Antenna Product Specifications

SLC0818DS6

0.8m Ultra High Performance Low Profile Antenna, single-polarized, 17.7÷19.7 GHz

CHARACTERISTIC

General Specifications

Antenna Type	Ultra High Performance Low Profile Antenna, Single-Polarized Antenna
Diameter, nominal	0.8m / 2.5ft
Polarization	Single
Reflector Construction	One-piece reflector
Antenna Color	White
Radome Color	White
Radome Material Description	ABS

Electrical Specifications

Frequency	17.7÷19.7 GHz
Gain, Top	42.8 dBi
Gain, Mid	42.3 dBi
Gain, Low	41.8 dBi
Front-to-Back Ratio	70 dB
Cross Polar Discrimination (XPD)	30 dB

Beamwidth	1.4 °
VSWR	1.30
Return Loss	17.69 dB
Regulatory Compliance	ETSI EN 302 217 Range 2 Class 3

Mechanical Specification

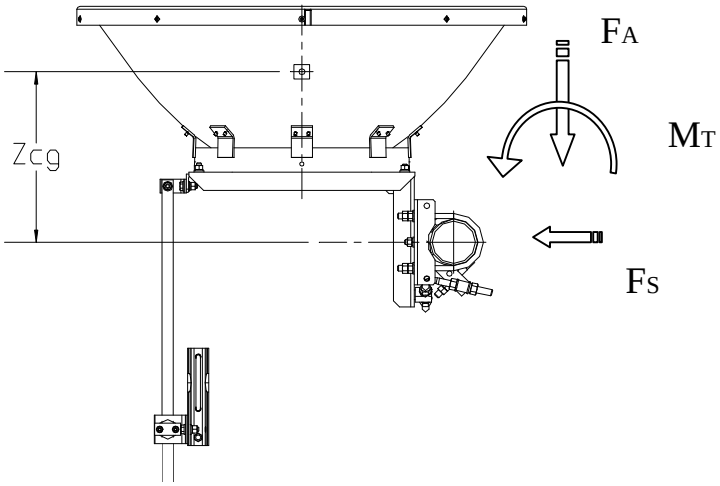
Wind Velocity Operational	110km/h
Wind Velocity Survival Rating	240km/h
Fine Azimuth Adjustment	Coarse 360° Fine ±15°
Fine Elevation Adjustment	Fine ±10°
Mounting Pipe Diameter	Φ114 mm
Ice-load	25.4 mm
Operational Temperature	-45÷+75 ℃
Side Struts, Included	1
Net Weight	38.4 kg

Wind Forces at Wind Velocity Survival Rating

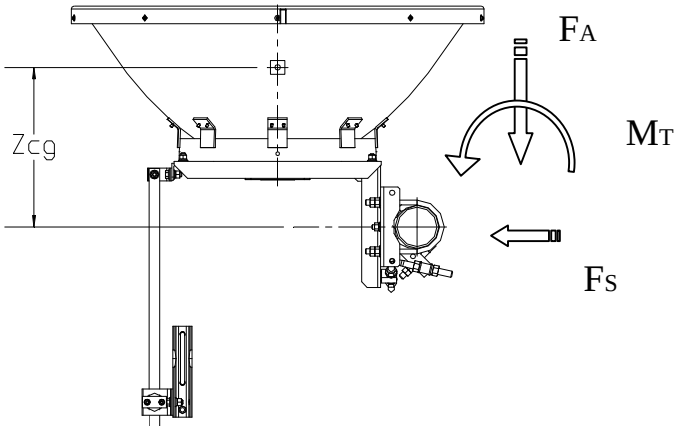
Axial Force(FA)	3926 N
Side Force(FS)	1230 N
Twisting Moment(MT)	1548 N • m
Zcg without Ice	168 mm
Zcg with 1”(25.4mm) Ice	247 mm
Weight with 1”(25.4mm) Ice	68.2 kg

Wind Forces at Wind Velocity Survival Rating Image

Separate:

