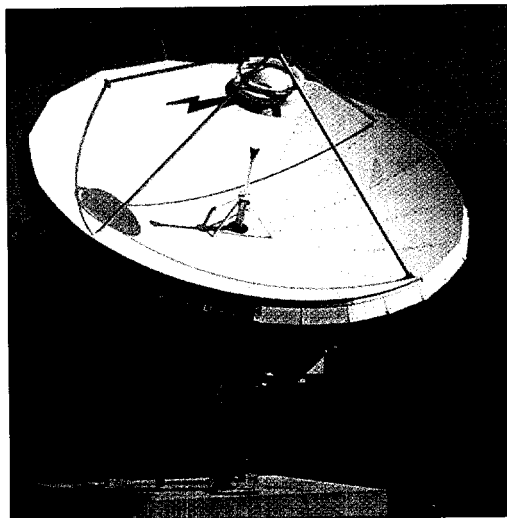




7.6-Meter C-, X-, Ku- or K-Band



Antenna Accessories

*Factory Feed System Testing and Documentation
Transmit Waveguide Kits, Cross-Axis Az/EI/Pol
Motorization Kits*

*Geostationary Indoor Antenna Positioner with
40 Satellite Memory*

*Inclined Orbit Tracking Indoor Antenna
Positioner (steptrack)*

Anti-Icing and Deicing

LNA Support Kits

Ocean Transport Packing

Hub Ventilation Kit

Grounding Kit

Foundation Kit

Lightning Rod Kit

Maintenance Platform and Ladder

Obstruction Warning Light Kit

Cable-Mounting Kit

Major Subsystem Spare Part Kits

Az/EI Vernier Kits

Features:

- *High Gain, Excellent Pattern Characteristics*
- *Advanced Gregorian Optics*
- *Rugged Aluminum and Steel – 125 mph (200 kph) Wind Survival*
- *No Field Alignment (C-Band)*
- *3-Year Warranty on All Structural Components*

Compliances:

- *APSTAR*
- *ASIASAT*
- *BRASILSAT*
- *INTELSAT E-3, F-3, D, G*
- *EUTELSAT*
- *ITU-R, S.580-5 and S.465-5*
- *US FCC Regulation 25.209*
- *Approved for use in the Territory of Russia by the Ministry of Communications of the Russian Federation (Reference: Homologation Certificate No OC/I-A -f-1)*

Television broadcasters and telecommunications system operators, integrators, and designers can bring their systems on line faster, more economically, and with superior performance with the Andrew 7.6-meter Earth Station Antenna (ESA). In use worldwide in broadcast applications and high-density data, voice, communications networks, the Andrew 7.6-meter ESA features a computer-optimized dual-reflector Gregorian system and close-tolerance manufacturing techniques. This combination provides extremely accurate surface contour, exceptionally high gain, superior efficiency, and closely controlled pattern characteristics.

Our wide selection of Type Approved antennas speeds system deployment. Type Approved Andrew ESAs can be deployed in the field with minimal testing and decreased administrative and approval requirements. Andrew ESAs provide maximum durability with minimal maintenance. The hot-dipped galvanized steel ground mount assembly ensures extended product life. Galvanized and stainless steel hardware maximize corrosion resistance. For cost effective system expansion, available modular equipment options include anti-icing equipment and pressurization systems. Microprocessor steptrack control and motorizable mount options are also available.

7.6-Meter C-, X-, Ku- or K-Band



Earth Station Antenna Products and Systems

Electrical Specifications

Operating Frequency Band	
C-Band Receive	3.4-4.2 GHz
C-Band Transmit	5.850-6.725 GHz
X-Band Receive	7.25-7.75 GHz
X-Band Transmit	7.90-8.40 GHz
Ku-Band Receive	10.7-13.25 GHz
Ku-Band Transmit	14.0-14.8 GHz
K-Band Transmit	17.3-18.4 GHz

