



ATHEROS AR7240 RADIO PTP LINK TEST REPORT

Radio Specifications: AR7240 CPU, 8MB Flash, 32MB RAM & 2 X SMA Connectors

5.8GHz 35dBi Dual Polarized 2X2 MIMO Dish Antennas

Operating Frequency: 5825MHz

PTP Link Distance: 34Kms

Point to Point TDMA Mode

Antenna Selection: Right and Left Antennas

Radio FW: 12-Jan-2013

UDP THROUGHPUT TEST RESULTS

CW	MIMO	TDMA Slot	UDP Throughput (in Mbps)		Packet Loss		Jitter (in ms)		Ping Latency (in ms)
			A → B	B → A	A → B	B → A	A → B	B → A	With Load
20MHz	2X2	Large	10	-	0%	-	1.198	-	Up to 40
			8	8	0%	0.026%	1.39	3.325	Up to 300
		Medium	6	6	0%	0%	1.863	2.933	Up to 60
		Small	5	5	0%	0%	2.954	2.949	Up to 20
		Extra Small	4	4	0%	0.022%	2.645	2.254	Up to 30
10MHz		Large	5	5	0%	0%	2.32	1.129	Up to 150
		Medium	6	6	0.36%	0%	1.733	2.988	Up to 220
		Small	4	4	0%	0%	4.923	3.797	Up to 1800
		Extra Small	4	4	0%	0%	3.024	4.07	Up to 200
5MHz		Large	2	2	0%	0%	5.809	3.121	Up to 300
		Medium	3	3	0%	0%	5.507	5.231	Up to 160
		Small	3	3	0%	0%	3.831	3.409	Up to 60
		Extra Small	4	4	0%	0%	2.699	2.865	Up to 50
20MHz	1X1 Only Left Ant	Large	8	8	0%	0%	2.593	3.589	Up to 400
			9	9	0.15%	0%	1.031	3.999	Up to 1200

PS: : Throughputs are measured with packet loss ~ 0%



RSL Details:

CW 20MHz (RIGHT & LEFT Antennas)

```
192.168.1.2 - PuTTY
\u@\h:\w\$ MFP: no
-ash: MFP:: not found
\u@\h:\w\$ TDLS peer: no
-ash: TDLS: not found
\u@\h:\w\$ iw wlan0 station dump
Station 00:c0:ca:78:e3:aa (on wlan0)
  inactive time: 50 ms
  rx bytes: 548323
  rx packets: 7838
  tx bytes: 21375
  tx packets: 191
  tx retries: 23
  tx failed: 0
  signal: -63 dBm
  signal avg: -63 dBm
  tx bitrate: 104.0 MBit/s MCS 13
  rx bitrate: 78.0 MBit/s MCS 12
  authorized: yes
  authenticated: yes
  preamble: long
  WMM/WME: no
  MFP: no
  TDLS peer: no
\u@\h:\w\$
```

CW 10MHz (RIGHT & LEFT Antennas)

```
192.168.1.2 - PuTTY
Enter 'help' for a list of built-in commands.
This firmware is based on OpenWRT with many third party addons
-----
\u@\h:\w\$ iw wlan0 station dump
Station 00:c0:ca:78:e3:aa (on wlan0)
  inactive time: 70 ms
  rx bytes: 251837
  rx packets: 2195
  tx bytes: 214482
  tx packets: 962
  tx retries: 24
  tx failed: 0
  signal: -60 dBm
  signal avg: -60 dBm
  tx bitrate: 130.0 MBit/s MCS 15
  rx bitrate: 130.0 MBit/s MCS 15
  authorized: yes
  authenticated: yes
  preamble: long
  WMM/WME: no
  MFP: no
  TDLS peer: no
\u@\h:\w\$
```



CW 5MHz (RIGHT & LEFT Antennas)

```
192.168.1.2 - PuTTY
Enter 'help' for a list of built-in commands.

This firmware is based on OpenWRT with many third party addons
-----
\u@\h:\w\$ iw wlan0 station dump
Station 00:c0:ca:78:e3:aa (on wlan0)
  inactive time: 90 ms
  rx bytes: 168745
  rx packets: 973
  tx bytes: 201258
  tx packets: 824
  tx retries: 3
  tx failed: 0
  signal: -58 dBm
  signal avg: -57 dBm
  tx bitrate: 104.0 MBit/s MCS 13
  rx bitrate: 117.0 MBit/s MCS 14
  authorized: yes
  authenticated: yes
  preamble: long
  WMM/WME: no
  MFP: no
  TDLS peer: no
\u@\h:\w\$
```

CW 20MHz (Only RIGHT Antenna)

```
192.168.1.2 - PuTTY
Enter 'help' for a list of built-in commands.

This firmware is based on OpenWRT with many third party addons
-----
\u@\h:\w\$ iw wlan0 station dump
Station 00:c0:ca:78:e3:aa (on wlan0)
  inactive time: 50 ms
  rx bytes: 121422
  rx packets: 1021
  tx bytes: 98425
  tx packets: 521
  tx retries: 281
  tx failed: 1
  signal: -82 dBm
  signal avg: -82 dBm
  tx bitrate: 13.0 MBit/s MCS 1
  rx bitrate: 13.0 MBit/s MCS 1
  authorized: yes
  authenticated: yes
  preamble: long
  WMM/WME: no
  MFP: no
  TDLS peer: no
\u@\h:\w\$
```



CW 20MHz (Only LEFT Antenna)

```
192.168.1.2 - PuTTY
Enter 'help' for a list of built-in commands.

This firmware is based on OpenWRT with many third party addons
-----
\u@\h:\w\$ iw wlan0 station dump
Station 00:c0:ca:78:e3:aa (on wlan0)
  inactive time: 10 ms
  rx bytes:      228444
  rx packets:    1852
  tx bytes:      210881
  tx packets:    797
  tx retries:    57
  tx failed:     0
  signal:        -63 dBm
  signal avg:    -62 dBm
  tx bitrate:    117.0 MBit/s MCS 14
  rx bitrate:    52.0 MBit/s MCS 11
  authorized:    yes
  authenticated: yes
  preamble:      long
  WMM/WME:       no
  MFP:           no
  TDLS peer:     no
\u@\h:\w\$
```