

PARABOLIC RADIO RELAY ANTENNAS

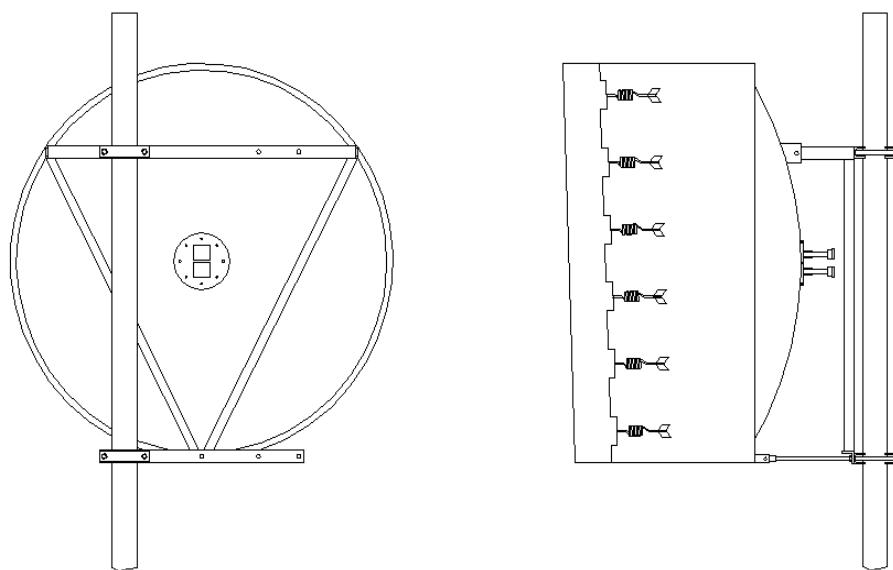


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AERIAL OY PARABOLIC RADIO RELAY ANTENNA PRODUCT LINE

Introduction

Aerial Oy has been supplying antenna products for more than 25 years. Aerial Oy has supplied radio relay antennas from the extreme arctic strong winds of Greenland to the damp moist heat of the Philippines.

Aerial Oy offers the following antenna performance types are available:

- Grid
- Standard
- High Performance
- Ultra High Performance
- Custom made client specified antennas

The grid antennas are the optimal solution for low capacity routes with low probability of interference. Grid antennas are mainly used in low-population areas where there is no snow or ice.

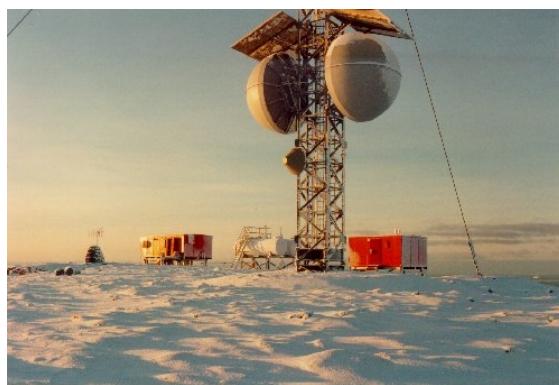
The standard antenna types are designed from low to medium capacity networks with low or medium interference probability. They are a natural option for grid antennas in areas where the environmental conditions are too heavy for open antenna structures.

High performance antennas are the next antenna category when designing your network in areas with need for higher capacity and probability of interference. They form the backbone of telecommunications networks in many industrial countries.

Ultra high performance antennas are needed when cross polarisation, F/B-ratio or some other electrical properties of normal antenna types are not enough. Ultra high performance antennas are typically high performance antennas with one or more enhanced electrical properties. They are mainly used in the node points of high or very high capacity networks with high interference possibility.

Grid antennas are always used in single polarisation. Standard, high performance and ultra high performance antennas are available with single or two orthogonal polarisations.

Please see the following specifications and data sheets to find the convenient antenna system solution for your network. For special requirements you can always contact Aerial Oy sales or design department to receive a quote on a product made just for your needs.



SPECIFICATIONS OF RADIO RELAY ANTENNAS MANUFACTURED BY AERIAL OY

Scope

This specification details the characteristics in design, development, production, installation and servicing of radio relay antennas manufactured by Aerial Oy and defines the measurements made in the factory acceptance tests.

General

Antenna Types, Diameters and Frequency Ranges

The frequency ranges of radio relay antennas manufactured by Aerial Oy are presented in Appendix A: Aerial Oy radio relay antennas electrical characteristics. Other frequency ranges can be added on request. Frequency ranges can be attached to each other to form multiband antennas.

The letters in each radio relay antenna unit type name are to be translated as follows:

AU1200-6,8RD

AU=Aerial radio relay antenna unit.

The four following letters indicate the antenna diameter.

The next two to three numbers indicate the frequency range name.

The following letter indicates the performance type of the antenna.

Letter R: The antenna is equipped with shroud ie. the antenna is a High-Performance-antenna and the antenna is equipped with a sheet radome.

Letter S: The antenna is equipped with a comical radome and no shroud ie. the antenna is a Standard-Performance-antenna.

Letter D: The antenna is equipped with orthomode transducer ie. the antenna is capable of operating dual linear orthogonal polarisations (vertical and horizontal polarisations).

Letter G: The antenna is a grid antenna.

Letter LS: Enhanced F/B-ratio (in High-Performance-antennas).

Table 1. gives more information about reflectors.

Type	Diameter	Weight shroud	w/ Shroud	Focal Length
Microwave	Mm	Kg	kg	Mm
AU300-	300	8	6	125
AU600-	600	20	18	250
AU1200-	1200	62	52	500
AU1800-	1800	117	99	630
AU2400-	2400	180	147	910
AU3000-	3000	254	200	1200

Table 1. Antenna diameters, weights and focal lengths.

The radio relay antenna unit type, antenna diameter, center frequency, frequency range, feed type, radome type and version number must be stated on the product and all documents attached to it.

The radio relay antenna unit consists of reflector, feed and their mounting hardware. Both the reflector and feed have an individual type name to ensure the compatibility and ease of maintenance, it also enables possible upgrades of the whole antenna unit. These type names depend on reflector type, frequency and flange type among other things.

Environmental Conditions and Tests

The radiorelay antenna equipments manufactured by Aerial Oy meet the following ETS-standards.

The antennas intended for use at non-weatherprotected locations:

STORAGE: ETS 300 019-1-1 class 1.3E

TRANSPORTATION: ETS 300 019-1-2 class 2.3

IN-USE: ETS 300 019-1-4 class 4.1 E



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Unless otherwise stated.

All antenna structures have been tested and designed to withstand these specifications. Some Aerial antennas have been in use for more than 30 years.

Definitions

The following are definitions appearing in this document.

dB	decibel
dBi	decibels over an isotropic antenna
dBm	decibels over a milliwatt

Electrical Characteristics

Electrical characteristics of each antenna unit are stated in antenna product brochures in Appendix A.

Antenna Gain

The gain values are stated at low-, mid- and top-band compared to an isotropic radiator. Gain tolerance is 0,25 dB. The antenna gains indicated in Appendix A must be corrected with values from table 2: Gain reduction caused by different radomes.

CONICAL MOULDED RADOMES (Standard performance antennas)							
Diameter	1,4 GHz	2 GHz	3,9 GHz	7 GHz	11 GHz	15 GHz	18 GHz
Mm							
300	NA	NA	NA	NA	NA	NA	2,1
600	0,1	0,1	0,2	0,3	0,8	1,3	2,3
1200	0,1	0,1	0,2	0,4	1	1,5	2,5
1800	0,1	0,15	0,35	0,7	1,4	1,9	2,9
2400	0,15	0,15	0,4	1	1,8	2	3
3000	0,2	0,2	0,5	1,2	1,9	2,1	NA

CALOTIC MOULDED RADOMES (High performance antennas)							
Diameter	1,4 GHz	2 GHz	3,9 GHz	7 GHz	11 GHz	15 GHz	18 GHz
Mm							
300	NA	NA	NA	NA	NA	NA	2,1
600	0,1	0,1	0,2	0,3	0,8	1,3	2,3
1200	0,1	0,1	0,2	0,4	1	1,5	2,5
1800	0,1	0,15	0,35	0,7	1,4	1,9	2,9
2400	0,15	0,15	0,4	1	1,8	2	3
3000	0,2	0,2	0,5	1,2	1,9	2,1	NA

UV-PROTECTED PVC SHEET RADOMES (High Performance antennas)							
Diameter	1,4 GHz	2 GHz	3,9 GHz	7 GHz	11 GHz	15 GHz	18 GHz
Mm							
300	NA	NA	NA	NA	NA	0,5	0,6
600	NA	NA	NA	<0,1	0,2	0,5	0,6
1200	<0,1	<0,1	<0,1	<0,1	0,2	0,5	0,6
1800	<0,1	<0,1	<0,1	<0,1	0,2	0,5	0,6
2400	<0,1	<0,1	<0,1	<0,1	0,2	0,5	0,6
3000	<0,1	<0,1	<0,1	<0,1	0,2	0,5	NA

TEFLON COATED FIBERGLASS SHEET RADOMES(High Perf. antennas)							
Diameter Mm	1,4 GHz	2 GHz	3,9 GHz	7 GHz	11 GHz	15 GHz	18 GHz
300	NA	NA	NA	NA	NA	0,15	0,2
600	NA	NA	NA	<0,1	<0,1	0,15	0,2
1200	<0,1	<0,1	<0,1	<0,1	<0,1	0,15	0,2
1800	<0,1	<0,1	<0,1	<0,1	<0,1	0,15	0,2
2400	<0,1	<0,1	<0,1	<0,1	<0,1	0,15	0,2
3000	<0,1	<0,1	<0,1	<0,1	<0,1	0,15	NA

Table 2: Gain reduction caused by different radomes (NA=not available).

