

Overview and Advantages

Pivotal's 28 GHz RAN beamformer was developed for network operators to use in access or transport applications at significantly lower C-SWaP – cost, size, weight and power consumption – than phased arrays. Specifically, at order of magnitude less cost, less than half the weight and less than 1/3 the power consumption (See “Holographic Beam Forming and Phased Arrays” white paper at technology page of Pivotal Commware’s website). Pivotal beamformers’ SWaP advantage will lead to less public visibility and therefore less municipal resistance. In summary, these advantages influence not only the CAPEX and OPEX associated with mmWave but also how fast operators can deploy dense mmWave networks.

Specifications

Parameter	Specification
Frequency of Operation	27.50 - 28.95 GHz
Antenna Polarization	H/V
HBF Gain (broadside)	25 dBi
Scan Range Azimuth	-60° to +60°
Scan Range Elevation	-60° to +60°
Scan Loss Over Steering Angle	Cosine factor of 2.0 over scan envelope
HPBW Azimuth	6°
HPBW Elevation	6°
Beam Steering Execution Rate	100ns
Beam Steer Update Rate	4μsec
RF Power Handling	10W, continuous
DC Power Consumption	12W (0.48Amp at 24V)
Dimensions	7.0" x 5.5" x 0.1"
Weight	0.12 lbs.
Operating Temperature	-30°C to +55°C
Configuration Management Interface	Serial Interface, USB

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