WAVETREND®
RFID | ACTIVATING YOUR BUSINESS

ACTIVE RFID

- Instant reporting of detected Wavetrend active RFID tags
- User configurable tag data and read range filters
- Supports RS232 and USB connection
- Extremely low current consumption
- Powered directly from RS232 or externally

The RX50 reader detects and decodes RFID (radio frequency identification) signals from Wavetrend's range of active RFID tags. It can operate in rugged conditions at ultra long ranges, subject to the appropriate antenna being fitted to the unit. The data from detected tags is sent by the reader via RS232 or USB to authorised corporate computing systems.

Typical Applications

This entry level reader is ideally suited for customer demos as a stand alone unit when connected over USB.

It is primarily designed to be integrated with 3_{rd} party hardware utilising the RS232 port which with its low current consumption makes it the ideal choice for adding active RFID reading capability to telematic systems for example.

The RX50 is available in two different models; the RX50 Solo as shown has an SMA connection to an external antenna* (not included) and the RX50 OEM version is a PCB based unhoused reader that includes an onboard patch antenna.

KEY FEATURES	BUSINESS BENEFITS
Compact Size	Ideal for integration into 3_{rd} party hardware
Reader status indication by LED's at RJ45 connectors	Provides activity and function diagnostics
Certified for FCC and ETSI	Can be deployed in all major countries
High RF long and short range sensitivity	High near field resolution < 0.5m
USB connection	Allows easy installation diagnostics and demonstrations
RF hardened Receiver	Maintains high performance in RF noisy backgrounds
Supports Full RX2XX Protocol	Compatible with any RX202/RX210 software
Two modes of data transmission: • Hardware auto-polling: tag data provided automatically from Reader network • Software polling: tag data requested from each reader individually by intelligent edge devices or host application	• Hardware auto-polling allows for the continuous feed of tag data to the system in the fastest possible manner • Software poling allows for dynamic communication with each reader by software applications, instant notification of reader offline and customisation of reader polling order and frequency

WWW.WAVETREND.NET

Compatibility

The RX50 supports the RX202/RX210 protocol including their baud rate ranges.The extremely low current consumption allows the RX50 to be driven by some RS232 devices directly. Not all RS232 provide sufficient current so in this event the RX50 can be powered via its 2.5mm power socket.

Despite its small size the RX50 is capable of reading tags at ranges from 0.5 to 500m.*

The RX50 Solo can be connected to any SMA male antenna or Via a SMA to BNC connector the rest of the antenna in the Wavetrend product range

RX50 Accessories
Antenna Ranges

AN50	⅛ Stub- up to 20m

AN50

*Read ranges are affected by environmental conditions and site configurations and may not match those stated in this sheet. Read ranges will generally be greater outdoors than indoors. With specialist antennas, ranges in excess of 500m can be achieved.

Specifications

Environmental	
▪ Operating temperature	: -40$_o$C to +85$_o$C
▪ Storage temperature	: -20$_o$C to +70$_o$C
▪ Humidity	: 5% to 90% (non condensing)

Physical	
▪ Size	: 55 mm x 50mm x 28mm
▪ Weight (unit)	: 80 grams
▪ Colour	: Aluminium Grey
▪ Material	: Aluminium
▪ Connections	: 1 RS232 DB9 socket
	: 1 Mini USB type socket
	: 2.5mm Power socket

Radio Frequency	
▪ Receive Frequency	: 433.92 MHz
▪ Modulation	: ASK
▪ RF Input	: 50 Ohm SMA

Electrical	
▪ Supply Voltage	: 6 -12Vdc Via Power Socket
▪ Max. current consumption	: 10 mA

Protocol Specification	
▪ Standard Data Rate	: 9,600 ~ 115,200 (baud rate)
▪ Interface	: RS232 / USB connectors

FCC Statement of Conformity

Wavetrend RX50

This device complies with Part 15 of the FCC rules subject to the following two conditions:

1) This device may not cause harmful interference.
2) This device must accept all interference received, including interference that may cause undesired operation.
3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Certified for FCC and CE use

IP Information
Wavetrend and the Wavetrend logo are either registered trademarks or trademarks of Wavetrend Technologies Limited in the United States and/or other countries. All other trademarks are the property of their respective owners. The product(s) described in this document are protected by various patents held by Wavetrend. Refer to the URL www.wavetrend.net/IPR for information on all patents and trademarks held, and for Wavetrend's Policy on Intellectual Property Rights.