access point (AP), controlled with a Summit® WM controller. Second, the AP can act as a standalone access point without a controller. Finally, it can operate as a virtual controller allowing it to control up to 24 other similar devices.

The Altitude 4532 continues to operate if connectivity to the controller is lost, for robust data forwarding.

Direct Forwarding: The Altitude 4532 supports direct forwarding which allows SSIDs to be directly forwarded to wired data VLANs without going through a controller, which can reduce data latency, jitter, and bottlenecks.

Intelligence: The Altitude 4532 uses SMART RF to adjust power and channel selection to help prevent channel overlap or co-channel interference. This is done automatically and reduces the chance of human error or interference. SMART RF is a standard feature on the Altitude 4532.

Security: The AP includes a layer 2-7 stateful packet filtering firewall. AAA Radius client services, built-in wireless IPS, rogue AP detection, VPN Gateway, and location-based access control are also included. The Altitude 4532 can even support simultaneous multi-band sensing (band un-locked) for both 2.4 GHz and 5.0 GHz spectrums. Wireless IPS and rogue detection is always-on with no timeslicing.

Deployment: The Altitude 4532 supports wireless controller autodiscovery. Upon activation it communicates with the controller and automatically downloads configuration parameters and firmware. This reduces installation, maintenance and troubleshooting costs for layer 2 and layer 3 deployments.

VoWLAN, HOTSPOT and GUEST ACCESS: Out-of-the-box, this access point supports voice over wireless LAN (VoWLAN) QoS, which ensures toll-quality even with many simultaneous VoWLAN calls on a single access point. In addition, it is easy to provide hotspot and guest access and ensure the user can only access authorized networks, sites, or applications.

Make Your Network Mobile

Ordering Information

Model	Part Number	Long Description
AP4532i US	15764	Altitude AP4532i dual-radio Independent indoor Access Point for US regulatory domain, 802.11 abgn, 2x3 MIMO, Includes internal omni-directional antennas, Powered by 802.3af/at PoE or by use of a PoE injector.
AP4532i ROW	15765	Altitude AP4532i dual-radio Independent indoor Access Point for the Rest of the World regulatory domain, 802.11 abgn, 2x3 MIMO, Includes internal omni-directional antennas, Powered by 802.3af/at PoE or by use of a PoE injector.
AP4532e US	15767	Altitude AP4532e dual-radio Independent indoor Access Point for US regulatory domain, 802.11 abgn, 2x3 MIMO. External antennas not included-must order separately up to 6 paddle antennas. Powered by 802.3af/at PoE or by use of a PoE injector.
AP4532e ROW	15768	Altitude AP4532e dual-radio Independent indoor Access Point for US regulatory domain, 802.11 abgn, 2x3 MIMO. External antennas not included-must order separately up to 6 paddle antennas. Powered by 802.3af/at PoE or by use of a PoE injector.

Physical Characteristics	Altitude 4532 (Internal Antenna)	Altitude 4532 (External Antenna)
Dimensions	9.5 in L x 7.5 in. w x 1.7 in H 24.13cm L X 18.916 cm W x 4.36 cm H	8.5 in Lx 5.6 in Wx 1.5 H 21.64 cm L x 14.10 cm W x 3.771 cm H
Weight	2.0 lbs./.91 kg	2.5 lbs./1.14 kg
Available Mounting Configurations	Ceiling-mount (to suspended ceiling T-bars below title), 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, Adopting and Errors	

Wireless Data Communication and Networking	
Data Rates Supported	802.11b/g; 1,2,5,5,11,6,9,12,18,24,36,48, and 54M bps 802. 11a;6,9,12,18,24,36,48,and 54Mbps 802 11n; mcs 0-15 up to 300Mbps
Wireless 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 10/100/1000 Base T Ethernet

Radio Characteristics	
Operating Channels	5GHz; All channels from 4920 MHz to 5825 MHz 2.4GHz Chan 1-13 (2412 -2472-MHz). Chan 14(2484 MHz) Japan only Actual operating frequencies depend on national regulatory limits
Maximum Available Transmit Power	21dBm
Transmit Power Adjustment	1 db increments
Antenna Configuration	2x3 MIMO (transmit on two and receive on all three antennas)
Operating Bands	FCC EU 2.412 to 2.462 GHz 2.472 GHz 5.150 to 5.250 to 5.250 GHz 5.725 to 5.825 (UNI .315.150 to 5.350 GHz 5.725 to 5.825 to 5.850 |ISM| 5.470 to 5.725 GHz (Country Specification) Japan 2.412 to 2.484GHz 4.900 to 5.00GHz 5.150 to .250 GHz
Operating Altitude	8000 ft/2438 m
Storage Altitude	15,000 ft./4572 m
Electrostatic Discharge	+/- 15 KV (Air) +/- 8 KV (contact)

