

LinkBudget:

All other Spot Beams: 8PSK, Turbo Rate 2/3

DATA RATE	38333.96	kbps	sat	BSS129	UPLINK SITE	
NUMBER OF PHASES	8		xpdr	Spot Beams exl SE	UPLINK SFD	-99.00 dBW/m2
LDPC	2/3		loc	-129.0	ATTENUATOR	10.0 dB
SPECTRAL EFFICIENCY	1.916698				UPLINK G/T	5.00 dB/K
REQUIRED Eb/No	4.40	dB			UPLINK FREQ	17300.00 MHz
IF BANDWIDTH	20000.0	kHz			DOWNLINK FREQ	12200.00 MHz
C/N REQUIRED	7.20	dB			UPLINK EIRP	73.5 dBW
Faded System Margin	0.3	dB			Uncompensated U/L Fade	0.0 dB
Antenna Efficiency	63.00%				UPLINK C/N+I	24.0 dB
Spacing Factor	1.2				Adjacent satellite C/I	20
Required Bandwidth	24.000	MHz			Spot beam C/I	13.5
Allocated Bandwidth	24.000	MHz			Transponder Bandwidth	24.0 MHz
Transponder SCPC IBO	0.0	dB			Required Bandwidth	100.00 %
Transponder SCPC OBO	0.0	dB			Allocated Bandwidth	100.00 %
Carrier IBO	0.00	dB			Carrier Allocated Power	100.00 %
Carrier OBO	0.00	dB				

RECEIVE SITE	ANT DIA (m)	ES Tsys (K)	ANT G/T (dB/K)	Assumed C/I (dB)	MINIMUM C/N DOWN (dB)	XPDR SAT EIRP (dBW)	CXR EIRP (dBW)	CLEAR-SKY DOWNLINK C/N (dB)	MARGIN TO MIN C/Ndn (dB)
HONOLULU HI	0.50	120.0	13.5	12.6	9.2	51.00	51.00	14.6	5.4
SAN ANTONIO TX	0.50	105.0	13.6	12.6	9.2	53.60	53.60	17.1	7.8
ATLANTA GA	0.50	105.0	13.6	12.6	9.2	55.00	55.00	18.2	9.0
NASHVILLE TN	0.50	105.0	13.6	12.6	9.2	55.00	55.00	18.2	9.0
EL PASO TX	0.50	105.0	13.6	12.6	9.2	50.10	50.10	13.6	4.4
LAS CRUCES NM	0.50	105.0	13.6	12.6	9.2	50.00	50.00	13.5	4.3
SHREVEPORT LA	0.50	105.0	13.6	12.6	9.2	56.30	56.30	19.7	10.4
PHOENIX AZ	0.50	105.0	13.6	12.6	9.2	50.40	50.40	14.0	4.7
PRESCOTT AZ	0.50	105.0	13.6	12.6	9.2	50.00	50.00	13.6	4.3
OKLAHOMA CITY OK	0.50	105.0	13.6	12.6	9.2	53.10	53.10	16.5	7.3
LOS ANGELES CA	0.50	105.0	13.6	12.6	9.2	50.00	50.00	13.6	4.4
WASHINGTON DC	0.50	105.0	13.6	12.6	9.2	54.80	54.80	17.9	8.6
HAGERSTOWN MD	0.50	105.0	13.6	12.6	9.2	54.80	54.80	17.9	8.6
ST LOUIS MO	0.50	105.0	13.6	12.6	9.2	53.80	53.80	17.1	7.8
SAN FRANCISCO CA	0.50	105.0	13.6	12.6	9.2	50.50	50.50	14.0	4.8
OAKLAND CA	0.50	105.0	13.6	12.6	9.2	50.50	50.50	14.0	4.8
SAN JOSE CA	0.50	105.0	13.6	12.6	9.2	50.30	50.30	13.9	4.6
DENVER CO	0.50	105.0	13.6	12.6	9.2	50.30	50.30	13.7	4.5
SALT LAKE CITY UT	0.50	105.0	13.6	12.6	9.2	49.10	49.10	12.5	3.3
CLEVELAND OH	0.50	105.0	13.6	12.6	9.2	53.80	53.80	16.9	7.7
AKRON OH	0.50	105.0	13.6	12.6	9.2	53.80	53.80	16.9	7.7
CANTON OH	0.50	105.0	13.6	12.6	9.2	54.30	54.30	17.4	8.2
CHICAGO IL	0.50	105.0	13.6	12.6	9.2	53.40	53.40	16.6	7.3
BOISE ID	0.50	105.0	13.6	12.6	9.2	49.50	49.50	12.9	3.7
MARQUETTE MI	0.50	105.0	13.6	12.6	9.2	52.70	52.70	15.8	6.6
MINNEAPOLIS MN	0.50	105.0	13.6	12.6	9.2	53.20	53.20	16.4	7.2
ST PAUL MN	0.50	105.0	13.6	12.6	9.2	53.20	53.20	16.4	7.2
SEATTLE WA	0.50	105.0	13.6	12.6	9.2	51.00	51.00	14.4	5.1
TACOMA WA	0.50	105.0	13.6	12.6	9.2	51.00	51.00	14.4	5.1
PORTLAND OR	0.50	105.0	13.6	12.6	9.2	51.00	51.00	14.4	5.2
GREAT FALLS MT	0.50	105.0	13.6	12.6	9.2	49.50	49.50	12.8	3.6
MINOT ND	0.50	105.0	13.6	12.6	9.2	52.10	52.10	15.3	6.1
BISMARCK ND	0.50	105.0	13.6	12.6	9.2	52.00	52.00	15.3	6.0
DICKINSON ND	0.50	105.0	13.6	12.6	9.2	52.00	52.00	15.3	6.0
ANCHORAGE AK	0.50	105.0	13.6	12.6	9.2	51.70	51.70	14.7	5.5
CORPUS CHRISTI TX	0.50	105.0	13.6	12.6	9.2	53.80	53.80	17.3	8.1
LUBBOCK TX	0.50	105.0	13.6	12.6	9.2	50.40	50.40	13.9	4.6
BAKERSFIELD CA	0.50	105.0	13.6	12.6	9.2	50.00	50.00	13.6	4.3
INDIANAPOLIS IA	0.50	105.0	13.6	12.6	9.2	53.90	53.90	17.2	7.9
TOPEKA KS	0.50	105.0	13.6	12.6	9.2	53.00	53.00	16.3	7.1
SIoux FALLS SD	0.50	105.0	13.6	12.6	9.2	53.00	53.00	16.3	7.0
EUGENE OR	0.50	105.0	13.6	12.6	9.2	50.00	50.00	13.4	4.2
IDAHO FALLS ID	0.50	105.0	13.6	12.6	9.2	49.80	49.80	13.2	4.0
FARGO ND	0.50	105.0	13.6	12.6	9.2	52.10	52.10	15.3	6.1
SPOKANE WA	0.50	105.0	13.6	12.6	9.2	50.40	50.40	13.7	4.5