



ValuStar™ Earth Station Antennas



1.2-Meter ValuStar™ Antenna with Optional MNT18 Mount

ValuStar™ 1.2-/1.8-/2.4-/3.0-/3.6-Meter Earth Station Antennas

Features:

- C 3.625-4.2 GHz
UC 4.5-4.8 GHz
Ku 10.7-12.75 GHz
- Dual-Polarized, High Gain
- R/T Version on Application
- 125 mph (200 km/h) Wind Survival in any Position
- Anti-icing Options
- Fast, Simple Installation

ValuStar™ antennas from Andrew are small-diameter, superior quality, earth station antennas for professional services where reliability and durability are essential. They are ideal for broadcast distribution applications.

ValuStar antennas are available in sizes from 1.2- to 3.6-meters and feature an interchangeable, high performance, dual-polarized receive-only feed system that provides optimum gain.

To reduce overall project costs and allow local product manufacture and labor content, the basic antenna is provided with a high-quality azimuth/elevation mount. This mount can be connected to either an Andrew provided (vertical) pipe, or a customer provided (vertical) pipe, and can be held in the vertical position by casting it into a concrete foundation. An optional mount can be offered to bolt to a foundation or other suitable mounting structure.

The antennas use rugged, high accuracy, spun aluminum reflectors which are conversion coated and painted white.

Hot-dip galvanizing of the steel mount parts and careful choice of all materials ensure reliable performance and long life in adverse environments.



Electrical

Antenna Type	ES12	ES18	ES24	ES30	ES36
Diameter, meters	1.2	1.8	2.4	3.0	3.6
Gain, dBi with 2-port combiner					
3.625	30.7	34.3	37.0	38.8	39.6
4.000	31.4	35.0	37.7	39.5	40.3
4.200	31.8	35.4	37.8	40.0	41.3
4.500	32.4	36.0	38.7	40.5	41.9
4.650	32.7	36.3	39.0	40.8	42.2
4.800	33.0	36.6	39.3	41.1	42.5
10.70	40.0	43.6	46.3	48.2	49.4
10.95	40.2	43.8	46.5	48.4	49.6
11.95	40.8	44.4	47.2	49.0	50.2
12.75	41.6	45.1	48.0	49.8	50.9
VSWR, maximum	1.3	1.3	1.3	1.3	1.3
Cross Polar Discrimination (linear), dB	30	30	30	30	30
Voltage Axial Ratio (circular)	1.3	1.3	1.3	1.3	1.3
3 dB Beamwidth, degrees	C UC Ku 4.7 4.0 1.7	C UC Ku 3.1 2.7 1.0	C UC Ku 2.4 2.0 0.75	C UC Ku 1.9 1.6 0.60	C UC Ku 1.6 1.3 0.50
ES12 - Noise Temperature, K	C-Band 2-Port Linear/Circular		UC 2-Port Linear		Ku-Band 2-Port Linear
at 10 degrees elevation	42K		43K		58K
at 30 degrees elevation	33K		34K		49K
at 50 degrees elevation	29K		30K		45K
ES18 - Noise Temperature, K	C-Band 2-Port Linear/Circular		UC 2-Port Linear		Ku-Band 2-Port Linear
at 10 degrees elevation	36K		37K		50K
at 30 degrees elevation	29K		30K		42K
at 50 degrees elevation	25K		26K		38K
ES24 - Noise Temperature, K	C-Band 2-Port Linear/Circular		UC 2-Port Linear		Ku-Band 2-Port Linear
at 10 degrees elevation	31K		32K		43K
at 30 degrees elevation	24K		25K		35K
at 50 degrees elevation	20K		21K		31K
ES30 - Noise Temperature, K	C-Band 2-Port Linear/Circular		UC 2-Port Linear		Ku-Band 2-Port Linear
at 10 degrees elevation	25K		26K		35K
at 30 degrees elevation	18K		19K		26K
at 50 degrees elevation	14K		15K		22K
ES36 - Noise Temperature, K	C-Band 2-Port Linear/Circular		UC 2-Port Linear		Ku-Band 2-Port Linear
at 10 degrees elevation	29K		30K		41K
at 30 degrees elevation	22K		23K		32K
at 50 degrees elevation	18K		19K		28K

All of the above models include an az/el mount that interfaces to a customer-provided pipe or the MNT series of pipe.

