

EXHIBIT 3: LINK BUDGETS

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|----------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| UPLINK BEAM INFORMATION | | | | | | |
| Uplink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Uplink Frequency (MHz) | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 |
| Uplink Beam Polarization | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical |
| Uplink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Uplink Contour G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Uplink SFD (dBW/m ²) | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| DOWNLINK BEAM INFORMATION | | | | | | |
| Downlink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Downlink Frequency (MHz) | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 |
| Downlink Beam Polarization | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal |
| Downlink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Downlink Contour EIRP (dBW) | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| ADJACENT SATELLITE 1 | | | | | | |
| Satellite 1 Orbital Location | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| ADJACENT SATELLITE 2 | | | | | | |
| Satellite 2 Orbital Location | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| CARRIER INFORMATION | | | | | | |
| Carrier ID | 1 | 1 | 1 | 2 | 2 | 2 |
| Emission Designation | 36M0F3F | 36M0F3F | 36M0F3F | 41M9G7W | 41M9G7W | 41M9G7W |
| Information Rate (kbps) | n/a | n/a | n/a | 28380 | 28380 | 28380 |
| Carrier Modulation | TV/FM | TV/FM | TV/FM | QPSK | QPSK | QPSK |
| Peak to Peak Bandwidth of EDS (MHz) | 4 | 4 | 4 | n/a | n/a | n/a |
| Code Rate | n/a | n/a | n/a | 1/2 | 1/2 | 1/2 |
| Occupied Bandwidth (kHz) | 36000 | 36000 | 36000 | 30800 | 30800 | 30800 |
| Allocated Bandwidth (kHz) | 36000 | 36000 | 36000 | 41890 | 41890 | 41890 |
| Minimum C/N, Clear Sky (dB) | 10 | 10 | 10 | 5.2 | 5.2 | 5.2 |
| Minimum C/N, Rain (dB) | 10 | 10 | 10 | 4.2 | 4.2 | 4.2 |
| UPLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| Earth Station Gain (dBi) | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| DOWNLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 4.6 | 4.6 | 4.6 | 9.0 | 9.0 | 9.0 |
| Earth Station Gain (dBi) | 53.5 | 53.5 | 53.5 | 59.0 | 59.0 | 59.0 |
| Earth Station G/T (dB/K) | 31.0 | 31.0 | 28.4 | 36.6 | 36.6 | 33.2 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| LINK FADE TYPE | | | | | | |
| | Clear Sky | Uplink Fade | Downlink Fade | Clear Sky | Uplink Fade | Downlink Fade |
| UPLINK PERFORMANCE | | | | | | |
| Uplink Earth Station EIRP (dBW) | 79.7 | 79.7 | 79.7 | 66.2 | 66.2 | 66.2 |
| Uplink Path Loss, Clear Sky (dB) | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 |
| Uplink Rain Attenuation (dB) | 0.0 | -5.9 | 0.0 | 0.0 | -1.9 | 0.0 |
| Satellite G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -75.6 | -75.6 | -75.6 | -74.9 | -74.9 | -74.9 |
| Uplink C/N (dB) | 24.5 | 18.6 | 24.5 | 11.6 | 9.7 | 11.6 |
| DOWNLINK PERFORMANCE | | | | | | |
| Downlink EIRP per Carrier (dBW) | 40.9 | 39.9 | 40.9 | 34.9 | 33.2 | 34.9 |
| Antenna Pointing Error (dB) | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 |
