



GPS
NETWORKING

L1 Link Budget Calculations for Aerotec

Change the values in the yellow boxes to calculate required readings

-140 or less at a range of 100 feet beyond the nearest external wall is required to meet NTIA regulations

Receive Ant Gain (dBm)	Cable Insertion Loss (dBm)	Repeater Amp Gain (dBm)	Repeater Ant Gain Best Case (dBi)	Range in Feet	Effective Isotropic Radiated Power @ Range In dBm
40	-4.3	30	-5	187	-140.83
GPS Carrier Frequency MHz		Total System Gain		Range in Miles	Total Signal Power @ Range in Watts
1575		60.7		0.04	8.3E-18
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm
-130				58.28	-69.3
Free Space loss with Isotropic Antennas				Range in Kilometers	Transmitted Power (W)
-71.53				0.06	58.9E-12
					Effective Radiated Power (W)
					117.5E-12
					Effective Radiated Power (dBW)
					-99.3

