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**DATASHEET**  
**RA621EXN**

## Technical Specifications

### Hardware

Main Chipset	Qualcomm IPQ6010 + QCA8081
Memory	Flash 128MB NAND RAM 512MB*2 (1GB) DDR3

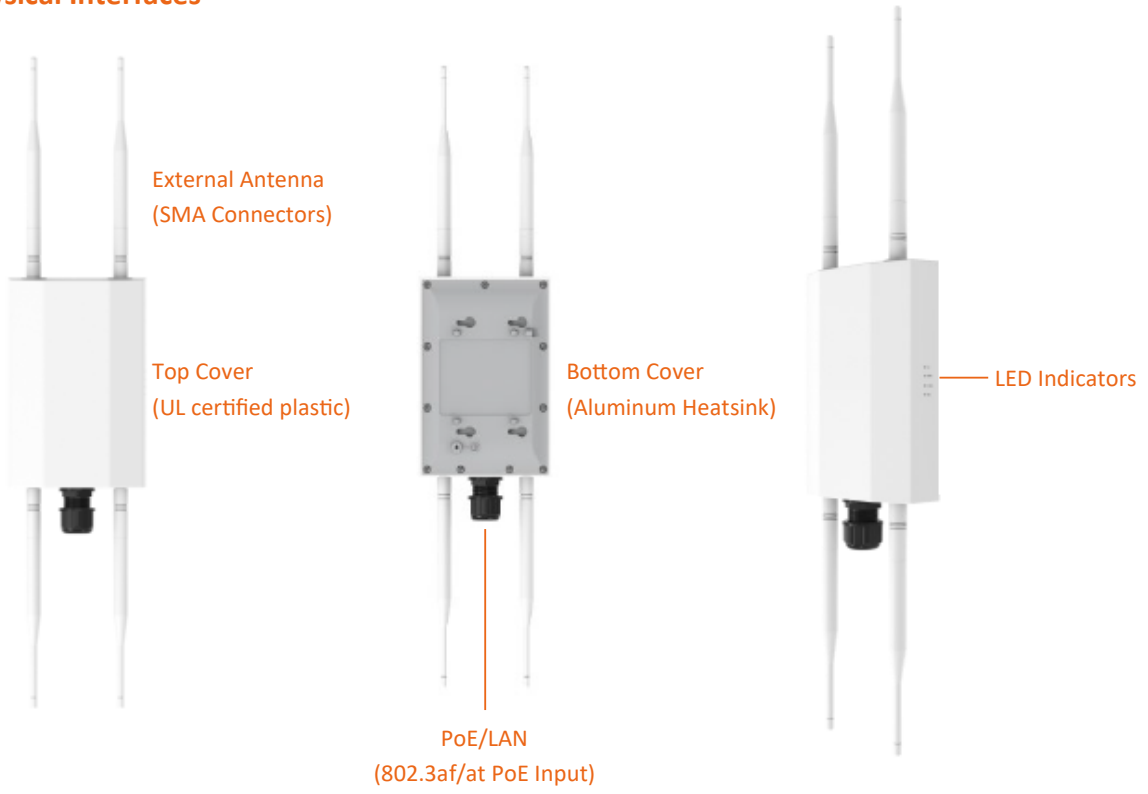
### Radio

Dual Concurrent Radio	2.4GHz with max data rate up to 574Mbps 5GHz with max data rate up to 1.2Gbps
Transmit Power (Combined)	2.4GHz: 22dBm 5GHz : 25dBm Max transmit power is limited by regulatory power
Radio Chains / Spatial Streams	2 x 2 / 2
Supported Radio Technology	802.11b: direct-sequence spread-spectrum (DSSS) 802.11a/g/n/ac: orthogonal frequency-division multiplexing (OFDM) 802.11ax: orthogonal frequency-division multiple access (OFDMA)
Channelization	802.11a/b/g with 20 MHz channel width 802.11n with 20/40 MHz channel width 802.11ac with 20/40/80 MHz channel width 802.11ax with 20/40/80 MHz channel width
Supported Modulation	802.11b: BPSK, QPSK, CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Supported data rates (Mbps)	802.11b: 1, 2, 5.5, 11 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 802.11n: 6.5 to 300 (MCS0 to MCS15) 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 ~ 2) 802.11ax: 2.4Ghz: 9 to 574 (MCS0 to MCS11, NSS=1 ~ 2) 5Ghz: 18 to 1201 (MCS0 to MCS11, NSS=1 ~ 2)

