

11ax 1800Mbps Inwall Wireless AP

PRODUCT OVERVIEW

AIR-WAP645 is a 11ax Wi-Fi standard in wall Access Point support MU-MIMO, Wave2.0, OFDMA and Seamless Roaming.

Combined 1800Mbps Wi-Fi speed over 2 radios: 2.4GHz (600Mbps 11ax 2*2) + 5GHz (1200Mbps 2*2), equipped Gigabit WAN port, support MU-MIMO and DL/UL-OFDMA modulation, faster Ethernet data rate and more users, then multiple users can upload or download multiple packets at same time, narrower subcarrier spacing and longer symbol time, improved the stability and data processing efficiency, publicly to be used in high density access environment such as university campus, concert venue, gymnasium, etc.



KEY FEATURES AND HIGHLIGHTS

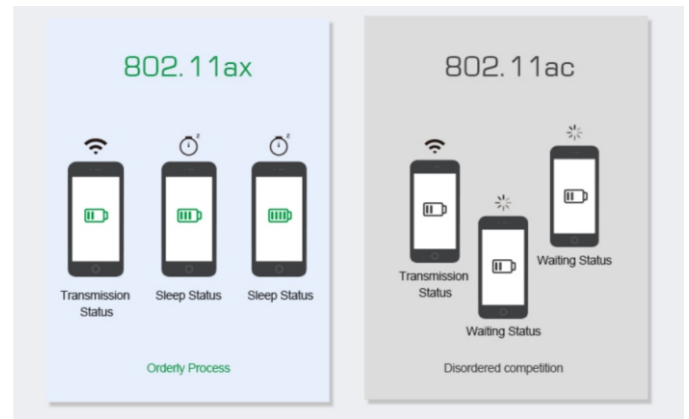
Wireless data rate up to 1.8Gbps. 802.11ax support 1024QAM, long OFDM symbol, 160M bandwidth and 11ax 2x2 MIMO technology, the wireless data rate up to 1.8Gbps, meet with demand of high-speed applications such as VR/ AR, 4K or 8K stream media.



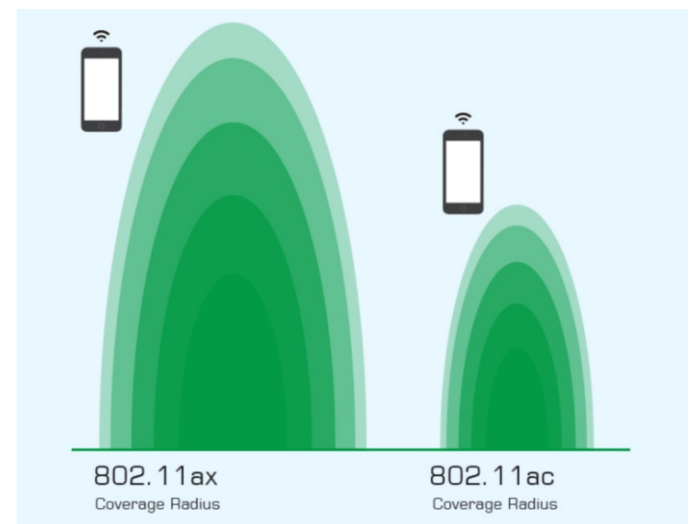
DL/ UL MU-MIMO. 802.11ax support both downlink MU-MIMO and uplink MU-MIMO. It can communicate with multiple end users at the same time, greatly improving the user's uplink transmission rate and the system's uplink and downlink capacity, improving the efficiency of multi-user concurrent scenarios, reducing the terminal application latency.



TWT (Target Wake-up Time). 802.11ax support TWT, allowing devices to negotiate when need to wake up, send and receive data. In additional, wireless AP can group the device into different TWT cycles, increase sleep time, reduce the device competing after wake-up, and save the device power.



Coverage Improvement. 802.11ax support long OFDM symbol transmission mechanism and 2MHz narrowband transmission, effectively reduced the packet loss rate and noise interference, improve the receive sensitivity and increase the Wi-Fi coverage.



Improvement of Anti-Interference Ability. 802.11ax support BSS color bit and dynamic CCA-SD (Clear Channel Assessment Signal Detection) threshold and power adjustment, effectively alleviates the channel interference in multi-users scenarios, improve the utilization of spectrum resources.