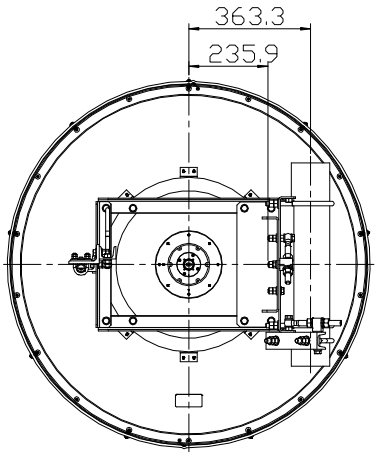


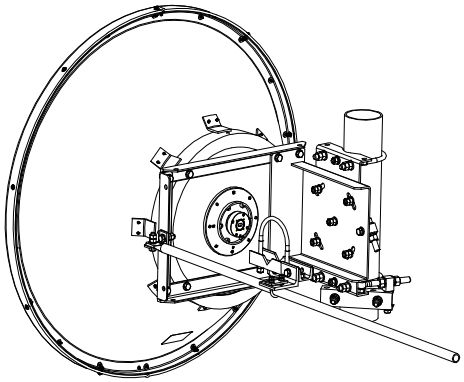
Integrated:

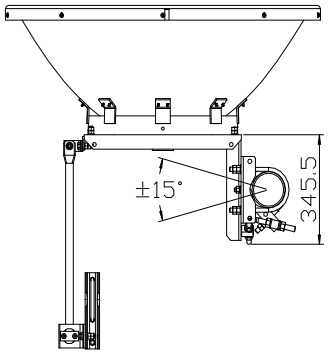


Antenna Dimensions and Mounting Information

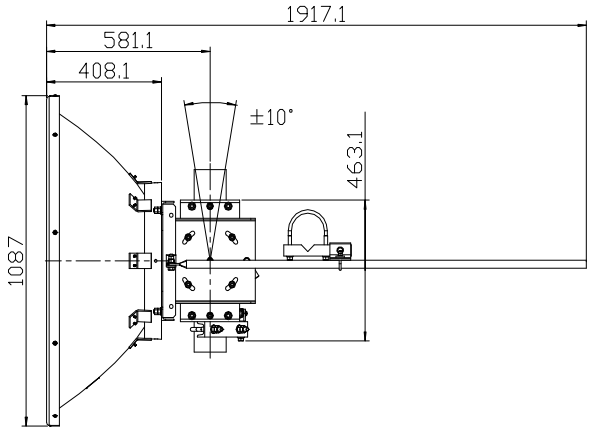
Separate







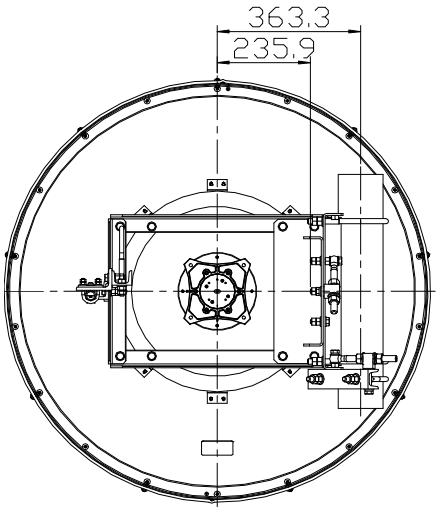
Fine Azimuth Adjustment

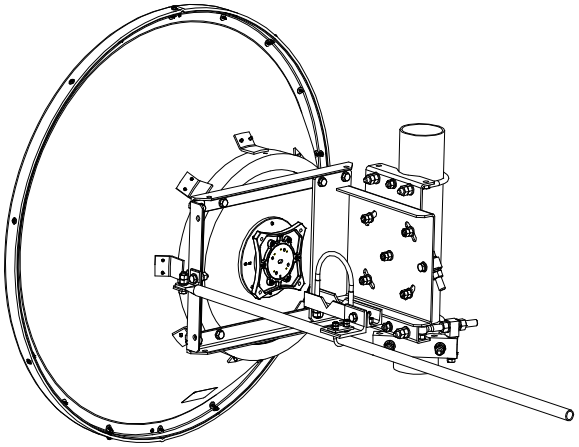


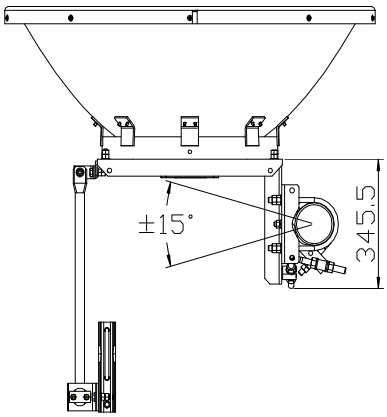
