

Earth Station Antenna

Model ASI 9.0 Ka Band Monopulse

Engineering + Craftsmanship + Service

We welcome you to the world of **Alpha Satcom, Inc.** The oldest, new antenna company on the planet. **ASI** is dedicated to bringing to you, the discerning customer, world-class products and services at the right price and at the right time.

Comprised of a team of Engineers and Satellite Professionals, both of whom with a stellar history reaching back to the beginnings of the Satellite Industry, **ASI** is uniquely qualified to bring to the market new, modern, state-of-the-art, antennas that will provide years of exceptional service. Coupled with a network of select customer focused companies, **ASI** can address the various requirements your particular business plan requires. We invite you to step into the professional world of **Alpha Satcom, Inc.**

Antenna Features

1. Wide variety of feed options designed to meet the latest international standards.
2. Doubly contoured, high strength, lightweight aluminium panels fabricated on new aircraft quality tooling providing exacting close tolerances.
3. All steel structure are hot dipped galvanized after fabrication providing a thermal homogeneous structure to support operation at high frequencies.
4. Pedestal mounted azimuth jack providing ease of relocation for 190° coverage in two 120° segments.
5. Generous hub enclosure, 5.97 cubic meters, with easy access for inclusion of RF components.
6. Stainless steel and galvanized metric hardware throughout.
7. Low cost apron type foundation design including anchor bolts and embedded hardware.
8. Three (3) years warranty.

Optional Features

- S, C, X, Ku, DBS and Ka Band
- Tx/Rx, 2Tx/2Rx, TT&C, 6 Port Feeds
- Hybrid, Hi Power and Low Pim Feeds
- Two and Three Axis Motorization Packages
- Staircase and Platform for ready access to hub
- Aircraft Warning Lights
- Lightning Protection
- High Wind Designs
- Low Temperature Designs
- Deicing for Feed, Reflector and Sub reflector
- Single or Dual TX waveguide integration from Hub to across upper Az axis
- Platform Mounted Hand Winch



Preliminary Antenna Performance Estimate 9.0-Mtr Ka 17.7-21.2 & 27.5-31		Band - 1			Band - 2		
		Receive			Transmit		
		CP			CP		
9.0 meters Cassegrain Ka-Band System 4-Port CP-Monopulse							
Frequency Range	GHz	17.7	19.45	21.2	27.5	29.25	31
Ambient Temperature	Centigrade	23	23	23	23	23	23
Diameter	Meters	9	9	9	9	9	9
Theoretical Gain Go	dbi	64.45	65.26	66.01	68.27	68.81	69.31
Antenna Gain Gs	dbi	61.57	62.3	62.96	65.37	65.78	66.16
Antenna Noise Temperature	Kelvin	74	84	104			
LNA Noise Temperature	Kelvin	120	120	120			
Effective LNA Noise Temperature	Kelvin	121	121	121			
System Temperature Ts	Kelvin	195	205	225			
Antenna System G/T	dbK	22.89	23.12	23.53			
Elevation Angle	40 degrees						
Antenne Noise Temperature at :							
7.5°	Elevation	111	138	184			
10°	Elevation	99	122	162			
20°	Elevation	81	96	127			
40°	Elevation	74	84	104			
Maximum Transmit Power	Watts				500	500	500
Transmit eirp	dbW				92	93	93
Antenna Pattern Features:							
3db beamwidth	deg		0.11			0.08	
10db beamwidth	deg		0.19			0.14	
Sidelobe envelope	dbi		29-25log(t)	1 > 20		29-25log(t) > 20	1 > 20
% peak sidelobes over envelope				3db / 10%			3db / 10%
Antenna Terminal Characteristics							
Cross-pol	db		30			30	
Tx > Rx Rejection	db		85			0	
Rx > Tx Rejection	db		0			85	
Insertion Loss	db		0.70			0.65	
Rx - Rx Isolation	db		18				
Tx - Tx Isolation	db					18	
Return Loss (VSWR)	db		17	(1.3:1)		17	(1.3:1)
Wavguide Size	dBi		WR-42			WR-28	