



## PTP LINKPlanner Configuration Worksheet

05 August 2008

### Summary

Link Name	Phone Room to Val's Building
Customer Company Name	FMI Miami
Link Type	Line-of-Sight
Maximum Obstruction	0 feet
Link Distance	0.953 miles
Free Space Path Loss	111.41 dB
Excess Path Loss	0.00 dB
User Throughput Expectation Aggregate	Aggregate 102.54 Mbps assuming PTP-600 Series running the 06-00 software
RF Frequency Band	5.8 GHz (5.725 to 5.85 GHz)
RF Channel Bandwidth	30 MHz
Description	

### Installation Notes

LOCAL - Site Name	Phone Room
LOCAL - Coordinates	33:24:44.5N 110:50:32.9W
LOCAL - Antenna Height	30.0 feet AGL
LOCAL - Bearing to Val's Building	74.05° from True North
LOCAL - Antenna Tilt angle	0.2°
LOCAL - Max Transmit Power setting while pointing	15 dBm
LOCAL - Predicted Receive Power	-40.41 dBm ± 5.00 dB
LOCAL - Max Transmit Power setting before Disarm	25 dBm
REMOTE - Site Name	Val's Building
REMOTE - Coordinates	33:24:58.1N 110:49:35.7W
REMOTE - Antenna Height	30.0 feet AGL
REMOTE - Bearing to Phone Room	254.06° from True North
REMOTE - Antenna Tilt angle	-0.2°
REMOTE - Max Transmit Power setting while pointing	15 dBm
REMOTE - Predicted Receive Power	-40.41 dBm ± 5.00 dB
REMOTE - Max Transmit Power setting before Disarm	25 dBm
Predicted Link Loss	111.41 dB ± 5.00 dB
Ranging Mode	Auto 0 to 25 miles

Perform the following checks during the installation

1. Check with a GPS that you are installing at the correct location.
2. Check carefully the direction to the other end of the link. Either use a corrected compass or use the GPS waypoint feature about 300 meters from the installation location.
3. Keep directing the antenna until the correct Receive Power is achieved. This should ensure that you are not peaking on a sidelobe of the antenna.
4. An hour after disarming check that the mean value for the link loss is as predicted.

### Local Site

Site Name	Phone Room
Hardware Platform	PTP-600 Series Integrated
Antenna Type	INTEGRATED - Built-in Antenna Dual Polar (23.0dBi)
Antenna Gain	23.0 dBi

**Local Site**

Antenna Height	30 feet AGL
Site Elevation	1017 feet AMSL
Mean Throughput Predicted	51.27 Mbps
Mean Throughput Required	5.00 Mbps
Receive Availability	99.9999 %
Minimum Throughput Required	1.00 Mbps
Ouput Power	25.00 dBm
In Band Environmental Noise	-75.23dB / 30 MHz
Local Site Location	33:24:44.5N 110:50:32.9W

**Remote Site**

Site Name	Val's Building
Hardware Platform	PTP-600 Series Integrated
Antenna Type	INTEGRATED - Built-in Antenna Dual Polar (23.0dBi)
Antenna Gain	23.0 dBi
Antenna Height	30 feet AGL
Site Elevation	1023 feet AMSL
Mean Throughput Predicted	51.27 Mbps
Mean Throughput Required	5.00 Mbps
Receive Availability	99.9999 %
Minimum Throughput Required	1.00 Mbps
Ouput Power	25.00 dBm
In Band Environmental Noise	-75.23dB / 30 MHz
Local Site Location	33:24:58.1N 110:49:35.7W

