

The Kathrein ARU 3500 antenna reader is the next generation of RAIN RFID readers with an integrated 65° wide-range antenna. It is the first choice for professional IoT solutions, such as industrial automation and vehicle identification in ruggedised environments.

Its best-in-class 33 dBm UHF RF unit, optimal connectivity via PoE+ and a second Ethernet port, as well as the powerful, scalable processing unit that changes the way identification works.

Based on the latest RFID standards, such as EPC Gen2v2/ISO 18000-63, Kathrein ARU 3500 antenna reader supports all market-leading transponder chip

features for security, authentication and encoding.



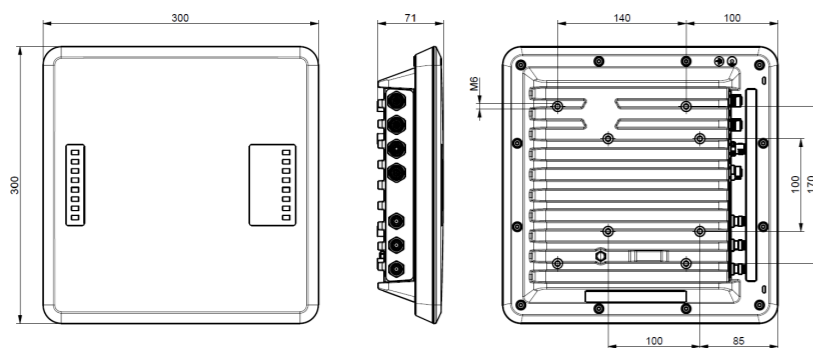
## > Features

- ruggedised high-end RAIN RFID reader with an integrated antenna
- powerful IoT gateway
- enhanced RF design
- integrated high secure memory module
- 3 antenna ports
- +33 dBm port power
- GPIO
- PoE+
- basic computing module
- embedded dual-core 800 MHz PC
- open source Linux OS
- advanced LED visualisation
- IP67 outdoor use\*
- type approval for Europe, US and RoW

## > Key Applications

- Manufacturing and Automotive
- Logistics
- Intelligent Transportation Systems

## > Dimensions [mm]



## > Note

### Risk of material damage!

- ▶ Make sure that the depth at which the screws are put into the housing of the reader does not exceed 10 mm (the tightening torque is 5 Nm).

## > General Specifications

Type		ETSI Version ARU 3500	FCC Version ARU 3500
Order number		52010292	52010300
<b>RFID</b>			
Frequency range	[MHz]	865–868	902–928
Impedance antenna port	[Ohm]	50	
Max. TX power conducted	[dBm]	33	30 (33 dBm with extended cable length)
Max. TX power radiated	[dBm ERP] [dBm EIRP]	33	36
RX sensitivity	[dBm]	typ. –80	
Number of antenna ports	[R-TNC]	3	
Standards		EN302208-2 V2.1.1, EN301489-3, EN50364, EN62368-1, EN60529, EPC Gen2 V2, UCODE DNA	FCC Part15, UL, IC, EPC Gen2 V2, UCODE DNA
<b>Antenna</b>			
Half-power beam width	[°]	65	
Gain, linear	[dBi]	–	
Gain, circular	[dBiC]	8.5	
<b>Voltage</b>			
Local supply	[VDC]	+10 to +30	
Connector		M12, A-coded, 4-pole	
Remote feed	[VDC]	PoE+ according to 802.3at (35–57)	
		<ul style="list-style-type: none"> <li>▶ Make sure that the router/switch supports 30 W in the static mode.</li> <li>▶ Use the cable the length of which does not exceed 100 m.</li> <li>▶ Make sure to use a Cat 6 cable or a higher level cable.</li> <li>▶ Note that the internal supply of GPIO-VCC-pin is not possible with PoE+.</li> </ul>	
Connector		M12, X-coded, 8-pole, port 1 only	
<b>Power consumption</b>			
Local supply	[W]	25.4	
Remote feed	[W]	25.4	
<b>Embedded PC</b>			
Processor		ARMv7-A based processor, 2 cores @ 800 MHz	
Flash memory (eMMC)	[Gbyte]	8	
RAM DDR3	[Gbyte]	1	
Operating system		Linux	
<b>Ethernet</b>			
Number of Ethernet ports		2	
Data rate	[Mbit/s]	10/100	
Connector		M12, X-coded, 8-pole	
<b>LED visualisation</b>			
Freely programmable		12	
Fixed		1 (power LED)	

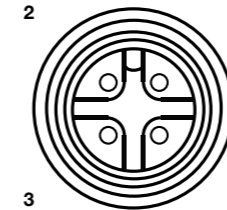
**> General Specifications**

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	<b>ARU3500</b>	<b>ARU3500</b>
Order number	<b>52010292</b>	<b>52010300</b>
<b>GPIO</b>		
Type	3 inputs, 3 outputs (double insulation possible)	
Max. input voltage	[V]	30
Max. output voltage	[V]	30
Max. current per output port	[mA]	500
Max. current over all outputs	[mA]	1500
Connector	M12, A-coded, 12-pole	
<b>RFID controller</b>		
Processor	ARMv7-A based processor with 600 MHz	
Flash memory eMMC	[Gbyte]	4
RAM DDR2	[Mbyte]	128
Operating system	Linux	
<b>Mechanical properties</b>		
Weight	[kg]	4.26
Degree of protection	IP67*	
Operating temperature range	[°C]	-20 to +55
Storage temperature range	[°C]	-40 to +85
Dimensions (L x W x H)	[mm]	300 x 300 x 71

\* if all connections are made with a Kathrein cable or have Kathrein protective caps

**> Power Supply**

M12, A-coded, 4-pin, male

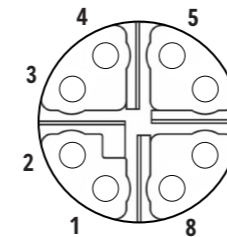


Pinout Power Supply

Pin	Allocation
1	+24 V DC
2	GND
3	GND
4	+24 V DC

**> Ethernet**

M12, X-coded, 8-pin, female

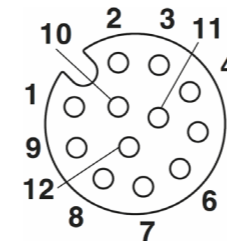


Pinout communication PoE+

Pin	Data	PoE
1	TX+	PoE Mode A
2	TX-	PoE Mode A
3	RX+	PoE Mode A
4	RX-	PoE Mode A
5		PoE Mode B
6		PoE Mode B
7		PoE Mode B
8		PoE Mode B

**> GPIO**

M12, A-coded, 12-pin, female



Pinout general purpose input output

Pin	Allocation	Pin	Allocation
1	OUT_CMN	7	UB
2	OUTPUT_1	8	OUTPUT_4
3	INPUT_3	9	OUTPUT_3
4	INPUT_CMN	10	OUTPUT_2
5	INPUT_1	11	INPUT_2
6	GND	12	INPUT_4