

4.0 Meter Light Quick Deploy Antenna

The Kratos 4.0 m Light Quick Deploy is a highly flexible antenna system designed to operate on almost any satcom band and in many configurations. The entire reflector structure consists of lightweight carbon fiber panels, with multiple mounting scenarios, and can be ordered in motorized or nonmotorized versions. With feeds available to address UHF-, L-, C-, X-, Ku-, K- and Ka-bands, as well as low PIM feeds. A very versatile Antenna System.

This antenna supports a variety of interchangeable feeds which are engineered for easy removal and replacement in the field. The reflector is constructed with a precision-formed honeycomb core and a carbon fiber skin which assures durability and high performance. The reflector is easily assembled with nineteen panels.

The Light Quick Deploy is designed to be lightweight, with maximum stiffness, yet offers compact and highly robust components. The versatile architecture makes it ideal for launching highly divergent equipment applications using a single, flexible, modular and cost-effective equipment base.

Electronically engineered to operate at multiple frequencies, A Kratos 4.0 meter Light Quick Deploy is capable of transmitting and receiving signals under demanding wind loads and surviving winds up to 100 mph. The tactical version can be deployed by two trained individuals within 30 minutes.



Features

- Multiple configurations available
- Nineteen reflector panels
- Motorized or non-motorized axes
- Pedestal mount
- ISO shippable
- Lightweight reflector, high accuracy mount for tracking
- Interchangeable feed systems for quick field swaps
- Meets all applicable FCC, ITU and Mil-Spec standards
- Designed to comply with MIL-STD-810F
- Utilized with ARSTRAT Certified terminals
- Low PIM X-band available

4.0 Meter Light Quick Deploy Antenna

The Light Quick Deploy Antennas are designed around a base configuration to provide modular flexibility and configurability. In addition, they are designed to be rugged and to allow for maximum compactability to withstand the demands and rigors of transport in military and commercial aircraft. The feeds are also palletized to allow for easy transport and for fast band changes.

RF Performances

	C-band	X-band	Ku-band	K-band	Ka-band
Tx Gain dBi (typ. Midband)	46.4	48.9	53.6	55.1	58.9
Rx Gain dBi (typ. Midband)	42.3	48.3	51.9	51.7	55.6
G/T dB/K (typ. Midband) ¹	23.5	28.7	31.3	30.4	31.6

¹G/T shown is typical for mid-band single thread, nominal temperature rated LNA connected directly to the feed flange and does not include post LNA contributions. See feed sheets for more details.

Environmental Performances

Operating Conditions (Typical)				
Pointing Accuracy (Step Track / Memory Track)	4 GHz	7.75 GHz	12 GHz	20 GHz
Typical (Degree RMS)				
Calm	0.170° 0.028°	0.102° 0.015°	0.061° 0.010°	0.032° 0.007°
Winds 30 gusting 45 mph	0.173° 0.057°	0.106° 0.052°	0.068° 0.050°	0.043° 0.050°
Typical (Degree Peak)				
Calm	0.205° 0.082°	0.128° 0.043°	0.075° 0.028°	0.041° 0.019°
Winds 30 gusting 45 mph	0.216° 0.169°	0.144° 0.154°	0.103° 0.151°	0.096° 0.149°
Wind Loading				
Survival				
Temperatures				
	Operational		Survival	
Range	-40°C to +60°C (-40°F to +140°F)		-58°C to +71°C (-50°F to +160°F)	
Seismic				
	1G Vertical and Horizontal; 8.3 Richter, 11 Mercalli			
Solar Radiation				
	360 BTU/h/ft ² (1135 watts/m ²)			
Rain				
	Up to 10 cm/h (4 in/h)			

Relative Humidity	0% to 100%	
Shock	As encountered by Air, Ship, Rail and Truck	
Atmospheric	As encountered in moderately corrosive coastal and industrial environments	
Altitude	Operational	Survival
Range	Up to 12,000 ft	Up to 40,000 ft

