

The Kathrein ARU 2000 reader family is a basic RAIN RFID reader with an integrated antenna for indoor applications in logistics, manufacturing and supply chain applications.

Its best in class 27-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 ARU 2000 series support all market leading transponder chip features.



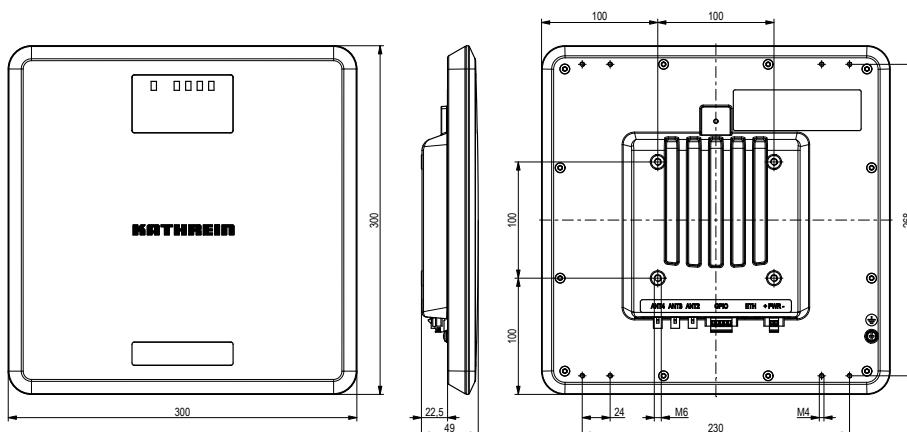
> Features

- basic RAIN RFID reader with an integrated antenna
- easy to install due to open connectors and FAKRA antenna sockets
- ready for shelf mounting with ITEM
- 3 antenna ports
- +27 dBm port power
- @KRAI antenna support
- GPIO: 2 inputs, 2 outputs
- PoE
- basic LED visualisation
- IP40 indoor use
- type approval for Europe, US and RoW

> Key Applications

- Logistics
- Industrial Automation
- SSMH Master
- 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 ARU 2400	FCC Version ARU 2400
Order No.		52010348	52010349
Frequency range	[MHz]	865–868 (865–867 for India)	902–928
Impedance antenna port	[Ohm]	50	
Max. TX power conducted	[dBm]	27	27
Max. TX power radiated	[ERP (ETSI)/ EIRP (FCC)]	27.25	29.5
RX sensitivity	[dBm]	typ. –70	
Number of antenna ports		3, Fakra connector, Z-coded	
Antenna			
Half-power beam width	[°]	60	
Gain, circular	[dBiC]	typ. 5.5	
Voltage			
Local supply	[VDC]	+10 to +30	
Connector		printed circuit-board connector, 2-pole, screw connection with tension sleeve	
Remote-fed	[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-fed	[W]	6.7 – PoE Class 0 (12,96 W)	
Ethernet			
Number of Ethernet ports		1	
Data rate	[Mbit/s]	10/100	
Connetor		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

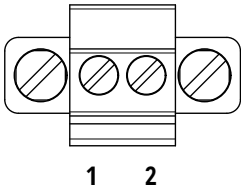
Type	ETSI Version ARU 2400		FCC Version ARU 2400	
Order number	52010348		52010349	
GPIO				
Type		2 inputs, 2 outputs		
Max. input voltage	[V]	30		
Max. output voltage	[V]	30		
Max. current per output port, open drain	[mA]	190		
Connector		printed circuit-board connector, 5-pole, screw connection with 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]	300 x 300 x 49		
Standards		EN 302208-2 V2.1.1	FCC Part15, UL	

> Accessories

Pin	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 TNC-FAKRA	RFID antenna cable L=1 m, IP40; FAKRA Z-coded to TNC (m); right angle antenna plug
52010462	R-AC 3 TNC-FAKRA	RFID antenna cable L=3 m, IP40; FAKRA Z-coded to TNC (m); right angle antenna plug
52010463	R-AC 5 TNC-FAKRA	RFID antenna cable L=5 m, IP40; FAKRA Z-coded to TNC (m); right angle antenna plug
52010474	R-RPA 2400	ARU 2400 AC/DC adapter, 24 V/18 W, AC 110-230 V, plug

> Power Supply

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

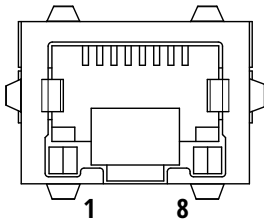


Pinout Power Supply

Pin	Allocation
1	GND
2	+24 V DC

> Ethernet

RJ45, 8-pole

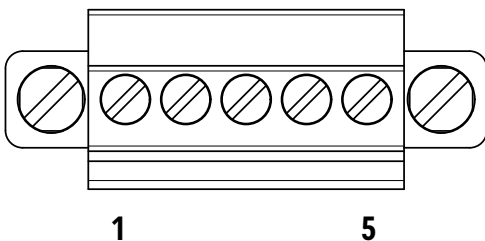


Pinout communication PoE

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)