

9.2 Meter KX Ka-Band Antenna

Antenna Technologies



Overview

Combining high performance and quality components, CPI Antenna Technologies' new 9.2 meter KX antenna delivers the best qualities of Ka-Band antenna capability mounted on its cost effective and durable Kingpost pedestal.

The 9.2 meter KX antenna is an antenna/pedestal combination that delivers world-class Ka-Band transmit and receive performance with superior and reliable antenna control.

As the world's leading supplier of satellite communications earth stations. For Ka-Band transmission and reception, we have the right antenna to meet your needs.

FEATURES:

- Cassegrain 4-Port Tx/Rx circular feed with optional TE21 tracking coupler (monopulse)
- High precision Ka-Band panels
- Steel back-up structure painted white, closed for anti-icing option
- Large working platform with access via stairway/handrails and electric hoist to ground
- Large 9 foot hub with roll-up, lockable hub access door

BENEFITS:

- CPI's industry knowledge and innovation
- Full support with CPI's 24/7/365
- Comprehensive warranty

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Specifications

PERFORMANCE PARAMETER ⁽¹⁾	Ka-Band
Reflector	9.2 meter precision reflector
Operating Frequency (GHz)	27.50 – 31.00 GHz (customizable) 17.70 – 21.20 GHz (customizable)
Feeds Available	2-port and 4-port, circular, linear or CP/LP switchable polarization options plus 2-ports for optional monopulse tracking
Antenna Gain (typical)	
Tx Port Input - Typical at 31.00 GHz	66.4 dBi
Rx@Feed Flange - Typical at 20.2 GHz	63.6 dBi
System G/T (Typical at 18.95 GHz @ 20 ° Elevation and 120K LNA (Standard Band))	39.2 dB/K
3 dB Beamwidth	
Transmit	0.08°
Receive	0.11°
Axial Ratio @ 1dB BW (X-POL Isolation in dB)	0.5 dB (30.7 dB)
Port to Port Isolation (CP)	
TX/TX and RX/RX	16 dB
RX/TX and TX/RX	85 dB
Feed RF Power Handling	500W CW per port, 1 kW total
Reflector	<ul style="list-style-type: none"> • Steel back-up structure painted white • Enclosed for anti-icing option • High precision Ka panels
Pedestal	<ul style="list-style-type: none"> • Kingpost, painted white • Limited continuous AZ travel
Travel Ranges	EL: 0 to 90° AZ: 180° (2 - 95° segments)
Axis Velocity & Acceleration (average)	EL: 0.1°/s; 0.1°/s ² AZ: 0.1°/s; 0.1°/s ²
Antenna Drive Configuration	AZ & EL: machine screw actuators
Primary Antenna Tracking Mode	Step Track / OpTrack (monopulse optional)
Anti-Ice Solution	Feed blower; heated subreflector; optional Primary reflector - gas or electric
Anti-Ice Performance	Snow & Ice: 4 in/hr (10 cm/hr) and up to 1" buildup on structure with less than a 3/4 dB of signal Loss with all heaters on

⁽¹⁾ Some specifications may vary based on the combination of equipment, options and/or upgrades ordered.