Mechanical Performances

Reflector	Multi-Band Intergangeable
Color	White (other colors available)
Material	Carbon Fiber
Segments	Nineteen Panels
Feed Type	Axisymmetric Gregorian dual optics
Mount Type	EI over Az Pedestal
Pointing Range	
Azimuth	± 60° Continuous
Elevation	0° to 90° of Boresight
Polarization	± 90°
Maximum Travel Limits	User defineable within mechanical limits
Operate Limits	Hardware and Software Settable

4.0 Meter Light Quick Deploy Antenna

MILSAT

Electrical Specifications

Controller Type	Multi Axis Tracking Controller with Auto Acquisition Assist
Controller Package	Single Box Outdoor Motor Controller 3RU 19" EIA Rack Mounted Indoor Controller
Prime Power	Indoor 110-220 VAC 50/60 Hz (Universal) Outdoor 24 VDC, 120 VAC (Field Configurable)
Power Consumption	20A or less @ 24VDC, 5A @ 120VAC (est.)
Motor (Az, El, and Pol)	24 VDC
Remote IDU Interconnect	Ethernet
Remote Interface	Remote Operation Software, SNMP V1 & V2c
IDU/ODU IFL	Multi Mode Fiber Optic Cable
Optional Sensors	GPS, Compass, and Inclometers
Angle Transducers	19 bit optical encoder
Angle Resolution	0.0010°
Positioning Accuracy	0.0050° (est)

