



28 GHz Repeater Beamformer with Holographic Beam Forming® Technology

Lowest cost, size, weight and power consumption

Wide angle beam steering

Fast beam switching



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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