

Description of Experiment

California Internet, L.P. dba GeoLinks (“GeoLinks”) provides high-speed Internet to residential, business and government customers in California. As part of its continuing efforts to improve speed and reliability of its service, GeoLinks requests experimental authorization to evaluate 28 GHz base station and remote equipment in a real-world setting prior the purchase and deployment of the equipment. The objective of this experiment is to prove the claim of utilizing a 28GHz point to multipoint microwave set up to pass the claimed 950M download and 250M upload speed in an actual client-like environment and not a test bench.

The trial will consist of a single base station located in a rural area 1.79 miles Southeast of South Mountain in Ventura County, California. The base station will deploy an Intracom Model - WiBAS WG5-Dual-BS-28-L-1008-02 transmitter which will be paired with Intracom WG5-GC1-1F-27-29 and WG5-GC1-1D6F-27-29 remote CPE units.

Transmission Characteristics:

	Base Station	Terminal 1	Terminal 2
Required parameter for FCC experimental application	WiBAS G5 dual-BS	WiBAS G5 GigaConnect with 30cm antenna	WiBAS G5 GigaConnect with 50cm antenna
Specific model of tower side and CPE	WG5-DUAL-BS-28-L-1008-02	WG5-GC1-1F-27-29	WG5-GC1-1D6F-27-29
Specific frequencies requested (in MHz)	28,108.5 - 28,220.5 (Tx) 29,116.5 - 29,228.5 (Rx)	28,108.5 - 28,220.5 (Rx) 29,116.5 - 29,228.5 (Tx)	28,108.5 - 28,220.5 (Rx) 29,116.5 - 29,228.5 (Tx)
Transmit Power (in mW or W)	0.0794 W	0.0631 W	0.0631 W
Effective Radiated Power (in mW or W)	12.16 W	216.36 W	431.70 W
Is the Power expressed as a Mean or Peak Value?	Mean	Mean	Mean
Antenna Gain	24dBi	37.5dBi	40.5 dBi

Required parameter for FCC experimental application	Base Station	Terminal 1	Terminal 2
	WiBAS G5 dual-BS	WiBAS G5 GigaConnect with 30cm antenna	WiBAS G5 GigaConnect with 50cm antenna
Frequency Tolerance	0.001%	0.0015%	0.0015%
Emission Designators to be Used	112MD7W	112MD7W	112MD7W
Signal Modulation Format	Downlink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM, 512-QAM, 1024-QAM Uplink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM	Downlink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM, 512-QAM, 1024-QAM Uplink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM	Downlink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM, 512-QAM, 1024-QAM Uplink: 4-QAM, 16-QAM, 64-QAM, 128-QAM, 256-QAM
Antenna Type	Antenna is fixed beamwidth sectoral (dual polarity)	Directional parabolic (dual polarity)	Directional parabolic (dual polarity)
Width of beam in degrees at the half-power point	4°	2°	1.5°
Width of beam in degrees at the half-power point	22.5°	2°	1.5°
Antenna Orientation in horizontal plane:	181°	n/a	1.3°
Antenna Orientation in vertical plane	-2°	n/a	2.7°