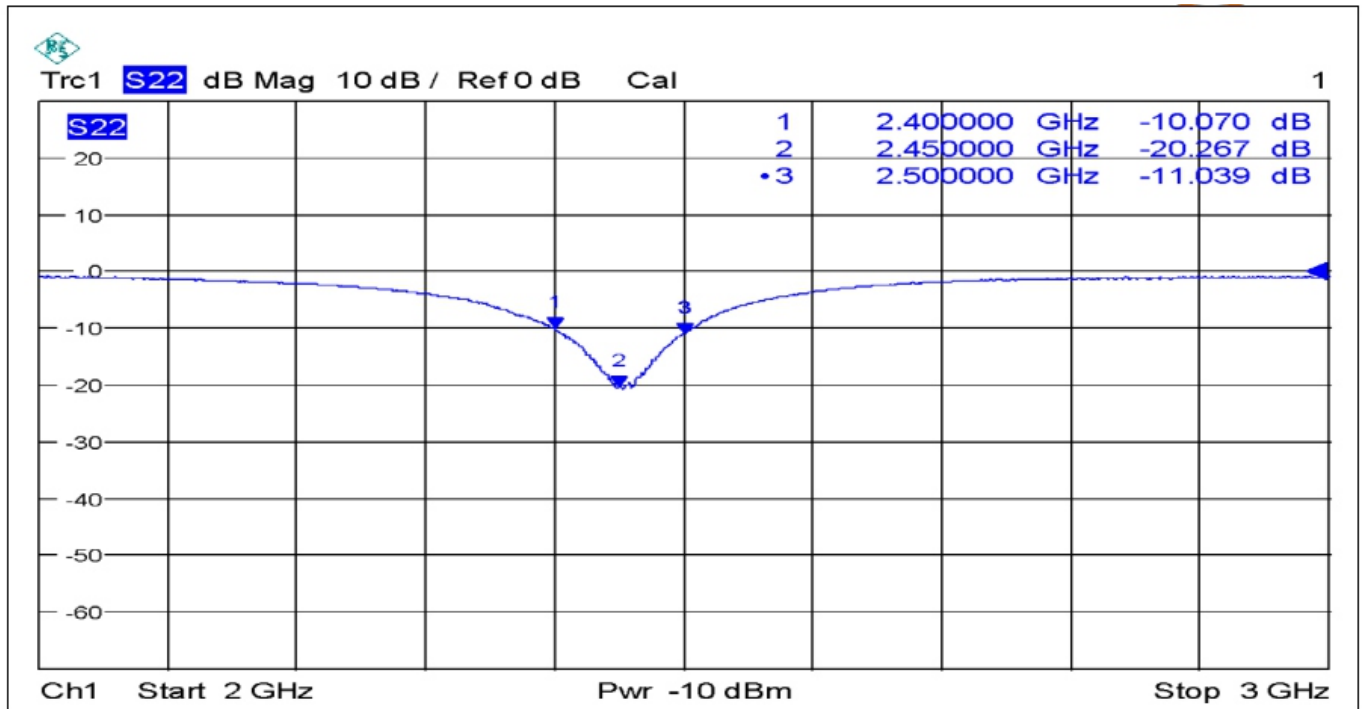


PRODUCT SPECIFICATIONS

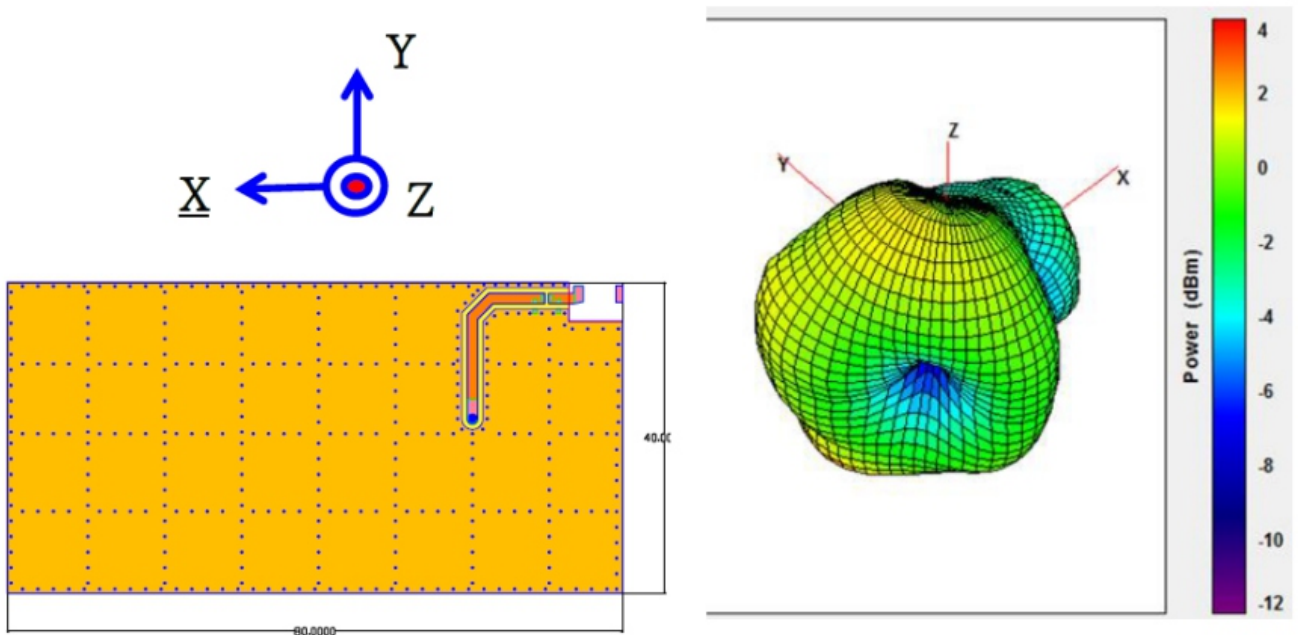
Hardware Specifications

Item	AIR-WAP645
Standard	802.11ax/ac/b/g/n
2.4G Frequency	2.4GHz - 2.484GHz
2.4G Wi-Fi standard	802.11b/g/n/ac/ax
5.8G Frequency	5150~5850MHz
5.8G Wi-Fi Standard	802.11 a/n/ac/ax
Interface	1 * 10/100 /1000 RJ45 WAN Port 1 * Reset button, press 10 seconds to revert to default setting 1 * LAN Port
Antenna	2.4G: 3dBi; 5G:4dBi
Data Rate	1800Mbps
End Users	120+
RF Power	2.4G≤20dBm; 5.8G≤19dBm
PoE	48V (IEEE 802.3af)
LED light	Sys
Power Consumption	≤ 14W
ESD	±6KV
Size	86mmX86mmX45mm
Firmware Specification	
Working Mode	Gateway, AP
Wireless Functions	Multiple SSID functions: 2.4GHz: 4; 5.8GHz: 4.
	Support SSID hidden
	Support seamless roaming, 802.11kvr standard.
	Support 5G Prior for a faster Ethernet.
	Wireless Security: Open, WPA, WPA2PSK, TKIPAES, WAP2_EAP,
	Support MAC filter
	Support Wi-Fi time on/off to save energy
