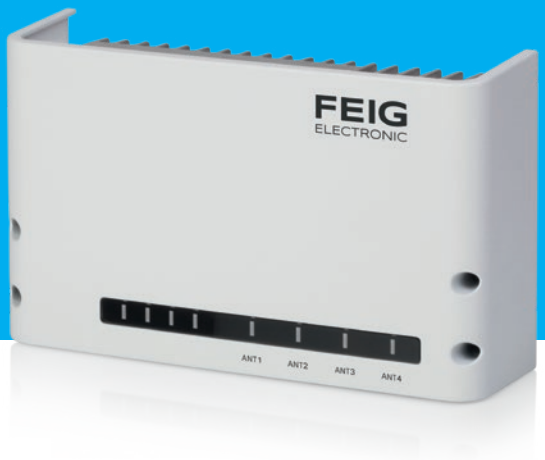
FEIG

ID LRU3000 / LRU3500

PREMIUM UHF LONG RANGE READER

- Robust metal housing for use in industrial environments
- Read range up to 16 m
- 4 Watt Output Power (LRU3500)
- High detection rate
- 4 Antenna ports (internal Multiplexer)
- Power over Ethernet (only LRU3500)
- 10 Inputs / Outputs
- Linux Operating System for installation and operation of custom specific applications directly on the reader
- 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)



Logistics Applications

› Incoming and outgoing shipments (Gate solutions, tunnel solutions, conveyor systems)
› Forklifts
› E-Kanban and refill control
› and much more

Applications Vehicle Identification

› Tolling systems
› Traffic management
› and much more

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

PREMIUM UHF LONG RANGE READER FOR VARIOUS APPLICATIONS

With a reading range of up to 16 m and 4 antenna connections several long range applications with special requirements (LINUX operating system, more interfaces and I/Os) can be realized.

Technical data

Dimensions (w x h x d)	260 mm x 157 mm x 68 mm
Weight	approx. 2,000 g
Housing	Aluminum, powder coated
Color	RAL 9003 Signal white
Protection class	IP53 (IP64 with protection cap*)
Power supply	24 V DC ±10 % or Power over Ethernet (only LRU3500)
Power consumption	max. 35 VA**
Operating frequencies	
Version EU	865 MHz up to 868 MHz
Version FCC	902 MHz up to 928 MHz
Output power	LRU3000: 300 mW to max. 2 W LRU3500: 300 mW to max. 4 W, 300 mW to max. 1 W (PoE)
Antenna connector	4x SMA-Female (50 Ohm), integrated Multiplexer, support of external Multiplexer ID ANT.UMUX
RF-diagnosis	RF-channel monitoring, Antenna SWR control, internal overheating control
Outputs	
2 Optocoupler	max. 24 V DC / 30 mA
3 Relays	max. 24 V DC / 1 A switching current, 2 A permanent current
Inputs	
5 Optocoupler	5 V DC to 10 V DC / 20 mA, max. 24 V DC / 20 mA with additional external series resistor
Interfaces	RS232, RS485, Ethernet, USB, USB port for external memory stick, Data-Clock***
Reader modes	ISO Host Mode, Scan Mode (HID), Notification Mode, Buffered Read Mode
Operating System	LINUX (Kernel 3.0), 64 MB RAM, 256 MB FLASH
Supported transponders	EPC Class1 Gen2, EPC Class1 Gen2 V2, ISO 18000-6C
Indicator	16 LEDs for diagnosis of reader operation and antenna status
Voltage on antenna conductor	24 V DC / 200 mA (only LRU3500)
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	–25 °C up to +55 °C, –25 °C up to +50 °C (PoE)
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 IP 64.

** Not including power consumption due to external Multiplexer

*** The reader offers a Data-Clock interface to be used only in Scan Mode for data transmission from reader to host.

ID LRU3000 / ID LRU3500

Standard conformity

Radio license	
Europe	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

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PREMIUM UHF LONG RANGE READER FOR VARIOUS APPLICATIONS

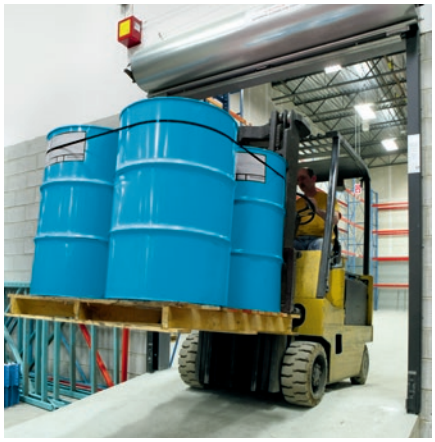
With a reading range of up to 16 m and 4 antenna connections several long range applications with special requirements (LINUX operating system, more interfaces and I/Os) can be realized.

The UHF Long Range Readers ID LRU3000 / LRU3500 are high performance Long Range Readers that can be used in different kind of applications. The readers convince with an excellent price performance ratio and are characterized by the following features:

- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Constant high receive sensitivity, high read range and high reading speed for fast detection of large transponder populations 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 (LLRP)
- 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 5 hardware interface ports: Ethernet, RS232, RS485, USB and Wiegand
- ACC (Application Connectivity Controller) with Linux operation system for installation of application software directly on the reader platform
- 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 IP 64 due to optional available connector sealing cap for the connector block
- Quick installation due to easy access to interfaces and antenna ports
- Inputs and 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
- Full support for the UHF Multiplexer ID ANT.UMUX to be used in antenna systems with a maximum number of 2,048 antennas

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

Applications



Logistics

Vehicle Identification

Industry

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