Front-to-back ratio (F/B)

Indicates the highest level of radiation compared to the main beam maximum. Front-to-Back Ratio tolerance from stated values on Appendix A is 3 dB.

Cross Polarization Discrimination (XPD)

Indicates the highest level of cross polarisation compared to the main beam in an angular zone as wide as the half power beam width on the two principal planes.

Reduction of Antenna Gain

Indicates the gain reduction due to a wet radome. The reduction of antenna gain will not exceed 2 dB in frequencies over 15 GHz.

Radiation Pattern Envelope (RPE)

Indicates the worst cases of radiation patterns at the low-,mid and top-band. Both copolar and crosspolar RPE's are represented on request. The tolerance of the RPE's is 3 dB. All RPE:s are according to ITU RF.699.

3 dB Beamwidth (3dB Beam)

Indicates the total angular width between main beam -3 dB points.

Voltage Standing Wave Ratio (VSWR)

The SWR values are guaranteed over the indicated band.

Isolation between Ports (Isolation)

Indicates the isolation between the two orthogonal input ports in dual polarised antennas. This value is guaranteed over the indicated band.

Connector or Flange

Indicates the input RF-connector or flange.

Intermodulation Products

None of the third order intermodulation products measured in the connector of the antenna may alone exceed -116 dBm level when two unmodulated test signals are fed to the connector of the antenna. The level of the test signals is +44 dBm.

Near-field Radiation Patterns

The near field radiation pattern strength can be calculated for distance $R=2D^2/\lambda$ from formula:

$$P_0=0,147/D^2$$

D=antenna diameter in meters
 $P_{in}=1W$
 λ =wavelenght

At any distance R calculate Δ and multiply P_0 by factor P_D (Achieved from Appendix B).

The Electrical characteristics from 4.1 to 4.9 are stated in the product brochure, 4.4 and other characteristics on request.

Mechanical Characteristics

General

The Appendix C indicates the main dimensions of radio relay antennas manufactured by Aerial Oy.

Materials

The mounts are made of hot dip galvanised steel and the supporting structure is aluminium alloy which is welded to the reflector. The elevation fine adjustment is made of stainless steel. The azimuth fine adjustment is done by turning the antenna in its mounting tube ie. the azimuth fine adjustment components are made of hot-dip-galvanised steel. All materials used are mentioned in table 3.

Part	Material
Name	
Mounting Accessories	Fe 37, nuts, bolts and washers 8.8 hot dip galvanised
Feed	A2 stainless steel
Reflector to rim screws	A2 stainless steel
Elevation adjust screw	A2 stainless steel
Antenna frame	Al 99,5
Reflector	Al 99,5
Feed support	Al 99,5
Feed horn	Al 99,5
Shroud	Al 99,5
Waveguide runs with OMT (for antennas with waveguides)	Cu
Coating on waveguide and OMT	Sn
Radome	1.UV-protected polyester hartz reinforced fiberglass Conical moulded radomes (Standard antennas) Calotic moulded radomes (High Performance antennas) 3. UV-protected PVC UV-protected PVC-sheet radomes (High Performance antennas) 2. Teflon PTFE coated fiberglass (Option) Teflon coated fiberglass sheet radomes (High Performance antennas)

Insulators	UV-stabilised PE UV-stabilised POM Teflon PTFE Glassfiber Glassfiber reinforced polycarbonate
Sealants	Silicone

Table 3. The materials of radio relay antennas by Aerial Oy.

Metals in Contact

The metals and alloys used in radio relay antennas manufactured by Aerial Oy are chosen to be as close as possible to each other in electrochemical behaviour. Other corrosion preventive methods used include using coating to limit cathode area and using non metallic spacers.

The list of materials used in radio relay antennas including the chemical composition and their electrochemical potentials are presented in table 4: Metal materials.

Metal	Usage	E(v)	Remarks
Name		V	
Fe37	Mounting	-0,7	Hot-dip Galvanised (Zn)
A4	Feed mounting screws	-0,35	
	Reflector to rim mounting screws	-0,35	
Al 99,5	Relay frame	-0,5	
	Reflector		
	Feed support		
	Feed horn		Anodised
Cu	Feed system with OMT	-0,2	Electrically coated (Sn)
Sn	Feed system coating	-0,2	

Table 4. Metal materials.

Protective Finish

All steel parts are protected by hot-dip galvanising unless they are made of stainless steel. The minimum thickness of the zinc layer is 100 µm. Aluminium parts including the antenna reflectors, feeds and supporting structures are finished with a high performance paint. The thickness of the paint is 20 µm minimum. The detailed surface finish of the different parts of the radio relay antennas manufactured by Aerial Oy are presented in table 5.

Part	Coating
Name	
Mounting	Hot-dip Galvanised (Zn minimum 100 µm)
Feed mounting screws	None
Reflector to rim mounting screws	None
Relay frame	Painted (WISOP minimum 20 µm)
Reflector	Painted (WISOP minimum 20 µm)
Feed support	Painted (WISOP minimum 20 µm)
Feed horn	Anodised then painted (WISOP minimum 20 µm)
Feed system with OMT	Electrically coated with Sn then painted (WISOP minimum 20 µm)

Table 5. Surface finish by part.

Survival Wind Speed and Ice Load

The antennas can withstand a wind speed of 55 m/s (200 km/h) or 50 mm of ice of density 900 kg/m² covering all outer surfaces without damage.

Mechanical Stability

The level of the co-polar signal will fall in the worst case 1 dB under the following conditions:

- a) a 40 m/s (144 km/h) wind acting in any horizontal direction OR
- b) 25 mm of ice of density of 900 kg/m² covering all outer surfaces excluding the radome.

The torsional moment caused by wind in different directions is presented in Appendix D.

Alignment Facilities

The standard alignment of radio relay antennas manufactured by Aerial Oy is in azimuth depending on the way it is mounted to the supporting structure (usually more than 20 degrees) and in elevation ± 5 degrees. It is possible to order the antennas with extended alignment option with which the alignment in elevation is ± 10 degrees.

Both single and dual polarisation antenna feeds are rotatable ± 5 degrees.

Waveguide Flanges and Connectors

Table 6 presents the preferred waveguide of each frequency range. All the waveguide flanges are made according to IEC 154-2: Flanges for waveguides. All coaxial connectors are IEC 169 female 7/16. Other connectors and flanges are available on request. Standard flange type is stated in Appendix A. Flange coating is Sn.

Radome

Radome chemical properties are mentioned in table 4. The materials of radio relay antennas offered by Aerial Oy. Mechanically the UV-protected polyester hartz reinforced fiberglass radomes are semi-rigid and much thinner than wavelength. UV-protected PVC and Teflon PTFE coated fiberglass (Option) radomes are sheet radomes, much thinner than the reinforced fiberglass radomes. Teflon prevents the water forming a constant thickness layer on the radome surface. The sheet radomes typically vibrate when in use and that way avoid accumulation of snow and ice. All the radome types mentioned above have a experimental average lifetime of 25 years. Data of sheet radomes is in Appendix E.

Pressurisation

Antenna feeds which are pressurisable are tested with a pressure of 100 kPa and placed in a water tank to detect any leakage through tuning holes, flange connections etc. Any visible leakage in this test will result to rejection of the feed. The maximum air pressure to be applied to the antenna feed is 50 kPa and the optimum working pressure is 20 kPa.

Installation and Maintenance

The standard mounting diameter of Aerial Oy radio relay antenna is 100 mm. Other mounting diameters are available as an option. It is possible to change the polarisation plane, replace the feed and replace the radome without lowering the antenna to ground. All nuts and bolts are of metric standard size. All antenna mountings can be done reliably with normal hand and power tools. An installation guide is available for each product.

When an antenna has more than one input/output they are all marked individually. These markings must include atleast the following: Frequency range, antenna or port name, polarisation and serial number. For mounting dimensions see Appendix F.

Quality Control and Factory Tests

Aerial Oy has a policy, that no antenna product leaves it's facilities unmeasured. This policy is being carried out to the fullest extent.

Aerial Oy has several analogue network analysers, waveguide bridges up to 40 GHz, two HP 8510 and two HP 8714 network analysers and several transmitters and receivers for radiation pattern measurements. The radiation patterns are recorded with the help of computer controlled turntable. Smaller antennas can be measured indoors.

Quality Control and Factory Tests: Design

First in the design process the objectives are set. During the design process the radiation patterns, isolation, matching and all other electrical properties of the prototype are measured and they must be at least 5-20 % better than the same properties in the completed product. Extra attention is focused on structural durability and long product lifetime achieved with low environmental load.

The primary radition patterns are first attained by modelling the structure and then calculating the radiation patterns. The same method is used when during the design process the radiation patterns are adapted. The radiation patterns of completed product are measured or calculated using more precise modeling.

Quality Control and Factory Tests: Materials

The materials used in antenna products manufactured by Aerial Oy are chosen from well known subsuppliers. The main parameters when selecting the material are: Availability, material similarity and material quality. The main materials used are hot dip galvanised steel, stainless steel or aluminium alloy. These metals are selected to be as suitable as possible to their in-use environment. All insulating materials are made of UV-resistant plastic or fiberglass.