Fine Elevation Adjustment

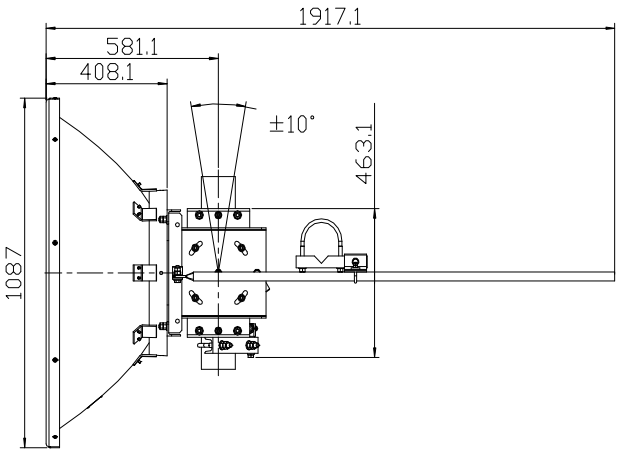
Antenna Dimensions and Mounting Information

Integrated:









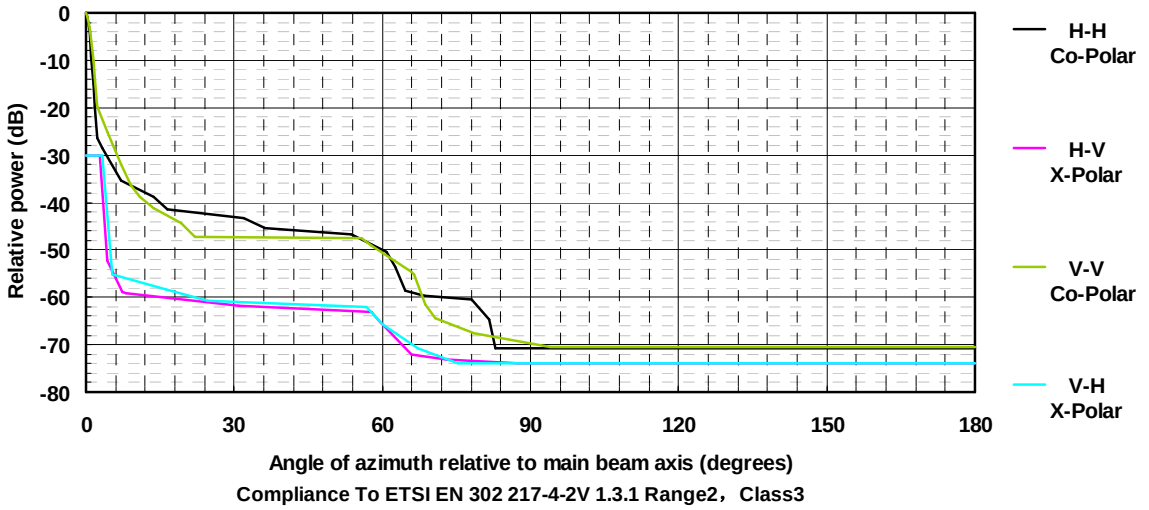
Fine Azimuth Adjustment

Fine Elevation Adjustment

Mechanical Torque

Diameter of screw (mm)	8	10	12	14	16
Torque Value (N • m)	11.3	21.9	38.2	62.5	93.1

Radiation Pattern Envelope Reference (RPE)



