Uplink Budget

Ground Station

Ground Station Transmitted Power Output	10 dBW
Ground Station Total Transmission Line Loss	3.6 dB
Ground Station Antenna Gain	16.0 dBi
Ground Station Effective Isotropic Radiated Power	22.3 dBW

Uplink Path

Path Loss	149.2 dB
Atmospheric Loss	0.3 dB
Ionospheric Loss	0.4 dB
Rain Loss	0 dB
Isotropic Signal Level at Spacecraft	-127.8 dBW

Spacecraft

Spacecraft Antenna Gain	2.0 dBi
Spacecraft Total Transmission Line Loss	2.0 dB
Spacecraft Effective Noise Temperature	261 K
Spacecraft Figure of Merit (G/T)	-24.1 dB/K
Signal Power at Spacecraft LNA Input	-128.1 dBW
Spacecraft Receiver Bandwidth	40 kHz
Spacecraft Receiver Noise Power	-158.4 dBW
Signal-to-Noise Power Ratio at Spacecraft Receiver	30.3 dB
Digital System Required Signal-to-Noise Ratio	14.4 dB
System Link Margin	15.9 dB