



## GPS Networking Link Budget Calculator

Change the values in the yellow boxes to calculate required readings

-140 or less at a range of 100 feet to meet NTIA regulations

| Receive Ant Gain | Ant Cable Insertion Loss | Repeater Amp Gain | Repeater Ant Gain Best Case | Range in Feet | Repeated Signal Power @ Range In dBm |
|------------------|--------------------------|-------------------|-----------------------------|---------------|--------------------------------------|
| 38               | -4                       | 20                | 3                           | 100           | -139.09                              |

GPS Carrier Frequency MHz  
1575

Total System Gain  
57

Range in Miles  
0.02

Total Signal Power @ Range in Watts  
12.3E-18

Avg Receive Power L1 dBm North America  
-130

Range in Meters  
31.17

Radiated Power dBm  
-73

Free Space loss with Isotropic Antennas  
-66.09

Range in Kilometers  
0.03

Transmitted Power (W)  
25.1E-12

Effective Radiated Power (W)  
50.1E-12

Effective Radiated Power (dBW)  
-103