| Downlink Path Loss, Clear Sky (dB) | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 |
| Downlink Rain Attenuation (dB) | 0.0 | 0.0 | -3.3 | 0.0 | -6.2 | -6.2 |
| Earth Station G/T (dB/K) | 31.0 | 31.0 | 28.4 | 36.6 | 36.6 | 33.2 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -75.6 | -75.6 | -75.6 | -74.9 | -74.9 | -74.9 |
| Downlink C/N (dB) | 18.5 | 17.5 | 12.6 | 18.8 | 17.1 | 9.2 |
| COMPOSITE LINK PERFORMANCE | | | | | | |
| C/N Uplink (dB) | 24.5 | 18.6 | 24.5 | 11.6 | 9.7 | 11.6 |
| C/N Downlink (dB) | 18.5 | 17.5 | 12.6 | 18.8 | 17.1 | 9.2 |
| C/I Intermodulation (dB) | n/a | n/a | n/a | n/a | n/a | n/a |
| C/I Uplink Co-Channel (dB)* | 24.8 | 18.9 | 24.8 | 22.6 | 20.7 | 22.6 |
| C/I Downlink Co-Channel (dB)* | 24.8 | 23.8 | 24.8 | 22.6 | 20.9 | 22.6 |
| C/I Uplink Adjacent Satellite 1 (dB) | 26.1 | 20.2 | 26.1 | 13.3 | 11.4 | 13.3 |
| C/I Downlink Adjacent Satellite 1 (dB) | 22.9 | 21.9 | 22.9 | 23.3 | 21.6 | 23.3 |
| C/I Uplink Adjacent Satellite 2 (dB) | 26.1 | 20.2 | 26.1 | 13.3 | 11.4 | 13.3 |
| C/I Downlink Adjacent Satellite 2 (dB) | 23.7 | 22.8 | 23.7 | 23.7 | 22.0 | 23.7 |
| C/(N+I) Composite (dB) | 14.1 | 11.0 | 11.0 | 7.1 | 5.2 | 5.2 |
| Required System Margin (dB) | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 |
| Net C/(N+I) Composite (dB) | 13.1 | 10.0 | 10.0 | 6.1 | 4.2 | 4.2 |
| Minimum Required C/N (dB) | -10.0 | -10.0 | -10.0 | -5.2 | -4.2 | -4.2 |
| Excess Link Margin (dB) | 3.1 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| Number of Carriers | 1 | 1 | 1 | 1 | 1 | 1 |
| Carrier Density Levels | | | | | | |
| Uplink Power Density (dBW/Hz) | -43.2 | -43.2 | -43.2 | -65.6 | -65.6 | -65.6 |
| Downlink EIRP Density At Beam Peak | -15.1 | -16.1 | -15.1 | -30.0 | -31.7 | -30.0 |

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 3: LINK BUDGETS (continued)

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|----------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| UPLINK BEAM INFORMATION | | | | | | |
| Uplink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Uplink Frequency (MHz) | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 |
| Uplink Beam Polarization | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical |
| Uplink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Uplink Contour G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Uplink SFD (dBW/m ²) | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| DOWNLINK BEAM INFORMATION | | | | | | |
| Downlink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Downlink Frequency (MHz) | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 |
| Downlink Beam Polarization | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal |
| Downlink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Downlink Contour EIRP (dBW) | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| ADJACENT SATELLITE 1 | | | | | | |
| Satellite 1 Orbital Location | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| ADJACENT SATELLITE 2 | | | | | | |
| Satellite 2 Orbital Location | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| CARRIER INFORMATION | | | | | | |
| Carrier ID | 3 | 3 | 3 | 4 | 4 | 4 |
