

Compact Antenna System 0.8m (2.6ft)



Compact Antenna System is a single polarized antenna with an embedded hybrid coupler ready to accommodate integrated two radios with predefined the splitting ratio. Antenna and Coupler are included into the same packaging and orderable with a unique part number.

It is the best solution to minimize logistics (ordering, handling and warehousing costs) for either protected hot-standby (1+1) or RLA Radio Link Aggregation (2+0) configurations.

General Specifications

Diameter	0.8 m
Standard Colour	RAL 7035
Shroud	Low profile
System Input	Integrated, according to Customer's specifications
Polarization	Single
Configuration	Integrated, Symmetrical or Asymmetrical.

Mechanical Characteristics

Pole	50 ÷ 115 mm
Elevation-fine adjustment	± 15°
Azimuth-fine adjustment	± 20°
Side struts, included	0
Side struts, optional	0
Net weight (*)	21 Kg
Radome	Rigid Plastic
Wind velocity Operational (**)	30 m/s (45 m/s with optional kit)
Wind velocity Survival Rating (***)	70 m/s

(*) average weight. It may vary depending on the frequency range.

(**) antenna deflection < 0.3 times the -3 dB beam width

(***) wind speed applicable to the antenna with 25mm of radial ice

Wind forces at Wind Velocity Survival Rating

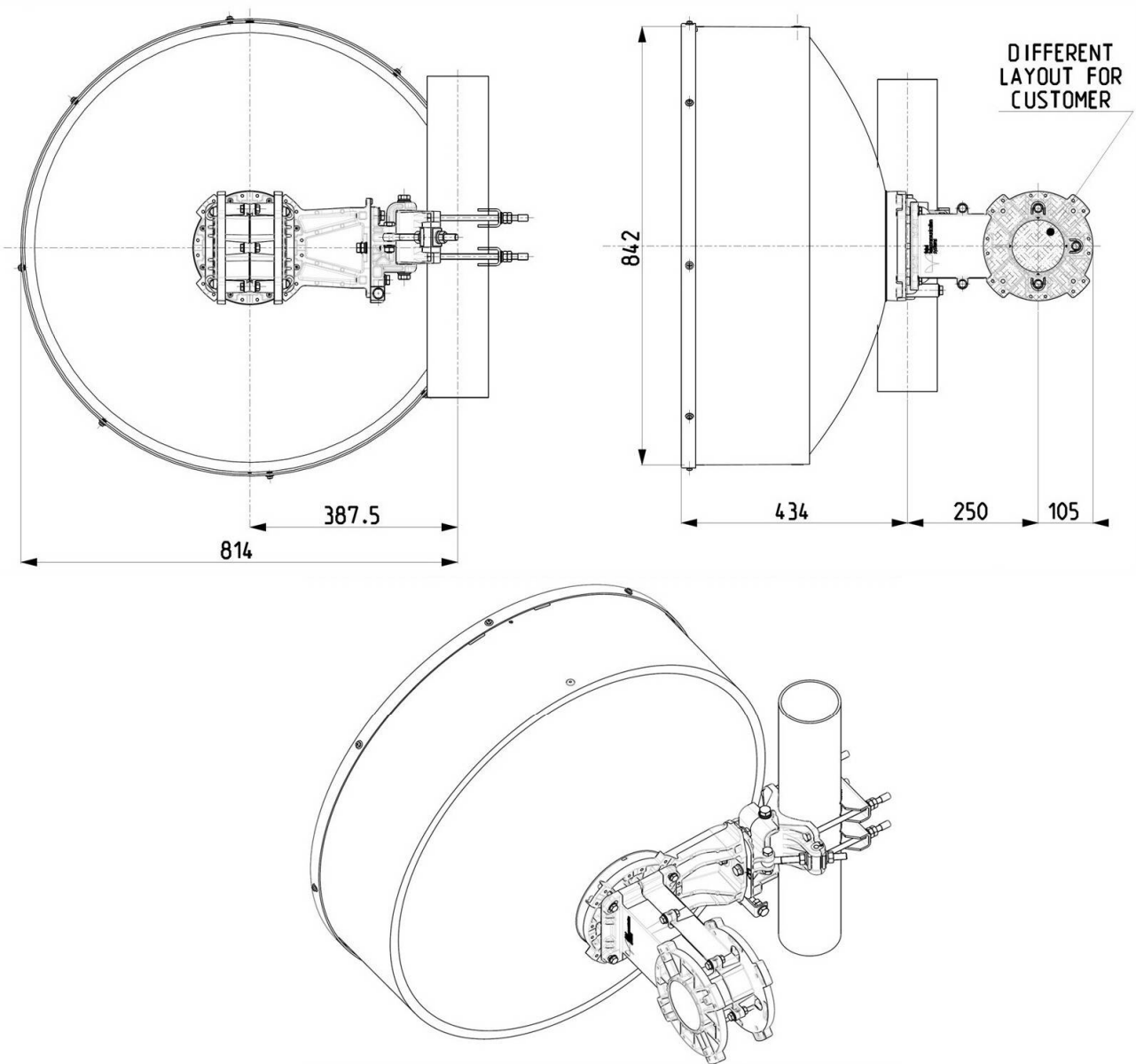
Axial force	2230 N
Side force	1105 N
Twisting moment	821 N*m

Maximum forces exerted on a supporting structure as a result of wind (survival rating) from the most critical direction for each parameter. These values may not occur simultaneously. All forces are referred to the mounting pipe of 115 mm diameter.

