



## Overview and Advantages

Pivotal's 39 GHz CPE beamformer was developed for OEMs to incorporate into CPE (Customer Premise Equipment) 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             | 38.60 GHz - 40.0 GHz                    |
| Antenna Polarization               | H/V                                     |
| HBF Gain (broadside)               | 17dB, nominal                           |
| Scan Range Azimuth                 | -50° to +50°                            |
| Scan Range Elevation               | -25° to +25°                            |
| 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               | 0.8W (0.067Amps at 12V)                 |
| Dimensions                         | 3.7" "x 2.0" x 0.15"                    |
| Weight                             | 0.1 lbs.                                |
| Operating Temperature              | -30°C to +55°C                          |
| Configuration Management Interface | Serial Interface, USB                   |

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