Earth Station Antenna

Models ASL7301 7.3 LMC & LMKu & LMKa

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 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

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* Wide variety of feed options designed to meet the latest international standards.
* Sixteen (16), doubly contoured, high strength, lightweight aluminium panels fabricated to exacting tolerances.
* Steel Structure manufactured to strict International Standards and hot dipped galvanized after fabrication.
* Pedestal mounted azimuth jack providing ease of relocation for extended travel requirements.
* Generous hub enclosure and access for inclusion of various RF components.
* Stainless steel and Galvanized hardware throughout.
* Anti-backlash, self-locking, direct drive machine screw jacks.
* Low cost apron type foundation design including anchor bolts and embedded hardware.
* Three (3) years warranty.

Optional Features

* S-band, C-band, X-band, Ku-band, Ka-band
* Tx/Rx or 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 Design
* Deicing for Feed, Reflector and Sub reflector
* Single or Dual TX waveguide integration from Hub to across upper AZ axis

ALPHA SATCOM Inc.
The Oldest New Antenna Company On The Planet
www.alpha-satcom.com

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Mechanical Performance	
Antenna Diameter	7.3 Meters (23.9 Feet)
RF Configuation	Cassegrain
Hub Dimensions	91" (2.3 M) diameter x 55" (1.4 M) height
Antenna Structure	Elevation over Azimuth Pedestal & Reflector Hot Dipped Galvanized After Fabrication
Reflector Panels	Sixteen (16) - Precision, Stretched Formed, Aluminum, High Quality Panels.
Azimuth Drive	120 Degree Continuous, Self Locking, Mechanical Screw Jack Mounted to Pedestal
ElevationDrive	5 to 90 Degree Continuous, Self Locking, Mechanical Screw Jack
Foundation	15ft x 19ft x2ft : 21.1 yds^3 of concrete and 2278 lbs of reenforcing bar.

Environmental Performance	
Operational Wind	45 mph (72km/h) Gusting to 60 mph (97km/h) High Wind designs available.
Survival Wind	130 mph (209 km/h) at any position
Operational Temperature	+5F to +122F (-15C to +50C)
Survival Temperature	-22F to +140F (-30C+E50 to +60C)
Rain	4 inches/hr (10cm/hr)
Relative Humidity	100%
Solar Radiation	360 BTU/hr/ft^2 (1000 Kcal/hr/m^2)
Ice (survival)	1 in (2.54cm) on all survices, no wind: 0.5 in (1.25cm) on all surfaces at 80 mph (130km/h) gusts.
Atmospheric Conditions	As per the enviornment in industrial areas or coastal regions.
Shock and Vibration	As encountered by commercial truck and air transportation
Seismic	0.1 G Vertical and 0.3 G Horizontal Acceleration (8.3 Richter/11 Modified Mercalli Scale)

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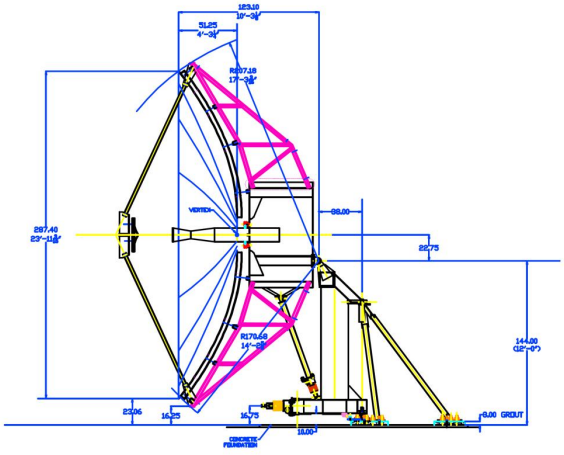
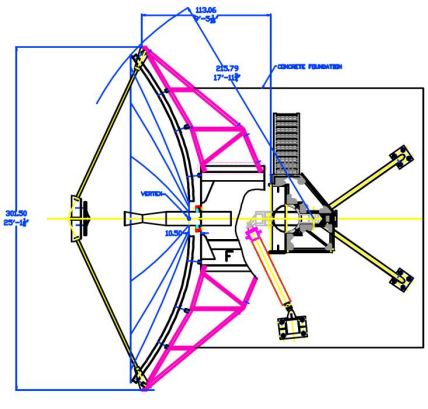
Electrical Performance							
Frequency	GHz	C-Band		Ku-Band		Ka-band	
Feed Configuration		2/4 Port Frequency Reuse		2/4 Port Frequency Reuse		4 Port Frequency Reuse	
		Receive	Transmit	Receive	Transmit		
Frequency Range	Ghz	3.4-4.2	5.725-6.725	10.7-12.75	13.75-14.5	17.7-21.2	27.5-31.0
Mid-Band Gain	dBi	48	51.6	57	58.3	61.05	64.5
Polarization		LP/CP	LP/CP	LP	LP	CP	CP
VSWR Performance		1.3:1	1.3:1	1.3:1	1.3:1	1.3:1	1.3:1
-3dB Beam Width	deg	0.69	0.45	0.23	0.2	0.14	0.11
-10dB Beam Width	deg	1.18	0.78	0.4	0.34	0.25	0.19
Antenna Noise Temperature							
10 Degrees Elevation	Kelvin	≤ 43		≤ 73		≤ 113	
20 Degrees Elevation	Kelvin	≤37		≤ 65		≤ 86	
30 Degrees Elevation	Kelvin	≤ 32		≤ 61		≤ 82	
TX Power Capability	Watts		5000/2800		2000/1000		500/250
Sidelobe Envelope	dBi	29-25 Log Theta (1 to 20 deg) ITU-580 3dB/10% SL over envelope					
Maximum Pressurization		0.50 psi		0.50 psi		0.50 psi	
Port to Port Isolation							
TX-RX	dB	≥85	≥85	≥85	≥85	≥85	≥85
RX-RX, TX-TX (CP)	dB	≥20	≥20			≥18	≥18
RX-RX, TX-TX (LP)		≥30	≥30	≥30	≥30		
Cross-pol on Axis	dB	35	35	35	35	30	30
Cross-pol across 1dB Beam width	dB	30	30	30	30	30	30
Insertion Loss	dB	0.3	0.4	0.35	0.5	0.5	0.5
Feed Interface		WR-229 CPR	WR-137 CPR	WR-75 CPR	WR-75 CPR	WR-42 CPR	WR-28 CPR



SIDE ELEVATION



TOP VIEW

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