

2-Port Antenna

Frequency Range	698–894
Dual Polarization	X
Half-power Beam Width	65°
Integrated replaceable Remote Control Unit	iRCU
Adjustable Electrical Downtilt	0.5°–9.5°

2-Port Antenna iRCU 698–894 65° 17dBi 0.5°–9.5°T



Type No.		80010736v01	
A) Antenna specifications		R1, connector 1–2	
		698–894	
Frequency range	MHz	698 – 806 MHz	824 – 894 MHz
Polarization	°	+45°, –45°	+45°, –45°
Gain	dBd	14.25	14.85
	dBi	16.4	17
Horizontal Pattern:			
Half-power beam width	°	67°	68°
Front-to-back ratio	dB	Copolar: > 30	Copolar: > 30
		Average: 35	Average: 35
Cross polar ratio	dB	Typically: > 25	Typically: > 20
		Maindirection 0°	> 11, Avg. 15
Sector	±60°	> 11, Avg. 15	> 11, Avg. 15
Vertical Pattern:			
Half-power beam width	°	9.5	8.6
Electrical tilt	°	0.5–9.5, continuously adjustable	
Min. sidelobe suppression for first sidelobe above main beam:	° T	0.5 ... 5 ... 9.5	0.5 ... 5 ... 9.5
	dB	16 ... 16 ... 16	18 ... 18 ... 17
Average:	dB	18 ... 18 ... 17	20 ... 20 ... 20
Impedance	Ω	50	
VSWR		< 1.5	
Isolation, between ports	dB	> 30	
Intermodulation IM3	dBc	< –150 (2 x 43 dBm carrier)	
Max. power per input	W	500 (at 50 °C ambient temperature)	



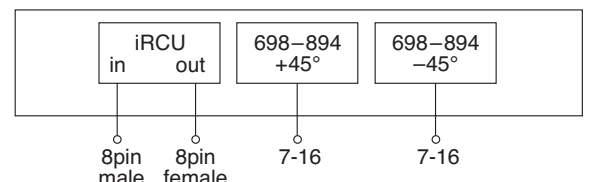
B) iRCU specifications (86010149)*	
Field replaceable without dismantling the antenna	
Logical interface ex factory ¹⁾	3GPP/AISG 2.0
Protocols	Compliant to AISG 1.1 and 3GPP/AISG 2.0
Hardware interface ²⁾	2 x 8pin connector acc. IEC 60130-9; according to AISG: – iRCU in (male): Control / Daisy chain in – iRCU out (female): Daisy chain out
Power supply	10 ... 30 V
Power consumption	< 1 W (stand by) < 8.5 W (motor activated)
Adjustment time (full range)	40 sec.
Adjustment cycles	> 50,000
Certification	CE, FC ³⁾

* See mounting instructions and warnings.

¹⁾ The protocol of the logical interface can be switched from 3GPP/AISG 2.0 to AISG 1.1 and vice versa with a vendor specific command. Start-up operation of the iRCU 86010149 is possible in a RET system supporting AISG 1.1 or supporting 3GPP/AISG 2.0 after performing a layer 2 reset before address assignment. The protocol can also be changed as follows: *AISG 1.1 to 3GPP*: Enter „3GPP“ into the additional data field „Installer’s ID“ and perform a layer 7 reset or a power reset. *3GPP to AISG 1.1*: Enter „AISG 1“ into the additional data field „Installer’s ID“ and perform a layer 2 reset or a power reset. After switching the protocol any other information can be entered into the „Installer’s ID“ field.

²⁾ The tightening torque for fixing the connector must be 0.5 – 1.0 Nm (*hand-tightened*). The connector should be tightened by hand only or using the torque screwdriver (85010080) as described in the connecting cable data sheet (86010007, ...)!

