

RC5501 (UHF Controller)

Data Sheet



The mobile **RC550X** family from smTAG is an intelligent ISM wireless UHF controller. It is ideal for high-volume two-way wireless applications, for remote control systems, for home security and alarm systems, for industrial applications such as telemetry, sensor data logging, for personal/patient data logging, barcode readers and automatic meter reading. It provides highly accurate, real-time data collection without human intervention in wireless applications like: Identification, Remote Control, Tracking and Tracing, Monitoring of Assets, Temperature, Vibration, Pressure and many more.

- **RC5501**: RS232 Interface
- **RC5502**: USB 2.0
- **RC5503**: Ethernet
- **RC5504**: Bluetooth
- **RC5505**: WLAN
- **RC5506**: GSM

By integration of advanced UHF radio frequency technology from smTAG, the **RC550X** transmits and receives data at distances of up to 100m (300 feet) from an **TM4300** and up to 40m (120 feet) from a **TM2200**. The highly effective anti-collision handling algorithm allows simultaneous communication with thousands of tags within the controller read zone. Because of its low power consumption, **RC550X** can effectively operate from the controller internal rechargeable battery pack.

Features

- 2000 tag simultaneous identification
- 100 tag/sec. identification rate
- UHF operating frequencies
- Multi-tag compatibility
- A unique communication interface
- Internal Buzzer
- Real-Time operating system
- Security

Benefits

Provides high-speed data collection to facilitate warehousing and inventory-based applications

Provides reliable identification of fast moving objects

Operates interchangeable on standard European ISM band frequencies

Provides communication for the whole smTAG UHF based tag families

This unique feature of the FSK-Controller family makes it easy to build a controller network and to integrate it into almost any existing IT infrastructure

The internal buzzer allows early, security network independent onsite alarming

Meets industrial requirements for reliability and robustness

High security system with use of sha-256 algorithm & frequency

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SMTAG

smTAG is a global supplier of innovative RFID Technology in the UHF band.

With its unique system approach smtag provides an easy to implement set of products, which reduces the time for implementation dramatically.

System integrators of industrial, medical and corporate solutions gets high quality products, which offers a max. return on investment.

FSK-C product line increase efficiency and quality

To learn more about how the FSK-C product family can increase profitability for business, contact one of smtag's business partner

Partner Network

Partner
Company
Details

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v.1.5 (10/05)

Specification RC550X

Compatibility Performance

Data rate ¹	TM, TC family
UID receive rate – ID only 2 Bytes @ 19'200 Baud rate	2.4 to 19.2 Kbs (programmable)
UID receive rate –128 bit data packets @ 57'600 Baud rate (UID + data)	Up to 5'000 UID's per second
Stability/Filter (Data Integrity)	Up to 1'000 UID's per second
	8 or 16 bit CRC

Communication

Base Frequency	868MHz (EC) or 915MHz (US) ISM Band (factory preset)
Modulation	FSK
Base Band Width	67 to 405 KHz
Sensitivity ¹	- 61 to 103 dBm
Channel	4096 per base frequency
Frequency/Channel hopping	Programmable
Number of antennas	1
Certification	EN 300 220 (EC); FCC part 15 (US)

Micro controller

Flash Memory	7 Kb
Data RAM	64 Bytes
External EEPROM	256 Kb (data logging)

Electrical

Powering	5 volts DC power supply 4 AAA batteries mounted on the inside (optional)
Voltage	5 volts regulated
Power consumption	
Active:	25 mA max. (during RF transmit operations)
Idle:	1.5 mA
Stand by:	2 uA

Environmental

Operating temperature	-40°C to +85°C / -40°F to +185°F
Storage temperature	-40°C to +85°C / -40°F to +185°F
Humidity	5% to 90% (non condensing)

Physical

Dimensions	87 x 153 x 55 mm
Weight	150 grams
Colour	Grey
Type of material	ABS

¹ in the course of Q1/06 a PC based configuration application will be downloadable from "www.smtag.com"