Quasonix

QTrack™ Portable Low-Gain Antenna

Self-Contained Ground Station

The QTrack™ is a low-gain antenna based on the feed from our wide-aperture models. Coupled with the industry-leading RDMS™ telemetry receiver, it is the perfect solution for portable or mast-mounted antenna applications. Quasonix is... Reinventing Telemetry™.

Automated Acquisition — Combined with our state-of-the-art antenna control unit (ACU) with its straightforward user interface, the QTrack enables simple and robust data capture for your missions.

Portable — Two-person transport and setup (transport case recommended). Free-standing antenna can be set up easily using a Moog Gibraltar tripod (model 4-60450-0A, available from Quasonix as part number QC-ACC-001) or equivalent.

Simultaneous LHCP and RHCP RF Outputs — 2-channel rotary joint allows continuous azimuth travel.

Dual Axis Pedestal — Multi-band SCM feed mounted in a dual axis pedestal; includes power supplies, slip rings, and rotary joint; custom dual axis positioner based on the rugged industry-standard Moog MPT-50.

Electronic Scanning for Highly Dynamic Targets — Feeds sweep the beam electronically allowing scan rates from 500 Hz to 2 kHz—greatly mitigating challenges inherent in tracking targets that impose high degrees of amplitude modulation on transmitted signal.

Seamless L, S, and C Band Operation — Future-proof, with support for legacy TM bands while being ready for the move to C, all in one unit.

Bidirectional (Transmit/Receive) Configurations Available — Ideal for use with Ethernet Via Telemetry (EVTM); contact Quasonix for more information.

Optional QTrack Camera Kit Available — 1080p, 30fps, h.264 Ethernet Camera

Watch the agility of a QTrack as it auto-tracks a drone. Can your antenna do this?

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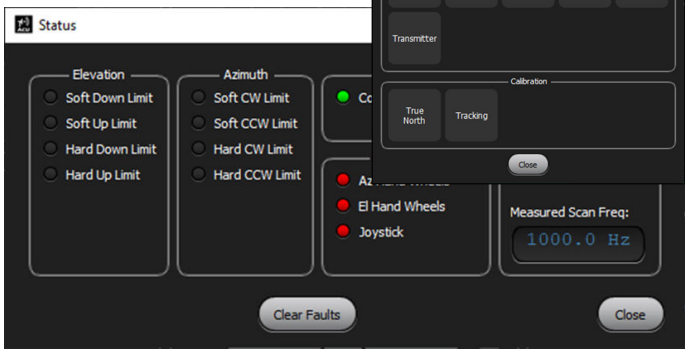
Antenna Control Unit (ACU)

A straightforward user interface, available for local or remote control, enables the user to work from a single integrated display for configuring, monitoring, and controlling all missions. All status related to the pedestal and ACU operations can be continuously broadcasted via a multicast port, allowing any computer on the network to gather all system information in one data log, time-stamped ASCII file.

- Azimuth and Elevation Axis
- Back Panel USB, Ethernet, Serial, and Test Ports
- Solid State Hard Drive
- Remote Operation



Antenna Control Unit Interface

Intuitive User Interface — Real time pedestal interface; Hand wheels or USB joystick for local control; Mouse and keyboard provide intuitive remote control.

Multiple Tracking Modes — Accepts pointing data from remote customer slave sources.

Client-Server Architecture for Maximum Operator Control — Operates in either local or remote modes with the remote interface consuming only a few kbps of network bandwidth; Multiple operators can view the local ACU simultaneously while a request channel allows control to be moved to any remote.

Comprehensive Diagnostics — Built-in Test (BIT) ensures peak performance on every mission; Comprehensive data logging utilities allow detailed post-mission analysis.

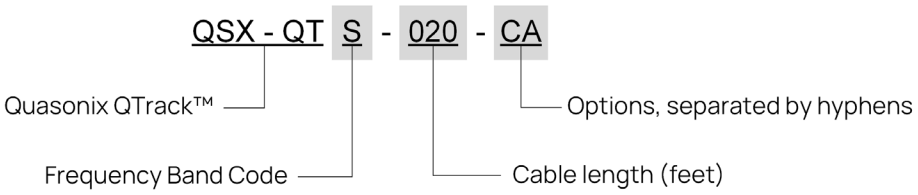
Antenna and Pedestal Specifications

Antenna Specifications

Performance	
Operating Frequency	1435.0 - 2500.0 MHz continuous, 4400.0—5250.0 MHz continuous, Actual operating band based upon selected filters
Polarization	Simultaneous Right Hand and Left Hand Circular
Axial Ratio	2.0 dB maximum
Antenna Type	Electronic Scanning
Array Size (Diameter)	13.25 inches nominal
Weight	< 15 lbs (7 kg)
Antenna Gain (nominal, linear polarized receive, RHCP and LHCP outputs combined)	1435.0 MHz +7.0 dB 2400.0 MHz +10.0 dB 4400.0 MHz +9.0 dB 5250.0 MHz +9.0 dB
Antenna Beamwidth (3 dB) (nominal)	40°

Environmental	
Temperature	Operating –30°C to +55°C Storage 40°C to +71°C
Relative Humidity	Up to 100%, including condensation (radome protected)

QTrack Part Numbering Example



QTrack Options

90 — MPT-90 Positioner

CA — Ethernet-based HD Camera, 1080p 30 fps, h.264. Hardware h.264 to HDMI decoder included

DH — Dehydrator

GP — Differential GPS; Position and Heading

GY — MEMS IMU; Position, Heading and Motion Compensation

TD — Time-Diverse EVTM Transceiver Enclosure

TR — Gibraltar Tripod

TX05 — 5 Watt EVTM Transmitter

TX10 — 10 Watt EVTM Transmitter

TX20 — 20 Watt EVTM Transmitter

Pedestal Specifications

Performance	
Type	Elevation/Azimuth
Backlash	≤ 0.2 degrees
Azimuth Velocity	≥ 30°/sec
Azimuth Travel	360° continuous
Elevation	-20° to +90° (Software, Electrical, and Mechanical limited provided)
Elevation Velocity	12°/sec
RF Cabling Capability	Two RF channels supporting frequencies through C-band
Weight	32.5 lbs
Power Requirements	Power Requirements 115 VAC, 60 Hz, 1Ø

Environmental	
Operating Temperature	-30°C to +55°C
Storage Temperature	-40°C to +71°C
Relative Humidity	Up to 100%, including condensation (radome protected)
Rain Up to 4 inches per hour	Up to 4 inches per hour
Wind	Operating 50 MPH (80 Km/Hr)

Reinventing Telemetry™

With a razor-sharp focus on the aeronautical telemetry market and a team rich in talent, experience, and sheer determination, Quasonix is able to consistently design, develop, and manufacture what our customers regard as market-leading telemetry products.

Quasonix

All Quasonix products are under U.S. Dept. of Commerce jurisdiction. Antennas are categorized as 5A991.
ISO 9001:2015 Certified | Specifications subject to change without notice.

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