³⁾ Tested to comply with FCC Standards. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



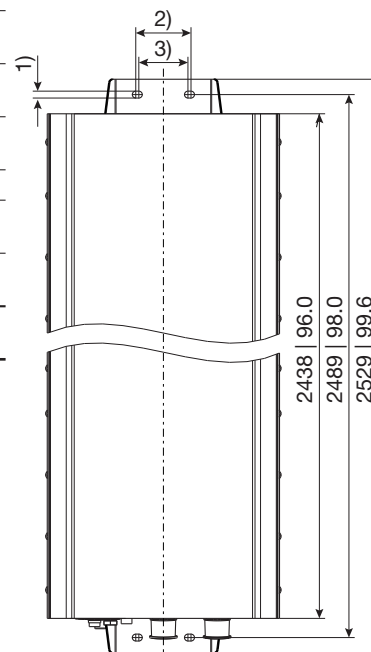
936.4274/d Subject to alteration.

Accessories

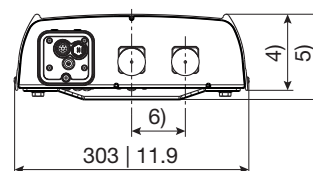
General Information

KATHREIN

Mechanical specifications	
Input	2 x 7-16 female iRCU in: 1 x 8pin male iRCU out: 1 x 8pin female
Connector position	Bottom
Wind load	N lbf Frontal: 980 220 (at 150 km/h) 2525 568 (at 150 mph) Maximal: 1080 242 (at 150 km/h) 2775 624 (at 150 mph)
Max. wind velocity	km/h mph 241 150
Height/width/depth	mm inches 2438 / 303 / 99 96 / 11.9 / 3.9
Category of mounting hardware	H (Heavy)
Weight	kg lb 17 / 19 (clamps incl.) 37.5 / 41.9 (clamps incl.)
Packing size	mm inches 2600 x 315 x 115 102.4 x 12.4 x 4.5
Scope of supply	Panel, 1 unit of iRCU and 2 units of clamps 42-115 mm 1.7-4.5 inches diameter



- 1) \varnothing 9 | 0.4
- 2) 72 | 2.8
- 3) 64 | 2.5
- 4) 99 | 3.9
- 5) 111 | 4.4
- 6) 70 | 2.8

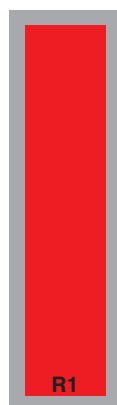


Bottom view
Dimensions refer to radome
All dimensions in mm | inches

Material: **Reflector screen:** Weather-proof aluminum. **Radiator:** Tin-plated zinc. **iRCU housing:** Coated aluminum. **Fiberglass radome:** The grey fiberglass radomes of these antennas are very stable and extraordinarily stiff. They are resistant to ultraviolet radiation and can also be painted to match their surroundings. **All screws and nuts:** Stainless steel.

Grounding: The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.

Environmental tests: iRCU additionally fulfil the standards: EN 60950-1 (Safety), EN 55022 (Emission) and EN 55024 (Immunity)



Correlation Table

Frequency range	Array	Connector
698- 894 MHz	R1	1-2

Order Information

Model	Description
80010736V01	2-Port antenna with mounting bracket
80010736V01K	2-Port antenna with mounting bracket and mechanical tilt bracket

Accessories

Type No.	Description	Remarks mm inches	Weight approx.		Units per antenna
			kg	lb	
738546	1 clamp	Mast diameter: 42 - 115 1.7 - 4.5	1.1	2.4	2 (included in the scope of supply)
86010149	1 iRCU		0.5	1.2	1 (included in the scope of supply)
85010002	1 clamp	Mast diameter: 110 - 220 4.9 - 8.7	2.7	6.0	2 (order separately if required)
85010003	1 clamp	Mast diameter: 210 - 380 8.3 - 15.0	4.8	10.6	2 (order separately if required)
85010008	1 downtilt kit	Downtilt angle: 0° - 8°	4.3	9.5	1 (order separately if required)

Wall mounting: No additional mounting kit needed.

Any previous data sheet issues have now become invalid.

All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com