Quality Control and Factory Tests: Feed

Waveguide runs are all bended in a computer controlled bending machine using preprogrammed bending procedures. This method ensures that all the bends are mechanically similar and the tuning process is easier to perform. Each flange is silver soldered using a specially designed jig. Then the waveguides are surface coated and tuned using a waveguide bridge and a network analyser. The OMT's are first pretuned and then they are connected to the waveguides using another jig to ensure the similarity of all manufactured feeds. After this the final tuning process is initiated. Once the whole feed tuned all the tuning screws are sealed by soldering. After the feed has passed all the electrical tests it will be checked visually.

The parts requiring the most precision ie. the OMT and the feedhorn are done by computer aided machining.

Antenna feeds which are pressurisable are tested with a pressure of 100 kPa and placed in a water tank to detect any leakage through tuning holes, flange connections etc. Any visible leakage in this test will result to rejection of the feed.

Quality Control and Factory Tests: Reflector and Supporting Structure

Reflector and the supporting structure are put together using large steel jigs to ensure the mechanical and electrical similarity. They are all numbered and a book is being kept of the makers.

Quality Control and Factory Tests: Radome

Radomes are being checked as any other goods that are bought outside. They are being checked visually and also the material similarity is controlled.

Quality Control and Factory Tests: Protective Finish

All steel parts are protected by hot-dip galvanising unless they are made of stainless steel. The minimum thickness of the zinc layer is 100 µm. Outer aluminium antenna parts are finished with a high performance paint. The thickness of the paint is 20 µm minimum.

Quality Control and Factory Tests: Mounting Accessories

Mounting accessories are precision welded by class welders using jigs to ensure the dimensional similarity. Usually the radio relay antennas and the mounting accessories are attached to each other at the factory. That way the compatibility is assured best.

Quality Control and Factory Tests: Packaging

The radio relay antenna is completed by installing the mounting accessories to the antenna frame. This entity is then packed to an open wooden box. These boxes are made especially for each antenna diameter. The feed is packed in to a smaller box. Then this box is attached to the larger one. Also closed packaging structures are available on request.

Quality Control and Factory Tests: Maintenance

Aerial Oy guarantees that spare parts and maintenance is available for these antenna products for at least 10 years. The antennas are designed to be maintenance free for their expected lifetime of 25 years. All the environmental conditions mentioned in the ETS-standards (Chapter 2.2) must have been met since the antennas have been delivered to customer.

Quality Control and Factory Tests: Guarantee

The radio relay antennas have a guarantee of 2 years.

Production Measurements

- 1) Visual check:
 - a) The radome surfaces and paint surfaces are controlled.
 - b) The connectors and connections are checked.
 - c) Type name, frequency range, serial number and all other markings on antenna, antenna documents and antenna packaging is checked.
- 2) SWR-measurement is printed and stored based on serial number (Available to customer if needed). All antenna impedance-measurements from the same lot must locate in the same area on the Smith-chart and/or be identical on SWR-display. Any deviations must be explained and examined although the antenna would meet SWR-requirements.
- 3) The product is mechanically vibrated while SWR is measured to double-check it for any loose connections.

Other measurement can be added on request.

Additional Information

The following domestic customers have been using radio relay antennas manufactured by Aerial Oy: The Finnish Defence Forces, Nokia, Ericsson, Siemens, Finnet Group, Radiolinja and Sonera. Foreign customers include Tele Greenland, Bite GSM and Radiolinja Eesti. Aerial Oy radio relay antennas are being manufactured under licence in India for the local markets.



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1,37...1,45 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-1,4	1200	22,5	22,7	22,9	(4)	(4)	12,1°	1,30	-	7/8" EIA	100	±5
AU 1800-1,4	1800	26,0	26,2	26,4	(4)	(4)	8,0°	1,30	-	7/8" EIA	100	±5
AU 2400-1,4	2400	28,5	28,7	28,9	(4)	(4)	6,2°	1,30	-	7/8" EIA	100	±5
AU 3000-1,4	3000	30,4	30,7	30,9	(4)	(4)	4,7°	1,30	-	7/8" EIA	100	±5
High performance												
AU 1200-1,4 R	1200	22,5	22,7	22,9	(4)	(4)	12,1°	1,30	-	7/8" EIA	100	±5
AU 1800-1,4 R	1800	26,0	26,2	26,4	(4)	(4)	8,0°	1,30	-	7/8" EIA	100	±5
AU 2400-1,4 R	2400	28,5	28,7	28,9	(4)	(4)	6,2°	1,30	-	7/8" EIA	100	±5
AU 3000-1,4 R	3000	30,4	30,7	30,9	(4)	(4)	4,7°	1,30	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-1,4 D	1200	22,5	22,7	22,9	(4)	(4)	12,1°	1,30	25	7/8" EIA	100	±5
AU 1800-1,4 D	1800	26,0	26,2	26,4	(4)	(4)	8,0°	1,30	25	7/8" EIA	100	±5
AU 2400-1,4 D	2400	28,5	28,7	28,9	(4)	(4)	6,2°	1,30	28	7/8" EIA	100	±5
AU 3000-1,4 D	3000	30,4	30,7	30,9	(4)	(4)	4,7°	1,30	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-1,4 RD	1200	22,5	22,7	22,9	(4)	(4)	12,1°	1,30	25	7/8" EIA	100	±5
AU 1800-1,4 RD	1800	26,0	26,2	26,4	(4)	(4)	8,0°	1,30	25	7/8" EIA	100	±5
AU 2400-1,4 RD	2400	28,5	28,7	28,9	(4)	(4)	6,2°	1,30	28	7/8" EIA	100	±5
AU 3000-1,4 RD	3000	30,4	30,7	30,9	(4)	(4)	4,7°	1,30	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

1,42...1,54 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front-to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-1,5	1200	22,8	23,2	23,6	(4)	(4)	11,5°	1,30	-	7/8" EIA	100	±5
AU 1800-1,5	1800	26,3	26,6	27,0	(4)	(4)	7,7°	1,30	-	7/8" EIA	100	±5
AU 2400-1,5	2400	28,8	29,1	29,5	(4)	(4)	6,1°	1,30	-	7/8" EIA	100	±5
AU 3000-1,5	3000	30,7	31,1	31,4	(4)	(4)	4,7°	1,30	-	7/8" EIA	100	±5
High performance												
AU 1200-1,5 R	1200	22,8	23,2	23,6	(4)	(4)	11,5°	1,30	-	7/8" EIA	100	±5
AU 1800-1,5 R	1800	26,3	26,6	27,0	(4)	(4)	7,7°	1,30	-	7/8" EIA	100	±5
AU 2400-1,5 R	2400	28,8	29,1	29,5	(4)	(4)	6,1°	1,30	-	7/8" EIA	100	±5
AU 3000-1,5 R	3000	30,7	31,1	31,4	(4)	(4)	4,7°	1,30	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-1,5 D	1200	22,8	23,2	23,6	(4)	(4)	11,5°	1,30	25	7/8" EIA	100	±5
AU 1800-1,5 D	1800	26,3	26,6	27,0	(4)	(4)	7,7°	1,30	25	7/8" EIA	100	±5
AU 2400-1,5 D	2400	28,8	29,1	29,5	(4)	(4)	6,1°	1,30	28	7/8" EIA	100	±5
AU 3000-1,5 D	3000	30,7	31,1	31,4	(4)	(4)	4,7°	1,30	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-1,5 RD	1200	22,8	23,2	23,6	(4)	(4)	11,5°	1,30	25	7/8" EIA	100	±5
AU 1800-1,5 RD	1800	26,3	26,6	27,0	(4)	(4)	7,7°	1,30	25	7/8" EIA	100	±5
AU 2400-1,5 RD	2400	28,8	29,1	29,5	(4)	(4)	6,1°	1,30	28	7/8" EIA	100	±5
AU 3000-1,5 RD	3000	30,7	31,1	31,4	(4)	(4)	4,7°	1,30	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

1,7...2,1 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-1,9	1200	24,3	25,3	26,2	(4)	(4)	8,9°	1,30	-	7/8" EIA	100	±5
AU 1800-1,9	1800	27,8	28,8	29,7	(4)	(4)	6,0°	1,20	-	7/8" EIA	100	±5
AU 2400-1,9	2400	30,3	31,3	32,2	(4)	(4)	4,4°	1,20	-	7/8" EIA	100	±5
AU 3000-1,9	3000	32,3	33,2	34,1	(4)	(4)	3,7°	1,15	-	7/8" EIA	100	±5
High performance												
AU 1200-1,9 R	1200	24,3	25,3	26,2	(4)	(4)	8,9°	1,30	-	7/8" EIA	100	±5
AU 1800-1,9 R	1800	27,8	28,8	29,7	(4)	(4)	6,0°	1,20	-	7/8" EIA	100	±5
AU 2400-1,9 R	2400	30,3	31,3	32,2	(4)	(4)	4,4°	1,20	-	7/8" EIA	100	±5
AU 3000-1,9 R	3000	32,3	33,2	34,1	(4)	(4)	3,7°	1,15	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-1,9 D (5)	1200	24,3	25,3	26,2	(4)	(4)	8,9°	1,30	25	7/8" EIA	100	±5
AU 1800-1,9 D (5)	1800	27,8	28,8	29,7	(4)	(4)	6,0°	1,20	25	7/8" EIA	100	±5
AU 2400-1,9 D (5)	2400	30,3	31,3	32,2	(4)	(4)	4,4°	1,20	28	7/8" EIA	100	±5
AU 3000-1,9 D (5)	3000	32,3	33,2	34,1	(4)	(4)	3,7°	1,20	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-1,9 RD (5)	1200	24,3	25,3	26,2	(4)	(4)	8,9°	1,30	25	7/8" EIA	100	±5
AU 1800-1,9 RD (5)	1800	27,8	28,8	29,7	(4)	(4)	6,0°	1,20	25	7/8" EIA	100	±5
AU 2400-1,9 RD (5)	2400	30,3	31,3	32,2	(4)	(4)	4,4°	1,20	28	7/8" EIA	100	±5
AU 3000-1,9 RD (5)	3000	32,3	33,2	34,1	(4)	(4)	3,7°	1,20	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Any 200 MHz band between the indicated frequency range

