

Attachment A – Link Budget

GPS repeater Link calculations				
Target level (NTIA regulations)	dBm	-140.00	-140 or less at a range of 100 feet to meet NTIA regulations	
Target level range	feet	100.00		
Target level range	m	30.48		
	Units	L1	L2	
Frequency	MHz	1,575.42	1,227.60	
Outdoor to Indoor Power				
Signal level from Satellite	dBm	-130.00	-127.50	
Active antenna gain	dB	35.00	35.00	
LMR 240 cable loss	dB	-6.64	-6.64	
Input power to GLI-METRO-G	dBm	-101.64	-99.14	
Repeater Max Output				
LMR 400 cable loss	dB	-2.03	-2.03	
Passive Repeater antenna gain	dB	3.20	2.30	
Total propagation loss (100 feet)	dB	-66.1	-63.9	
Total losses	dB	-64.91	-63.64	
Max GLI-METRO-G Output Power	dBm	-75.09	-76.36	
Max GLI-METRO-G EIRP	dBm	-73.92	-76.09	
GLI-METRO-G gain setting	dB	26.55	22.78	
Maximum Operating Parameters				
Max transmit Power	dBm	-76.36	-76.36	
EIRP	dBm	-75.19	-76.09	
Signal Power at 100 feet	dBm	-141.27	-140.00	

Cable	value	unit
LMR240 Loss	33.2	dB/100m
Length	20	m
Loss	6.64	dB
LMR400 Loss	20.3	dB/100m
Length	10	m
Loss	2.03	dB