GAO RFID Inc.
A Member of GAO Group

Celebrating Over 20 Years of Innovation

This active RFID reader enables complete management of all tagged assets and the automation of business decisions about them based on accurate and near real-time knowledge of their location and condition.

This RS485 / RS232 RFID reader detects and decodes RF transmitted signals from compatible Wavetrend tags. It can be configured remotely and can be connected to a host PC, edge server or intelligent hardware controller via RS232, RS485 or TTL; it can also be used singly or in networked mode. It offers a connection for an external antenna. This active RFID reader can be used in rugged conditions at ultra long ranges. The detected tag data is sent by the reader via RS485 / RS232 or USB to authorized corporate computing systems.

This compact reader is ideally suited for asset tracking, people tracking, and other safety or security applications. It can be used to create RFID networks within buildings. The tag data and reader status information is fed into the end-user application enabling complete management of all tagged assets and the automation of business decisions about them based on accurate and near real-time knowledge of their location and condition.

Key Feature

✓ Instant reporting of detected Wavetrend active RFID tags

✓ User configurable tag data and read range filters

✓ Singular use or as part of multiple reader daisy chain network

✓ Easy remote configuration via the reader network

✓ RS232, RS485 and USB connection

✓ Supports wide variety of antennas to achieve custom coverage areas

Key Features	Benefits
Up to 255 unique Receiver Addresses possible	Allows for multiple readers to be connected in a daisy-chain RS485 network
Remote readers are powered via standard CAT5 cable, centralized or distributed PSU topology may be used.	It can be powered over the network or individually depending on the clients' requirements
Reader status indication by LED's at RJ45 connectors	Provides activity and function diagnostics
Certified for FCC and ETSI	Can be deployed in most countries
High RF long and short range sensitivity	High near field resolution < 0.5 m
USB connection	Allows easy installation diagnostics and demonstrations
RF hardened Receiver	Maintains high performance in RF noisy backgrounds
Configurable protocol support for L series	Can read L series tags

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 customization of reader polling order and frequency.

Typical read ranges of tags with various antennas

(Distances may vary depending on the ambient RF environment 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 500 m can be achieved.)

Antenna Type	Read Range
304001	¼ Whip up to 50 m
304002	⅛ Stub- up to 20 m
304004	Circular patch up to 150 m
304005	Outdoor Whip up to 150 m

Technical Specifications

Environmental	
Operating temperature	- 40 °C to 85 °C
Storage temperature	- 20 °C to 70 °C
Humidity	5% to 90% (Non condensing)
IP Rating	IP50
Physical	
Size	105 mm x 58mm x 28mm
Weight (unit)	118 grams
Color	Aluminium Grey
Material	Aluminium
Connections	2 x RJ45 socket
	1 Mini USB type socket
	2.5mm Power socket
Radio Frequency	
Receive Frequency	433.92 MHz
Modulation	ASK
RF Input	50 Ohm BNC
Electrical	
Supply Voltage	7 V to 16 V DC
Max. current consumption	60 ma
Protocol Specification	

Standard Data Rate	9,600 to 115,200 (baud rate)
Interface	RJ45 connectors

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