

The Kathrein RRU 1000 series is a basic RAIN RFID reader for indoor applications in logistics, manufacturing, supply chain and access control applications.

Its best in class 30-dBm UHF RF unit and connectivity interface PoE and the basic level processing unit allow for a flexible integration into Industry 4.0 and IoT solutions.

Based on the latest RFID standards, such as EPC Gen2v2/ISO 18000-63, Kathrein RRU 1000 series support all market leading transponder chip features.



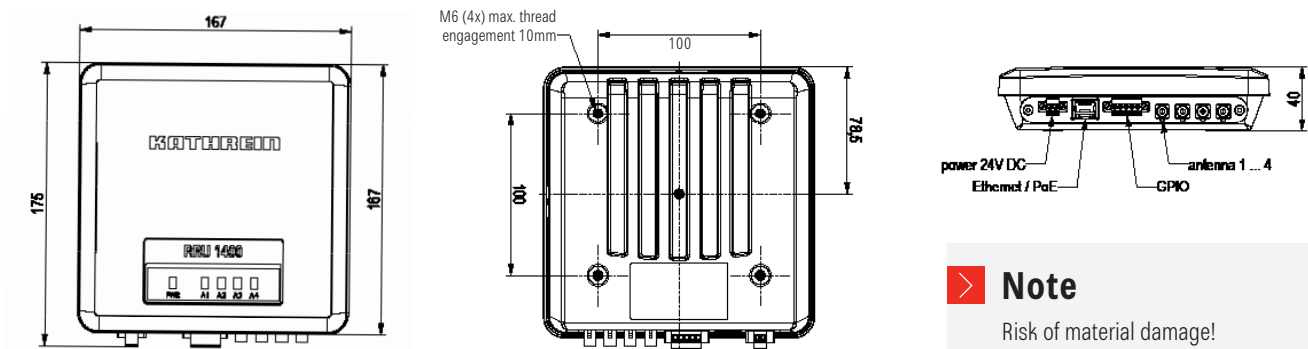
> Features

- basic RAIN RFID reader
- easy to install due to open connectors and FAKRA antenna sockets
- 4 antenna ports
- +30 dBm port power
- @KRAI antenna support
- GPIO: 2 inputs, 2 outputs
- PoE
- basic LED visualisation
- IP40 indoor use

> Key Applications

- Logistics
- Industrial Automation
- Access Control
- eKanban Applications

> 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	FCC Version
		RRU 1400	RRU 1400
Order number		52010551	52010552
Frequency range	[MHz]	865–868 (865–867 for India)	902–928
Impedance antenna port	[Ohm]	50	
Max. TX power conducted	[dBm]	30	30
Max. TX power radiated	[ERP (ETSI)/ EIRP (FCC)]	33	36
RX sensitivity	[dBm]	typ. –70	
Number of antenna ports			
		4, Fakra connector, Z-coded	
Voltage			
Local supply	[VDC]	+10 to +30	
Connector		printed circuit-board connector, 2-pole, screw connection with tension sleeve	
Remote feed	[VDC]	PoE+ and PoE Class 0 according to 802.3at (10–57) (internal supply of GPIO-VCC pin not possible with PoE)	
Connector		RJ45, 8-pole	
Power consumption			
Local supply	[W]	5.7	
Remote feed	[W]	6.7 – PoE Class 0 (12,96 W)	
Ethernet			
Number of Ethernet ports		1	
Data rate	[Mbit/s]	10/100	
Connector		RJ45, 8-pole	
©KRAI			
TX Frequency	[kHz]	22	
Supply voltage (output)	[V]	5	
Max. current per port	[mA]	100	
LED visualisation			
Freely programmable		Basic LED	

> General Specifications

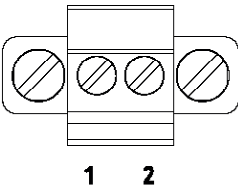
Type		ETSI Version RRU 1400	FCC Version RRU 1400
Order number		52010551	52010552
GPIO			
Type		2 inputs, 2 outputs	
Max. input voltage	[V]	30	
Max. output voltage	[V]	30	
Max. current per output port, open drain	[mA]	190	
Connector		printed circuit-board connector, 5-pole, screw connection with tension sleeve	
RFID controller			
Processor		ARMv7-A based processor with 600 MHz	
Flash memory eMMC	[Gbyte]	4	
RAM DDR2	[Mbyte]	128	
Operating system		Linux	
Weight	[kg]	1.86	
Degree of protection		IP40	
Operating temperature range	[°C]	−20 to +55	
Storage temperature range	[°C]	−40 to +85	
Dimensions (L x W x H)	[mm]	160 x 160 x 26	
Standards		EN 302208-2 V2.1.1	FCC Part15, UL

> Accessories

Order number	Type	Description
52010451	R-AC 1 SMA-FAKRA	RFID antenna cable L=1 m, IP40, FAKRA Z-coded to SMA (m); right angle antenna plug
52010452	R-AC 3 SMA-FAKRA	RFID antenna cable L=3 m, IP40, FAKRA Z-coded to SMA (m); right angle antenna plug
52010453	R-AC 5 SMA-FAKRA	RFID antenna cable L=5 m, IP40, FAKRA Z-coded to SMA (m); right angle antenna plug
52010461	R-AC 1 SMA-FAKRA	RFID antenna cable L=1 m, IP40, FAKRA Z-coded to TNC (m); right angle antenna plug
52010462	R-AC 3 SMA-FAKRA	RFID antenna cable L=3 m, IP40, FAKRA Z-coded to TNC (m); right angle antenna plug
52010463	R-AC 5 SMA-FAKRA	RFID antenna cable L=5 m, IP40, FAKRA Z-coded to TNC (m); right angle antenna plug
52010474	R-RPA 24VDC-18W	AC/DC adapter 24V/18 W AC 110-230 V-plug

> **Power Supply**

Printed circuit board connector 2-pole,
screw connection with tension sleeve

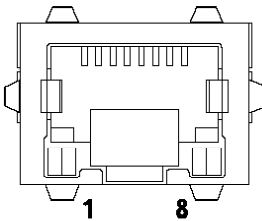


Pinout Power Supply

Pin	Allocation
1	GND
2	+24 V DC

> **Ethernet**

RJ45, 8-pole

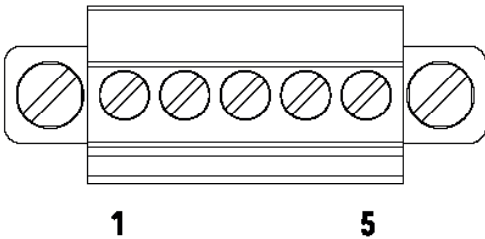


Pinout communication PoE+

Pin	Allocation
1	TX+ / PoE1
2	TX- / PoE1
3	RX+ / PoE2
4	PoE1
5	PoE1
6	RX+ / PoE2
7	PoE2
8	PoE2

> **GPIO**

Printed circuit board connector, 5-pole,
screw connection with tension sleeve



Pinout general purpose input output

Pin	Allocation
1	GND OUT_CMN
2	INPUT_1
3	INPUT_2
4	OUTPUT_1 (open drain)
5	OUTPUT_2 (open drain)