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
- efficent 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