1,9...2,3 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front-to-back dB	X-pol discr.	Beam width ° (-3 dB)	SWR VSWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-2,1	1200	25,3	26,2	27,0	(4)	(4)	8,2°	1,30	-	7/8" EIA	100	±5
AU 1800-2,1	1800	28,8	29,7	30,5	(4)	(4)	5,5°	1,20	-	7/8" EIA	100	±5
AU 2400-2,1	2400	31,3	32,2	33,0	(4)	(4)	4,1°	1,20	-	7/8" EIA	100	±5
AU 3000-2,1	3000	33,2	34,1	34,9	(4)	(4)	3,3°	1,15	-	7/8" EIA	100	±5
High performance												
AU 1200-2,1 R	1200	25,3	26,2	27,0	(4)	(4)	8,2°	1,30	-	7/8" EIA	100	±5
AU 1800-2,1 R	1800	28,8	29,7	30,5	(4)	(4)	5,5°	1,20	-	7/8" EIA	100	±5
AU 2400-2,1 R	2400	31,3	32,2	33,0	(4)	(4)	4,1°	1,20	-	7/8" EIA	100	±5
AU 3000-2,1 R	3000	33,2	34,1	34,9	(4)	(4)	3,3°	1,15	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-2,1 D (5)	1200	25,3	26,2	27,0	(4)	(4)	8,2°	1,30	25	7/8" EIA	100	±5
AU 1800-2,1 D (5)	1800	28,8	29,7	30,5	(4)	(4)	5,5°	1,20	25	7/8" EIA	100	±5
AU 2400-2,1 D (5)	2400	31,3	32,2	33,0	(4)	(4)	4,1°	1,20	28	7/8" EIA	100	±5
AU 3000-2,1 D (5)	3000	33,2	34,1	34,9	(4)	(4)	3,3°	1,15	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-2,1 RD (5)	1200	25,3	26,2	27,0	(4)	(4)	8,2°	1,30	25	7/8" EIA	100	±5
AU 1800-2,1 RD (5)	1800	28,8	29,7	30,5	(4)	(4)	5,5°	1,20	25	7/8" EIA	100	±5
AU 2400-2,1 RD (5)	2400	31,3	32,2	33,0	(4)	(4)	4,1°	1,20	28	7/8" EIA	100	±5
AU 3000-2,1 RD (5)	3000	33,2	34,1	34,9	(4)	(4)	3,3°	1,15	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Any 200 MHz band between the indicated frequency range

2,1...2,4 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-2,3	1200	26,2	26,8	27,4	(4)	(4)	7,5°	1,30	-	7/8" EIA	100	±5
AU 1800-2,3	1800	29,7	30,3	30,9	(4)	(4)	4,7°	1,20	-	7/8" EIA	100	±5
AU 2400-2,3	2400	32,2	32,8	33,4	(4)	(4)	3,9°	1,20	-	7/8" EIA	100	±5
AU 3000-2,3	3000	34,1	34,7	35,3	(4)	(4)	3,1°	1,15	-	7/8" EIA	100	±5
High performance												
AU 1200-2,3 R	1200	26,2	26,8	27,4	(4)	(4)	7,5°	1,30	-	7/8" EIA	100	±5
AU 1800-2,3 R	1800	29,7	30,3	30,9	(4)	(4)	4,7°	1,20	-	7/8" EIA	100	±5
AU 2400-2,3 R	2400	32,2	32,8	33,4	(4)	(4)	3,9°	1,20	-	7/8" EIA	100	±5
AU 3000-2,3 R	3000	34,1	34,7	35,3	(4)	(4)	3,1°	1,15	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-2,3 D (5)	1200	26,2	26,8	27,4	(4)	(4)	7,5°	1,30	25	7/8" EIA	100	±5
AU 1800-2,3 D (5)	1800	29,7	30,3	30,9	(4)	(4)	4,7°	1,20	25	7/8" EIA	100	±5
AU 2400-2,3 D (5)	2400	32,2	32,8	33,4	(4)	(4)	3,9°	1,20	28	7/8" EIA	100	±5
AU 3000-2,3 D (5)	3000	34,1	34,7	35,3	(4)	(4)	3,1°	1,15	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-2,3 RD (5)	1200	26,2	26,8	27,4	(4)	(4)	7,5°	1,30	25	7/8" EIA	100	±5
AU 1800-2,3 RD (5)	1800	29,7	30,3	30,9	(4)	(4)	4,7°	1,20	25	7/8" EIA	100	±5
AU 2400-2,3 RD (5)	2400	32,2	32,8	33,4	(4)	(4)	3,9°	1,20	28	7/8" EIA	100	±5
AU 3000-2,3 RD (5)	3000	34,1	34,7	35,3	(4)	(4)	3,1°	1,15	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Any 200 MHz band between the indicated frequency range

2,3...2,5 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-2,4	1200	27,0	27,3	27,6	(4)	(4)	6,9°	1,30	-	7/8" EIA	100	±5
AU 1800-2,4	1800	30,5	30,8	31,1	(4)	(4)	4,7°	1,20	-	7/8" EIA	100	±5
AU 2400-2,4	2400	33,0	33,3	33,6	(4)	(4)	3,5°	1,20	-	7/8" EIA	100	±5
AU 3000-2,4	3000	34,9	35,3	35,6	(4)	(4)	3,0°	1,15	-	7/8" EIA	100	±5
High performance												
AU 1200-2,4 R	1200	27,0	27,3	27,6	(4)	(4)	6,9°	1,30	-	7/8" EIA	100	±5
AU 1800-2,4 R	1800	30,5	30,8	31,1	(4)	(4)	4,7°	1,20	-	7/8" EIA	100	±5
AU 2400-2,4 R	2400	33,0	33,3	33,6	(4)	(4)	3,5°	1,20	-	7/8" EIA	100	±5
AU 3000-2,4 R	3000	34,9	35,3	35,6	(4)	(4)	3,0°	1,15	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-2,4 D	1200	27,0	27,3	27,6	(4)	(4)	6,9°	1,30	25	7/8" EIA	100	±5
AU 1800-2,4 D	1800	30,5	30,8	31,1	(4)	(4)	4,7°	1,20	25	7/8" EIA	100	±5
AU 2400-2,4 D	2400	33,0	33,3	33,6	(4)	(4)	3,5°	1,20	28	7/8" EIA	100	±5
AU 3000-2,4 D	3000	34,9	35,3	35,6	(4)	(4)	3,0°	1,15	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-2,4 RD	1200	27,0	27,3	27,6	(4)	(4)	6,9°	1,30	25	7/8" EIA	100	±5
AU 1800-2,4 RD	1800	30,5	30,8	31,1	(4)	(4)	4,7°	1,20	25	7/8" EIA	100	±5
AU 2400-2,4 RD	2400	33,0	33,3	33,6	(4)	(4)	3,5°	1,20	28	7/8" EIA	100	±5
AU 3000-2,4 RD	3000	34,9	35,3	35,6	(4)	(4)	3,0°	1,15	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

2,48...2,7 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-2,6	1200	27,6	28,0	28,4	(4)	(4)	6,1°	1,30	-	7/8" EIA	100	±5
AU 1800-2,6	1800	31,1	31,5	31,9	(4)	(4)	4,6°	1,20	-	7/8" EIA	100	±5
AU 2400-2,6	2400	33,6	34,0	34,4	(4)	(4)	3,1°	1,20	-	7/8" EIA	100	±5
AU 3000-2,6	3000	35,5	35,9	36,3	(4)	(4)	2,7°	1,15	-	7/8" EIA	100	±5
High performance												
AU 1200-2,6 R	1200	27,6	28,0	28,4	(4)	(4)	6,1°	1,30	-	7/8" EIA	100	±5
AU 1800-2,6 R	1800	31,1	31,5	31,9	(4)	(4)	4,6°	1,20	-	7/8" EIA	100	±5
AU 2400-2,6 R	2400	33,6	34,0	34,4	(4)	(4)	3,1°	1,20	-	7/8" EIA	100	±5
AU 3000-2,6 R	3000	35,5	35,9	36,3	(4)	(4)	2,7°	1,15	-	7/8" EIA	100	±5
Standard dual polarized												
AU 1200-2,6 D	1200	27,6	28,0	28,4	(4)	(4)	6,1°	1,30	25	7/8" EIA	100	±5
AU 1800-2,6 D	1800	31,1	31,5	31,9	(4)	(4)	4,6°	1,20	25	7/8" EIA	100	±5
AU 2400-2,6 D	2400	33,6	34,0	34,4	(4)	(4)	3,1°	1,20	28	7/8" EIA	100	±5
AU 3000-2,6 D	3000	35,5	35,9	36,3	(4)	(4)	2,7°	1,15	30	7/8" EIA	100	±5
High performance dual polarized												
AU 1200-2,6 RD	1200	27,6	28,0	28,4	(4)	(4)	6,1°	1,30	25	7/8" EIA	100	±5
AU 1800-2,6 RD	1800	31,1	31,5	31,9	(4)	(4)	4,6°	1,20	25	7/8" EIA	100	±5
AU 2400-2,6 RD	2400	33,6	34,0	34,4	(4)	(4)	3,1°	1,20	28	7/8" EIA	100	±5
AU 3000-2,6 RD	3000	35,5	35,9	36,3	(4)	(4)	2,7°	1,15	30	7/8" EIA	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

