team2tech

Technical data sheet

CS LH + RH Quad Antenna

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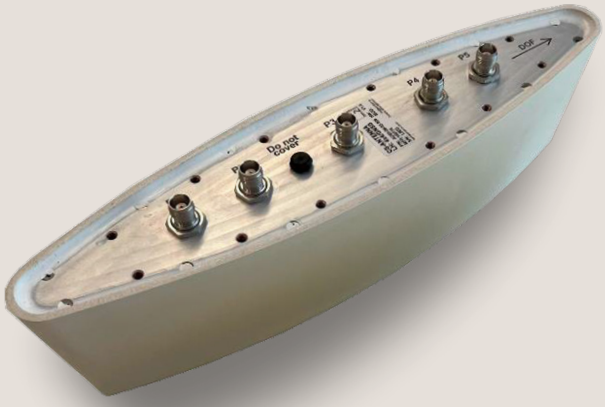
Airbone Antenna/0.7 to 3.8 GHz/quad omnidirectional/ IRIDIUM/GNSS



The CS Quad antenna is a multipurpose airborne antenna which covers a wide range of airborne applications.

The CS antennas are engineered to harness the whole mobile network frequency spectrum for fast and reliable high-throughput connections. Four wide-band radiators with orthogonal MIMO polarization cover the entire cellular frequency spectrum.

A supplementary antenna element with circular polarization and upward radiation pattern is used for the GNNS / Iridium network. This antenna element complies with the guidelines for commercial usage of the Iridium satellite network.

The quad antenna design which incorporates 4ea. antenna poles, so one antenna replaces up to 4ea. legacy antennas on aircraft. The antennas are designed for helicopter and fixed wing aircraft rooftop mount to enable a interference-free cell network and/or WiFi operation.

The world's most cost-effective all-in-one wideband 5G quad antenna certified for helicopters & aircraft

The CS-Antenna variants enable all types of airborne link applications within a frequency range from 0.7 to 3.8 GHz. Typical applications are connectivity with mobile cell-network and WLAN- (MESH network) requirements or video-video-downlink applications. In addition, also public security applications in co-existence with IMSI-catchers are covered. Typical applications are connectivity, mission systems, public safety, emergency medical transport (HEMS/ telemedicine), passenger connectivity and in-flight entertainment (IFEC).

In addition, aircraft tracking, asset management or automated aircraft data storage and transmission applications are enabled. Another use case is unattended wireless Inflight entertainment content on- transfer from and to airliner applications.

Typical Specification

- 3G/4G/5G Cell Antenna
- Frequency range: 0.7 GHz to 3.8 GHz
- Wide frequency design enables a wide range of airborne applications
- Quad Antenna design eliminates 3ea. additional antennas
- Admitted power: 2 W continuous
- Integrated GNSS Antenna (LH variant)
- Integrated IRIDIUM Antenna (RH variant)
- TNC female connectors
- Impedance 50Ohms

Certifications

- RTCA DO-160G compliant
- Rotorcraft and Fixed-Wing platforms
- OEM certifications pending

Adoptions & Accessories

- Customizations & adaptions available on request
- Antenna combiners
- Frequency filters

QMS-01000 Quad Antenna

Product part number:

A063-09-03.009	CS LH Antenna / 0.7 to 3.8 GHz / quad omnidirectional / GNSS / TNC-f
A063-09-03.010	CS RH Antenna / 0.7 to 3.8 GHz / quad omnidirectional / IRIDIUM / TNC-f

Radio frequency data:

Frequency	0.694 to 3.800 GHz
E-UTRA (LTE) Bands	694-960MHz: 5, 6, 8, 12, 13, 14, 17, 18, 19, 20, 26-29, 44, 67, 68, 85, 103 1450-1500 MHz: 32 (Downlink) / 1710-2100 MHz: 1-4, 9, 10, 25, 33-36, 39, 66, 70 2500-2700 MHz: 7, 38, 41, 69 / 3400-3800 MHz: 22, 42, 43, 48, 49
5G-Band FR1 Bands	694-960MHz: n5, n8, n12, n14, n18, n20, n28, n29, n75, n76 1450-1500 MHz: n75, n76 (Downlink) / 1710-2100 MHz: n1-n3, n25, n34, n39, n65, n66 2500-2700 MHz: n7, n38, n41 / 3400-3800 MHz: n48, n78
VSWR	<2:1
Gain (peak/average)	2.2 to 6.4 dBi / -1,1 to -1,9 dB
Return loss	min. 7dB, typ. >10 dB
Polarization	P1/P5: vertical; P2/P4: horizontal; Use P1/P4 and P2/P5 as MIMO pairs

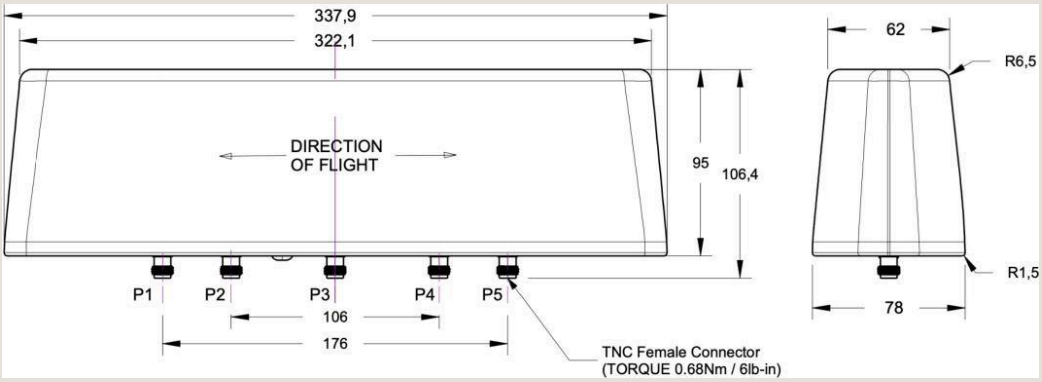
Physical data:

Dimensions / Weight	Diameter: 230 mm (198mm inner); 139 mm height; 125mm insertion depth* / 2.7 kg*
Mounting	Up to 12ea. M4 screws, bottom mount*

Environmental qualification:

Category code acc. RTCA DO-160G:	[B2B2B3B3XF2XX]AB[DX]RXSFSFTXXXXXXXX[2A]XXC

Mechanical outline:



team2technologies

team2applications is a supplier of electronics & system solutions for aerospace and transport applications. The product range covers solutions in the field of connectivity & in-flight entertainment, data communication, data interfaces, onboard computing and IoT edge computing, airborne antenna designs, control-head, as well as heat control systems in various applications. team2 acquired major IPR from a predecessor company with operations in aerospace and transport markets since 1992.

team2 is cooperation partner of EASA Subpart 21J design organizations with EASA Subpart 21G manufacturing and EASA/ FAA Subpart 145 maintenance capabilities for the complete product range.

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