ID LRU1002

STANDARD UHF LONG RANGE READER

- Robust metal housing for use in industrial environment
- 2 Watt Output Power
- High Receive Sensitivity
- 4 Antenna ports (internal Multiplexer)
- 6 Inputs / Outputs
- Output of RSSI values and phase angle
- Full support of new transponder chips with encryption (e. g. NXP UCODE DNA)
- Secure Key Storage (Secure Element)
- Support of EPC Low Level Reader Protocol (LLRP) with Software Library
- Optimum price performance ratio

Logistics Applications

› Incoming and outgoing shipments (Gate solutions, tunnel solutions, conveyor systems)

› Forklifts

› E-Kanban and refill control

› and much more

Applications Vehicle Identification

› Vehicle Access Control

› Tolling systems

› Traffic management

› Parking management

› and much more

Other areas of application are laundries, the automotive industry, waste management and much more.

STANDARD UHF LONG RANGE READER FOR VARIOUS APPLICATIONS

With a reading range of up to 12 m and 4 antenna connections several long range applications can be realized.

Technical data

Dimensions (w x h x d)	260 mm x 157 mm x 68 mm
Weight	approx. 1,800 g
Housing	Aluminum, powder coated
Color	RAL 9003 Signal white
Protection class	IP53 (IP64 with protection cap*)
Power supply	24 V DC ±20 %
Power consumption	max. 24 VA**
Operating frequencies	
Version EU	865 MHz up to 868 MHz
Version FCC	902 MHz up to 928 MHz
Output power	100 mW to max. 2 W configurable in steps of 100 mW
Antenna connector	4x SMA-Female (50 Ohm), integrated Multiplexer, support of external Multiplexer ID ISC.ANT.UMUX
RF-diagnosis	RF-channel monitoring, Antenna SWR control, internal overheating control
Outputs	
2 Optocoupler	max. 24 V DC / 20 mA
2 Relays	max. 24 V DC / 1 A switching current, 2 A permanent current
Inputs	
2 Optocoupler	max. 24 V DC / 20 mA
Interfaces	RS232, Ethernet, USB (On-The-Go), Wiegand (Scan Mode Interface)
Reader modes	ISO Host Mode, Scan Mode (HID), Notification Mode, Buffered Read Mode
Supported transponders	EPC Class1 Gen2, EPC Class1 Gen2 V2, ISO 18000-6C
Indicator	16 LEDs for diagnosis of reader operation and antenna status
Others	Anti-Collision, Output of RSSI values and phase angle, Battery assisted Real Time Clock, Supports encrypted transponder communication, Secure Key Storage, "Config Cloning" function
Temperature range	
Operation	–40 °C up to +70 °C***
Storage	–25 °C up to +85 °C
Relative air humidity	5 % up to 95 % (non-condensing)
Vibration	EN 60068-2-6 10 Hz up to 150 Hz: 0.075 mm / 1 g
Shock resistance	EN 60068-2-27 Acceleration: 30 g

* Optionally a connector sealing cap is available which covers the connectors, offers a pull relief for the connected cables and guarantees enclosure rate IP64.

** Not including power consumption due to external Multiplexer

*** Tested according to EN 60068-2-1/-2-2

ID LRU1002

Standard conformity

Radio license

Europe, UK	EN 302 208
USA	FCC 47 CFR Part 15
Canada	IC RSS-GEN, RSS-210
EMC	EN 301 489
Safety & Health	EN 62368-1
	EN 50364

STANDARD UHF LONG RANGE READER FOR VARIOUS APPLICATIONS

With a reading range of up to 12 m and 4 antenna connections
several long range applications can be realized.

The UHF Long Range Reader ID LRU1002 is a high performance Long Range Reader that can be used in different kind of applications. The reader convinces with an excellent price performance ratio and is characterized by the following features:

› High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range

› Possible secure read range of up to 12 m (40 ft) *

› Constant high receive sensitivity and high read range also in disturbed environments and applications with a large number of readers operating at the same time

› Support of Transponders according to EPC Class1 Gen2 and ISO 18000-6-C

› Allows the realization of secure UHF systems by full support of new transponder chips according to EPC Class1 Gen2 V2 specification and ISO 29167 (e. g. NXP UCODE DNA)

› Secure storage of application keys in a secure memory (Secure Element)

› Support of EPCglobal™ Low Level Reader Protocol with special software library

› Readout of RSSI data and phase angle of identified transponders (e. g. for localization of transponders)

› Various configuration options for software and hardware

› Support of 4 hardware interface ports: Ethernet, RS232, USB and Wiegand

› Reader protection against fault conditions like antenna shortcut, antenna mismatching and electrostatic discharge

› Robust aluminum die case housing for usage in rough and industrial environments

› Increase of enclosure rating to IP64 due to optional available connector sealing cap for the connector block

› Quick installation due to easy access to interfaces and antenna ports

› 2 Inputs, 2 outputs and 2 relay outputs suit industrial needs and allow control of external components and signalization of different events

› Antenna Port Indication: Display of active antennas (green), read events (blue) and possible antenna mismatching (red) via 4 separate LEDs

* The maximum Read Range is depending on the used antenna, the antenna cable, the used transponder and environmental conditions.

Applications

Logistics
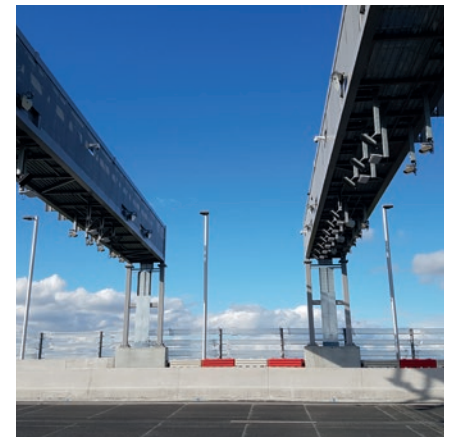
Vehicle Identification

Industry