QUADSAT

Quadsat Series
System Specifications
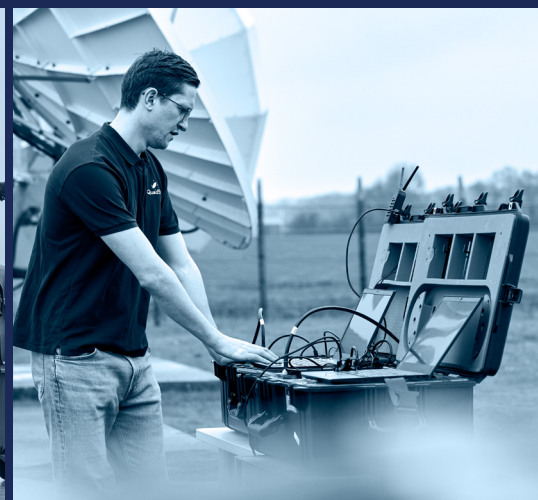
System Specification

UAV and System Level

SYSTEM FEATURES

UAV OPERATIONAL TIME	Up to 30 min. mission duration per battery/continuous operation
STABILISED PAYLOAD	Counteracting drone motion and maintaining beam pointing stability
WEATHER CONDITIONS	Withstands light rain and wind speeds up to 15 m/s (33.5 mph)
OPERATING TEMPERATURE	-10°C to 40°C (14°F to 104°F)
CREW	One operator for most operations
FLIGHT PLANNING AND EXECUTION	Automatic flight planning and execution. Pilot intervenieance only needed in case of iregularity
DATA GATHERING AND POSTPROCESSING	Automatic file generation
DATA STORAGE	Cloud database for easy data storage, report generation and asset management

PAYLOAD FEATURES

PAYLOAD COMPARISON	CW DL PAYLOADS			SDR DL/UL PAYLOADS		
	QS 1-18 DL	QS 6-24 DL	QS 17-31 DL	QS 1-18 DL/UL	QS 6-24 DL/UL	QS 17-31 DL/UL
FREQUENCY RANGE	1-18 GHz (S-KU band)	6-24 GHz (X-Ka low band)	17-31 (Ka band)	1-18 GHz (S-KU band)	6-24 GHz (X-Ka low band)	17-31 GHz (Ka band)
FEED SYSTEM	Circular polarized horn	Linear dual-polarized quadridged horn	Circular dual-polarized horn	Circular polarized horn	Linear dual-polarized quadridged horn	Circular dual-polarized horn
POLARIZATION	LHCP or RHCP	Full 360 degree feed rotation. VP, HP	LHCP, RHCP	LHCP or RHCP	Full 360 degree feed rotation. VP, HP	LHCP, RHCP
CROSS POLAR DISCRIMINATION	25-30 dB	30 dB typical	25-30 dB	25-30 dB	30 dB typical	25- 35 dB
TRANSMIT POWER	EIRP -20 dBm to +30 dBm. Adjustable in 0,1 dB step.	EIRP -15 dBm to +35 dBm. Adjustable in 0,1 dB step.	EIRP -20 dBm to +30 dBm. Adjustable in 0,1 dB step.	EIRP -20 dBm to +30 dBm. Adjustable in 0,1 dB step.	EIRP -15 dBm to +35 dBm. Adjustable in 0,1 dB step.	EIRP -20 dBm to +30 dBm. Adjustable in 0,1 dB step.
RECEIVING POWER				EIRP -10 dBm to -100 dBm. Adjustable in 0,1 dB step.	EIRP -10 dBm to -100 dBm. Adjustable in 0,1 dB step.	EIRP -10 dBm to -100 dBm. Adjustable in 0,1 dB step.
DOWNLINK	✓	✓	✓	✓	✓	✓
UPLINK				✓	✓	✓
CONTINUOUS WAVE SIGNAL GENERATION	✓	✓	✓	✓	✓	✓
MODULATED SIGNAL GENERATION				✓	✓	✓

MEASUREMENTS

PAYLOAD COMPARISON	CW DL PAYLOADS			SDR DL/UL PAYLOADS		
	QS 1-18 DL	QS 6-24 DL	QS 17-31 DL	QS 1-18 DL/UL	QS 6-24 DL/UL	QS 17-31 DL/UL
2D/3D RADIATION PATTERNS	✓	✓	✓	✓	✓	✓
RADIATION PATTERN CUTS	✓	✓	✓	✓	✓	✓
POLARIZATION AND XPD	✓	✓	✓	✓	✓	✓
AXIAL RATIO		✓			✓	
EIRP & G/T MEASUREMENT	✓	✓	✓	✓	✓	✓
STATIONARY POINT TRACKING	✓	✓	✓	✓	✓	✓
NGSO SATELLITE TRACKING EMULATION	✓	✓	✓	✓	✓	✓
DATA LINK VERIFICATION OF GROUND SEGMENT				✓	✓	✓
WAVEFORM VALIDATION OF GROUND SEGMENT				✓	✓	✓