

Typical Link Budgets - CONUS and Alaska

Parameter	KA_1	KA_2
Carrier designation	1M20G1W	5M50G1W
Throughput rate, Mbps	1.43	4.75
Required bandwidth, MHz	1.20	5.50
Allocated bandwidth, MHz	1.20	5.50
FEC code rate	0.50	0.50
C/N required, dB	4.70	1.28
Faded system margin, dB	0.50	0.50
Uplink		
Transmit Power (dBW)	4.00	10.50
Antenna diameter	9.00	9.00
Antenna Gain (dBi)	65.00	65.00
TxES antenna input power density, dBW/MHz	3.21	3.10
Ground Station EIRP (dBW)	77.50	75.50
Uplink Rain Loss (dB)	0.00	0.00
Satellite G/T (dB/K)	-9.00	-8.00
C/N, dB	25.23	17.24
C/I(X-pol uplink), dB	30.00	30.00
Downlinks:		
Satellite Carrier EIRP (dBW)	34.00	34.00
Ground station antenna dia, m	0.95	1.50
Ground Station G/T (dB/K)	20.90	24.87
C/N(clear weather), dB	14.74	11.72
Min C/N down, dB	7.06	2.65
C/I(ASI), dB	10.00	10.00
C/I(total), dB	9.91	9.91
Rain margin to min C/N down, dB	7.69	9.07
Availability, %		
BIRMINGHAM AL	99.21%	99.71%
LITTLE ROCK AR	99.27%	99.75%
DENVER CO	99.90%	99.97%
WASHINGTON DC	99.50%	99.83%
MIAMI FL	99.36%	99.55%
LOS ANGELES CA	99.98%	99.99%
MOBILE AL	99.07%	99.63%