

## KATHREIN

### RRU-7700: RAIN RFID Reader Unit, 865-868MHz, 4 port, HSM II, KRAI, PoE, Linux

The Kathrein RRU-7700 UHF RFID (RAIN) reader is the most powerful of the Kathrein RFID reader series. It excels in high computing speed and durability, and can be used for such demanding applications as highway toll systems.

The Kathrein ITS reader offers modularity for high-speed identification and end-to-end security at the same time.



With its best-in-class +33 dBm UHF RFID unit and PoE+ powering capability, the reader is the first choice for vehicle identification in harsh environments. Based on the latest RFID standards, such as EPC Gen2v2/ISO 18000-63, Kathrein RRU 7700 reader supports all market-leading transponder chips for security, authentication and encoding. This makes the reader compliant to the Crypto Suite requirements for road tolling of ISO/IEC 29167-10.

The reader fulfill as well the performance test for ISO/ IEC 18046-2 and conformance test for ISO/IEC 18047-6.

#### High Performance Solution with the RRU 7700 Reader

With the RFID Reader RRU 7700 a new generation of High Security Readers is available, which allows highest security standards in terms of integration into backend systems. It also enables unprecedented speed in the processing of encrypted transponder data both on the network side and on the air interface.

#### Main features of the Kathrein RRU-7700 RAIN RFID reader

- high-speed vehicle identification
- accelerated data decoding
- efficient key handling on edge level with embedded High Secure Memory (HSM) module
- Crypto Suite compliant for road tolling ISO/IEC 29167-10
- compliant with ISO/IEC 18046-2 performance test and ISO/IEC 18047-6 conformance test

- ruggedised high-end RAIN RFID reader
- powerful IoT gateway
- 4 antenna ports
- +33 dBm port power
- GPIO
- PoE+
- 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**

- Smart City Applications
- Vehicle Identification
- Tolling Applications

# Technical Description

## Functionality & Operation

|                            |                                             |
|----------------------------|---------------------------------------------|
| Antennas, Antenna inputs   | 4 mono-static ports                         |
| Frequency                  | UHF: 865 - 868 MHz (EU)                     |
| Indicators                 | 12 programmable LED                         |
| Communication interface    | GPIO, Ethernet, LLRP, KRAI ©, PROFINET      |
| Connectors                 | GPIO, TNC Male, M12                         |
| Maximal transmit power     | 33dBm                                       |
| Operating system           | Linux                                       |
| Memory                     | 8GB Flash eMMC (main CPU)                   |
| Program memory             | 1GB DDR3 (main CPU)                         |
| Memory                     | 4GB eMMC (RFID controller)                  |
| Data memory                | 128MB DRAM (RFID controller)                |
| CPU Type                   | ARMv7-A based, 2 cores @ 800 MHz (main CPU) |
| CPU Type                   | ARMv7-A based, 600 MHz (RFID controller)    |
| RFID transponder protocols | ISO 18000-63, EPC Gen 2v2, UCODE DNA        |

## Electrical

|               |                                                           |
|---------------|-----------------------------------------------------------|
| Power Source  | 10 VDC ~ 30 VDC, PoE+ (Power Over Ethernet spec. 802.3at) |
| DC resistance | 50ohm                                                     |

## Mechanical

|            |                                          |
|------------|------------------------------------------|
| Color      | light grey                               |
| Dimensions | Width: 300mm, Height: 300mm Length: 71mm |
| Weight     | 4.26kg                                   |

## Environment

|                       |             |
|-----------------------|-------------|
| Operating temperature | -20 to 55°C |
| Ingress protection    | IP67        |
| Storage temperature   | -40 to 85°C |

## Others

|                |                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------|
| Certifications | EN 302208-2, EN 50364, EN 60529, EPC Gen2 V2, EN 301489-3, EN 62368-1, ISO/IEC 18047, ISO 14443A, ISO/IEC 29167-10, UCODE DNA |
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