Mechanical

Antenna Type	ES12	ES18	ES24	ES30	ES36
Survival Wind Rating, mph (km/h)	125 (200)	125 (200)	125 (200)	125 (200)	125 (200)
Mount Adjustment Range					
Elevation, degrees					
Coarse	0-90	0-90	0-90	0-90	0-90
Fine	± 7.5	± 7.5	± 7.5	± 7.5	± 7.5
Azimuth, degrees					
Coarse	360	360	360	360	360
Fine	± 7.5	± 7.5	± 7.5	± 7.5	± 7.5
Net Weight, lb (kg)	122 (55)	136 (62)	616 (280)	682 (310)	1067 (485)
Standard Reflector – Vertical Configuration	One-Piece	One-Piece	One-Piece	Two-Piece	Two-Piece
Mounting Pipe Size Needed, Nominal	4.5"	4.5"	6.625"	6.625"	6.625"

Surface anti-icing options: Antenna reflector surface anti-icing systems are available to prevent snow and ice from forming that would otherwise accumulate on the antenna reflector and affect the signal quality. These systems heat a 360 degree region of the reflector and come supplied with a precipitation sensing device, a temperature sensing control unit and all inter-connecting cables. In addition, a dish center heater is available, for use where ice and snow conditions may be severe.

Antenna Accessories

- Factory Feed System Testing and Documentation
- Ocean Transport Packing
- Anti-Icing and Deicing
- Grounding Kit
- LNA Support Kits

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

Earth Station Feed System Specifications

ValuStar™ Earth Station Antennas

Operating Frequency Band, GHz

C-Band Receive 3.625 - 4.200 **Ku-Band Receive** 10.7 - 12.75

Gain, (dBi, ±0.2dB), with 2-Port Combiner

Rx Freq. GHz	Antenna Type Diameter, Meters ES12	Antenna Type Diameter, Meters ES18	Antenna Type Diameter, Meters ES24	Antenna Type Diameter, Meters ES30	Antenna Type Diameter, Meters ES36
3.625	----	34.3	37.0	38.8	39.6
4.000	----	35.0	37.7	39.5	40.3
4.200	----	35.4	37.8	40.0	41.3
10.700	40.0	43.6	46.3	48.2	49.4
10.950	40.2	43.8	46.5	48.4	49.6
11.950	40.8	44.4	47.2	49.0	50.2
12.750	41.6	45.1	48.0	49.8	50.9

Antenna Noise Temperature - under clear sky conditions, at 68°F (20°C), ±2K.

ES12 - Noise Temp, K	C-Band 2-Port Linear/Circular	Ku-Band 2-Port Linear
At 10° elevation	----	58K
At 30° elevation	----	49K
At 50° elevation	----	45K
ES18 - Noise Temp, K	C-Band 2-Port Linear/Circular	Ku-Band 2-Port Linear
At 10° elevation	36K	49K
At 30° elevation	29K	42K
At 50° elevation	25K	38K
ES24 - Noise Temp, K	C-Band 2-Port Linear/Circular	Ku-Band 2-Port Linear
At 10° elevation	31K	43K
At 30° elevation	24K	35K
At 50° elevation	20K	31K
ES30 - Noise Temp, K	C-Band 2-Port Linear/Circular	Ku-Band 2-Port Linear
At 10° elevation	25K	35K
At 30° elevation	18K	26K
At 50° elevation	14K	22K
ES36 - Noise Temp, K	C-Band 2-Port Linear/Circular	Ku-Band 2-Port Linear
At 10° elevation	29K	41K
At 30° elevation	22K	32K
At 50° elevation	18K	28K

