



28 GHz RAN 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 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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