3,6...4,2 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 1200-3,9	1200	30,8	31,5	32,2	(4)	(4)	4,2°	1,20	-	PDR 40	100	±5
AU 1800-3,9	1800	34,4	35,1	35,7	(4)	(4)	2,9°	1,20	-	PDR 40	100	±5
AU 2400-3,9	2400	36,9	37,5	38,2	(4)	(4)	2,3°	1,15	-	PDR 40	100	±5
AU 3000-3,9	3000	38,8	39,5	40,1	(4)	(4)	1,8°	1,15	-	PDR 40	100	±5
High performance												
AU 1200-3,9 R	1200	30,8	31,5	32,2	(4)	(4)	4,2°	1,20	-	PDR 40	100	±5
AU 1800-3,9 R	1800	34,4	35,1	35,7	(4)	(4)	2,9°	1,20	-	PDR 40	100	±5
AU 2400-3,9 R	2400	36,9	37,5	38,2	(4)	(4)	2,3°	1,15	-	PDR 40	100	±5
AU 3000-3,9 R	3000	38,8	39,5	40,1	(4)	(4)	1,8°	1,15	-	PDR 40	100	±5
Standard dual polarized												
AU 1200-3,9 D (5)	1200	30,8	31,5	32,2	(4)	(4)	4,2°	1,20	25	PDR 40	100	±5
AU 1800-3,9 D (5)	1800	34,4	35,1	35,7	(4)	(4)	2,9°	1,20	25	PDR 40	100	±5
AU 2400-3,9 D (5)	2400	36,9	37,5	38,2	(4)	(4)	2,3°	1,15	28	PDR 40	100	±5
AU 3000-3,9 D (5)	3000	38,8	39,5	40,1	(4)	(4)	1,8°	1,15	30	PDR 40	100	±5
High performance dual polarized												
AU 1200-3,9 RD (5)	1200	30,8	31,5	32,2	(4)	(4)	4,2°	1,20	25	PDR 40	100	±5
AU 1800-3,9 RD (5)	1800	34,4	35,1	35,7	(4)	(4)	2,9°	1,20	25	PDR 40	100	±5
AU 2400-3,9 RD (5)	2400	36,9	37,5	38,2	(4)	(4)	2,3°	1,15	28	PDR 40	100	±5
AU 3000-3,9 RD (5)	3000	38,8	39,5	40,1	(4)	(4)	1,8°	1,15	30	PDR 40	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Any 200 MHz band between the indicated frequency range

6,425...7,125 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 1200-6,8	1200	35,6	36,0	36,5	(4)	(4)	2,5°	1,20	-	PDR 70	100	±5
AU 1800-6,8	1800	39,1	39,6	40,0	(4)	(4)	1,7°	1,15	-	PDR 70	100	±5
AU 2400-6,8	2400	41,6	42,1	42,5	(4)	(4)	1,3°	1,15	-	PDR 70	100	±5
AU 3000-6,8	3000	43,5	44,0	44,5	(4)	(4)	1,0°	1,10	-	PDR 70	100	±5
High performance												
AU 1200-6,8 R	1200	35,9	36,3	36,8	(4)	(4)	2,5°	1,20	-	PDR 70	100	±5
AU 1800-6,8 R	1800	39,4	39,9	40,3	(4)	(4)	1,7°	1,15	-	PDR 70	100	±5
AU 2400-6,8 R	2400	41,9	42,4	42,8	(4)	(4)	1,3°	1,15	-	PDR 70	100	±5
AU 3000-6,8 R	3000	43,8	44,3	44,8	(4)	(4)	1,0°	1,10	-	PDR 70	100	±5
Standard dual polarized (5)												
AU 1200-6,8 D	1200	35,6	36,0	36,5	(4)	(4)	2,5°	1,20	25	PDR 70	100	±5
AU 1800-6,8 D	1800	39,1	39,6	40,0	(4)	(4)	1,7°	1,15	27	PDR 70	100	±5
AU 2400-6,8 D	2400	41,6	42,1	42,5	(4)	(4)	1,3°	1,15	30	PDR 70	100	±5
AU 3000-6,8 D	3000	43,5	44,0	44,5	(4)	(4)	1,0°	1,10	30	PDR 70	100	±5
High performance dual polarized												
AU 1200-6,8 RD	1200	35,9	36,3	36,8	(4)	(4)	2,5°	1,20	25	PDR 70	100	±5
AU 1800-6,8 RD	1800	39,4	39,9	40,3	(4)	(4)	1,7°	1,15	27	PDR 70	100	±5
AU 2400-6,8 RD	2400	41,9	42,4	42,8	(4)	(4)	1,3°	1,15	30	PDR 70	100	±5
AU 3000-6,8 RD	3000	43,8	44,3	44,8	(4)	(4)	1,0°	1,10	30	PDR 70	100	±5

Notes

(1) For antennas with dual polarization

(2) Antennas with other connectors available on request

(3) Elevation adjust option ±10 degrees available

(4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

(5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

7,125...7,750 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 600-7	600	30,4	30,7	31,1	(4)	(4)	4,3°	1,20	-	PDR 70	100	±5
AU 1200-7	1200	36,4	36,7	37,1	(4)	(4)	2,2°	1,15	-	PDR 70	100	±5
AU 1800-7	1800	39,9	40,3	40,6	(4)	(4)	1,5°	1,15	-	PDR 70	100	±5
AU 2400-7	2400	42,4	42,7	43,1	(4)	(4)	1,1°	1,10	-	PDR 70	100	±5
AU 3000-7	3000	44,4	44,7	45,1	(4)	(4)	0,9°	1,10	-	PDR 70	100	±5
High performance												
AU 600-7 R	600	30,8	31,1	31,5	(4)	(4)	4,3°	1,20	-	PDR 70	100	±5
AU 1200-7 R	1200	36,8	37,1	37,5	(4)	(4)	2,2°	1,15	-	PDR 70	100	±5
AU 1800-7 R	1800	40,3	40,7	41,0	(4)	(4)	1,5°	1,15	-	PDR 70	100	±5
AU 2400-7 R	2400	42,8	43,1	43,5	(4)	(4)	1,1°	1,10	-	PDR 70	100	±5
AU 3000-7 R	3000	44,8	45,1	45,5	(4)	(4)	0,9°	1,10	-	PDR 70	100	±5
Standard dual polarized (5)												
AU 600-7 D	600	30,4	30,7	31,1	(4)	(4)	4,3°	1,20	24	PDR 70	100	±5
AU 1200-7 D	1200	36,4	36,7	37,1	(4)	(4)	2,2°	1,15	25	PDR 70	100	±5
AU 1800-7 D	1800	39,9	40,3	40,6	(4)	(4)	1,5°	1,15	27	PDR 70	100	±5
AU 2400-7 D	2400	42,4	42,7	43,1	(4)	(4)	1,1°	1,10	30	PDR 70	100	±5
AU 3000-7 D	3000	44,4	44,7	45,1	(4)	(4)	0,9°	1,10	30	PDR 70	100	±5
High performance dual polarized												
AU 600-7 RD	600	30,8	31,1	31,5	(4)	(4)	4,3°	1,20	24	PDR 70	100	±5
AU 1200-7 RD	1200	36,8	37,1	37,5	(4)	(4)	2,2°	1,15	25	PDR 70	100	±5
AU 1800-7 RD	1800	40,3	40,7	41,0	(4)	(4)	1,5°	1,15	27	PDR 70	100	±5
AU 2400-7 RD	2400	42,8	43,1	43,5	(4)	(4)	1,1°	1,10	30	PDR 70	100	±5
AU 3000-7 RD	3000	44,8	45,1	45,5	(4)	(4)	0,9°	1,10	30	PDR 70	100	±5