Antenna VSWR, Transmit and Receive <1.3:1

AVAILABLE PART NUMBERS		
Part Number	Operational Frequency	Use with:
ES12 C or Ku-Band Single Piece Reflector, Mounts on Customer Supplied 4.50" OD Pipe	-	-----
ES18 C or Ku-Band Single Piece Reflector, Mounts on Customer Supplied 4.50" OD Pipe	-	-----
ES24 C or Ku-Band Single Piece Reflector, Mounts on Customer Supplied 6.625" OD Pipe	-	-----
ES30 C or Ku-Band 2 Piece Reflector, Mounts on Customer Supplied 6.625" OD Pipe	-	-----
ES36 C or Ku-Band 2 Piece Reflector, Mounts on Customer Supplied 6.625" OD Pipe	-	-----
PIPE18 1.2 and 1.8 Meter ValuStar Earth Station Antenna Pipe Mount	N/A	ES12 & ES18
PIPE30 2.4 and 3.0 Meter ValuStar Earth Station Antenna Pipe Mount	N/A	ES24 & ES30
PIPE36 3.6 Meter ValuStar Earth Station Antenna Pipe Mount	N/A	ES36
MNT18 1.2 and 1.8 Meter ValuStar Earth Station Antenna Pedestal Mount Use ANC18	N/A	ES12 & ES18
MNT30 2.4/3.0 Meter ValuStar Earth Station Antenna Pedestal Mount Use ANC30	N/A	ES24 & ES30
MNT36 3.6 Meter ValuStar Earth Station Antenna Pedestal Mount Use ANC36	N/A	ES36
ANC18 1.2, 1.8M Anchor Bolt Kit. Use on MNT18	N/A	MNT18
ANC30 3.0M Anchor Bolt Kit. Use on MNT30	N/A	MNT30
ANC36 3.6M Anchor Bolt Kit. Use on MNT36	N/A	MNT36
2LPCR-18 2-Port Receive Only C-Band Feed System, Linear Polarized	3.700 - 4.200 Linear	ES18
2LPCR-24 2-Port Receive Only C-Band Feed System, Linear Polarized	3.700 - 4.200 Linear	ES24
2LPCR-30 2-Port Receive Only C-Band Feed System, Linear Polarized	3.700 - 4.200 Linear	ES30
2LPCR-36 2-Port Receive Only C-Band Feed System, Linear Polarized	3.700 - 4.200 Linear	ES36
2CPCR-18 2-Port Receive Only C-Band Feed System, Circularly Polarized	3.625 - 4.200 Circular	ES18
2CPCR-24 2-Port Receive Only C-Band Feed System, Circularly Polarized	3.625 - 4.200 Circular	ES24
2CPCR-30 2-Port Receive Only C-Band Feed System, Circularly Polarized	3.625 - 4.200 Circular	ES30
2CPCR-36 2-Port Receive Only C-Band Feed System, Circularly Polarized	3.625 - 4.200 Circular	ES36
2LPKR-12 2-Port Ku-Band Receive Only Feed System, Linear Polarized	10.7 - 12.75 Linear	ES12
2LPKR-18 2-Port Ku-Band Receive Only Feed System, Linear Polarized	10.7 - 12.75 Linear	ES18
2LPKR-24 2-Port Ku-Band Receive Only Feed System, Linear Polarized	10.7 - 12.75 Linear	ES24
2LPKR-30 2-Port Ku-Band Receive Only Feed System, Linear Polarized	10.7 - 12.75 Linear	ES30
2LPKR-36 2-Port Ku-Band Receive Only Feed System, Linear Polarized	10.7 - 12.75 Linear	ES36
For More Information on the ValuStar™ antennas, please see these additional publications 10305 ValuStar™ 1.2 - 3.6 Receive Only Antennas 237578 Foundation Specification, 1.2 - 1.8 Meter ValuStar™ 237579 Foundation Specification, 2.4 - 3.0 Meter ValuStar™ 37835A Foundation Specification, 3.6 Meter Antenna		