

# HITAG

## Long-Range Reader Module

### HT RM802/902



#### This exceptional reader module is the benchmark for Long-Range multiple-tag identification rates in LF.

The anti-collision feature of the HITAG™ long-range system allows for the simultaneous operation of an arbitrary number of transponders within the communication field of the antenna. This feature ensures comfortable and fast identification of, for example, several items passing through a gate at the same time. Other typical uses for this technology include, for instance, the reading of 100's of gaming tokens on a gaming table or the identification of dozens of surgical instruments in a sterilization box. A digital signal processing system ensures reliable signal recovery and provides a fast anti-collision algorithm. It also ensures operation with almost no loss of performance in industrial environments based on European immunity standards (ETS 300683). The Eurocard sized OEM-PCB (160 x 100 mm) can be easily mounted in a standard housing unit.

The HITAG™ Long-Range Reader Module also handles all the security functions of the HITAG™ transponders. It calculates proprietary security algorithms and stores keys and passwords for the access of HITAG™ transponders in security mode. That way, the module can guarantee a high level of security for your application.

## Order Numbers

125 kHz//134,2 kHz

HT RM802/AED// HT RM902/AED  
HITAG™ Long-Range Reader Module, RS232

HT RM802/CED// HT RM902/CED  
HITAG™ Long-Range Reader Module, RS485

HT RM802/EED// HT RM902/EED  
HITAG™ Long-Range Reader Module, TTL

HT RM802/LAN// HT RM902/LAN  
HITAG™ Long-Range Reader Module, LAN

## Features

- Multiple tag operations (anti-collision)
- up to 1 m with credit card sized transponders
- 35 transponders per second, up 800 transponders on 1 antenna
- In stacks of more than 40 transponders
- Hitag2, Hitag1, HitagS, Hitagμ, EM4102, EM4205, EM4305
- ISO 11784/85 FDX, ISO 14223, ISO18000.2 transponders
- carrier frequency: 125 kHz (802), 134,2 kHz (902)
- full HitagS/μ functionality
- data encryption, key handling
- easy system integration
- several interface options
- add on boards with Multiplexer and/or PoE+
- meets all requirements for CE and EMI approval

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### HT RM802/902

#### Possibilities for Integration:

The HTRM802/902 Reader Module offers diverse possibilities for integration within your system. For example, two, four, eight or as many as sixteen antennas can be multiplexed (HTMU0x) as needed. The multiplexer is controlled by means of serial communication through a host or automatically within the framework of a high-level command executed independently by the reader. Power (+/-15V) can be supplied to the reader either by means of an external power adaptor or by means of power over Ethernet

technology with the help of our HTPoE+ Module. The HT RM802/LAN equipment option not only facilitates access to the device via Ethernet by means of a virtual COM port, it also enables the customer to use a device server that can be programmed freely. A further option is the synchronization of up to 3 readers in settings where multiple systems have to be operated in close proximity to one another (i.e. at a Black Jack table or on a smart shelf).

#### Specifications

<b>operating frequency:</b>	125 kHz / 134,2 kHz	<b>Interface to host:</b>	serial RS232, 3.3V TTL, LAN or RS485 optional
<b>power supply:</b>	+15 VDC 5% / -15 VDC 5%	<b>transmission rate:</b>	9600 baud standard, up to 57600 baud
<b>max. supply current:</b>	550 mADC / 400 mADC (operating) 200 mADC / 100 mADC (stand-by mode)	<b>Interface to antenna:</b>	coax cable
<b>operating temperature:</b>	-25 .. +70°C	<b>operating distance:</b>	up to 1 meter with credit card sized transponders
<b>storage temperature:</b>	-40 .. +85°C	<b>EMI:</b>	ETSI EN 300330-1 V1.3.1 (2001-6) ETSI EN 300330-2 V1.3.1 (2006-4)
<b>Inputs/Outputs:</b>	2 in- and 2+8 output lines for general purpose (CMOS level)	<b>Immunity:</b>	ETSI EN 301489-3 V1.4.1 (2002-8)
<b>mechanical dimensions:</b>	160 x 100 x 43 mm	<b>RFI-Emissions:</b>	Limit class B according to EN 55022, 1987