Notes

(1) For antennas with dual polarization

(2) Antennas with other connectors available on request

(3) Elevation adjust option ±10 degrees available

(4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

(5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

8,2...8,5 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 600-8,4	600	31,6	31,8	32,0	(4)	(4)	3,9°	1,20	-	PDR 84	100	±5
AU 1200-8,4	1200	37,7	37,9	38,1	(4)	(4)	1,95°	1,15	-	PDR 84	100	±5
AU 1800-8,4	1800	41,2	41,4	41,6	(4)	(4)	1,3°	1,15	-	PDR 84	100	±5
AU 2400-8,4	2400	43,6	43,8	44,0	(4)	(4)	1,0°	1,10	-	PDR 84	100	±5
AU 3000-8,4	3000	45,6	45,8	46,0	(4)	(4)	0,8°	1,10	-	PDR 84	100	±5
High performance												
AU 600-8,4 R	600	31,6	31,8	32,0	(4)	(4)	3,9°	1,20	-	PDR 84	100	±5
AU 1200-8,4 R	1200	37,7	37,9	38,1	(4)	(4)	1,95°	1,15	-	PDR 84	100	±5
AU 1800-8,4 R	1800	41,2	41,4	41,6	(4)	(4)	1,3°	1,15	-	PDR 84	100	±5
AU 2400-8,4 R	2400	43,6	43,8	44,0	(4)	(4)	1,0°	1,10	-	PDR 84	100	±5
AU 3000-8,4 R	3000	45,6	45,8	46,0	(4)	(4)	0,8°	1,10	-	PDR 84	100	±5
Standard dual polarized (5)												
AU 600-8,4 D	600	31,6	31,8	32,0	(4)	(4)	3,9°	1,20	24	PDR 84	100	±5
AU 1200-8,4 D	1200	37,7	37,9	38,1	(4)	(4)	1,95°	1,15	25	PDR 84	100	±5
AU 1800-8,4 D	1800	41,2	41,4	41,6	(4)	(4)	1,3°	1,15	27	PDR 84	100	±5
AU 2400-8,4 D	2400	43,6	43,8	44,0	(4)	(4)	1,0°	1,10	30	PDR 84	100	±5
AU 3000-8,4 D	3000	45,6	45,8	46,0	(4)	(4)	0,8°	1,10	30	PDR 84	100	±5
High performance dual polarized												
AU 600-8,4 RD	600	31,6	31,8	32,0	(4)	(4)	3,9°	1,20	24	PDR 84	100	±5
AU 1200-8,4 RD	1200	37,7	37,9	38,1	(4)	(4)	1,95°	1,15	25	PDR 84	100	±5
AU 1800-8,4 RD	1800	41,2	41,4	41,6	(4)	(4)	1,3°	1,15	27	PDR 84	100	±5
AU 2400-8,4 RD	2400	43,6	43,8	44,0	(4)	(4)	1,0°	1,10	30	PDR 84	100	±5
AU 3000-8,4 RD	3000	45,6	45,8	46,0	(4)	(4)	0,8°	1,10	30	PDR 84	100	±5

Notes

(1) For antennas with dual polarization

(2) Antennas with other connectors available on request

(3) Elevation adjust option ±10 degrees available

(4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

(5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

10,2...10,7 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 600-10	600	33,4	33,6	33,8	(4)	(4)	3,4°	1,20	-	PDR 100	100	±5
AU 1200-10	1200	39,4	39,6	39,8	(4)	(4)	1,7°	1,15	-	PDR 100	100	±5
AU 1800-10	1800	42,9	43,1	43,3	(4)	(4)	1,2°	1,15	-	PDR 100	100	±5
AU 2400-10	2400	45,4	45,6	45,8	(4)	(4)	0,9°	1,10	-	PDR 100	100	±5
AU 3000-10	3000	47,3	47,6	47,8	(4)	(4)	0,7°	1,10	-	PDR 100	100	±5
High performance												
AU 600-10 R	600	33,9	34,1	34,3	(4)	(4)	3,4°	1,20	-	PDR 100	100	±5
AU 1200-10 R	1200	39,9	40,1	40,3	(4)	(4)	1,7°	1,15	-	PDR 100	100	±5
AU 1800-10 R	1800	43,4	43,6	43,8	(4)	(4)	1,2°	1,15	-	PDR 100	100	±5
AU 2400-10 R	2400	45,9	46,1	46,3	(4)	(4)	0,9°	1,10	-	PDR 100	100	±5
AU 3000-10 R	3000	47,8	48,1	48,3	(4)	(4)	0,7°	1,10	-	PDR 100	100	±5
Standard dual polarized (5)												
AU 600-10 D	600	33,4	33,6	33,8	(4)	(4)	3,4°	1,20	24	PDR 100	100	±5
AU 1200-10 D	1200	39,4	39,6	39,8	(4)	(4)	1,7°	1,15	25	PDR 100	100	±5
AU 1800-10 D	1800	42,9	43,1	43,3	(4)	(4)	1,2°	1,15	27	PDR 100	100	±5
AU 2400-10 D	2400	45,4	45,6	45,8	(4)	(4)	0,9°	1,10	30	PDR 100	100	±5
AU 3000-10 D	3000	47,3	47,6	47,8	(4)	(4)	0,7°	1,10	30	PDR 100	100	±5
High performance dual polarized												
AU 600-10 RD	600	33,9	34,1	34,3	(4)	(4)	3,4°	1,20	24	PDR 100	100	±5
AU 1200-10 RD	1200	39,9	40,1	40,3	(4)	(4)	1,7°	1,15	25	PDR 100	100	±5
AU 1800-10 RD	1800	43,4	43,6	43,8	(4)	(4)	1,2°	1,15	27	PDR 100	100	±5
AU 2400-10 RD	2400	45,9	46,1	46,3	(4)	(4)	0,9°	1,10	30	PDR 100	100	±5
AU 3000-10 RD	3000	47,8	48,1	48,3	(4)	(4)	0,7°	1,10	30	PDR 100	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

12,75...13,25 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR VSWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 600-13	600	35,2	35,4	35,5	(4)	(4)	2,6°	1,20	-	PDR 120	100	±5
AU 1200-13	1200	41,2	41,4	41,6	(4)	(4)	1,2°	1,15	-	PDR 120	100	±5
AU 1800-13	1800	44,7	44,9	45,1	(4)	(4)	0,9°	1,15	-	PDR 120	100	±5
AU 2400-13	2400	46,7	46,9	47,1	(4)	(4)	0,7	1,15	-	PDR 120	100	±5
High performance												
AU 600-13 R	600	35,8	36,0	36,1	(4)	(4)	2,6°	1,20	-	PDR 120	100	±5
AU 1200-13 R	1200	41,8	42,0	42,2	(4)	(4)	1,2°	1,15	-	PDR 120	100	±5
AU 1800-13 R	1800	45,3	45,5	45,7	(4)	(4)	0,9°	1,15	-	PDR 120	100	±5
AU 2400-13 R	2400	46,7	46,9	47,1	(4)	(4)	0,7	1,15	-	PDR 120	100	±5
Standard dual polarized (5)												
AU 600-13 D	600	35,2	35,4	35,5	(4)	(4)	2,6°	1,20	24	PDR 120	100	±5
AU 1200-13 D	1200	41,2	41,4	41,6	(4)	(4)	1,2°	1,15	25	PDR 120	100	±5
AU 1800-13 D	1800	44,7	44,9	45,1	(4)	(4)	0,9°	1,15	27	PDR 120	100	±5
AU 2400-13 D	2400	46,7	46,9	47,1	(4)	(4)	0,7	1,15	30	PDR 120	100	±5
High performance dual polarized												
AU 600-13 RD	600	35,8	36,0	36,1	(4)	(4)	2,6°	1,20	24	PDR 120	100	±5
AU 1200-13 RD	1200	41,8	42,0	42,2	(4)	(4)	1,2°	1,15	25	PDR 120	100	±5
AU 1800-13 RD	1800	45,3	45,5	45,7	(4)	(4)	0,9°	1,15	27	PDR 120	100	±5
AU 2400-13 RD	2400	46,7	46,9	47,1	(4)	(4)	0,7	1,15	30	PDR 120	100	±5

Notes

(1) For antennas with dual polarization

(2) Antennas with other connectors available on request

(3) Elevation adjust option ±10 degrees available

(4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

(5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

14,5...15,35 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 600-15	600	36,2	36,5	36,7	(4)	(4)	2,2°	1,20	-	PBR 140	100	±5
AU 1200-15	1200	41,3	42,5	42,7	(4)	(4)	1,2°	1,15	-	PBR 140	100	±5
AU 1800-15	1800	45,8	46,0	46,3	(4)	(4)	0,8°	1,15	-	PBR 140	100	±5
High performance												
AU 600-15 R	600	36,9	37,2	37,4	(4)	(4)	2,2°	1,20	-	PBR 140	100	±5
AU 1200-15 R	1200	42,0	43,2	43,4	(4)	(4)	1,2°	1,15	-	PBR 140	100	±5
AU 1800-15 R	1800	46,5	46,7	47,0	(4)	(4)	0,8°	1,15	-	PBR 140	100	±5
Standard dual polarized (5)												
AU 600-15 D	600	36,2	36,5	36,7	(4)	(4)	2,2°	1,20	24	PBR 140	100	±5
AU 1200-15 D	1200	41,3	42,5	42,7	(4)	(4)	1,2°	1,15	25	PBR 140	100	±5
AU 1800-15 D	1800	45,8	46,0	46,3	(4)	(4)	0,8°	1,15	27	PBR 140	100	±5
High performance dual polarized												
AU 600-15 RD	600	36,9	37,2	37,4	(4)	(4)	2,2°	1,20	24	PBR 140	100	±5
AU 1200-15 RD	1200	42,0	43,2	43,4	(4)	(4)	1,2°	1,15	25	PBR 140	100	±5
AU 1800-15 RD	1800	46,5	46,7	47,0	(4)	(4)	0,8°	1,15	27	PBR 140	100	±5