| Emission Designation | 10M3G7W | 10M3G7W | 10M3G7W | 100KG7W | 100KG7W | 100KG7W |
| Information Rate (kbps) | 6000 | 6000 | 6000 | 64 | 64 | 64 |
| Carrier Modulation | QPSK | QPSK | QPSK | QPSK | QPSK | QPSK |
| Peak to Peak Bandwidth of EDS (MHz) | n/a | n/a | n/a | n/a | n/a | n/a |
| Code Rate | 1/2xRS | 1/2xRS | 1/2xRS | 1/2xRS | 1/2xRS | 1/2xRS |
| Occupied Bandwidth (kHz) | 6771.1 | 6771.1 | 6771.1 | 75.4 | 75.4 | 75.4 |
| Allocated Bandwidth (kHz) | 10300 | 10300 | 10300 | 100 | 100 | 100 |
| Minimum C/N, Clear Sky (dB) | 3.9 | 3.9 | 3.9 | 3.0 | 3.0 | 3.0 |
| Minimum C/N, Rain (dB) | 3.6 | 3.6 | 3.6 | 2.8 | 2.8 | 2.8 |
| UPLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| Earth Station Gain (dBi) | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| DOWNLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 9.0 | 9.0 | 9.0 | 6.1 | 6.1 | 6.1 |
| Earth Station Gain (dBi) | 59.0 | 59.0 | 59.0 | 55.5 | 55.5 | 55.5 |
| Earth Station G/T (dB/K) | 36.6 | 36.6 | 33.0 | 33.1 | 33.1 | 29.9 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| LINK FADE TYPE | | | | | | |
| | Clear Sky | Uplink Fade | Downlink Fade | Clear Sky | Uplink Fade | Downlink Fade |
| UPLINK PERFORMANCE | | | | | | |
| Uplink Earth Station EIRP (dBW) | 60.1 | 60.1 | 60.1 | 40.4 | 40.4 | 40.4 |
| Uplink Path Loss, Clear Sky (dB) | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 |
| Uplink Rain Attenuation (dB) | 0.0 | -2.4 | 0.0 | 0.0 | -2.5 | 0.0 |
| Satellite G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -68.3 | -68.3 | -68.3 | 48.8 | 48.8 | 48.8 |
| Uplink C/N (dB) | 12.1 | 9.7 | 12.1 | 12.0 | 9.5 | 12.0 |
| DOWNLINK PERFORMANCE | | | | | | |
| Downlink EIRP per Carrier (dBW) | 28.3 | 26.0 | 28.3 | 8.7 | 6.2 | 8.7 |
| Antenna Pointing Error (dB) | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 |
| Downlink Path Loss, Clear Sky (dB) | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 |
| Downlink Rain Attenuation (dB) | 0.0 | 0.0 | -7.2 | 0.0 | 0.0 | -5.2 |
| Earth Station G/T, Clear Sky (dB/K) | 36.6 | 36.6 | 33.0 | 33.1 | 33.1 | 29.9 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -68.3 | -68.3 | -68.3 | -48.8 | -48.8 | -48.8 |
| Downlink C/N (dB) | 18.7 | 16.4 | 8.0 | 15.1 | 12.6 | 6.7 |
| COMPOSITE LINK PERFORMANCE | | | | | | |
| C/N Uplink (dB) | 12.1 | 9.7 | 12.1 | 12.0 | 9.5 | 12.0 |
| C/N Downlink (dB) | 18.7 | 16.4 | 8.0 | 15.1 | 12.6 | 6.7 |
| C/I Intermodulation (dB) | 16.5 | 14.5 | 16.5 | 16.4 | 13.9 | 16.4 |
| C/I Uplink Co-Channel (dB)* | 21.6 | 19.2 | 21.6 | 22.1 | 19.6 | 22.1 |
| C/I Downlink Co-Channel (dB)* | 21.6 | 19.3 | 21.6 | 22.1 | 19.6 | 22.1 |
| C/I Uplink Adjacent Satellite 1 (dB) | 13.8 | 11.4 | 13.8 | 13.7 | 11.2 | 13.7 |
| C/I Downlink Adjacent Satellite 1 (dB) | 23.3 | 20.9 | 23.3 | 19.6 | 17.1 | 19.6 |
| C/I Uplink Adjacent Satellite 2 (dB) | 13.8 | 11.4 | 13.8 | 13.7 | 11.2 | 13.7 |
| C/I Downlink Adjacent Satellite 2 (dB) | 23.7 | 21.4 | 23.7 | 20.2 | 17.7 | 20.2 |
| C/(N+I) Composite (dB) | 6.9 | 4.6 | 4.6 | 6.3 | 3.8 | 3.8 |
| Required System Margin (dB) | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 |
| Net C/(N+I) Composite (dB) | 5.9 | 3.6 | 3.6 | 5.3 | 2.8 | 2.8 |