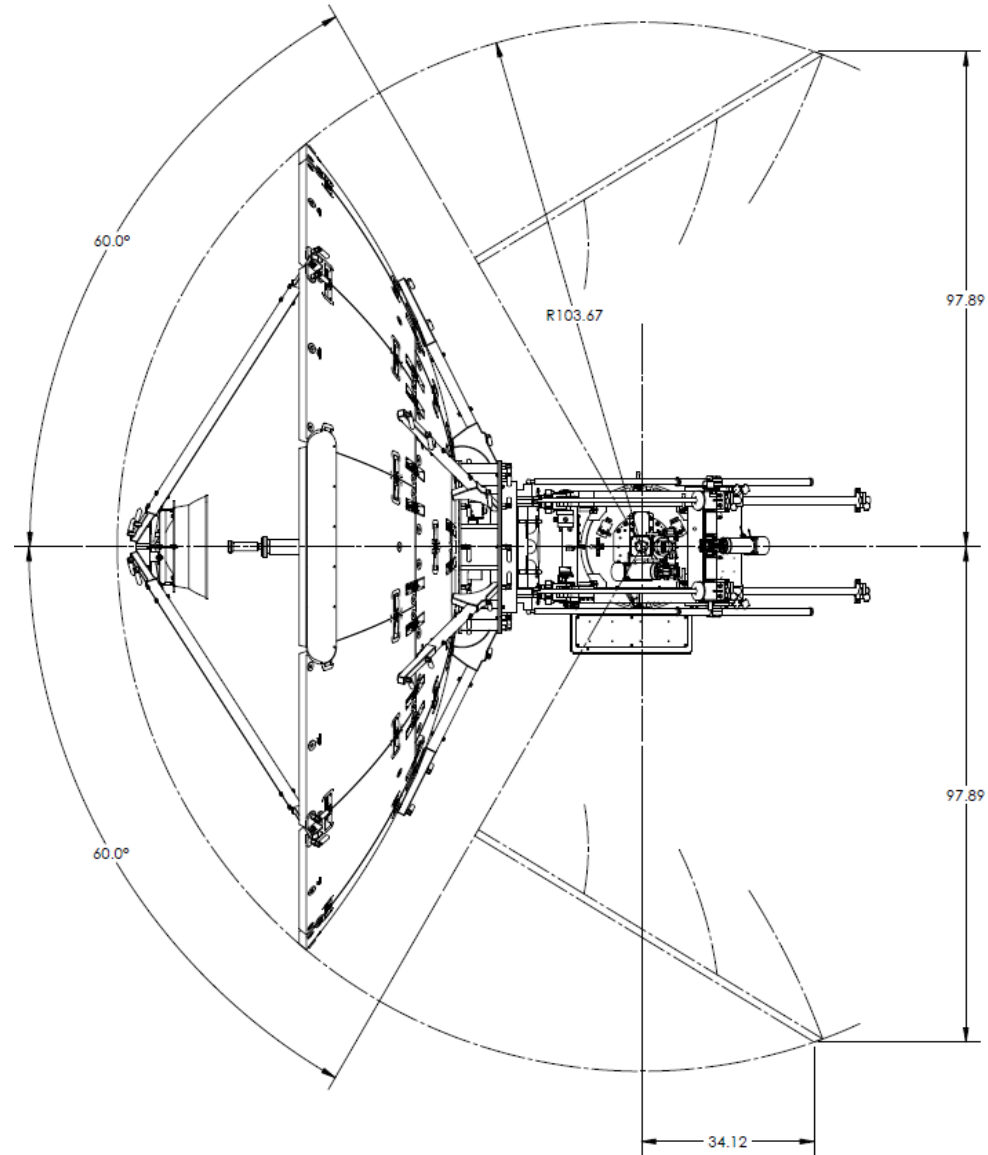
Shipping Information

Packing Options	
Standard Commercial Domestic Pack	Included
Service and materials For Ocean Transport Packaging of 4.0M product	CRATE-40-OCEAN
Service and materials For Air Transport Packaging of 4.0M product	CRATE-40-AIR
Service and materials for enclosed crating a 4.0M product for transport	CRATE-40-PACK
Required Shipping Container	
Standard 20 ft land/sea container	Quantity 1

Shipping container information is given for basic configuration and may vary depending on the selected options, please contact Kratos for specific container loading plan.