Power Specification	
Operating Voltage	802 3af supply: 48 VDC @ 12.95W (Typical) ,36 VDC to 57VDC (range)
Operating Current	270mA (typical)
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
2400 MHZ	+21 dBm	+24 dBm
5200MHZ	+19 dBm	+22 dBm

TYPICAL RMS POWER CONSUMPTION

Option 1	DC Voltage	DC AMPS	DC Power Consumption
1	48V	270mA	12.95W
2	48V	209mA	10.00W

Antenna Specifications		
Type	Integrated 2.4 Ghz and 5.2 GHz Dual-Antenna Elements	Six RSMA connectors for external antennas (not included)
Band	2.4 GHz to 2.5 GHz, 4.9 GHz to 5.850 GHz (actual operating frequencies depend on regulatory rules and certification agency)	
Gain	2.0 dbi (2.4 Ghz). 4.8 dBi (5GHz)	Antenna-specific

INTERNAL ANTENNA INFORMATION

Internal Antenna Description	Values
Peak gain,2.4GHz band	2.0dBi
Peak gain,5.2GHz band	4.8dBi

Regulatory	
Product Safety Certifications	UL 60950, cLU, EU EN 60950, TUV and UL 2043 (external antenna)
Radio Approvals	FCC (USA), Industry Canada, CE (Europe) and TELEC (Japan)

RECEIVER SENSITIVITY

(maximum) at antenna housing connector (metal housing) 2400MHz band

Rate/MCS	Mode	Average sens (dBm)
1	Legacy	-96
2	Legacy	-94
5.5	Legacy	-93
11	Legacy	-91
6	Legacy	-94
9	Legacy	-94
12	Legacy	-94
18	Legacy	-94
24	Legacy	-90
36	Legacy	-87
48	Legacy	-83
54	Legacy	-82
MCS0	HT20	-96
MCS1	HT20	-93
MCS2	HT20	-91
MCS3	HT20	-88
MCS4	HT20	-84
MCS5	HT20	-80
MCS6	HT20	-79
MCS7	HT20	-78
MCS8	HT20	-94
MCS9	HT20	-91
MCS10	HT20	-88
MCS11	HT20	-85
MCS12	HT20	-82
MCS13	HT20	-78
MCS14	HT20	-77
MCS15	HT20	-76
MCS0	HT40	-90
MCS1	HT40	-89
MCS2	HT40	-87
MCS3	HT40	-84
MCS4	HT40	-82
MCS5	HT40	-78
MCS6	HT40	-77
MCS7	HT40	-75
MCS8	HT40	-90
MCS9	HT40	-87
MCS10	HT40	-85
MCS11	HT40	-83

RECEIVER SENSITIVITY

(maximum) at antenna housing connector (metal housing) 5200MHz band

Rate/MCS	Mode	Sensitivity (dBm)
6	Legacy	-94
9	Legacy	-94
12	Legacy	-94
18	Legacy	-93
24	Legacy	-90
36	Legacy	-87
48	Legacy	-83
54	Legacy	-81
MCS0	HT20	-94
MCS1	HT20	-93
MCS2	HT20	-91
MCS3	HT20	-87
MCS4	HT20	-84
MCS5	HT20	-80
MCS6	HT20	-79
MCS7	HT20	-77
MCS8	HT20	-93
MCS9	HT20	-90
MCS10	HT20	-88
MCS11	HT20	-85
MCS12	HT20	-82
MCS13	HT20	-78
MCS14	HT20	-76
MCS15	HT20	-74
MCS0	HT40	-91
MCS1	HT40	-89
MCS2	HT40	-87
MCS3	HT40	-84
MCS4	HT40	-81
MCS5	HT40	-76
MCS6	HT40	-75
MCS7	HT40	-73
MCS8	HT40	-90
MCS9	HT40	-87
MCS10	HT40	-85
MCS11	HT40	-82
MCS12	HT40	-79
MCS13	HT40	-74
MCS14	HT40	-72
MCS15	HT40	-71

Rate/MCS	Mode	Average sens (dBm)
MCS12	HT40	-79
MCS13	HT40	-75
MCS14	HT40	-74
MCS15	HT40	-72

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