

| AMC-14 DBS Link Budget | | (Normal Mode) | | | (High-Powered Mode) | | |
|---|---------|-------------------------|-------------------------|----------------------|-------------------------|-------------------------|----------------------|
| | | Clear Sky (New York) | Faded D/L (New York) | Faded D/L (Miami) | Clear Sky (New York) | Faded D/L (New York) | Faded D/L (Miami) |
| Link Parameters | | | | | | | |
| Link Geometry: | | | | | | | |
| Tx E/S Range to Satellite (Cheyenne) | (km) | 39,033 | 39,033 | 39,033 | 39,033 | 39,033 | 39,033 |
| Rx E/S Range to Satellite | (km) | 37,686 | 37,686 | 36,882 | 37,686 | 37,686 | 36,882 |
| Uplink (per carrier): | | | | | | | |
| Carrier Frequency | (MHz) | 17,500 | 17,500 | 17,500 | 17,500 | 17,500 | 17,500 |
| Tx E/S Antenna Diameter | (m) | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |
| Tx E/S Power to Antenna | (dBW) | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 |
| Tx E/S Antenna Gain | (dB) | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 |
| Tx E/S EIRP per Carrier | (dBW) | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 |
| Atmospheric and Other Losses | (dB) | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Free Space Loss | (dB) | 209.1 | 209.1 | 209.1 | 209.1 | 209.1 | 209.1 |
| Satellite: | | | | | | | |
| G/T towards Tx E/S | (dB/K) | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| Sat'd EIRP | (dBW) | 55.7 | 55.7 | 55.7 | 58.4 | 58.4 | 58.4 |
| EIRP towards Rx E/S | (dBW) | 53.1 | 53.1 | 53.7 | 55.8 | 55.8 | 56.4 |
| Downlink (per carrier): | | | | | | | |
| Carrier Frequency | (MHz) | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 |
| Atmospheric and Rain Losses | (dB) | 0.1 | 3.4 | 4.1 | 0.1 | 4.8 | 6.0 |
| Free Space Loss | (dB) | 205.9 | 205.9 | 205.7 | 205.9 | 205.9 | 205.7 |
| Rx E/S Antenna Diameter | (m) | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| Antenna Mis-pointing Error | (dB) | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Rx E/S Antenna Gain | (dB) | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 |
| Rx E/S G/T | (dB/K) | 13.2 | 9.7 | 9.4 | 13.2 | 9.2 | 8.9 |
| System (LNA+Sky) Noise Temp. | (K) | 120 | 267 | 285 | 120 | 302 | 324 |
| Total Link: | | | | | | | |
| Noise Bandwidth | (dB-Hz) | 73.5 | 73.5 | 73.5 | 73.5 | 73.5 | 73.5 |
| (C/N) - Thermal Uplink | (dB) | 28.3 | 28.3 | 28.3 | 28.3 | 28.3 | 28.3 |
| (C/N) - Thermal Downlink | (dB) | 14.9 | 8.1 | 7.9 | 17.6 | 8.9 | 8.2 |
| (C/I) - Adjacent Satellite Interference | (dB) | 23.7 | 23.7 | 24.5 | 26.4 | 26.4 | 27.2 |
| (C/I) - Other Link Degradations | (dB) | 22.9 | 22.9 | 22.9 | 22.9 | 22.9 | 22.9 |
| (C/N) - Total Actual | (dB) | 13.6 | 7.8 | 7.6 | 15.8 | 8.6 | 7.9 |
| (C/N) - Total Required | (dB) | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| Excess Margin | (dB) | 6.1 | 0.3 | 0.1 | 8.3 | 1.1 | 0.4 |
| Availability | (%) | N/A | 99.94 | 99.85 | N/A | 99.97 | 99.93 |