4.0 Meter Light Quick Deploy Antenna

4.0m LQD Dimensional Drawings Ground Mount Pedestal

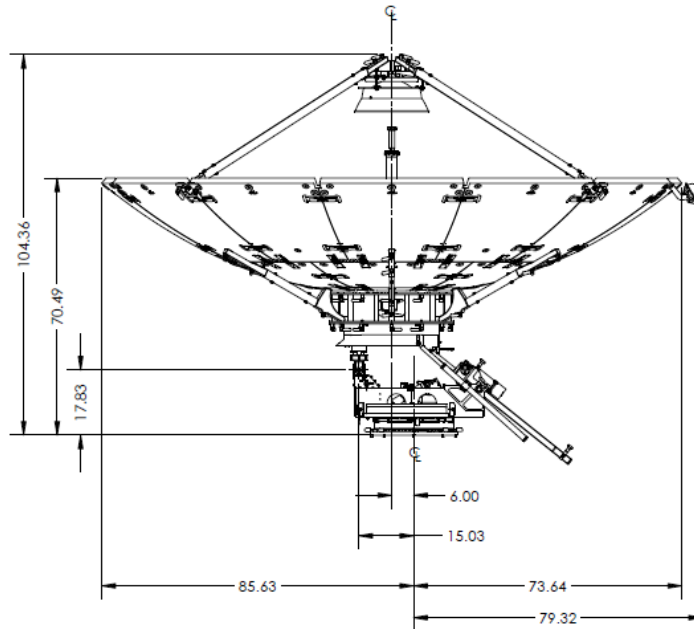


MILSAT

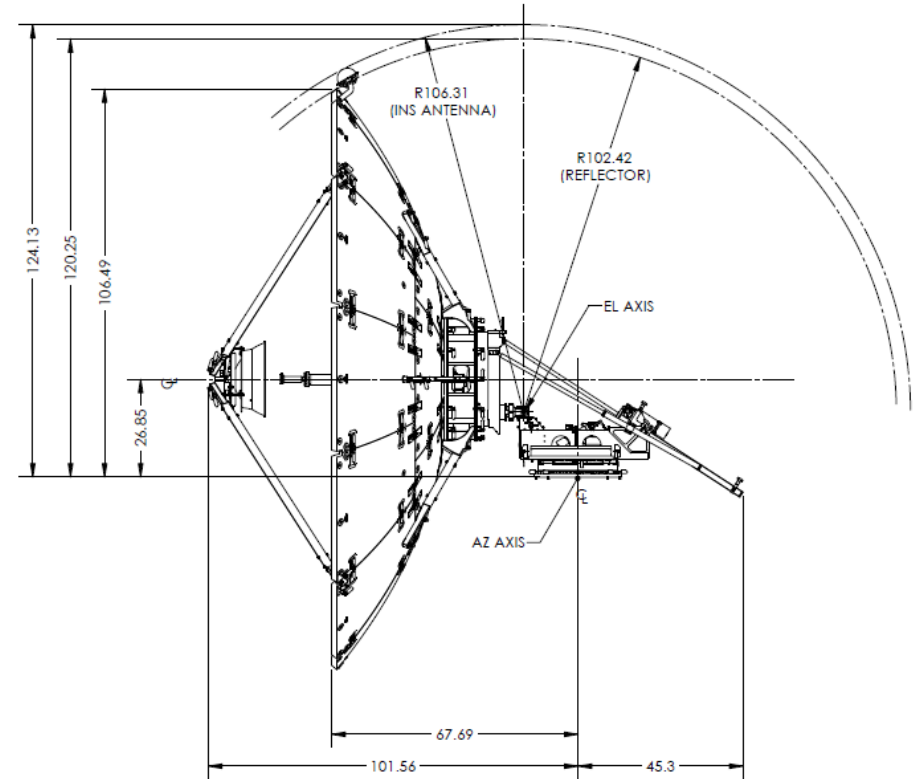
4.0 Meter Light Quick Deploy Antenna

4.0m LQD Dimensional Drawings Ground Mount Pedestal

MILSAT



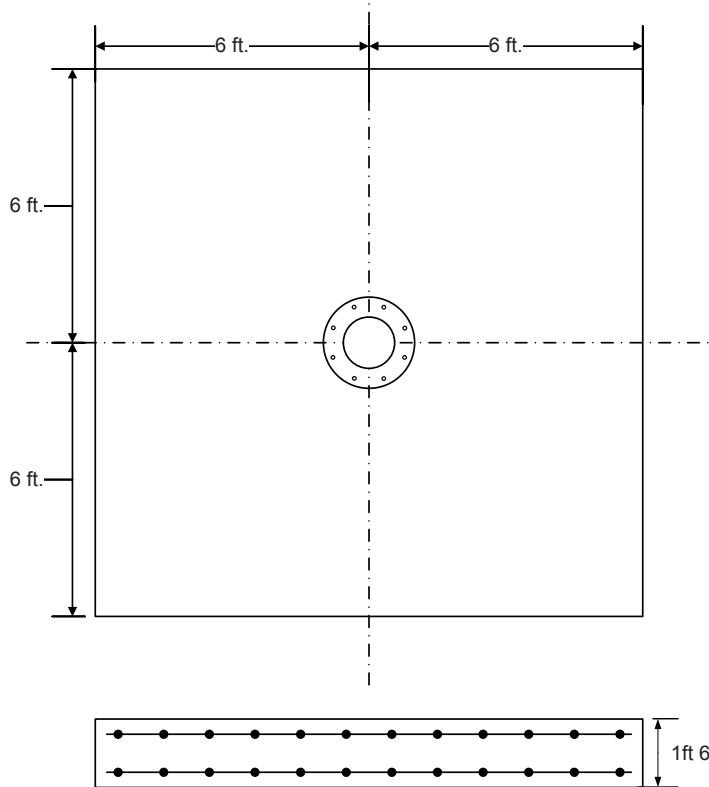
ANTENNA AT 90 DEGREES ELEVATION



ANTENNA AT 0 DEGREES ELEVATION

4.0 Meter Light Quick Deploy Antenna

4.0m LQD Typical Foundation Design



Foundation information are provided in special bulletin, please contact Kratos.