Networking Function	Support client isolation to improve the wireless stability
	Support RF power adjustable, adjust the RF power based on environment.
	Support user quantity limited, Max 64 users to access each band.
	VLAN settings
	Managed through Controller
	Back-up the configuration
	Restore the configuration
Device Management	Reset to factory default
	Reboot the device: including time reboot or reboot immediately
	Admin management password modify
	Firmware upgrade
	System log
	Support firmware GUI web management, AC controller management, remote management and cloud management
	Protocols
Antenna Specification	
Frequency Range	2.4-2.5GHz
Impedance	50 Ohms nominal
Gain	3dBi
Radiation	Omni
Polarization	Linear

Return Loss/VSWR



Radiation Pattern

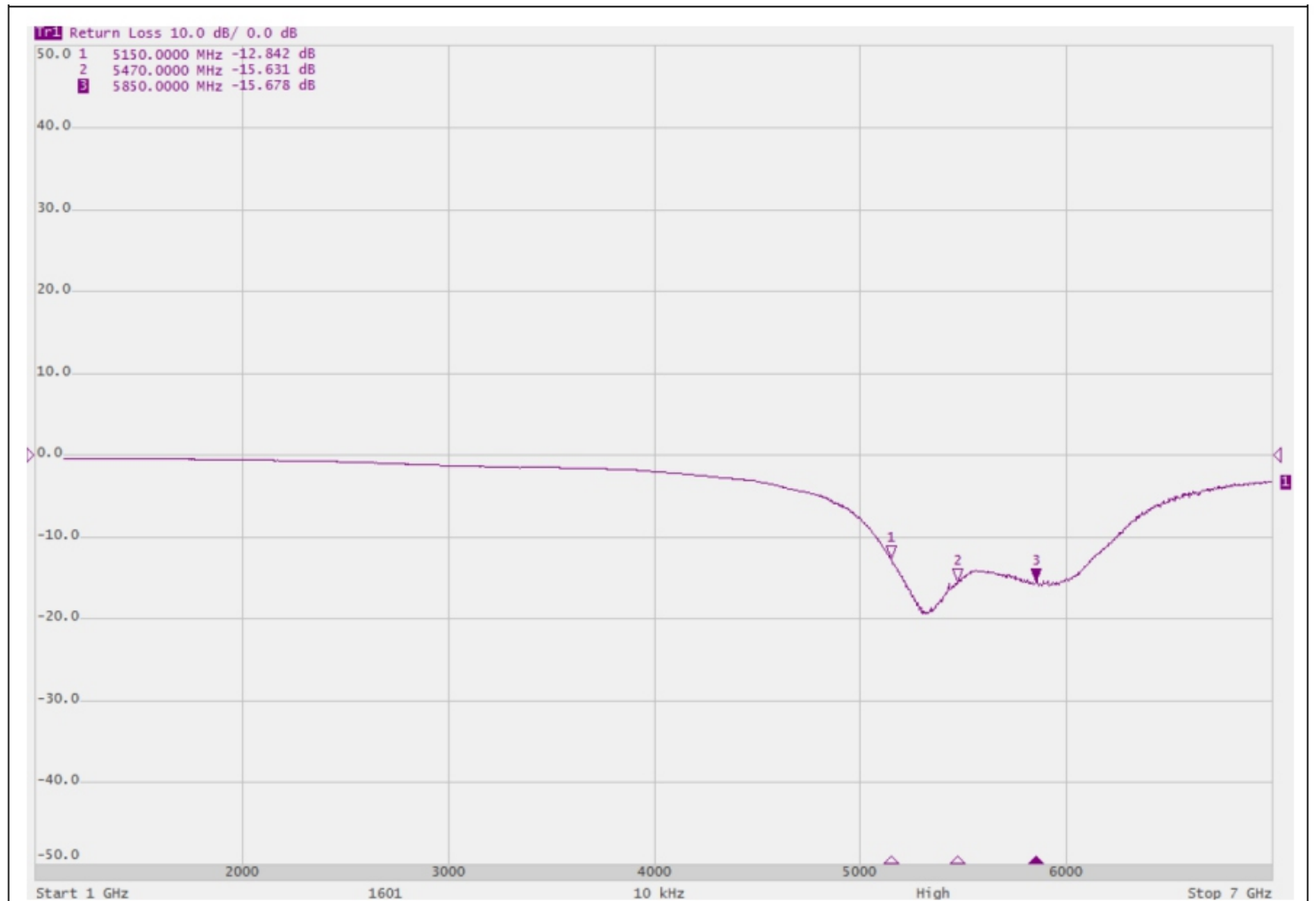


	Efficiency	Peak Gain	Directivity
2400MHz	64.77 %	2.62 dBi	5.15 dBi
2450MHz	75.12 %	3.19 dBi	5.03 dBi
2500MHz	66.18 %	2.64 dBi	5.10 dBi

