

Earth Station Antenna ASI 13.2-Mtr Ka Band

Description:

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.

Product Features:

- Wide variety of feed options designed to meet the latest international standards.
- Doubly contoured, high strength, light weight aluminium panels fabricated on new aircraft quality tooling providing exacting close tolerances.
- All steel structures are hot dipped galvanized after fabrication, providing a thermal homogeneous structure to support operation at high frequencies.
- Pedestal mounted azimuth jack providing ease of relocation for 190° coverage in two 120° segments.
- Generous hub enclosure, 9.28 cubic meters (328 cu. ft.), with access for inclusion of RF components.
- Stainless steel and galvanized metric hardware throughout.
- Low cost apron type foundation design including anchor bolts and embedded hardware.

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
- * Anti-Ice for Feed, Reflector and Sub-Reflector
- Single or Dual TX Waveguide Integration from Hub to across Upper Az Axis



Alpha Satcom, Inc.

www.alpha-satcom.com



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Preliminary Antenna							
Performance Estimate		Band - 1			Band - 2		
Frequency: Ka FRU 17.7-21.2 & 27.5-31.0							
Frequency Range GHz		17.7	19.45	21.2	27.5	29.25	31
Ambient Temperature	Centigrade		23	23	23	23	23
Diameter	Meters	13.2	13.2	13.2	13.2	13.2	13.2
Theoretical Gain Go	dbi	67.78	68.59	69.34	71.60	72.13	72.64
Antenna Gain Gs	dbi	64.92	65.64	66.29	68.70	69.09	69.45
Antenna Noise Temperature	Kelvin	77	91	122	00.10	00.00	00.10
LNA Noise Temperature	Kelvin	120	120	120			
Effective LNA Noise Temperature	Kelvin	121	121	121			
System Temperature Ts	Kelvin	121	212	243			
System remperature is							
Antenna System G/T	dbK dbK	22.96 41.96	23.27 42.37	23.86 42.42			
-			42.07	42.42			
-	20 degrees						
Antenna Noise Temperature at :							
7.5°		106	134	180			
10°	Elevation	94	117	157			
20°	Elevation	77	91	122			
40°	Elevation	69	80	100	500	500	500
Maximum Transmit Power	Watts				500	500	500
Transmit eirp	dbW				96	96	96
Antenna Pattern Features:			0.00			0.00	
3db beamwidth			0.08 0.13			0.06 0.10	
10db beamwidth	Ū			1 > 20			1 > 20
Sidelobe envelope			29-25log(t)	1 > 20		29-25log(t)	1 > 20
% peak sidelobes over envelope				3db / 10%			3db / 10%
Antenna Terminal Characteristics							
Cross-pol	db		35			35	
Tx > Rx Rejection	db		85			0	
Rx > Tx Rejection			0			85	
Insertion Loss			0.70			0.60	
Rx - Rx Isolation			35			a =	
Tx - Tx Isolation			47	(1.0.1)		35	(1.0.1)
Return Loss (VSWR) Waveguide Size			17 WR-28	(1.3:1)		17 WR-42	(1.3:1)
waveguide Size	dBi		VVR-20			VVR-42	

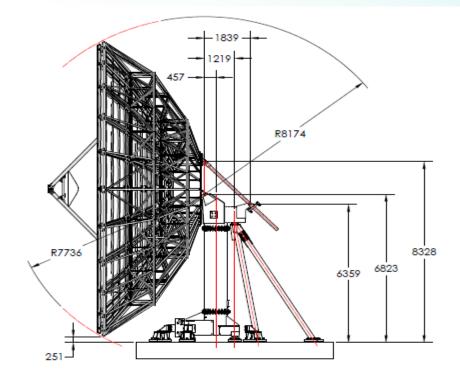
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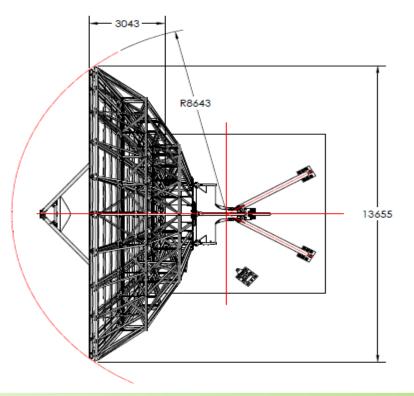
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