

The Kathrein ARU2000 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 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 ARU2000 series support all market leading transponder chip features. The ARU 2401 is the version for countries where FCC rules apply.



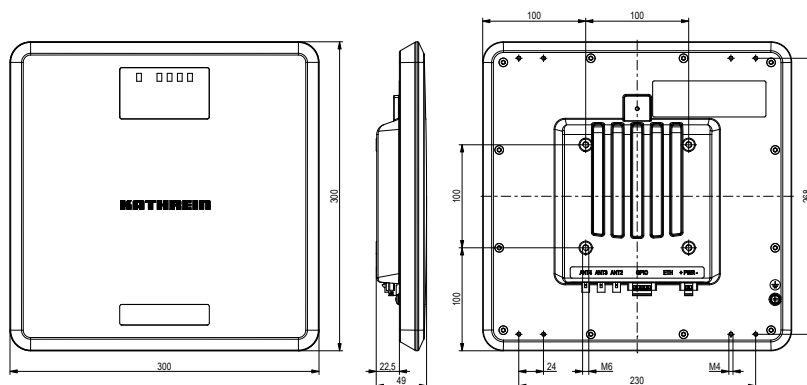
> Features

- RAIN RFID reader with embedded computing module
- easy to install due to open connectors and FAKRA antenna sockets
- ready for shelf mounting with ITEM
- 60° antenna integrated
- 3 antenna ports
- +30 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

- Manufacturing and Automotive
- Logistics
- Track & Trace
- eKanBan
- 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).

> General Specifications

| Type | | ETSI Version ARU 2400 | FCC Version ARU 2401 |
|--------------------------|-----------------------------|---|-------------------------|
| Order number | | 52010348 | 52010664 |
| RFID | | | |
| 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)] | 30.25 | 32.5 |
| RX sensitivity | [dBm] | typ. –70 | |
| Number of antenna ports | | 3, Fakra connector, Z-coded | |
| Standards | | EN 302208-2 V2.1.1 | FCC Part15, UL |
| 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 Class 0 according to 802.3at (10–57) | |
| Connector | | RJ45, 8-pole | |
| Power consumption | | | |
| Local supply | [W] | 5.7 | |
| Remote-fed | [W] | 6.7 – PoE Class 0 (10,5 W) | |
| Ethernet | | | |
| Number of Ethernet ports | | 1 | |
| Data rate | [Mbit/s] | 10/100 | |
| Connetor | | RJ45, 8-pole | |
| ©KRAI | | | |
| Supply voltage (output) | [V] | 5 | |
| Max. current per port | [mA] | 100 | |
| LED visualisation | | | |
| Freely programmable | | Basic LED | |

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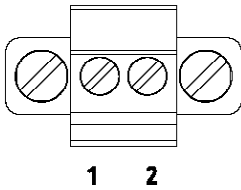
| Type | ETSI Version ARU 2400 | FCC Version ARU 2401 |
|--|--------------------------|---|
| Order number | 52010348 | 52010664 |
| GPIO | | |
| Type | | 2 inputs, 2 outputs |
| Max. input voltage | [V] | 30 |
| Max. output voltage | [V] | 30 |
| Max. current per output port, open drain | [mA] | 190 |
| 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 |
| Mechanical properties | | |
| 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 |

> Accessories (optional)

| 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 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 24VDC-18W | AC/DC adapter 24V/18 W AC 110-230 V-plug |
| 52010485 | R-AC 0.5 FAKRA-FAKRA | RFID-antenna-cable, L=0.5 m, IP40, FAKRA Z-coded to FAKRA Z-coded |
| 52010486 | R-AC 1 FAKRA-FAKRA | RFID-antenna-cable, L=1 m, IP40, FAKRA Z-coded to FAKRA Z-coded |
| 52010487 | R-AC 3 FAKRA-FAKRA | RFID-antenna-cable, L=3 m, IP40, FAKRA Z-coded to FAKRA Z-coded |
| 52010488 | R-AC 5 FAKRA-FAKRA | RFID-antenna-cable, L=5 m, IP40, FAKRA Z-coded to FAKRA Z-coded |

> Power Supply

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

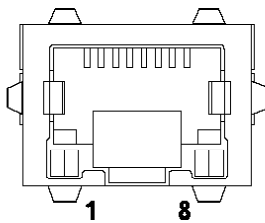


Pinout Power Supply

| Pin | Allocation |
|-----|------------|
| 1 | GND |
| 2 | +24 V DC |

> Ethernet

RJ45, 8-pole

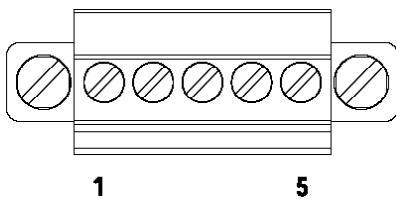


Pinout communication PoE

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

> 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) |