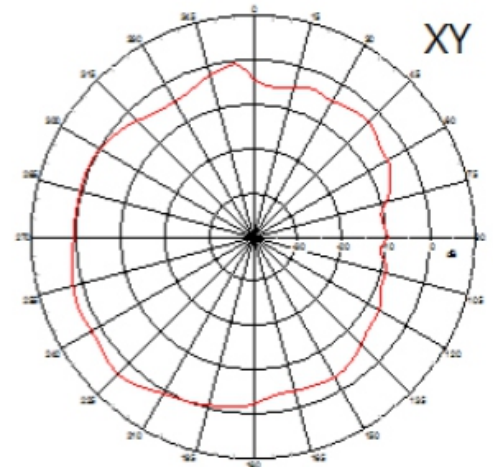
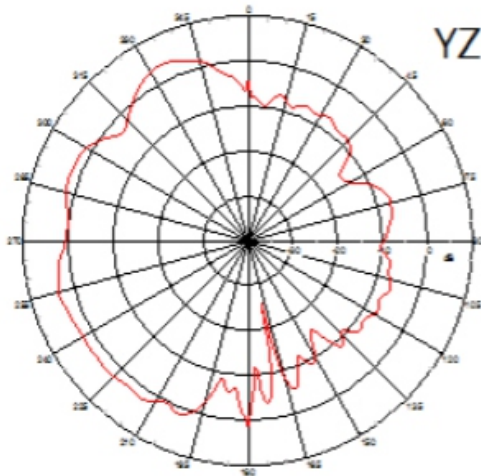
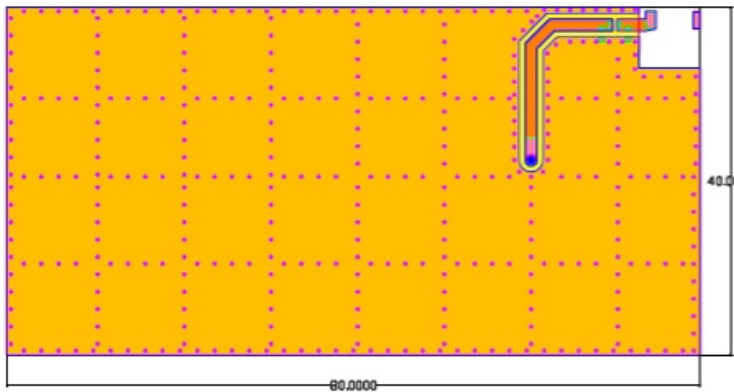
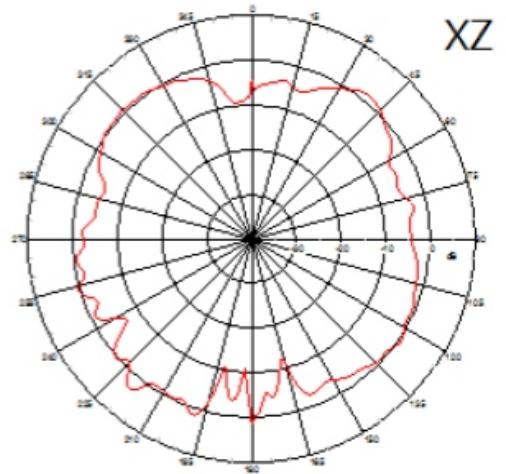
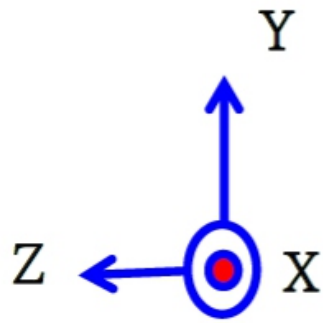
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Hardware Specifications

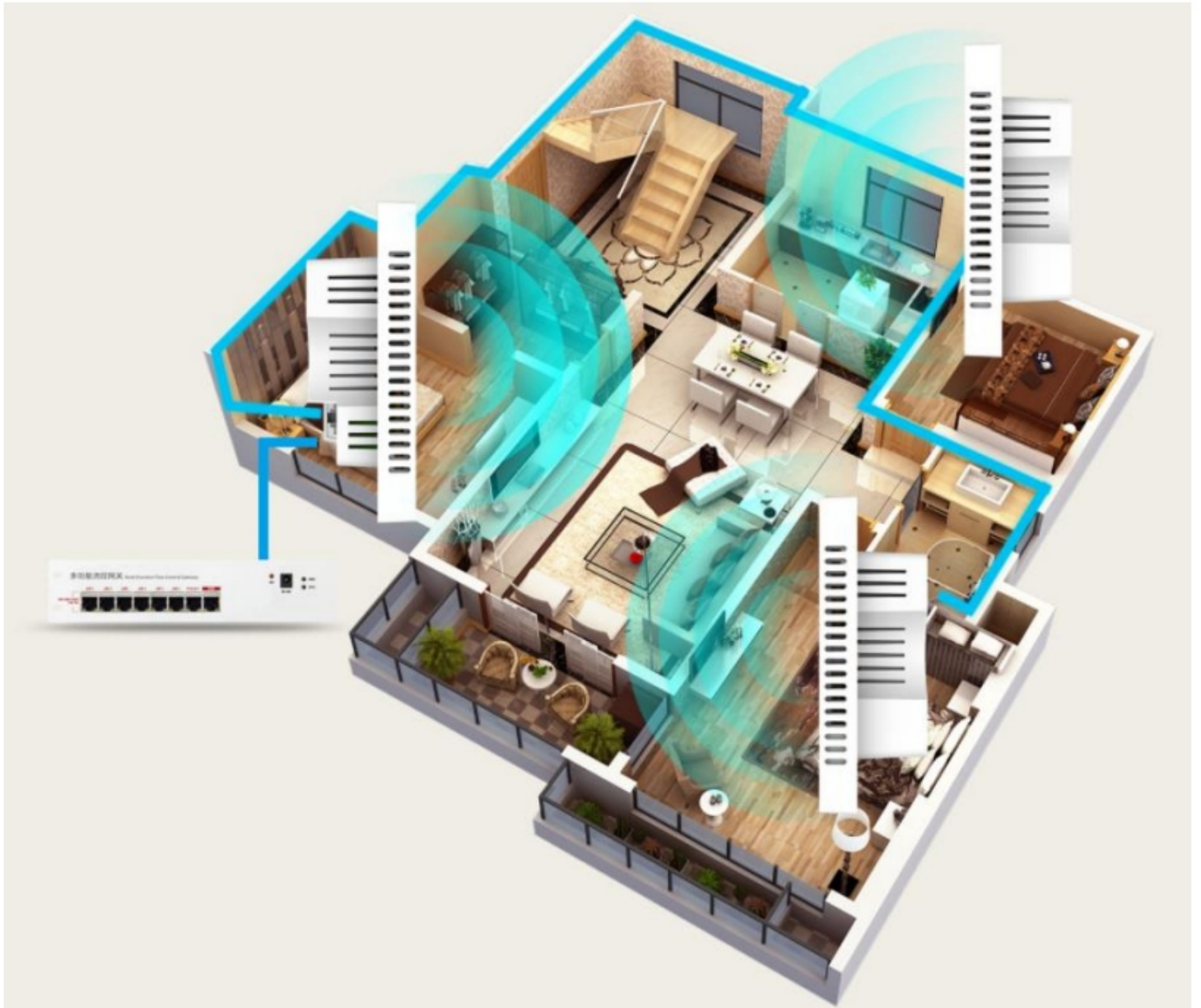
Item	AIR-WAP645
Frequency Range	5.15-5.85GHz
Impedance	50 Ohms nominal
Gain	3dBi
Radiation	Omni
Polarization	Linear
Return	Loss/VSWR