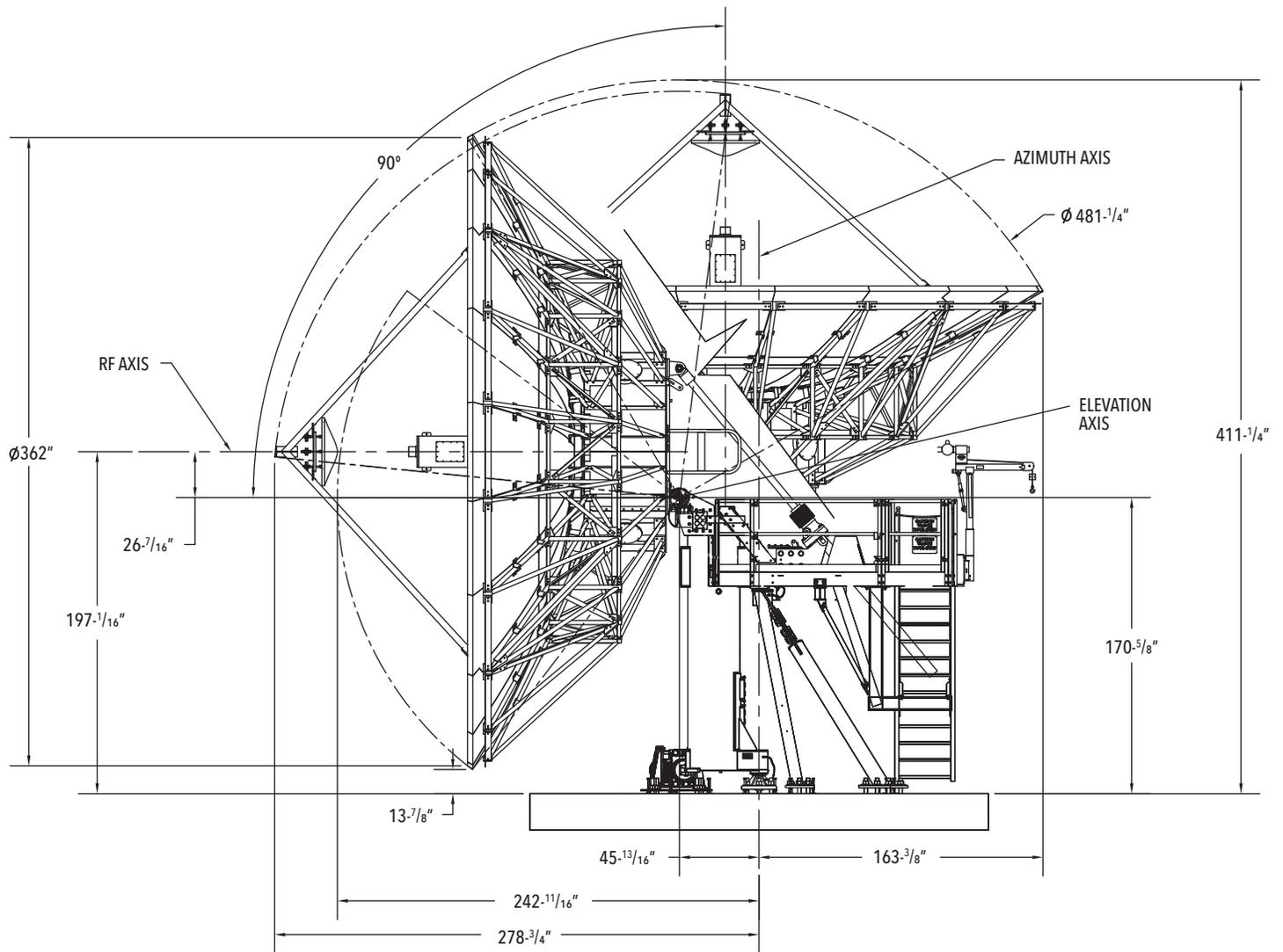
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PERFORMANCE PARAMETER ⁽¹⁾	Ka-Band
Hub Size	Large 9 foot hub with roll-up, lockable hub door which can accommodate up to 8 HPAs and associated converters with online component replacement
Hub Environmental Control	Redundant, closed Air-conditioning systems for various environmental conditions
Customization/Integration	Designed to be customized or tailored to customer requirements
Elevation Platform and Access	Large working platform with access via stairway with handrails and electric hoist to ground level
Limited Driving Wind Speed	62 mph (100 km/hr)
Survival Wind Speed	125 mph (200 km/hr)
Antenna Control System	Model 950, predictive tracking (Optrack) Model 970, monopulse tracking
Antenna Two-Axis Pointing Performance (over 10° of travel)	0.0093° rms no wind, 0.0187° rms winds 30 mph gusting to 45 mph
Tracking Performance	0.0075° rms, Optrack no wind 0.0102° rms, Optrack with winds 30 mph gusting to 45 mph 0.0067° rms, Monopulse no wind 0.0068° rms, Monopulse with winds 30 mph gusting to 45 mph
Antenna Radiation Patterns	Compliant with FCC, ITU, ANATEL, and Eutelsat regulations, ARSTRAT capable
Temperature Range	Operational: -15° to +50°C (optional -40°C)
Delivery and Installation	Ship: 4 months; install/test: 3 weeks

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ELEVATION TRAVEL

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