Soil Bearing Capacity,	2000 lb/ft ² (9770 kg/m ²)
Reinforcing Steel,	821 lbs (372 kg)
Concrete Compressive Strength,	3000 psi (211 kg/cm ²)
Foundation Size:	(for specific standard soil and typical design)
Length	12 ft (3.66 m)
Width	12 ft (3.66 m)
Depth	1 ft 6 in (0.457 m)
Concrete Volume	8 yd ³ (6.1 m ³)
NOTE: Other typical foundation designs are available. Soil borings and foundation analysis should be performed by a qualified civil engineer.	

4.0 Meter Light Quick Deploy Antenna

Motorization

One motorization system is available for this antenna: the NGC tracking system that can support Steptrack, Smartrack and Ephemeris orbital tracking.

Motor Kit

Azimuth/Elevation Motor Kit is part of the motorizable positioner

Polarization Drive Kit (DC Step Motors)

Part of the Motorized Feed System

Outdoor Unit Controller

ODU 24VDC 5 AMPS	NGC-ODU-NMD
------------------	-------------

Antenna controller, motorization and options are detailed in specific bulletins, please contact Kratos.

Antenna Configurations

Reflectors

Nineteen Panels Lightweight 4.0 Meter Dual Optics Gregorian Feed Antenna Reflector	NMD-40-19
--	-----------

Positioners

Motorizable Positioner	4MLQD-CAP
------------------------	-----------

Motorization and NGC Options

Indoor	
NGC-IDU	NGC Rack Mounted Antenna Controller W/LCD Touch Panel
NGC-001	NGC-IDU Analog Telephone Modem
NGC-002	NGC-IDU Spectrum Analyzer Card, Analog
NGC-003	NGC-IDU DVB Receiver Card
NGC-004-02	NGC IDU, L-Band Internal Beacon Receiver
NGC-006	NGC-IDU Emergency Stop Button
NGC-007	NGC-IDU 10 Mhz Reference Source
NGC-008	NGC-IDU Redundant Power Supply
NGC-009	NGC-IDU Rack Slides
NGC-101	NGC-IDU Step Tracking Software
NGC-102	NGC-IDU Smartrack Software
NGC-103	NGC-IDU Predictive Track Software
NGC-104	NGC-IDU Full Tracking Capability Software
NGC-105	NGC-IDU Acquisition Assist
NGC-106	NGC-IDU Remote Access Software Package
NGC-107	NGC-IDU Spectrum Analyzer Enhanced User Interface
NGC-108	Receive Pattern Test Tool
Outdoor	
NGC-SEN-4-VN-NMD	Nomadic INS Sensor Kit, High Accuracy
7586787	Handheld for NGC-ODU-NMD with MILSPECS

4.0 Meter Light Quick Deploy Antenna

MILSAT

Feed Matrix 4.0m LQD

UHF- BAND FEED SYSTEMS	PORT	CP Left Hand	CP Right Hand	225 - 400 MHz Rx and Tx
1LHCPUHF-40CF	1	X		X
1RHCPUHF-40CF	1		X	X

C- BAND FEED SYSTEMS	PORT	CP	LP	RX 3.625 - 4.2 GHz	RX 3.4 - 4.2 GHz	RX 4.5 - 4.8 GHz	TX 5.850 - 6.425 GHz	TX 5.725 - 6.650 GHz	TX 5.725 - 6.725 GHz	TX 6.725 - 7.025 GHz
2CPC-40CF	2	X		X			X			
2CPNC-40CF-109	2	X		X			X			
2CPWCR-40CF	2	X			X					
2LPC-40CF	2		X	X			X			
2LPCPWCR-40CF	2	X	X		X					
2LPUC-40CF	2		X			X				X
2LPWCR-40CF	2		X		X					
4CPNC-40CF-206	4	X		X			X			
4LPNC-40CF	4		X	X			X			
4LPWC-40CF	4		X			X			X	
4LPCPWW-40CF-2-RS	4	X	X		X			X		

