



14 GHz A2G Beamformer with Holographic Beam Forming® Technology

Lowest cost, size, weight and power consumption

Wide angle beam steering

Fast beam switching

version 2021.1

Overview and Advantages

Pivotal's 14 GHz A2G beamformer was developed to address air-to-ground (A2G) broadband communications for military and commercial use cases. For both, beamforming is critical for maximizing throughput over long distances while promoting spectral hygiene and low probability of detect and intercept. Holographic Beam Forming offers these capabilities with the lowest cost, size, weight and power consumption (C-SWaP) available, including the option to aerodynamically conform to curved surfaces found on drones and passenger aircraft. Minimizing size, weight and power consumption reduce operating expenses for passenger aircraft and enable new mission profiles for military drones. You can read more about how this 14 GHz beamformer supported a system Pivotal designed for military drones via the product page of the Pivotal Commware website.

Specifications

Parameter	Specification
Frequency of Operation	14.40-15.35 GHz
Antenna Polarization	H/V
HBF Gain (broadside)	28.5 dBi
Scan Range Azimuth	-70° to +70°
Scan Range Elevation	-55° to +55°
Scan Loss Over Steering Angle	Cosine factor of 1.5 over scan envelope
HPBW Azimuth	6°
HPBW Elevation	6°
Beam Steering Execution Rate	100ns
Beam Steer Update Rate	4μsec
RF Power Handling	20W
DC Power Consumption	14W (0.5Amp at 28V)
Dimensions	11.5" x 11.5" x 0.15"
Weight	1.5 lbs.
Operating Temperature	-40°C to +55°C
Configuration Management System	RS-485

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