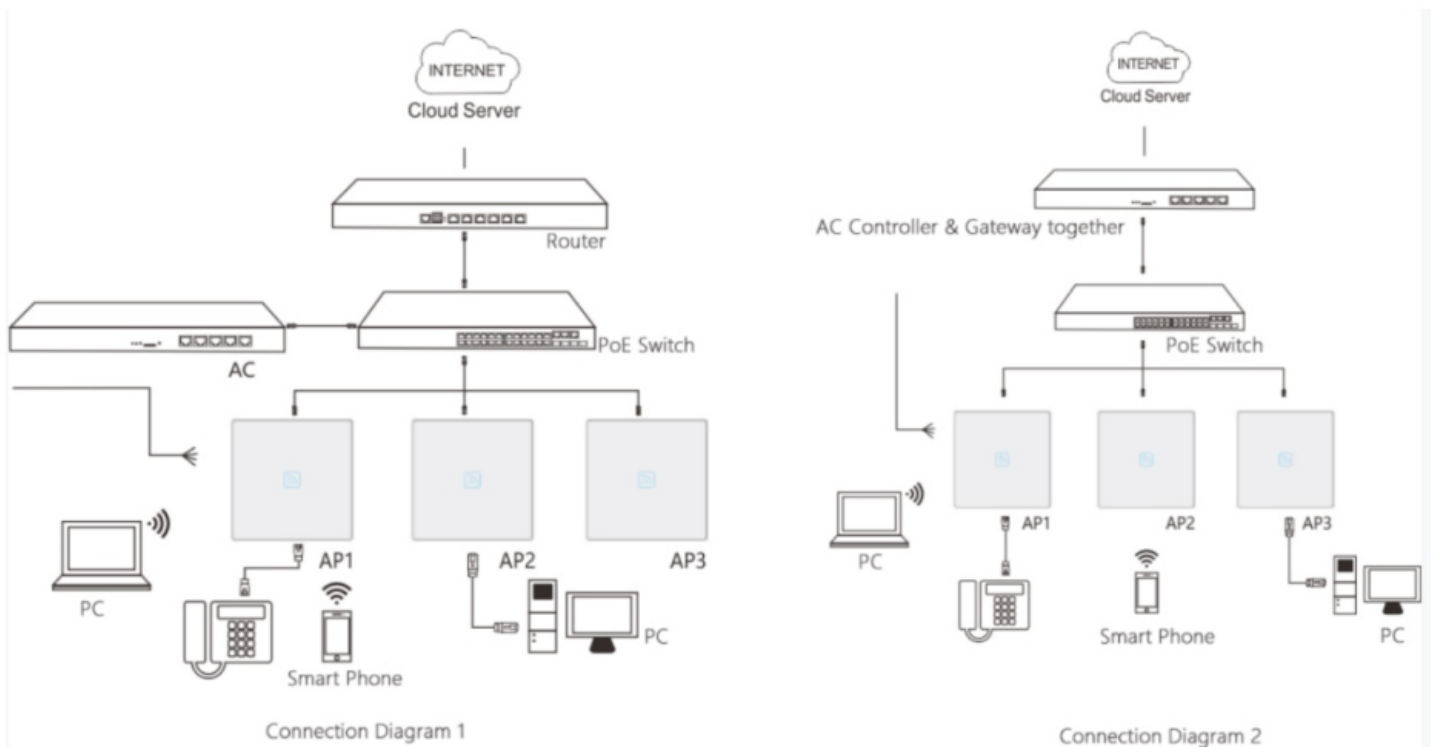
Radiation Pattern



	Efficiency	Peak Gain
5150MHz	72.73 %	4.05 dBi
5500MHz	84.66 %	4.63 dBi
5850MHz	69.57 %	3.87 dBi