**Physical & Environment**

Power Consumption	12W Typical
Power Source	802.3af/at Compliant PoE PSE Proprietary PoE 48 ~ 54V
Interface	1 x 100/1000/2500Mbps Ethernet Port 4x SMA Connectors for Antennas
Dimensions (W x D x H)	190 x 124 x 47 mm
IP Rating	IP67
Surge Protection	1KV
ESD Protection	Contact: 4KV / Air: 8KV
Environment	Operating temperature: 0°C~60°C Operating humidity: 0%~90% typical Storage temperature: -40°C~80°C Storage humidity: 0%~90% typical
Mounting	Pole / Wall Mounting
Remote Reset	Remotely trigger reset using companion EPA5006GR PoE Injector

### Physical Interfaces



## RF Performance Specification

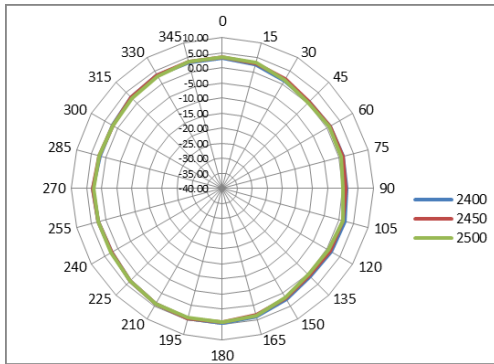
Channel	Data rate	Typical AVG - Tx Power	Min / Max - Rx Sensitivity
		Per-Chain (dBm)	Per-Chain (dBm)
		Tolerance = +/-1.5 dB	
		Measure at board connector	Measure at board connector
802.11b 2.4 GHz	1 Mbps	19	-93 / -98
	11 Mbps	18	-85 / -89
802.11g 2.4 GHz	6 Mbps	19	-88 / -93
	54 Mbps	17	-72 / -76
802.11a 5 GHz	6 Mbps	22	-90 / -94
	54 Mbps	22	-72 / -78
802.11n HT20 2.4 GHz	MCS 0 / 8	19	-88 / -93
	MCS 7 / 15	15	-69 / -73
802.11n HT40 2.4 GHz	MCS 0 / 8	18	-85 / -90
	MCS 7 / 15	15	-66 / -71
802.11n HT20 5GHz	MCS 0 / 8	22	-90 / -94
	MCS 7 / 15	21	-70 / -75
802.11n HT40 5GHz	MCS 0 / 8	22	-87 / -92
	MCS 7 / 15	21	-68 / -73
802.11ac VHT20 5GHz	MCS0	22	-90 / -94
	MCS8	21	-66 / -71
802.11ac VHT40 5GHz	MCS0	22	-87 / -92
	MCS9	20	-63 / -68
802.11ac VHT80 5GHz	MCS0	22	-83 / -89
	MCS9	20	-58 / -64
802.11ax HE20 2.4GHz	MCS0	19	-88 / -93
	MCS11	13	-60 / -64
802.11ax HE40 2.4GHz	MCS0	18	-85 / -90
	MCS11	13	-57 / -61
802.11ax HE20 5GHz	MCS0	22	-90 / -95
	MCS11	18	-60 / -66
802.11ax HE40 5GHz	MCS0	22	-87 / -92
	MCS11	18	-58 / -63
802.11ax HE80 5GHz	MCS0	22	-83 / -89
	MCS11	18	-55 / -60

**Antenna Pattern**

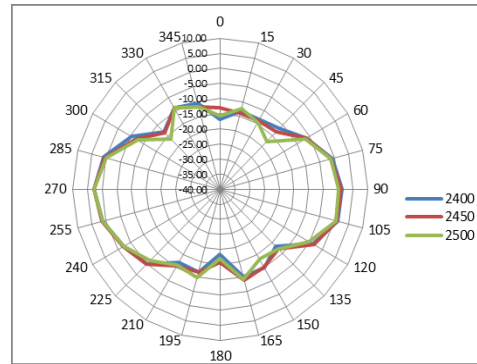
2.4Ghz: 2x detachable 5.0dBi Antennas

5Ghz: 2x detachable 5.0dBi Antennas

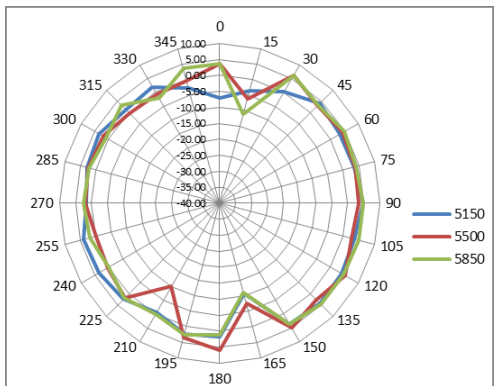
2.4GHz H-Plane



2.4GHz E-Plane



5GHz H-Plane



5GHz E-Plane

