

Table D-12 GMR-3G Return Link Budget – PC Card Terminal

21 kbps Data - Terminal G/T=-26 dB/K

Parameter	Units	Data	Parameter	Units	Data
Traffic type		Data	Gateway Downlink C/No		
Burst type		PNB(1 6)	Downlink bandwidth	MHz	480
Throughput	kbps	21	Number of data carriers per Gateway		1260
Modulation		PI/4 QPSK	Satellite EIRP per Gateway	dBW	51.50
FEC/Code rate		Turbo/.6	Satellite EIRP per carrier, net		2.85
Es/No	dB	5.80	Frequency	GHz	11.450
Implementation margin	dB	0.50	Path loss	dB	205.25
Burst duration	ms	10.00	Atmospheric loss	dB	6.95
Symbol rate	ksps	23.40	Gateway G/T	dB/K	37.90
Occupied bandwidth	kHz	31.25	G/T degradation	dB	2.80
MT Uplink C/No			C/No, downlink	dBHz	54.35
MT EIRP	dBW	-2.30	Gateway Downlink C/No		
Frequency	GHz	1.640	C/I (across 480 MHz)	dB	14.85
Path loss	dB	188.80	C/No, downlink	dBHz	53.01
Fade and blocking loss	dB	6.00	Total Link		
Satellite G/T	dB/K	20.60	Uplink C/(No+Io)	dBHz	49.67
Polarization mismatch loss	dB	0.70	Downlink C/(No+Io)	dBHz	50.62
C/No, uplink	dBHz	51.40	C/(No+Io)	dBHz	47.11
MT Uplink C/No			Received Es/(No+Io)	dB	3.41
C/I, co-channel	dB	22.50	Polarization diversity gain	dB	0.00
Number of co-frequency beams		24	Satellite diversity gain	dB	2.95
Adjacent beam loading	%	0.60	Es/(No+Io)	dB	6.36
VAD gain	dB	2.01	Required Es/(No+Io)	dB	6.30
C/I, co-channel	dBHz	32.92	Margin	dB	0.06
C/I, adjacent channel	dB	11.28			
C/I, calibration signal	dB	21.42			
C/I, pointing beacon	dB	15.42			
C/No, uplink	dBHz	54.50			