For Hotel/School:



Throughput Testing:

Mode	11AX HT40 (2.4G)
Upload Link	396Mbps

ixChariot Test - untitled1.tst

File Edit View Run Tools Window Help

ALL TCP SR EP1 EP2 SQ PG PC XIXIA

18% OK

Group	Pair Group Name	Run Status	Timing Records Completed	95% Confidence Interval	Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)	Measured Time (sec)	Relative Precision
All Pairs			18,445		396.686	19.743	53.619		
Pair 1 No Group	Pair 1 No Group	Finished	1,838	-0.080 : +0.080	39.540	24.309	51.982	3,718.763	0.201
Pair 2 No Group	Pair 2 No Group	Finished	1,862	-0.092 : +0.092	40.062	22.734	52.910	3,718.240	0.232
Pair 3 No Group	Pair 3 No Group	Finished	1,829	-0.094 : +0.094	39.346	22.949	52.086	3,718.770	0.239
Pair 4 No Group	Pair 4 No Group	Finished	1,830	-0.101 : +0.101	39.816	19.743	49.536	3,717.140	0.253
Pair 5 No Group	Pair 5 No Group	Finished	1,854	-0.080 : +0.080	39.895	23.995	51.216	3,717.741	0.200
Pair 6 No Group	Pair 6 No Group	Finished	1,826	-0.100 : +0.100	39.293	20.382	48.873	3,717.703	0.254
Pair 7 No Group	Pair 7 No Group	Finished	1,875	-0.092 : +0.092	40.346	22.561	51.580	3,717.961	0.231
Pair 8 No Group	Pair 8 No Group	Finished	1,845	-0.088 : +0.088	39.690	22.929	53.619	3,718.842	0.222
Pair 9 No Group	Pair 9 No Group	Finished	1,837	-0.081 : +0.081	39.521	27.425	51.948	3,718.521	0.206
Pair 10 No Group	Pair 10 No Group	Finished							

Throughput

Elapsed time (h:mm:ss)

Legend

All Pairs

Pairs: 10 | Start: 2021/3/24, 11:36:50 | Ixia Configuratio | End: 2021/3/24, 12:38:50 | Run time: 01:02:00 | Ran to completion

Download Link	433Mbps
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ixChariot Test - untitled1.tst

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ALL TCP SR EP1 EP2 SQ PG PC XIXIA

18% OK

Group	Pair Group Name	Run Status	Timing Records Completed	95% Confidence Interval	Average (Mbps)	Minimum (Mbps)	Maximum (Mbps)	Measured Time (sec)	Relative Precision
All Pairs			20,178		432.950	12.685	127.389		
Pair 1 No Group	Pair 1 No Group	Finished	2,140	-0.342 : +0.342	46.043	15.702	96.735	3,718.252	0.744
Pair 2 No Group	Pair 2 No Group	Finished	2,049	-0.257 : +0.257	44.082	21.558	127.389	3,718.487	0.582
Pair 3 No Group	Pair 3 No Group	Finished	1,957	-0.208 : +0.208	39.947	15.427	78.421	3,718.593	0.772
Pair 4 No Group	Pair 4 No Group	Finished	1,850	-0.208 : +0.208	39.809	13.685	71.492	3,717.709	0.774
Pair 5 No Group	Pair 5 No Group	Finished	1,981	-0.230 : +0.230	42.618	15.692	83.420	3,718.624	0.775
Pair 6 No Group	Pair 6 No Group	Finished	2,201	-0.316 : +0.316	47.367	21.517	93.132	3,717.379	0.667
Pair 7 No Group	Pair 7 No Group	Finished	1,922	-0.262 : +0.262	41.252	16.074	71.620	3,718.319	0.878
Pair 8 No Group	Pair 8 No Group	Finished	1,998	-0.230 : +0.230	42.984	16.327	67.340	3,718.563	0.769
Pair 9 No Group	Pair 9 No Group	Finished	1,975	-0.251 : +0.251	42.505	15.160	76.263	3,717.246	0.825
Pair 10 No Group	Pair 10 No Group	Finished	2,205	-0.287 : +0.287	47.435	22.173	83.770	3,718.749	0.605

