

Representative Forward Link Budget

UT Type Carrier Type	Handheld Terminal TDMA	
<u>General Parameters</u>		
Gateway elevation angle	deg	42.0
Minimum user elevation angle	deg	20.0
Uplink frequency	GHz	29.625
Downlink frequency	GHz	2.200
Bandwidth/carrier	kHz	200.0
<u>Uplink</u>		
Uplink E/S antenna diameter	m	13.2
Uplink E/S antenna peak gain	dBi	69.6
E/S antenna pointing error	dB	0.5
Clear-sky uplink EIRP	dBW	53.8
Rain-faded uplink EIRP	dBW	70.8
Free space loss	dB	213.4
Atmospheric loss	dB	0.3
Rain attenuation	dB	17.0
Satellite antenna pointing error	dB	0.3
Satellite antenna receive system noise temp.	dB-K	32.1
Satellite receive antenna G/T	dB/K	17.0
Uplink C/N ₀	dBHz	85.5
Uplink C/IM ₀	dBHz	101.2
Uplink C/I _{0ASI}	dBHz	92.5
Uplink C/I _{0 Intra-system}	dBHz	75.1
<u>Downlink</u>		
Effective Satellite EIRP/carrier (-3 dB contour)	dBW	57.3
Free space loss	dB	191.2
Atmospheric loss	dB	0.1
User terminal antenna gain	dB	0.0
User terminal system noise temperature	dB-K	27.0
User terminal G/T	dB/K	-27.0
Downlink propagation margin	dB	10.1
Downlink C/N ₀	dBHz	57.5
Downlink C/IM ₀	dBHz	78.8
Downlink C/I _{0 Intra-system}	dBHz	65.7
Downlink C/I _{0 External Interference}	dBHz	67.5
<u>End-to-End Performance</u>		
End-to-end C/N ₀	dBHz	57.5
End-to-end aggregate C/I ₀	dBHz	63.2
End-to-end C/IM ₀	dBHz	78.8
Total aggregate C/(N ₀ +I ₀ +IM ₀)	dBHz	56.4
Total aggregate C/(N+I+IM)	dB	3.4
Required C/N	dB	3.4
System Margin	dB	0.0