Gain, with 2-port linear combiner (dBi, ±0.2dB)			
Rx Frequency	Rx Gain	Tx Frequency	Tx Gain
3.400 GHz	47.2	5.850 GHz	52.1
3.625 GHz	47.8	6.175 GHz	52.6
4.000 GHz	48.7	6.425 GHz	52.9
4.200 GHz	49.1	6.725 GHz	53.2
7.250 GHz	54.0	7.90 GHz	54.6
7.500 GHz	54.2	8.15 GHz	54.7
7.750 GHz	54.4	8.40 GHz	54.9
10.700 GHz	56.7	13.75 GHz	58.9
10.950 GHz	57.0	14.00 GHz	59.1
11.950 GHz	57.8	14.25 GHz	59.3
12.750 GHz	58.3	14.50 GHz	59.4
		14.80 GHz	59.6
		17.30 GHz	60.2
		18.40 GHz	60.7

Polarization
Linearly- or Circularly-Polarized

Polarization Discrimination (Linearly-Polarized)
>35 dB across 1 dB beamwidth 19 - 25 log θ from 1.8° to 9.2°

Voltage Axial Ratio, C-Band, circularly-polarized with 4-port combiner
<1.06:1 across the 1 dB beamwidth X-Band, <1.20:1 on axis, Tx and Rx

	Beamwidth, Mid-band, Degrees		
	C-Band	Ku-Band	X-Band
3 dB Receive (Transmit)	0.58 (0.39)	0.22 (0.18)	0.33 (0.30)
15 dB Receive (Transmit)	1.18 (0.75)	0.39 (0.31)	0.62 (0.57)

Antenna Noise Temperature – under clear sky conditions, at 68°F (20°C), with 2-port combiner.

Elevation	Kelvin (C-Band)	Kelvin (X-Band)	Kelvin (K- and Ku-Band)
10°	45	45	55
30°	36	36	41
50°	32	32	36

Antenna VSWR, Transmit and Receive <1.3:1

G/T Performance (C-Band)

LNA/LNB Noise Temperature	65K	45K	30K
ES76 G/T at 10° EL (dB/K)	28.2	29.0	29.7

Based on a 2-port, linearly-polarized antenna configuration at 4 GHz and at 10° elevation under clear sky conditions.

G/T Performance (X-Band)

LNA/LNB Noise Temperature	100K	75K	50K
ES76 G/T at 10° EL (dB/K)	32.3	33.1	34.1

Based on a 2-port, circularly-polarized antenna configuration at 7.5 GHz and at 10° elevation under clear sky conditions.

G/T Performance (Ku-Band)

LNA/LNB Noise Temperature	165K	125K	90K
ES76 G/T at 10° EL (dB/K)	34.4	35.3	36.1

Based on a 2-port, circularly-polarized antenna configuration at 12 GHz and at 10° elevation under clear sky conditions.

Mechanical Specifications

Feed Type	Dual-Reflector, Gregorian
Reflector Material	Precision-Formed Aluminum
Reflector Segments	8
Mount Type	EI over Az, Tripod

Antenna Pointing Range, Coarse/(Continuous)	
Elevation	0-90° (90°)
Azimuth	180° (120°)
Polarization	180° (180°)

Hub/Enclosure Dimensions	
Diameter	52 in (1.32 m)
Depth	46 in (1.17 m)

Wind Loading, Survival
125 mph (200 km/h) in any position of operation

Wind Loading, Operational
45 mph (72 km/h), gusting to 65 mph (105 km/h) (motor drives)

Temperature, Operational -40° to 125°F (-40° to 52°C)

Rain 4 in (102 mm) per hour

Solar Radiation 360 BTU/hr/ft² (1135 watts/m²)

Relative Humidity 100%

Shock and Vibration As encountered by commercial air, rail and truck shipment

Atmospheric Conditions Moderate coastal/industrial areas. Severe conditions require additional protection.

Slab Foundation Information

Soil Bearing Capacity	2000 lb/ft ² (9770 kg/m ²)
Reinforcing Steel	1681 lb (764 kg)
Concrete Compressive Strength	3000 lb/in ² (211 kg/cm ²)
Foundation Size:	
Length	19.5 ft (5.94 m)
Width	19.5 ft (5.94 m)
Depth	2.5 ft (0.76 m)
Concrete Volume	35.2 yd ³ (27 m ³)

Note: Other typical foundation designs are available.

Typical Shipping Information

Net Weight	6500 lb (2948 kg)
Gross Shipping Weight	8200 lb (3720 kg)
Shipping Volume	780 ft ³ (22.1 m ³)
Shipping Container	Standard 20 ft land/sea container

All designs, specifications and availabilities of products and services presented are subject to change without notice.