NEW

2.4-Meter VSAT Earth Station Antenna

INTELSAT and Eutelsat Type Approved

The 2.4-meter Prime Focus Ku-band earth station antenna from Andrew Corporation received final INTELSAT (E-I and G) and Eutelsat Type Approvals and has been granted the following registration numbers:

INTELSAT No. IA033A00
IA033AA0 (with LNA)
Eutelsat No. EA-A003

These new antennas are manufactured to stringent specifications and perform to the exacting standards demanded of them. Because of this, Andrew 2.4m VSAT antennas can be installed anywhere in the world without extensive and costly on-site testing of each unit. You save both time and money with these Andrew antennas.

2.4 Meter Prime Focus Ku-band ESA Features:

- Parabolic main reflector for excellent pattern characteristics and high gain
- Wind survival to 125 mph in any position of operation
- Feed replacement requires no electrical realignment
- Extended Tx band 12.75 – 14.5 GHz
- Meets or exceeds:
  -U.S. FCC regulation 25.209 for mandatory pattern requirements for 2˚ satellite spacing
  -INTELSAT requirements for standard E-1 (IESS208) and G (IESS601) stations
  -Eutelsat requirements for pattern (CCIR 580-2) and polarization discrimination

Request the Type Approved 2.4m VSAT with part number ESA24K-() or ESA24K-()-2 (with LNA). (1) unit pack (10) bulk pack

Choose the Andrew Advantage for your next antenna. Complete turnkey systems are available, and every antenna system is backed by our technical/customer support services 24 hours a day. For more information, call our Customer Support Center.

After extensive factory testing, witnessed by representatives of Comsat (U.S. signatory for INTELSAT) and Eutelsat, Type Approvals were granted for the Andrew 2.4m VSAT.

ANDREW®

Electrical Specifications

Operating Frequency Band	
Ku-Band Receive	Ku-Band Transmit
10.95-12.75 GHz	12.75-14.50 GHz

Gain, at rectangular waveguide flange of feed. (dBi, ±0.2 dB)

Rx Frequency	Rx Gain	Rx Frequency	Rx Gain
10.950 GHz	47.0	12.200 GHz	47.6
11.325 GHz	47.1	12.500 GHz	47.8
11.700 GHz	47.4	12.750 GHz	48.1
11.950 GHz	47.6		

Tx Frequency	Tx Gain	Tx Frequency	Tx Gain
12.750 GHz	48.1	14.000 GHz	49.0
13.000 GHz	48.4	14.250 GHz	49.0
13.250 GHz	48.7	14.500 GHz	49.2

Polarization	Linear
Polarization Discrimination	>35 dB across 1 dB beamwidth
Antenna VSWR, Receive (Transmit)	1.5:1 (1.35:1)
with W/G Option	1.5:1 (1.4:1)
Isolation, Tx to Rx	>35 dB
Beamwidth, degrees	
3 dB Receive (Transmit)	0.75 (0.65)
15 dB Receive (Transmit)	1.60 (1.40)

Antenna Noise Temperature

Elevation	Kelvin
10˚	63˚
20˚	48˚
30˚	45˚

Antenna G/T @10˚ El, @ 11.0 GHz with 80˚ K LNA	**25.5 dB/K**

*To meet these performance requirements, an LNA/LNB with dimensions not exceeding 12 cm long x 4 cm wide x 4 cm high is used.

Mechanical Specifications

Feed Type**	Prime Focus, Aluminum Chromate Converted per MIL-C-5541C Finished with highly diffusive white paint
Flange Type (OMT)	WR75 Cover Gasket
Reflector Type	Precision-Formed Aluminum, single-piece Chromate Converted per MIL-C-5541C Finished with highly diffusive white paint
Mount Type	Az over El, manual pipe mount Galvanized per ASTM-AL 23 Customer furnished 5-inch nominal schedule 80 pipe interface on customer supplied pipe

Antenna Pointing Range	
Elevation	0-90˚
Azimuth	360˚
Polarization Adjustment	180˚
Wind Loading, Survival in any position of operation	125 mph (200 km/h)
Wind Loading, Operational	50 mph (80 km/h)
Pointing Accuracy, worst case	
Winds Gusting to 50 mph (80 km/h)	0.084˚
Gain Degrades @11 GHZ	<0.25 dB

**Feed replacement does not require electrical realignment.

Environmental Specifications

Temperature, Operational	-50˚ to 125˚F (-45˚ to 52˚C)
Rain	4 in (102 mm) per hour
Solar Radiation	360 BTU/hr/ft^2 (1135 Watts/m^2)
Relative Humidity	100%

Available Options

Polarization Cross-Axis Kit***	0.5 dB attenuation
Deicing Kit	
Shield Kit	Needed for FCC 2˚ Compliance

***Allows transmit RF module mounting behind reflector.

Shipping Information

Weight, Net	
Reflector	125 lbs. (57 kg)
Mount	130 lbs. (59 kg)
Feed System	10 lbs. (4.5 kg)

Dimensions/Weight, Gross	
Unit Pack	107"L x 44"W x 100"H, 800 lbs. (363 kg)
Bulk Pack, 10 ea.	
Reflector Pack	107"L x 85"W x 108"H, 2350 lbs. (1066 kg)
Mount/Feed Pack	40"L x 60"W x 40"H, 1000 lbs. (454 kg)

Ordering Information

Type ESA24K-1, 2.4-Meter Ku-Band ESA
Type ESA24K-1 -2, 2.4-Meter Ku-Band ESA with 90 LNA
Type 173615 Polarization Cross-Axis Kit
Type 173622 Partial Shield Kit
Type 173623 Reflector Deicing Kit

For further information, request SP-38-22

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