



# Reader

**Product Code: L-RX201**

## Description: Reader RS485 / RS232

The **L-RX201** RS485 / RS232 Reader detects and decodes RF transmitted signals from the Wavetrend family of tags. Interpreted data is converted into electrical information that is passed down the RS485 Reader-net (Network of readers).

**L-RX201** Readers can be used in stand-alone mode or in a multi-drop asynchronous network where the "Node ID" is automatically assigned. The electrical connection between the host PC and the first reader may be RS232 or RS485.

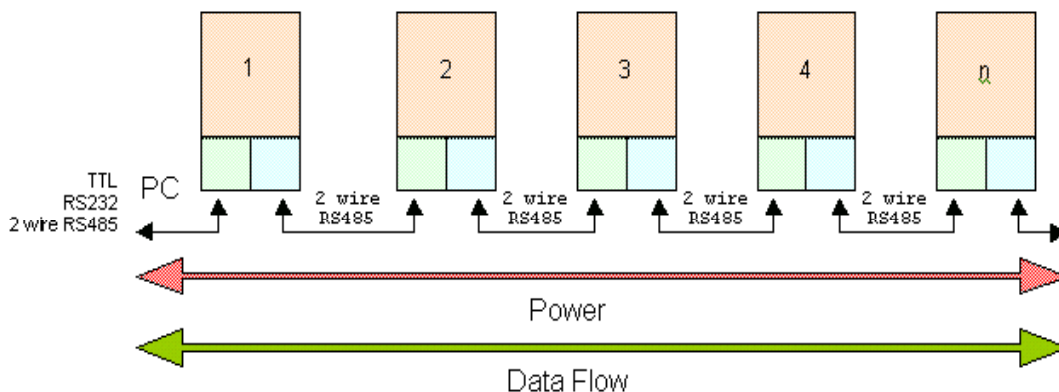
This reader is also available in a proximity or close range model without antenna. Product code: **L-RX201-PR**. This reader will typically be used in an environment where the tag has to be very close range to the reader.



## Features

- Up to 255 unique Receiver Addresses possible.
- Remote readers are powered via the CAT5 cable, centralised or distributed PSU topology may be used.
- Reader status indication by LED's at RJ45 connectors.
- ESD protection as specified by FCC and CE requirements.
- Conformance to the RF standards required by the internationally accepted regulatory bodies: i.e. FCC, CE and ETSI.
- Sensitivity adjustment, and reader addressing done remotely via PC software application.
- Reader programming (configuration) done dynamically via PC software.

## Basic Configuration





## Typical read ranges of Wavetrend Tags with various antennas

(Distances may vary depending on the ambient RF environment)

(The following tests were conducted in free air)

### L-RX201

	Min	Max
Antenna Type	Range (metre)	Range (metre)
None	0.2	7
L-AN200 (Stub)	1	30
L-AN100 (Whip)	3	35
L-AN300 (Patch)	3	100
RSSI threshold	130	72

### L-RX201-PR

	Min	Max
Range (metre)	0.01	1
RSSI threshold	130	72

## Specifications

### RF Specifications

Rx Frequency	433 Mhz
Demodulation	ASK
Sensitivity	- 103 dBm (Not applicable to the L-RX201-PR)
Stability	2ppm / °C
RF Input	50 Ohm BNC (Female)

### Electrical Specifications

Supply Voltage	6 V DC – 16 V DC
Max current consumption	±72 mA to 80 mA
ESD protection	2 kV Human Body Model

### Protocol Specifications

Standard Data Rate (Baud)	115 200, 8, n, 1 (Configurable down to 9600 Baud)
Interface	RJ45 connectors

### Environmental

Operational temperature	- 10° C to + 60° C
Storage temperature	-20° C to + 70° C
Humidity	5 % to 90 % (non condensing)

### Physical

Size	84 mm x 40 mm x 19 mm
Weight	45 grams
Colour	Grey
Type of material	ABS (ultrasonically sealed)
Input/Output Connections	2 x RJ45 Sockets





## L-Series

Product Information Sheet



## Certification

The following standards applied in accordance with Article 5 of the directive, 1999/5/EC:

- EN 300 220-1 V1.2.1 (1997-11)
- ETS 300 683 (1997-03).
- FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation

## Summary of tests

Effective radiated power	25 MHz - 4 GHz
EN55022	Radiated emissions 30 MHz – 1GHz
EN55022	Conducted emissions 150 kHz – 30 MHz
EN61000-4-3	Radiated immunity 80 MHz – 1GHz, excl 433 MHz $\pm$ 20 MHz
EN61000-4-4	Electrical fast transients
EN61000-4-2	Electrostatic discharge
EN61000-4-6	Conducted immunity 150 kHz – 80 MHz



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