| Minimum Required C/N (dB) | -3.9 | -3.6 | -3.6 | -3.0 | -2.8 | -2.8 |
| Excess Link Margin (dB) | 2.0 | 0.0 | 0.0 | 2.3 | 0.0 | 0.0 |
| Number of Carriers | 4.2 | 4.2 | 4.2 | 430 | 430 | 430 |
| Carrier Density Levels | | | | | | |
| Uplink Power Density (dBW/Hz) | -65.1 | -65.1 | -65.1 | -65.2 | -65.2 | -65.2 |
| Downlink EIRP Density At Beam Peak | -30.0 | -32.3 | -30.0 | -30.1 | -32.6 | -30.1 |

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 3: LINK BUDGETS (continued)

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|----------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| UPLINK BEAM INFORMATION | | | | | | |
| Uplink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Uplink Frequency (MHz) | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 | 14000 - 14500 |
| Uplink Beam Polarization | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical | Horizontal/Vertical |
| Uplink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Uplink Contour G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Uplink SFD (dBW/m ²) | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 | -83.2 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| DOWNLINK BEAM INFORMATION | | | | | | |
| Downlink Beam Name | CONUS | CONUS | CONUS | CONUS | CONUS | CONUS |
| Downlink Frequency (MHz) | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 | 11700 - 12200 |
| Downlink Beam Polarization | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal |
| Downlink Relative Contour Level (dB) | -10 | -10 | -10 | -10 | -10 | -10 |
| Downlink Contour EIRP (dBW) | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 |
| Rain Rate (mm/hr) | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 |
| ADJACENT SATELLITE 1 | | | | | | |
| Satellite 1 Orbital Location | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. | 74.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| ADJACENT SATELLITE 2 | | | | | | |
| Satellite 2 Orbital Location | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. | 78.85 W.L. |
| Uplink Power Density (dBW/Hz) | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 | -50.0 |
| Uplink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| Downlink EIRP Density (dBW/Hz) | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 | -26.0 |
| Downlink Polarization Advantage (dB) | 0 | 0 | 0 | 0 | 0 | 0 |
| CARRIER INFORMATION | | | | | | |
| Carrier ID | 5 | 5 | 5 | 6 | 6 | 6 |
| Emission Designation | 1M45G7W | 1M45G7W | 1M45G7W | 400KG7W | 400KG7W | 400KG7W |
| Information Rate (kbps) | 512 | 512 | 512 | 128 | 128 | 128 |
| Carrier Modulation | BPSK | BPSK | BPSK | BPSK | BPSK | BPSK |
| Peak to Peak Bandwidth of EDS (MHz) | n/a | n/a | n/a | n/a | n/a | n/a |
| Code Rate | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| Occupied Bandwidth (kHz) | 1229 | 1229 | 1229 | 307 | 307 | 307 |
| Allocated Bandwidth (kHz) | 1450 | 1450 | 1450 | 400 | 400 | 400 |
| Minimum C/N, Clear Sky (dB) | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| Minimum C/N, Rain (dB) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| UPLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| Earth Station Gain (dBi) | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| DOWNLINK EARTH STATION | | | | | | |
