

**FORTH WORTH, TX
GPS REPEATER
LINK BUDGET**

July 2015

Model Number	Location	Gain/Loss
Mobile Mark EDM238-3200	Outdoor Antenna	26 dB (per datasheet)
LDF4RK-50	Outdoor Coax - 20ft	-0.5542 dB (calculated)
DGXZ+06NFNF	Lightning Arrestor	-0.1 dB (typical)
LDF4RK-50	Indoor Coax - 150ft	-4.1565 dB (calculated)
GPSRKL1	Indoor GPS Antenna/Repeater	30 dB (per datasheet)
		51.1893 dB Gain

105 Feet Cable Link Budget Calculation

Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp + Splitter Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range In dBm
26	-4.8107	0	30	100	-144.90

GPS Carrier Frequency MHz
1575

Total System Gain
51.1893

Range in Miles
0.02

Total Signal Power @ Range in Watts
3.2E-18

Avg Receive Power L1 dBm North America
-130

Range in Meters
31.17

Radiated Power dBm

-78.8107

Free Space loss with Isotropic Antennas
-66.09

Range in Kilometers
0.03

Transmitted Power (W)
6.6E-12

Effective Radiated Power (W)
13.2E-12

Effective Radiated Power (dBW)
-108.8107