X- BAND FEED SYSTEMS	PORT	Low PIM	CP	RX 7.25 - 7.75 GHz	TX 7.9 - 8.4 GHz
2CPX-40CF	2		X	X	X
2CPXF-40CF	2		X	X	X
4CPX-40CF	4		X	X	X
2CPMX-40CF	2	X	X	X	X
4CPMX-40CF	4	X	X	X	X

4.0 Meter Light Quick Deploy Antenna

Feed Matrix 4.0m LQD

Ku- BAND FEED SYSTEMS	PORT	LP	RX 10.7 - 12.75 GHz	RX 10.7 - 13.25 GHz	TX 13.00- 13.25 GHz	TX 13.75- 14.5 GHz	TX 13.75- 14.8 GHz
2LPKU-40CF-W	2	X		X			X
4LPKU-40CF	4	X	X				X
4LPWKU-40CF	4	X	X		X	X	

K- BAND FEED SYSTEMS	PORT	LP	CP	RX 10.7 - 12.75 GHz	TX 17.3 - 18.4 GHz
2LPK-40CF	2	X		X	X
4LPK-40CF	4	X		X	X

KA- BAND FEED SYSTEMS	PORT	LP	CP	RX 17.7 - 21.2 GHz	RX 18.3 - 20.2 GHz	RX 20.2 - 21.2 GHz	TX 27.0 - 30.05 GHz	TX 27.50 - 31.00 GHz	TX 30.0 - 31.0 GHz
2LPCPKAR-40CF	2	X	X	X					
4CPKA-40CF	4		X			X			X
4CPWWKA-40CF-206	4		X	X				X	
4LPKA-40CF	4	X			X		X		

Ku/K- BAND FEED SYSTEMS	PORT	LP	RX 10.7 - 12.75 GHz	TX 13.75- 14.5 GHz	TX 17.3- 18.4 GHz
6LPKUK-40CF-W	2	X	X	X	X

MILSAT

4.0 Meter Light Quick Deploy Antenna

MILSAT

Antenna Options and Spares

Anchor Bolt and Template Kits Option	
302689	Anchor Bolt and Template Kit for 4.0Meter Nomadic with PEDMNT
Heating Options	
GSS-40-1	4.0M Passive Snow Shield Cover
SSH12K-40-1	4.0M 4KW Electric Heater System
WSS-IC-100	Interface Cable; 100ft
WSS-RMDP7	Rack Mounted Remote Monitor Panel
Color Options	
NMD-33510	Sandstone Color Painting for Reflector FS33510
NMD-34096	Olive Drab Color Painting for Reflector FS34096
NMD-NPN-LG	Custom Color Painting for Reflector
Other Options	
NMD-40-LP	LOW PIM Antenna Configuration & Range Certification Test Service
NMD-TAC-TCASE	Tactical System Transit Case for 4.0M
PEDMT-40	Pedestal Mount for 4.0 Meter; Galvanized
PEDMT-40-FSxxxxx	Pedestal Mount for 4.0 Meter; Podwer Coated to Match FS Color (xxxxx)
PEDMT-40-INT	Galvanized Pedestal Mount Interface Kit for 4.0 Meter
FTST	Feed System Testing



1120 Jupiter Road, Suite 102
Plano Texas 75074
USA

t: +1-214-291-7654
f: +1-214-291-7655
e: Space@KratosDefense.com

for information visit: www.KratosDefense.com

© 2020 Kratos Defense & Security Solutions, Inc.