Throughput

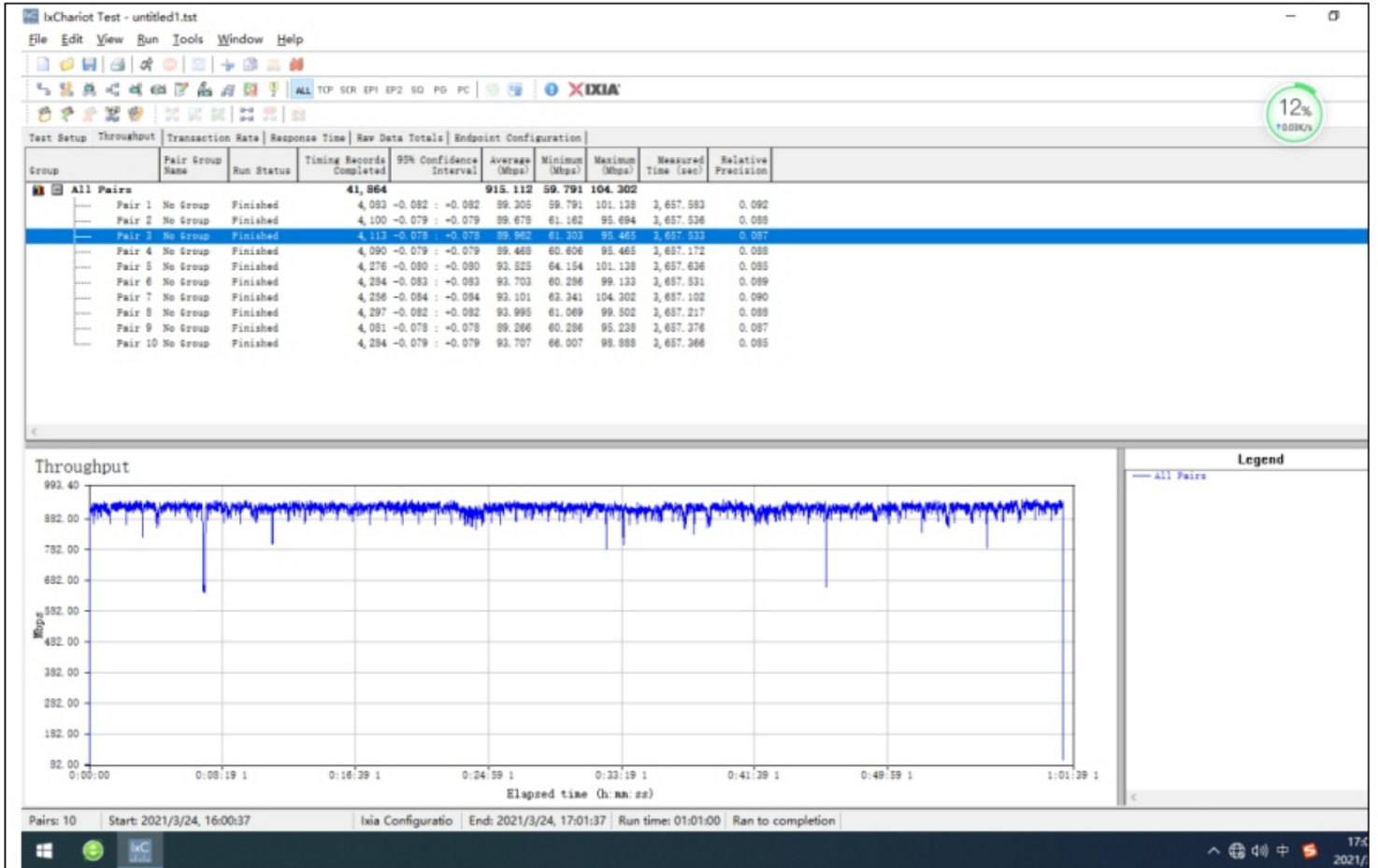
Elapsed time (h:mm:ss)

Legend

All Pairs

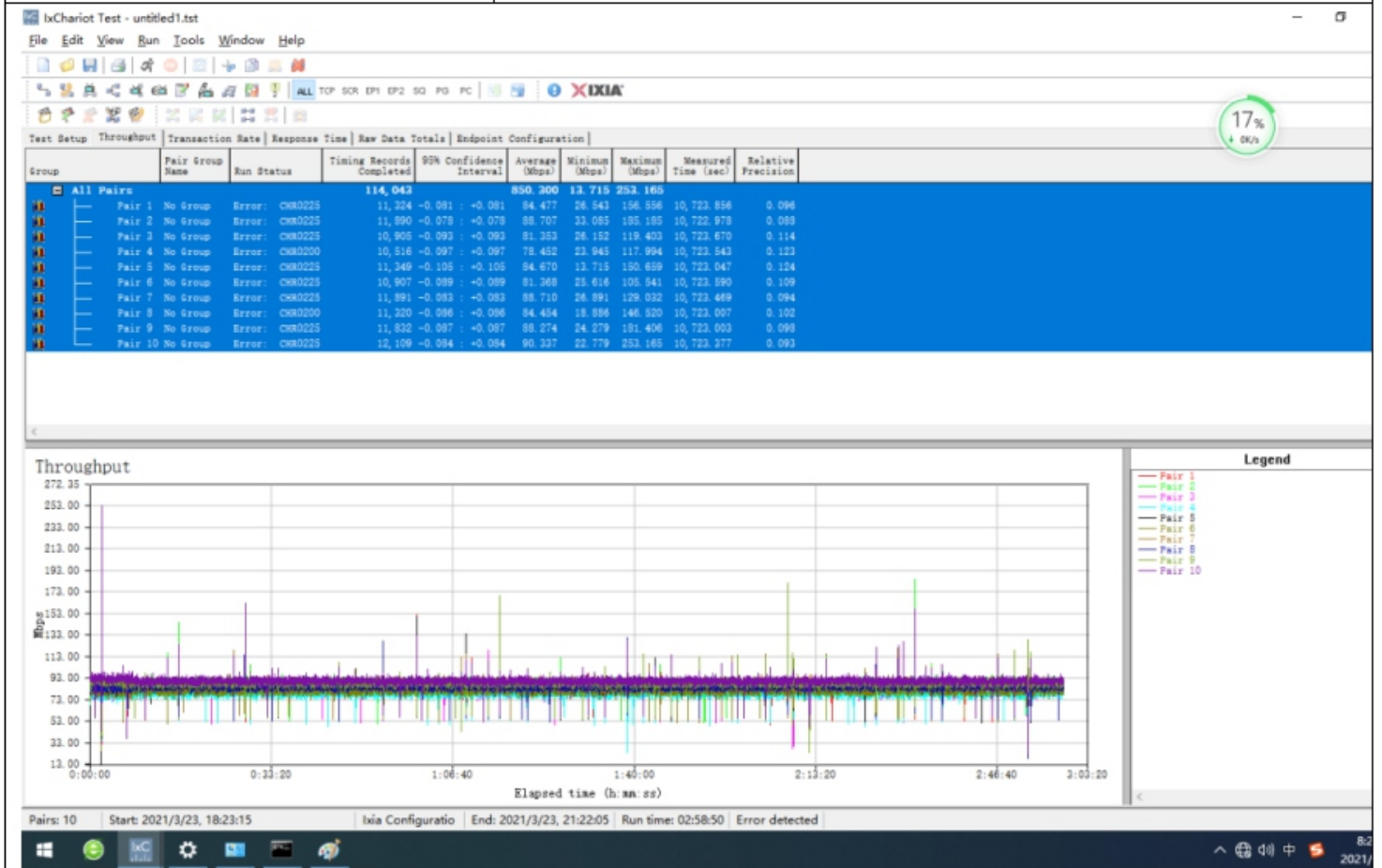
Pairs: 10 | Start: 2021/3/24, 12:44:18 | Ixia Configuratio | End: 2021/3/24, 13:46:18 | Run time: 01:02:00 | Ran to completion