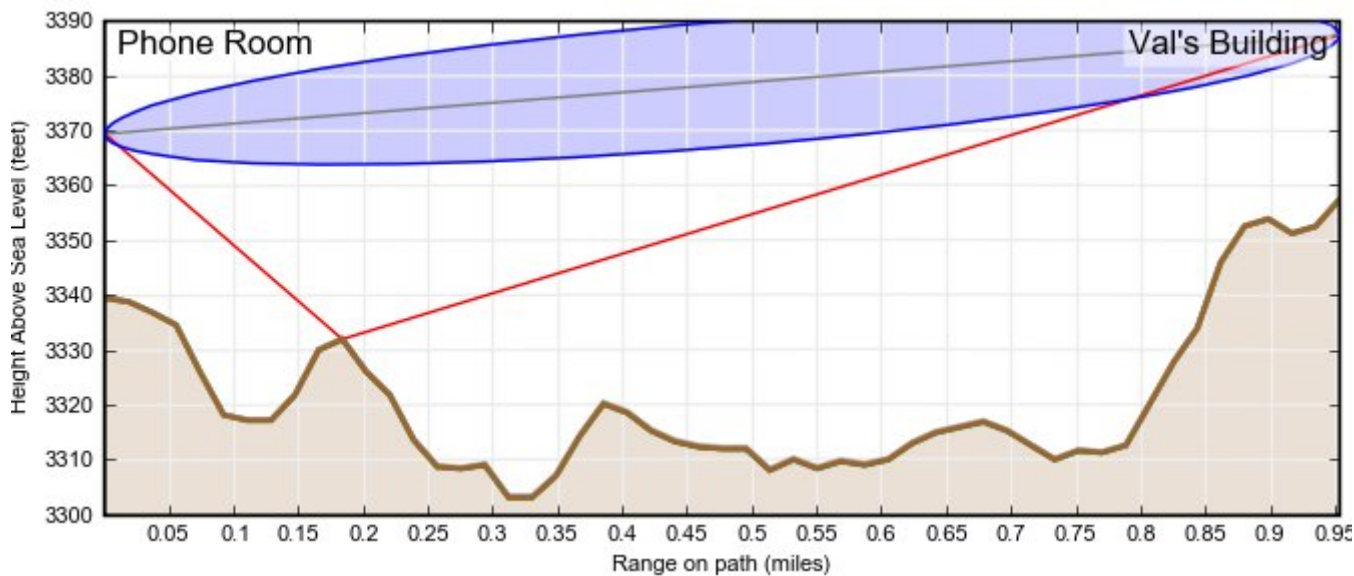
**Link Throughput & Availability**

Mean Throughput Required	5.00
Mean Throughput Predicted	51.27
Percentage of Required Throughput	1025.42
Link Symmetry	Adaptive
(Predicted) Availability	99.9999

**Required user throughput**

Required User Data Throughput (Mbps)	1.00
Link Availability for User Data Throughput (%)	99.99

Mode	Max Aggregate User Throughput (Mbps)	Max User Throughput in Either Direction (Mbps)	Fade Margin (dB)	Phone Room	Val's Building			
				Throughput Availability (%)	Receive time in Mode (%)	Fade Margin (dB)	Throughput Availability (%)	Receive time in Mode (%)
256QAM 0.81 Dual	149.65	74.82	-6.68	0.0003	0.0003	-6.68	0.0003	0.0003
64QAM 0.92 Dual	126.08	63.04	-3.88	0.0082	0.0078	-3.88	0.0082	0.0078
64QAM 0.75 Dual	103.03	51.52	2.75	97.8491	97.8409	2.75	97.8491	97.8409
16QAM 0.87 Dual	80.16	40.08	8.33	99.9991	2.1500	8.33	99.9991	2.1500
16QAM 0.63 Dual	57.62	28.81	14.89	99.9995	0.0004	14.89	99.9995	0.0004
256QAM 0.81 Sngl	74.82	37.41	-1.95	0.0000	0.0000	-1.95	0.0000	0.0000
64QAM 0.92 Sngl	63.04	31.52	0.11	0.0002	0.0002	0.11	0.0002	0.0002
64QAM 0.75 Sngl	51.52	25.76	5.99	0.0005	0.0002	5.99	0.0005	0.0002
16QAM 0.87 Sngl	40.08	20.04	11.44	0.0005	0.0000	11.44	0.0005	0.0000
16QAM 0.63 Sngl	28.81	14.41	17.94	99.9999	0.0000	17.94	99.9999	0.0000
QPSK 0.87 Sngl	20.04	10.02	20.88	99.9999	0.0000	20.88	99.9999	0.0000
QPSK 0.63 Sngl	14.40	7.20	24.82	99.9999	0.0000	24.82	99.9999	0.0000
BPSK 0.63 Sngl	7.20	3.60	29.34	99.9999	0.0000	29.34	99.9999	0.0000

**Path Profile****Regulatory Conditions**

License	FCC USA, Canada, Taiwan, Brazil region code: 1
Max EIRP	48.00 dBm
Output Power	25.00 dBm

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