The Kathrein RRU 4570 reader is the next generation of RAIN RFID readers and the leading IoT device for all professional AutoID solutions. It is the first choice for professional AutoID solutions, such as industrial automation and vehicle dentification in ruggedised environments.

Its best-in-class 33-dBm UHF RF unit, embedded 4G mobile interface and the powerful scalable processing unit change the way identification works.

Based on the latest RFID standards, such as EPC Gen2v2/ISO 18000-63, Kathrein RRU 4570 reader supports all market leading transponder chip features for security, authentification and encoding.

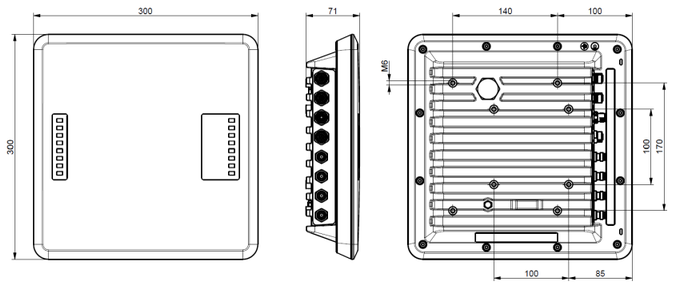
Features

- ruggedised high-end RAIN RFID reader
- powerful IoT gateway
- enhanced RF design
- integrated high secure memory module
- 4 antenna ports
- +33 dBm port power
- @KRAI antenna support
- GPIO
- PoE+
- 2G/3G/4G wireless interface
- basic computing module
- embedded dual-core 800 MHz PC
- open source Linux OS
- advanced LED visualisation
- IP67 outdoor use*
- type approval for Europe

Key Applications

- Manufacturing and Automotive
- Logistics
- Track & Trace
- Intelligent Transportation Systems
- Healthcare

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).

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General Specifications

Type		ETSI Version RRU 4570	FCC Version RRU 4570
Model No.		**52010290**	**52010298-C00**
RFID			
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]	4	
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
Voltage			
Local supply	[VDC]	+10 to +30	
Connector		M12, A-coded, 4-pole	
Remote feed	[VDC]	PoE+ according to 802.3at (35–57) ▸ Make sure that the router/switch supports 30 W in the static mode. ▸ Use the cable the length of which does not exceed 100 m. ▸ Make sure to use a Cat 6 cable or a higher level cable. ▸ Note that the internal supply of GPIO-VCC-pin is not possible with PoE+.	
Connector		M12, X-coded, 8-pole, port 1 only	
Power consumption			
Local supply	[W]	25.4	
Remote feed	[W]	25.4	
Embedded PC			
Processor		ARMv7-A based processor, 2 cores @ 800 MHz	
Flash memory (eMMC)	[Gbyte]	8	
RAM DDR3	[Gbyte]	1	
Operating system		Linux	
Ethernet			
Number of Ethernet ports		2	
Datarate	[Mbit/s]	10/100	
Connetor		M12, X-coded, 8-pole	
©KRAI			
TX Frequency	[kHz]	22	
Supply voltage (output)	[V]	5	
Max. current per port	[mA]	100	
LED visualisation			
Freely programmable		12	
Fixed		1 (power LED)	

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General Specifications

Type		ETSI Version RRU 4570	FCC Version RRU 4570
Model No.		**52010290**	**52010298-C00**
2G/3G/4G			
Type Allocation Code		35416109	
Frequency range GSM/GPRS/EDGE	[MHz]	900/1800	
Frequency range UMTS/HSPA	[MHz]	800/1800/2100	
Frequency range 4G	[MHz]	800/900/1800/2100/2600	
Max. TX power (dependent on class and modulation)	[dBm]	33	
GPIO			
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	
RFID controller			
Processor		ARMv7-A based processor with 600 MHz	
Flash memory eMMC	[Gbyte]	4	
RAM DDR2	[Mbyte]	128	
Operating system		Linux	
Mechanical properties			
Weight	[kg]	4.00	
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	

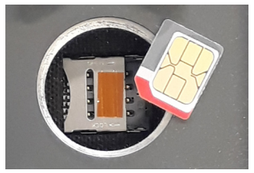
* if all connections are made with a Kathrein cable or have Kathrein protective caps

Inserting a SIM Card into the RRU 4570 Reader

RRU 4570 reader has a 2G/3G/4G connection option. This chapter describes how to insert a SIM card into the reader.

✓ You have a micro-SIM card available.

1. Open the screw at ① → A SIM card slot is seen:



2. Open the SIM card slot in the direction shown.
3. Insert the micro-SIM card into the slot.
4. Lock the slot in the direction shown.
5. Close the screw to seal the SIM card slot.

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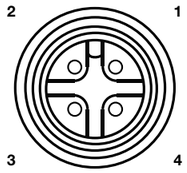
Power Supply

M12, A-coded, 4-pin, male

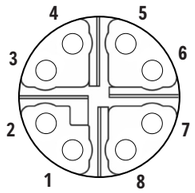


Pinout Power Supply

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

Ethernet

M12, X-coded, 8-pin, female

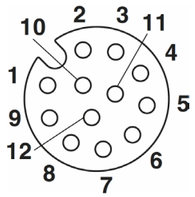


Pinout communication PoE+

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

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