Notes

(1) For antennas with dual polarization

(2) Antennas with other connectors available on request

(3) Elevation adjust option ±10 degrees available

(4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

(5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

17,7...19,7 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard (5)												
AU 300-18	300	31,6	32,1	32,6	(4)	(4)	3,6°	1,2	-	PBR 220	100	±5
AU 600-18	600	37,7	38,1	38,6	(4)	(4)	1,8°	1,2	-	PBR 220	100	±5
AU 1200-18	1200	43,7	44,2	44,6	(4)	(4)	0,9°	1,2	-	PBR 220	100	±5
AU 1800-18	1800	47,2	47,7	48,1	(4)	(4)	0,7°	1,2	-	PBR 220	100	±5
High performance												
AU 300-18 R	300	32,6	33,1	33,6	(4)	(4)	3,6°	1,2	-	PBR 220	100	±5
AU 600-18 R	600	38,7	39,1	39,6	(4)	(4)	1,8°	1,2	-	PBR 220	100	±5
AU 1200-18 R	1200	44,7	45,2	45,6	(4)	(4)	0,9°	1,2	-	PBR 220	100	±5
AU 1800-18 R	1800	48,2	48,7	49,1	(4)	(4)	0,7°	1,2	-	PBR 220	100	±5
Standard dual polarized (5)												
AU 300-18 D	300	31,6	32,1	32,6	(4)	(4)	3,6°	1,2	23	PBR 220	100	±5
AU 600-18 D	600	37,7	38,1	38,6	(4)	(4)	1,8°	1,2	24	PBR 220	100	±5
AU 1200-18 D	1200	43,7	44,2	44,6	(4)	(4)	0,9°	1,2	25	PBR 220	100	±5
AU 1800-18 D	1800	47,2	47,7	48,1	(4)	(4)	0,7°	1,2	27	PBR 220	100	±5
High performance dual polarized												
AU 300-18 RD	300	32,6	33,1	33,6	(4)	(4)	3,6°	1,2	23	PBR 220	100	±5
AU 600-18 RD	600	38,7	39,1	39,6	(4)	(4)	1,8°	1,2	24	PBR 220	100	±5
AU 1200-18 RD	1200	44,7	45,2	45,6	(4)	(4)	0,9°	1,2	25	PBR 220	100	±5
AU 1800-18 RD	1800	48,2	48,7	49,1	(4)	(4)	0,7°	1,2	27	PBR 220	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request
- (5) Antenna gain values given for standard antennas are a fraction lower compared to the high performance models due to attenuation caused by conical fiber glass radome at this frequency

21,2...23,6 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
Standard												
AU 300-23	300	34,2	34,7	35,1	(4)	(4)	2,8°	1,2	-	PBR 220	100	±5
AU 600-23	600	40,2	40,7	41,1	(4)	(4)	1,6°	1,2	-	PBR 220	100	±5
AU 1200-23	1200	46,2	46,7	47,1	(4)	(4)	0,8°	1,2	-	PBR 220	100	±5
AU 1800-23	1800	49,7	50,2	50,6	(4)	(4)	0,5°	1,2	-	PBR 220	100	±5
High performance												
AU 300-23 R	300	34,2	34,7	35,1	(4)	(4)	2,8°	1,2	-	PBR 220	100	±5
AU 600-23 R	600	40,2	40,7	41,1	(4)	(4)	1,6°	1,2	-	PBR 220	100	±5
AU 1200-23 R	1200	46,2	46,7	47,1	(4)	(4)	0,8°	1,2	-	PBR 220	100	±5
AU 1800-23 R	1800	49,7	50,2	50,6	(4)	(4)	0,5°	1,2	-	PBR 220	100	±5
Standard dual polarized												
AU 300-23 D	300	34,2	34,7	35,1	(4)	(4)	2,8°	1,25	23	PBR 220	100	±5
AU 600-23 D	600	40,2	40,7	41,1	(4)	(4)	1,6°	1,25	24	PBR 220	100	±5
AU 1200-23 D	1200	46,2	46,7	47,1	(4)	(4)	0,8°	1,25	25	PBR 220	100	±5
AU 1800-23 D	1800	49,7	50,2	50,6	(4)	(4)	0,5°	1,25	27	PBR 220	100	±5
High performance dual polarized												
AU 300-23 RD	300	34,2	34,7	35,1	(4)	(4)	2,8°	1,25	23	PBR 220	100	±5
AU 600-23 RD	600	40,2	40,7	41,1	(4)	(4)	1,6°	1,25	24	PBR 220	100	±5
AU 1200-23 RD	1200	46,2	46,7	47,1	(4)	(4)	0,8°	1,25	25	PBR 220	100	±5
AU 1800-23 RD	1800	49,7	50,2	50,6	(4)	(4)	0,5°	1,25	27	PBR 220	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

37...40 GHz

Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR Max	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. ° (3)
High performance												
AU 300-38 R	300	39	39,4	39,7	(4)	(4)	1,7°	1,2	-	PBR 320	100	±5
AU 600-38 R	600	45,1	45,4	45,7	(4)	(4)	1,0°	1,2	-	PBR 320	100	±5
High performance dual polarized												
AU 300-38 RD	300	39	39,4	39,7	(4)	(4)	1,7°	1,25	25	PBR 320	100	±5
AU 600-38 RD	600	45,1	45,4	45,7	(4)	(4)	1,0°	1,25	25	PBR 320	100	±5

Notes

- (1) For antennas with dual polarization
- (2) Antennas with other connectors available on request
- (3) Elevation adjust option ±10 degrees available
- (4) Both co-polarisation and cross-polarisation radiation pattern envelopes available on request

Grid antennas

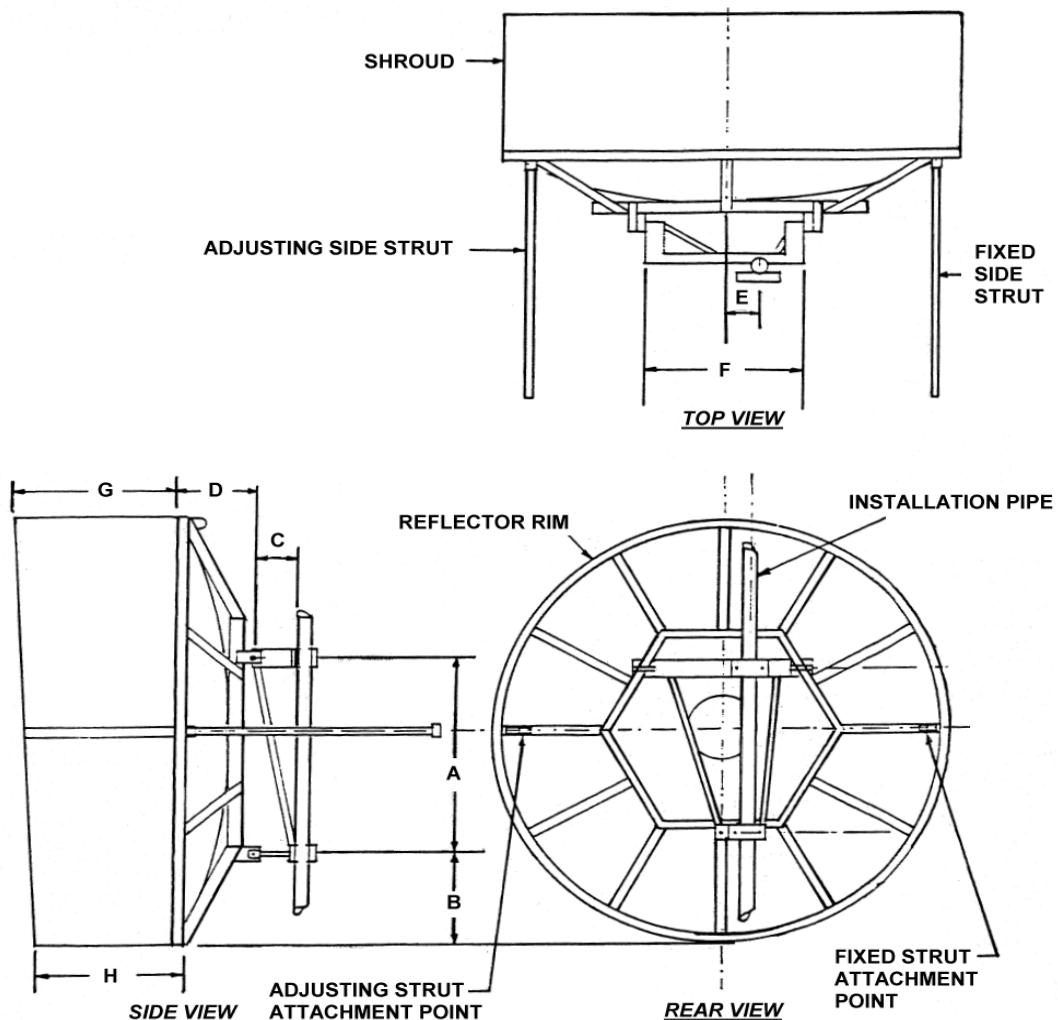
Model	Size Diam. mm	Gain Low dBi	Gain Mid dBi	Gain High dBi	Front- to-back dB	X-pol discr. dB	Beam width ° (-3 dB)	SWR VSWR dBi	Inter port Isolation dB (1)	Connector Flange (2)	Mount Diam. mm	Elev. adj. °
Grid antennas 0,403...0,470 GHz												
AU 1800-440G	1800	15,0	15,7	16,4	22	30	22,9	1,35	-	7/8" EIA	100	±5
AU 2400-440G	2400	17,3	18,0	18,7	22	30	17,1	1,3	-	7/8" EIA	100	±5
AU 3000-440G	3000	19,4	20,1	20,8	22	30	13,7	1,3	-	7/8" EIA	100	±5
AU 4000-440G	4000	21,9	22,6	23,3	24	30	10,3	1,3	-	7/8" EIA	100	±5
Grid antennas 0,89...0,96 GHz												
AU 1800-0,9G	1800	21,9	22,2	22,5	25	30	10,8	1,3	-	7/8" EIA	100	±5
AU 2400-0,9G	2400	24,4	24,7	25,0	28	30	8,1	1,3	-	7/8" EIA	100	±5
AU 3000-0,9G	3000	26,3	26,6	26,9	30	30	6,5	1,3	-	7/8" EIA	100	±5
AU 4000-0,9G	4000	28,8	29,1	29,4	43	30	4,9	1,3	-	7/8" EIA	100	±5
Grid antennas 1,35...1,54 GHz												
AU 1200-1,5G	1200	22,0	22,5	23,0	28	30	10,4	1,3	-	7/8" EIA	100	±5
AU 1800-1,5G	1800	25,6	26,1	26,6	31	30	6,9	1,25	-	7/8" EIA	100	±5
AU 2400-1,5G	2400	28,1	28,6	29,1	34	30	5,2	1,2	-	7/8" EIA	100	±5
AU 3000-1,5G	3000	30,0	30,5	31,0	37	30	4,2	1,2	-	7/8" EIA	100	±5
AU 4000-1,5G	4000	32,5	33,0	33,5	40	30	3,1	1,2	-	7/8" EIA	100	±5
Grid antennas 1,7...2,3 (1) GHz												
AU 1200-2G	1200	24,0	25,4	26,8	30	30	7,5	1,35	-	7/8" EIA	100	±5
AU 1800-2G	1800	27,5	28,9	30,3	35	35	5,0	1,2	-	7/8" EIA	100	±5
AU 2400-2G	2400	30,0	31,4	32,8	38	35	3,8	1,2	-	7/8" EIA	100	±5
AU 3000-2G	3000	31,9	33,3	34,7	40	35	3,0	1,2	-	7/8" EIA	100	±5
AU 4000-2G	4000	34,4	35,8	37,2	42	35	2,3	1,2	-	7/8" EIA	100	±5
Grid antennas 2,3...2,5 GHz												
AU 1200-2,4G	1200	26,6	27,0	27,4	30	30	6,3	1,3	-	7/8" EIA	100	±5
AU 1800-2,4G	1800	30,1	30,5	30,9	33	30	4,2	1,2	-	7/8" EIA	100	±5
AU 2400-2,4G	2400	32,6	33,0	33,4	36	30	3,1	1,2	-	7/8" EIA	100	±5
AU 3000-2,4G	3000	34,5	34,9	35,3	38	30	2,5	1,2	-	7/8" EIA	100	±5
AU 4000-2,4G	4000	37,0	37,4	37,8	40	30	1,9	1,2	-	7/8" EIA	100	±5
Grid antennas 2,48...2,7 GHz												
AU 1200-2,4G	1200	27,3	27,6	27,9	30	30	5,8	1,3	-	7/8" EIA	100	±5
AU 1800-2,6G	1800	30,9	31,2	31,5	33	30	3,9	1,3	-	7/8" EIA	100	±5
AU 2400-2,6G	2400	33,4	33,7	34,0	36	30	2,9	1,2	-	7/8" EIA	100	±5
AU 3000-2,6G	3000	35,3	35,6	35,9	38	30	2,3	1,2	-	7/8" EIA	100	±5
AU 4000-2,6G	4000	37,8	38,1	38,4	40	30	1,8	1,2	-	7/8" EIA	100	±5

