

# 2-Port Antenna

Frequency Range	<b>698–894</b>
Dual Polarization	<b>X</b>
Half-power Beam Width	<b>65°</b>
Integrated replaceable Remote Control Unit	<b>iRCU</b>
Adjustable Electrical Downtilt	<b>0°–10°</b>

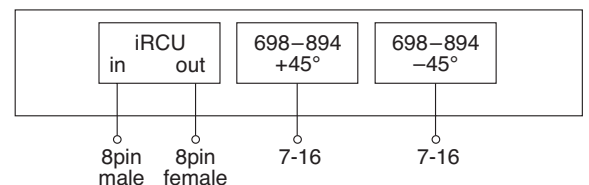
**2-Port Antenna iRCU 698–894 65° 16dBi 0°–10°T**



Type No.		<b>80010735v01</b>	
A) Antenna specifications		<b>R1, connector 1–2</b>	
		<b>698–894</b>	
Frequency range	MHz	698 – 806	824 – 894
Polarization	°	+45, –45	+45, –45
Gain	dBd	13.35	13.85
	dBi	15.5	16
<b>Horizontal Pattern:</b>			
Half-power beam width	°	67	65
Front-to-back ratio	dB	Copolar: > 30	Copolar: > 30
		Average: 35	Average: 35
Cross polar ratio	dB	Typically: > 25	Typically: > 25
		0° Main direction	> 11, Avg. 15
±60° Sector			
<b>Vertical Pattern:</b>			
Half-power beam width	°	11.3	10
Electrical tilt	°	0–10, continuously adjustable	
Min. sidelobe suppression for first sidelobe above main beam:	° T	0 ... 5 ... 10	0 ... 5 ... 10
	dB	16 ... 17 ... 17	18 ... 17 ... 16
Average:	dB	16 ... 19 ... 20	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>B) iRCU specifications (86010149)*</b>	
Field replaceable without dismantling the antenna	
Logical interface ex factory <sup>1)</sup>	3GPP/AISG 2.0
Protocols	Compliant to AISG 1.1 and 3GPP/AISG 2.0
Hardware interface <sup>2)</sup>	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, <b>FC</b> <sup>3)</sup>



\* See mounting instructions and warnings.

<sup>1)</sup> 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.

<sup>2)</sup> 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, ...)

<sup>3)</sup> 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.

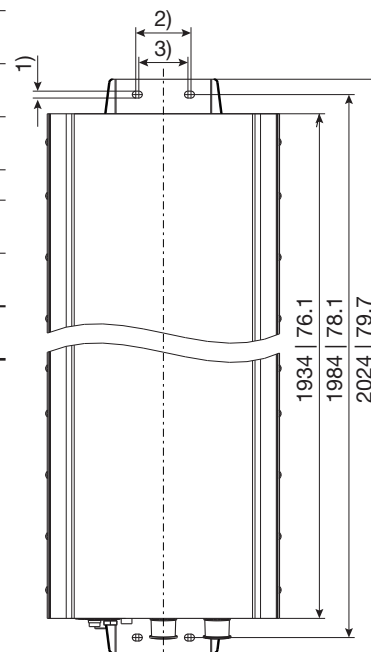
All specifications are subject to change without notice.  
The latest specifications are available at [www.kathreinusa.com](http://www.kathreinusa.com)

# Accessories

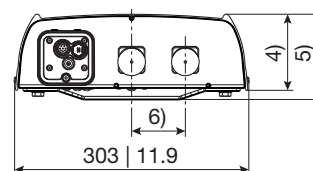
## General Information

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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: 750   169 (at 150 km/h) 1935   436 (at 150 mph) Maximal: 825   185 (at 150 km/h) 2130   479 (at 150 mph)
Max. wind velocity	km/h mph 241 150
Height/width/depth	mm inches 1934 / 303 / 99 76.1 / 11.9 / 3.9
Category of mounting hardware	H (Heavy)
Weight	kg lb 14 / 16 (clamps incl.) 30.9 / 35.3 (clamps incl.)
Packing size	mm inches 2136 x 317 x 127 84.1 x 12.5 x 5
Scope of supply	<b>Panel, 1 unit of iRCU and 2 units of clamps 42–115 mm   1.7–4.5 inches diameter</b>



- 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

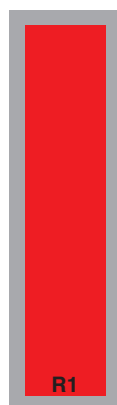


Bottom view  
Dimensions refer to radome  
All dimensions in mm | inches

**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
80010735V01	2-Port antenna with mounting bracket
80010735V01K	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° – 11°	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.

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