KATHREIN

The Kathrein RRU 4000 reader family is the next generation of RAIN RFID reader and the leading IoT device for all professional AutoID solutions.

Its best in class 30-dBm UHF RF unit and connectivity interface PoE+ and the basic level processing unit change the way identification works.

Based on the latest RFID standards, such as EPC Gen2v2 / ISO 18000-63, Kathrein RRU 4000 series support all market leading transponder chip features for security, authentification and encoding.

> Features

| Type		ETSI Version RRU 4560	FCC Version RRU 4560
Order No.		**52010289**	**52010297**
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		high-end LED	
Wi-Fi			
Supported standards		a, b, g, n	
2.5 GHz band	[GHz]	2.412–2.484	
Max. TX power (dependent on country)	[dBm]	max. 17.3	
5 GHz band	[GHz]	4.910–5.825	
Max. TX power (dependent on country)	[dBm]	max. 18	
Max. channel bandwidth	[MHz]	max. 40	
Bluetooth			
Frequency range	[GHz]	2.402–2.480	
Max. TX power	[dBm]	11.7	

> Key Applications

- Logistics
- Industry Automation
- Vehicle Identification
- Smart City Applications

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▷ General Specifications

Type		ETSI Version RRU 4560	FCC Version RRU 4560
Order number		52010289	52010297
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	[ERP (ETSI)/ EIRP (FCC)]	33	36
RX sensitivity	[dBm]	typ. –80	
Number of antenna ports	[R-TNC]	4	
Voltage			
In situ	[VDC]	+10 to +30	
Connector		M12, A-coded, 4-pole	
Remote-fed	[VDC]	PoE+ according to 802.3at (10–57) (internal supply of GPIO-VCC-pin not possible with PoE+)	
Connector		M12, X-coded, 8-pole, port 1 only	
Power consumption			
In situ	[W]	25.4	
Remote-fed	[W]	25.4	
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	
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	
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

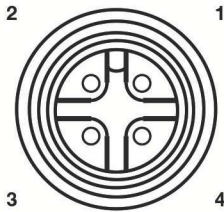**KATHREIN**

Dimensions [mm]
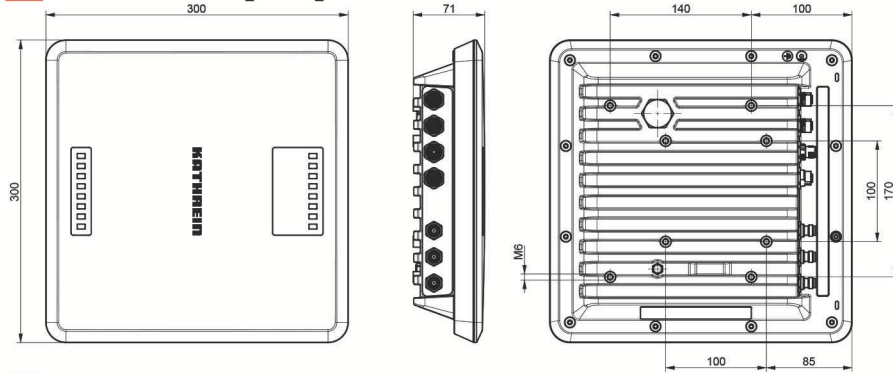
Note

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).
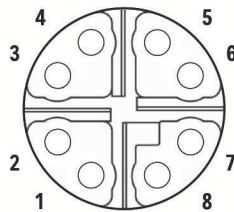
Power Supply

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	Allocation
1	TX+ / PoE+1
2	TX- / PoE+1
3	RX+ / PoE+2
4	RX- / PoE+2
5	PoE+1
6	PoE+1
7	PoE+2
8	PoE+2

Pinout communication LAN

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

GPIO

M12, A-coded, 12-pin, female
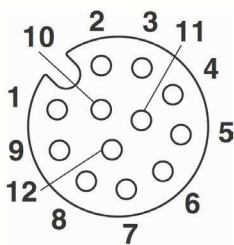
Pinout general purpose input output

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

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