| Earth Station Diameter (meters) | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| Earth Station Gain (dBi) | 55.5 | 55.5 | 55.5 | 55.5 | 55.5 | 55.5 |
| Earth Station G/T, Clear Sky (dB/K) | 33.1 | 33.1 | 29.9 | 33.1 | 33.1 | 29.9 |
| Earth Station Elevation Angle | 20 | 20 | 20 | 20 | 20 | 20 |
| LINK FADE TYPE | | | | | | |
| | Clear Sky | Uplink Fade | Downlink Fade | Clear Sky | Uplink Fade | Downlink Fade |
| UPLINK PERFORMANCE | | | | | | |
| Uplink Earth Station EIRP (dBW) | 52.5 | 52.5 | 52.5 | 46.5 | 46.5 | 46.5 |
| Uplink Path Loss, Clear Sky (dB) | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 | -207.5 |
| Uplink Rain Attenuation (dB) | 0.0 | -2.5 | 0.0 | 0.0 | -2.5 | 0.0 |
| Satellite G/T (dB/K) | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 | -0.8 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -60.9 | -60.9 | -60.9 | -54.9 | -54.9 | -54.9 |
| Uplink C/N (dB) | 11.9 | 9.4 | 11.9 | 11.9 | 9.4 | 11.9 |
| DOWNLINK PERFORMANCE | | | | | | |
| Downlink EIRP per Carrier (dBW) | 20.7 | 18.2 | 20.7 | 14.7 | 12.2 | 14.7 |
| Antenna Pointing Error (dB) | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 |
| Downlink Path Loss, Clear Sky (dB) | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 | -205.9 |
| Downlink Rain Attenuation (dB) | 0.0 | 0.0 | -5.2 | 0.0 | 0.0 | -5.2 |
| Earth Station G/T, Clear Sky (dB/K) | 33.1 | 33.1 | 29.9 | 33.1 | 33.1 | 29.9 |
| Boltzman Constant (dBW/K-Hz) | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 | 228.6 |
| Carrier Noise Bandwidth (dB-Hz) | -60.9 | -60.9 | -60.9 | -54.9 | -54.9 | -54.9 |
| Downlink C/N (dB) | 15.0 | 12.5 | 6.6 | 15.0 | 12.5 | 6.6 |
| COMPOSITE LINK PERFORMANCE | | | | | | |
| C/N Uplink (dB) | 11.9 | 9.4 | 11.9 | 11.9 | 9.4 | 11.9 |
| C/N Downlink (dB) | 15.0 | 12.5 | 6.6 | 15.0 | 12.5 | 6.6 |
| C/I Intermodulation (dB) | 16.3 | 13.9 | 16.3 | 16.3 | 13.8 | 16.3 |
| C/I Uplink Co-Channel (dB)* | 22.5 | 20.0 | 22.5 | 22.1 | 19.6 | 22.1 |
| C/I Downlink Co-Channel (dB)* | 22.5 | 20.0 | 22.5 | 22.1 | 19.6 | 22.1 |
| C/I Uplink Adjacent Satellite 1 (dB) | 13.6 | 11.1 | 13.6 | 13.6 | 11.1 | 13.6 |
| C/I Downlink Adjacent Satellite 2 (dB) | 19.4 | 17.0 | 19.4 | 19.5 | 17.0 | 19.5 |
| C/I Uplink Adjacent Satellite 2 (dB) | 13.6 | 11.1 | 13.6 | 13.6 | 11.1 | 13.6 |
| C/I Downlink Adjacent Satellite 2 (dB) | 20.1 | 17.6 | 20.1 | 20.1 | 17.6 | 20.1 |
| C/(N+I) Composite (dB) | 6.2 | 3.7 | 3.7 | 6.2 | 3.7 | 3.7 |
| Required System Margin (dB) | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 | -1.0 |
| Net C/(N+I) Composite (dB) | 5.2 | 2.7 | 2.7 | 5.2 | 2.7 | 2.7 |
| Minimum Required C/N (dB) | -3.4 | -2.7 | -2.7 | -3.4 | -2.7 | -2.7 |
| Excess Link Margin (dB) | 1.8 | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 |
| Number of Carriers | 29.7 | 29.7 | 29.7 | 107.5 | 107.5 | 107.5 |
| Carrier Density Levels | | | | | | |
| Uplink Power Density (dBW/Hz) | -65.3 | -65.3 | -65.3 | -65.3 | -65.3 | -65.3 |
| Downlink EIRP Density At Beam Peak | -30.2 | -32.7 | -30.2 | -30.2 | -32.7 | -30.2 |

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation