



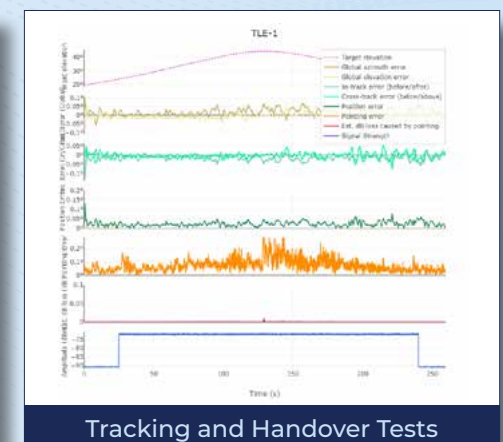
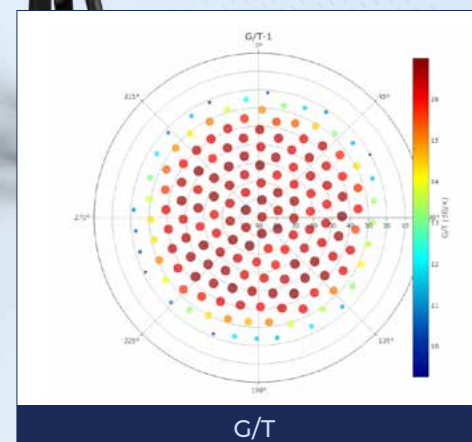
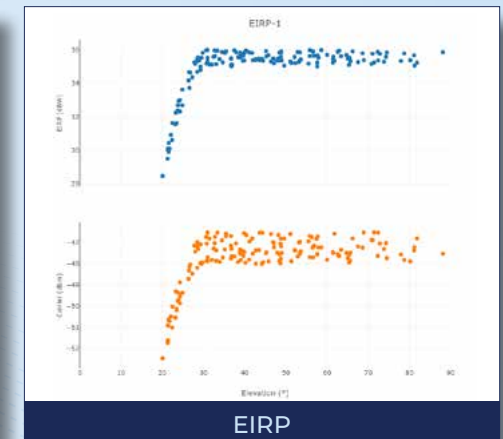
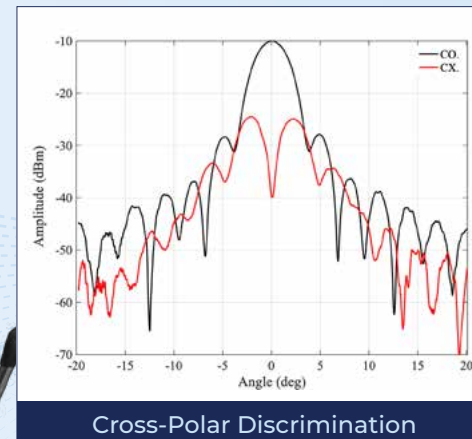
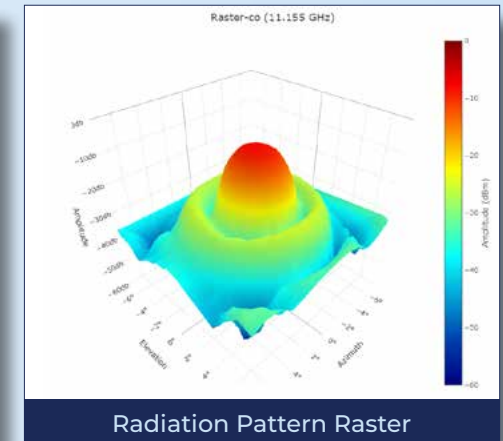
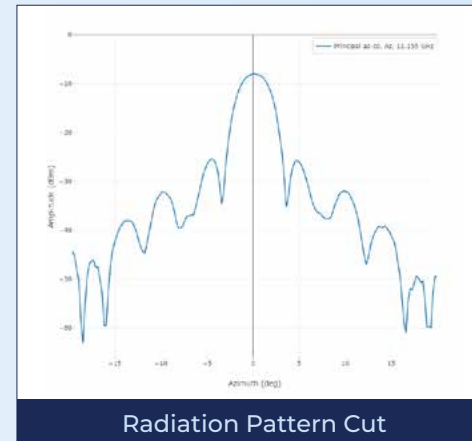
Quadsat Series System Specifications



MEASUREMENT CAPABILITIES

Quadsat systems provide classic antenna measurements and insights, including radiation pattern cuts, gain measurements and EIRP calculation, along with unique measurements and analytics such as full 3D visualization of radiation pattern rasters, as well as tests, validation and optimization of antenna pointing accuracy, satellite tracking and handover efficiency.

All in real-world environments.



PAYLOAD SPECIFICATIONS

Quadsat's payload range and versatile software suite offer multiple configuration options, enabling compatibility with a wide variety of antenna types operating across different frequency ranges. These configuration options make Quadsat's RF measurement system an efficient solution for meeting both current and evolving testing requirements.