Compliance To ETSI EN 302 217-4-2V 1.3.1 Range2，Class3

H-H		H-V		V-V		V-H	
Angle	dB	Angle	dB	Angle	dB	Angle	dB
0.00	0.00	0.00	-30.00	0.00	0.00	0.00	-30.00
0.36	-0.87	2.70	-30.00	0.36	-0.78	3.24	-30.00
0.72	-4.00	4.23	-52.17	0.72	-3.29	5.40	-55.07
1.08	-9.19	7.47	-58.97	1.44	-10.14	16.20	-58.37
1.44	-14.99	8.10	-59.14	1.80	-13.77	24.48	-60.71
1.80	-19.76	31.05	-61.74	2.16	-19.89	30.78	-61.03
2.16	-26.44	57.87	-62.98	4.23	-25.16	56.79	-62.18
3.33	-28.61	59.31	-64.97	7.02	-31.84	60.21	-65.67
7.11	-35.48	65.88	-72.01	9.00	-36.56	67.23	-70.78
13.68	-38.93	72.99	-73.16	10.89	-38.78	75.42	-73.85
16.56	-41.44	87.39	-73.85	13.59	-41.28	90.81	-74.00
31.95	-43.24	180.00	-73.85	19.26	-44.35	180.00	-74.00
36.27	-45.46			21.96	-47.31		
53.82	-46.61			55.89	-47.42		
60.84	-50.39			57.87	-48.98		
62.64	-53.67			65.97	-54.78		
64.71	-58.59			66.42	-55.31		
68.40	-59.59			68.67	-61.52		
78.03	-60.51			70.65	-64.35		
81.63	-64.58			78.66	-67.48		
82.80	-70.72			93.96	-70.50		

180.00	**-70.72**	**180.00**	**-70.50**

RoHS Compliance

This product and its packaging are compliant to the DIRECTIVE 2002/95/EC of the EUROPEAN PARLIAMENT and of the COUNCIL of 27 January 2003 （RoHS）on the restriction of the use of hazardous substances as defined on RoHS Directive.

Footnotes

Axial Force (FA)	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
Cross Polarization Discrimination (XPD)	The stated unit is dB. It is refer to the difference of levels between co-polar and cross-polar within range of 3dB BW.
Front to Back Ratio	It refers to the ratio between peak level and the lowest back lobe at 180°±60°; The F/B Ratio of existing products are unable to exceed 2dB as against stated values unless other specific declarations.
Gain, Mid Band	It denotes the gain of centre frequency in operated frequency band. The average value of stated three frequencies at mid-band as well as bottom and top frequency bands is gain of antenna.
Half-Power BW	Denote the nominal total width of main beam at the -3dB points.
Operating Frequency Band	Bands correspond with ITU-R recommendations or common allocations used throughout the world. Other ranges can be accommodated on.
Packing	Standard packing is suitable for export. Antennas are shipped as standard in totally recyclable material.
Radiation Pattern Envelope Reference (RPE)	Radiation patterns determine an antenna's ability to discriminate against unwanted signals under

	conditions of radio congestion. Radiation patterns are dependent on antenna series, size, and frequency.
Return Loss	The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.
Side Force (FS)	Maximum axial forces exerted on support structures by side struts as a result of a 240 km/h wind from the most critical direction and extreme angle permitted. The forces are a component of, not in addition to, the maximum forces specified above.
Twisting Moment (MT)	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
VSWR	Refer to the maximum Voltage Standing Wave Ration in frequency band of operation.
Wind Velocity Operational	The antenna axis deflection is less than one third of the half power beam width at the highest frequency which occurs.
Wind Velocity Survival Rating	The antenna sub-system will survive the specified survival wind speed without any permanent deformation or change of shape.

Part Numbers List

P/N	Flanges/WG Dim	Description	Integration Kit
SLC0818DS6-U-01M	UBR220	0.8M 18GHz SP EXTERNAL MOUNT	-
SLC0818DS6-P-01M	PBR220	0.8M 18GHz SP EXTERNAL MOUNT	-
SLC0818DS6D-01M	R220	0.8M 18GHz SP INT. STANDARD	V60117
SLC0818DS6C-01M	R220	0.8M 18GHz SP INT. FAST	V32340

CE