

Overview and Advantages

Pivotal's 28 GHz repeater beamformer was developed for network operators to deploy in repeaters and in low power gNBs at significantly lower C-SWaP – cost, size, weight and power consumption compared to 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). Low device C-SWaP contributes to lower CAPEX and OPEX, but low device size, weight and power consumption are especially important considerations indoors where people live, work and where 80% of wireless data traffic originates or terminates.

Specifications

Parameter	Specification
Frequency of Operation	27.50 - 28.35 GHz
Antenna Polarization	H/V
HBF Gain (broadside, per aperture)	17 dBi
Scan Range Azimuth	-76° to +76°
Scan Range Elevation	-35° to +35°
Scan Loss Over Steering Angle	Cosine factor of 1.5 over scan envelope
HPBW Azimuth	5°
HPBW Elevation	26°
Beam Steering Execution Rate	100ns
Beam Steer Update Rate	4μsec
RF Power Handling	10W, continuous
DC Power Consumption	2.8W (0.12Amp at 24V)
Dimensions	5.6" x 4.5" x 0.15"
Weight	0.2 lbs.
Operating Temperature	-30°C to +55°C
Configuration Management Interface	Serial Interface, USB

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