 Payload Range	STANDARD PAYLOADS FOR DOWNLINK			SDR PAYLOADS FOR UPLINK AND DOWNLINK		
						
	QS 2-12 DL	QS 6-24 DL	QS 17-31 DL	QS 2-12 DL/UL	QS 6-24 DL/UL	QS 17-31 DL/UL
Frequency Range	2-12 GHz	6-24 (X-Ka low band)	17-31 (Ka band)	2-12 GHz	6-24 GHz (X-Ka low band)	17-31 GHz (Ka band)
Feed System	Circular dual-polarized horn	Linear dual-polarized quadridged horn	Circular dual-polarized horn	Circular dual-polarized horn	Linear dual-polarized quadridged horn	Circular dual-polarized horn
Polarization	Dual CP LHCP and RHCP	Full 360 degree feed rotation. VP, HP	Dual CP LHCP and RHCP	Dual CP LHCP and RHCP	Full 360 degree feed rotation. VP, HP	Dual CP LHCP and RHCP
Gimbal Axis	Yaw, Pitch	Yaw, Pitch, Roll	Yaw, Pitch, Roll	Yaw, Pitch	Yaw, Pitch, Roll	Yaw, Pitch
Cross-Polar Discrimination	15 to 25 dB	25 to 30 dB	25 to 35 dB	15 to 25 dB	25 to 30 dB	25 to 35 dB
Transmit Power	EIRP -35dBm to +15 dBm. Adjustable in 0,1 dB step.	EIRP -30 dBm to +20 dBm. Adjustable in 0,1 dB step	EIRP -70 dBm to +10 dBm. Adjustable in 0,5 dB step.	EIRP -80 dBm to +5 dBm. Adjustable in 0,25 dB step.	EIRP -75 dBm to +10 dBm. Adjustable in 0,25 dB step.	EIRP -75 dBm to +10 dBm. Adjustable in 0,25 dB step.
Receiving Power	-	-	-	5 dBm to -105 dBm.	10 dBm to -100 dBm.	10 dBm to -100 dBm.
Downlink	✓	✓	✓	✓	✓	✓
Uplink				✓	✓	✓
Continuous Wave Signal Generation	✓	✓	✓	✓	✓	✓
Modulated Signal Generation				✓	✓	✓

MEASUREMENTS CAPABILITIES & PAYLOAD OVERVIEW

Payloads	QS 2-12 DL	QS 6-24 DL	QS 17-31 DL	QS 2-12 DL/UL	QS 6-24 DL/UL	QS 17-31 DL/UL
ANTENNA CHARACTERIZATION						
Radiation Pattern Cut - Transmit	✓	✓	✓	✓	✓	✓
Radiation Pattern Cut - Receive				✓	✓	✓
Radiation Pattern Raster - Transmit	✓	✓	✓	✓	✓	✓
Radiation Pattern Raster - Receive				✓	✓	✓
Cross-Polar Discrimination Cut - Transmit	✓	✓	✓	✓	✓	✓
Cross-Polar Discrimination Cut - Receive				✓	✓	✓
Cross-Polar Discrimination Raster - Transmit	✓	✓	✓	✓	✓	✓
Cross-Polar Discrimination Raster - Receive				✓	✓	✓
EIRP				✓	✓	✓
G/T	✓	✓	✓	✓	✓	✓
GAIN	✓	✓	✓	✓	✓	✓
TRACKING CHARACTERIZATION						
Pointing Accuracy Validation and Optimization	✓	✓	✓	✓	✓	✓
NGSO Satellite Tracking Emulation	✓	✓	✓	✓	✓	✓
GEO Satellite Emulation	✓	✓	✓	✓	✓	✓
Handover	✓	✓	✓	✓	✓	✓
Data Link Verification of Ground Segment				✓	✓	✓
Waveform Validation of Ground Segment				✓	✓	✓



UAS SPECIFICATIONS

UAV - QUADSAT STANDARD	
Type	Quadcopter (4)
Material	Carbon fiber, aluminium and titanium
Maximum Take-Off / Operating Mass	6.7 kg / 15 lb
GNSS Positioning Technology	Real-time Kinematic
UAV Operational Time	Up to 30 min per battery (three batteries included)

GROUND CONTROL STATION	
RF Spectrum Analyzer	9 kHz to 6 GHz Real-time RF Spectrum Analyzer and RF Recorder
Precision GPS Reference Clock	Frequency: L1, 1575.42MHz/L2,1561.10MHz/L3,1602.00MHz Baud Rate: 4800,9600,19200,38400,57600,115200bp Timing accuracy: 30ns Update Rate: 1Hz
Antenna Locator	Integrate dual band RTK GNSS technology including centimeter level accurate position
LoRa Wireless Communication Link	Frequency: 2.402 - 2.482 TX Power: 20 dBm - 30 dBm Total (adjustable) Channel bandwidth: 4,8 MHz (selectable)
Telemetry Module	Frequency Spectrum: 868-869 MHz Transmission power: 1W Transmission rate: 2-500 kbit/sec.



Managing and Optimizing
The World's Radio Spectrum

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