Compact Antenna System dimensions
(pole mount included)

Height	842 mm
Width (*)	814 mm
Depth	789 mm

(*) dimension referred to a 115 mm dia. pole




Electrical Characteristics

Antenna characteristics, as per THP family, 0.8 m (2.6 ft), single pol.												
Frequency range (GHz)	5.925-7.125	7.125-8.5	10-11.7	12.7-13.25	14.2-15.35	17.7-19.7	21.2-23.6	24.5-26.5	27.5-29.5	31.8-33.4	37.0-40.0	40.5-43.5
Antenna Gain (*), low band (dBi)	31.0	32.9	36.3	37.6	39.3	41.0	42.7	43.3	44.4	45.5	46.8	-
Antenna Gain (*), mid band (dBi)	31.6	33.5	36.9	37.9	39.7	41.4	43.0	43.6	44.7	45.8	47.0	-
Antenna Gain (*), top band (dBi)	32.4	34	37.5	38.2	40.0	41.7	43.3	43.9	45.0	46.1	47.2	-
R.L. @ antenna feeder port (dB)	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	-
V.S.W.R. @ antenna feeder port	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	-
HPBW (°)	4.4	4	2.8	2.2	2.0	1.6	1.3	1.2	1.0	0.9	0.8	-
F/B (dB)	53	60	64	64	68	70	67	72	70	65	68	-
XPD (dB)	30	30	30	30	30	30	30	30	30	30	30	-
Electrical Compliance (ref. ETSI 302 217)	2	3	3	3	3	3	3	3	3	3B	3B	-

(*) stated values refer to the antenna feeder port. For RF link budget, please take into account the insertion losses of the coupler, illustrated in the next table.

Hybrid Coupler characteristics													
Frequency range (GHz)		5.925 – 7.125	7.125 – 8.5	10 – 11.7	12.7- 13.25	14.2- 15.35	17.7- 19.7	21.2- 23.6	24.5- 26.5	27.5- 29.5	31.8- 33.4	37.0 – 40.0	40.5- 43.5
<i>Symmetrical -3</i>	Insertion Loss, Main (dB)	3.8	3.8	3.8	3.5	3.5	3.5	3.5	3.8	3.8	3.8	3.8	-
	Insertion Loss, Standby (dB)	3.8	3.8	3.8	3.5	3.5	3.5	3.5	3.8	3.8	3.8	3.8	-
<i>Asymmetrical -6</i>	Insertion Loss, Main (dB)	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	-
	Insertion Loss, Standby (dB)	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.2	7.2	7.2	7.2	-
<i>Asymmetrical -10</i>	Insertion Loss, Main (dB)	1.2	1.2	1.2	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	-
	Insertion Loss, Standby (dB)	11.0	11.0	11.0	10.8	10.8	10.8	10.8	11.0	11.0	11.0	11.0	-
R.L. @ coupler ports (dB)		-17.7	-17.7	-17.7	-20.8	-20.8	-20.8	-20.8	-20.8	-20.8	-20.8	-20.8	-
VSWR @ coupler port (dB)		1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	-
Inter port Isolation (dB)		24	24	24	24	24	24	24	24	24	24	24	-
wave guide (*)		R70	R84	R100	R120	R140	R220	R220	R220	R320	R320	R320	-
(*) Other waveguides are available upon request													

Shipping information

Gross weight (*)	28 Kg
Height	820 mm
Width	950 mm
Depth	950 mm

(*) average weight. It may vary depending on the frequency range.

Ordering information

The Compact Antenna Systems ordering codes are defined as follow:

THP08-*fff* PR*c* *Int*

where:

- THP 08:** identifies the 0.8 m Thin High Performance antenna family
- fff*:** defines the frequency range
- PR:** identifies the protected configuration
- c*:** defines the coupling ratio
- Int*** Defines the Customer's interface

<i>fff</i>	frequency range ^(*) (GHz)	<i>c</i>	Nominal coupling ratio ^(*) (dB)
059	5.925 – 7.125	3	-3
071	7.125 – 8.5	6	-6
100	10.0 – 11.7	10	-10
127	12.7 – 13.25		
142	14.2 – 15.35		
177	17.7 – 19.7		
212	21.2 – 23.6		
245	24.5 – 26.5		
275	27.5 – 28.5		
318	31.8 – 33.4		
370	37.0 – 40.0		

(*) different frequency ranges and coupling ratios could be available upon request