Notes

(1) Any 400 MHz band between these frequencies.

(2) Versions with 7/16- or N-connector available on request.

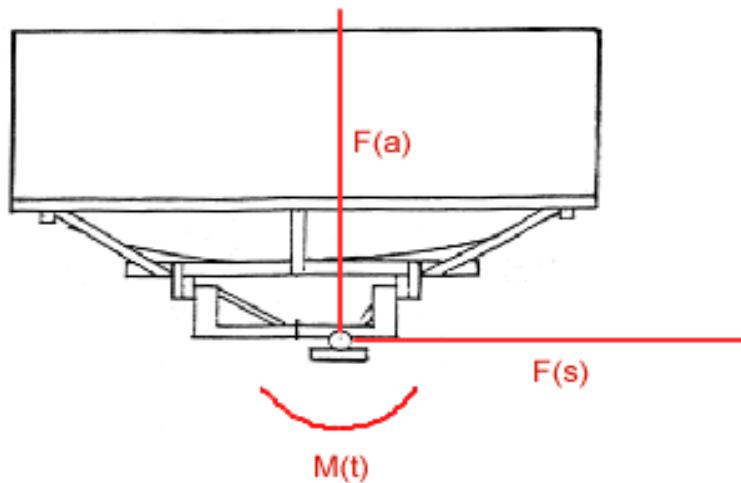
Antenna main dimensions



Size Diam.	A	B	C	D	E	F	G	H
mm	mm	mm	mm	mm	mm	mm	mm	mm
600	190	0	230	0	100	730	300	280
1200	919	0	215	80	250	1092	460	420
1800	764	375	200	360	135	938	585	545
2400	1127	496	200	440	180	890	1190	1085
3000	1127	756	200	570	180	890	1190	1075

Wind forces and loads produced by microwave antennas

The following graph and table describes the axial and side forces and twisting moment exerted on a supporting structure by microwave antenna. Antenna characteristics conform to TIA/EIA 222 E specifications. The wind pressure 1987 N/m² used in the calculations equals to 200 km/h wind speed at 0°C ambient temperature and 1,29 kg/m³ air density.



Antenna type	Size m	F(a) max With no ice	F(s) max	M(t) max	F(a) max With 13 mm (1/2") radial ice	F(s) max	M(t) max
		kN	kN	kNm	kN	kN	kNm
Standard antennas	1,2	2,02	1,02	0,5	2,11	1,06	0,5
Standard antennas	1,8	4,54	2,3	1,7	4,67	2,36	1,8
Standard antennas	2,4	8,08	4,08	3,8	8,25	4,17	3,9
Standard antennas	3	12,62	6,38	7,2	12,84	6,48	7,3
High performance antennas	1,2	2,72	1,3	0,5	2,83	1,35	0,5
High performance antennas	1,8	6,12	2,92	1,4	6,29	3,01	1,4
High performance antennas	2,4	10,87	5,19	2,9	11,11	5,31	3
High performance antennas	3	16,99	8,12	5,4	17,28	8,25	5,4
Grid antennas	1,2	1,11	0,57	0,2	1,16	0,59	0,2
Grid antennas	1,8	2,5	1,27	0,6	2,57	1,31	0,7
Grid antennas	2,4	4,44	2,26	1,3	4,53	2,31	1,4
Grid antennas	3	6,94	3,54	2,4	7,06	3,6	2,5

Radio relay antenna package information, sizes and weights



By default, Aerial Oy radio relay antennas are shipped in palette based wooden crates.
Package details are listed below. Please contact sales on any special requirements.

Model	Size Diam. mm	Gross kg	Net kg	Length m	Width m	Height m	Volume m³
Standard and standard dual polarised antennas							
AU600-...	600	40	20	0,8	0,7	1	0,56
AU1200-...	1200	110	75	1,53	1,1	1,54	2,59
AU1800-...	1800	170	110	2,05	1,25	2,25	5,77
AU2400-...	2400	440	180	3,23	2,32	2,49	18,66
AU3000-...	3000	520	255	3,3	2,4	3,3	26,14
High performance and high performance dual polarised antennas							
AU600-...	600	36	18	0,8	0,9	1	0,72
AU1200-...	1200	87	52	1,53	1,1	1,54	2,59
AU1800-...	1800	195	99	2,05	1,63	1,67	5,58
AU2400-...	2400	407	147	3,23	2,8	2,49	22,52
AU3000-...	3000	467	201	3,3	2,9	3,3	31,58

APPENDIX E: TECHNICAL SPECIFICATION OF AERIAL OY PVC SHEET RADOME

Type	AERIAL OY PVC SHEET RADOME
Material	Scanplan 5545 Base fabric: 1100 dtex polyester
Coating	PVC, extra UV, mildew and rot resistant.
Weight	0,55 kg/m ²
Thickness	0,45 mm nominal
Tear strength	350/300N according to DIN53363 500/500N according to DIN53356
Tensile strength	2700/2500N/50mm accorging to SFS 2983, EN ISO 1421 and DIN 53354
Adhesion	100N/50mm
Temperature range	-30...+70°C according to SFS-EN 1876-1
Attenuation of dry radome	7 GHz A<0,1dB 12 GHz A=0,2 dB 18 GHz A=0,45 dB 24 GHz A=0,55 dB
Standard sizes available for Aerial Oy Antennas	300 mm (AU300-XXR/XXRD) 600 mm (AU600-XXR/XXRD) 850 mm (AU850-XXR/XXRD) 1200 mm (AU1200-XXR/XXRD) 1800 mm (AU1800-XXR/XXRD) 2400 mm (AU2400-XXR/XXRD) 3000 mm (AU3000-XXR/XXRD)
Options	Special sizes and models available

Technical data shown above are average values of production. The sheet radome mounting is typically designed so that the radomes vibrate when in use and that way avoid accumulation of snow and ice. All the radome types mentioned above have an experimental average lifetime of 25 years.

