

# GPS Repeater Link Budget

June 2017

Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	EIRP @ Range In dBm
19.5	0	0	30	100	-146.59
			Total System Gain	Range in Miles	Total Signal Power @ Range in Watts
	GPS Carrier Frequency MHz		49.5	0.02	2.2E-18
	1575				
	Avg Receive Power L1 dBm North America			Range in Meters	Radiated Power dBm
	-130			31.17	-80.5
	Free Space loss with Isotropic Antennas			Range in Kilometers	Transmitted Power (W)
	-66.09			0.03	4.5E-12
					Effective Isotropic Radiated Power (W)
					8.9E-12
					Effective Radiated Power (dBW)
					-110.5