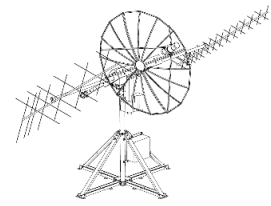


The ISIS Ground Station Kit is a turnkey solution to prioritize, autonomously track, and receiving data from earth-orbiting satellites operating on VHF, UHF, and/or S-Band frequencies. The Kit consists of an antenna-rotor unit and an indoor tracking and communications system that work together to create a fully-functional satellite tracking suite.



Radio Characteristics

Low Rate S-Band Receiver		
Frequency Ranges	RX	Amateur: 2400 – 2450 MHz Commercial: 2200 – 2290 MHz
Frequency Stability		±2 ppm at 25°C
Modulation Schemes	RX	BPSK, BPSK-G3RUH, AFSK, FSK, FSK-G3RUH
Data rates	RX	9.6, 14.4, 28.8, 57.6, 115.2 kbps
Data link layer protocol		AX.25
Data Interfaces		IQ data output, Raw bytes output, KISS output, Binary output
High Rate S-Band Receiver		
Frequency Ranges	RX	Amateur: 2400 – 2450 MHz Commercial: 2200 – 2290 MHz
Frequency Stability		±0.01 ppm at 25°C
Modulation Schemes	RX	BPSK, OQPSK
Data rates	RX	625 – 5000 ksymbols/s
Data link layer protocol	RX	CCSDS
Data Interfaces		Binary output

Rotor Characteristics

Description		
Rotational Range	Azimuth	360°
	Elevation	180°
Rotational Speed		0 – 6 °/sec
Rotor Pointing Accuracy		≤ 0.2°

Antenna Characteristics

Description		
Gain	Ø1.9 m	31.4 dBic
	Ø3.0 m	35.4 dBic
Beamwidth	Ø1.9 m	5.1°
	Ø3.0 m	3.2°
Polarization		Either LHCP or RHCP



S-Band Ground Station Kit Data Sheet

Mechanical/Environmental Specifications

Outdoor System		
Height (from ground to cross-boom)		2.3 m
Clearance Radius	Ø1.9 m	1.5 m
	Ø3.0 m	2.5 m
Weight	Ø1.9 m	230 kg
	Ø3.0 m	250 kg
Operating Temperature		-10 °C to 50 °C
Humidity		95%, non-condensing
Lightning Protection		< 10kA
Survival Wind Speed		120 km/h
Indoor System		
Size (w x h x d)		9U 19" rack: 56x46x60 cm
Weight		< 46 kg
Operating Temperature		10 °C to 35°C
Humidity		95%, non-condensing
Supply Voltage		100 to 240 VAC, 50 to 60 Hz
Supply Current		max 3.5 A @220V, max 7.0 A @110V