Mode:	11AX HT80 (5.8G)
Upload Link	915Mbps



Download Link

850Mbps



PRODUCT SPECIFICATIONS

Signal Strength Testing:

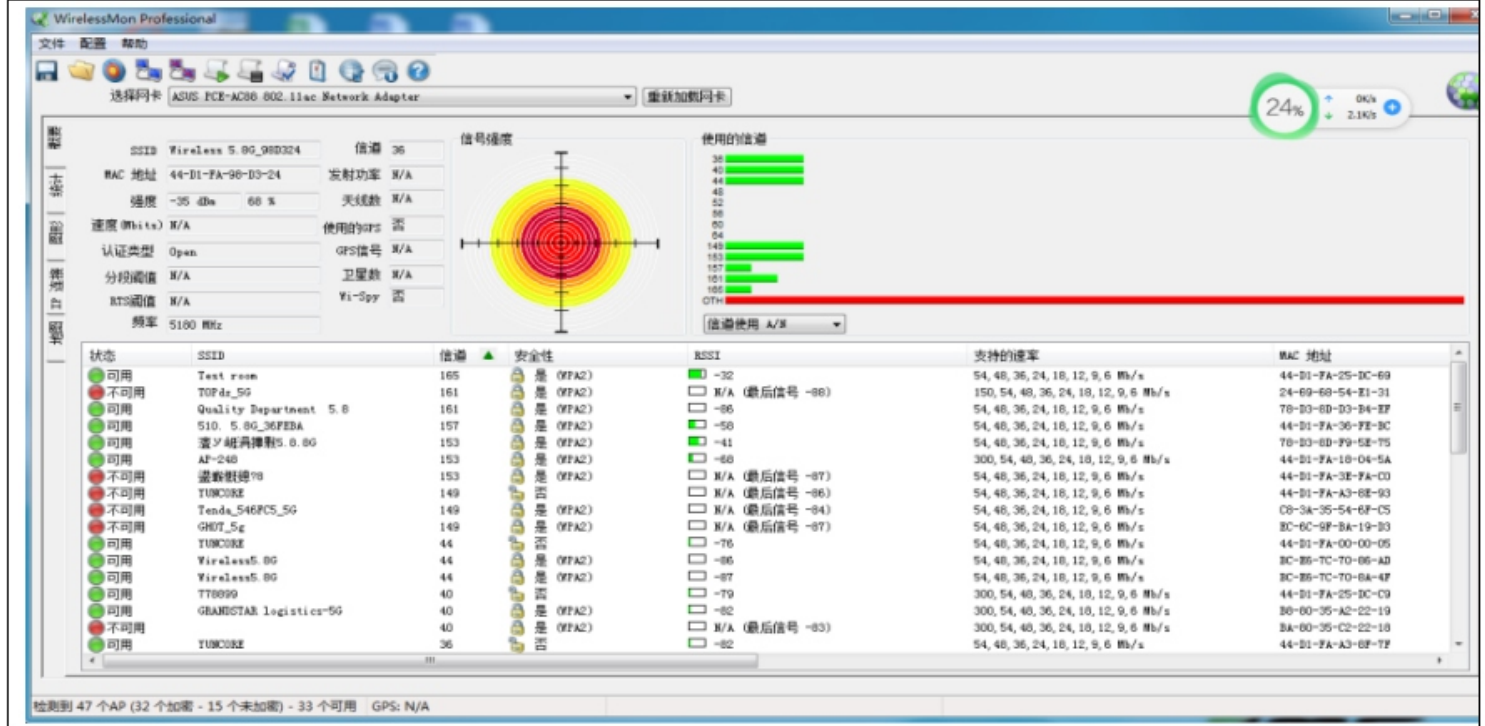
Item	AIR-WAP645	
Distance	Band	Signal strength/ Link quality
5 meters	2.4G	-37dBm/66%



5 meters

5G

-35dBm/68%



检测到 47 个 AP (32 个加锁 - 15 个未加锁) - 33 个可用 GPRS: N/A

PRODUCT SPECIFICATIONS

Accessory

<i>Item</i>	<i>AIR-WAP645</i>
<i>AP</i>	<i>1</i>
<i>Screw</i>	<i>2</i>
<i>Gift Box</i>	<i>1</i>



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