# ITGsr-061, time attendance registration and access control terminal

Typical applications:

- time of attendance registration
- access control (doors, barriers and ramps, locker controller)

ITGsr-061 terminal device's basic characteristics are:

- custom developed and fully adaptable firmware
- bootstrap loader (remote firmware update over LAN)
- based on 32-bit processor, Cortex M3
- interrogates all ISO 14443A compliant transponders, including DESFire EV1 with AES crypto algorithm
- 1MB Flash RAM for storing up to 24000 events (optional: 2 Mb Flash RAM, 100000 events and 45000 cards)
- Real-time clock
- 4 digital inputs
- 4 digital outputs (for controlling electrical lock, barrier or ramp) and 6 outputs for sound and light signalization (LED, piezo buzzer)
- Optional: external IP video camera
- 10/100 Mbps TCP/IP, optional RS232C, RS485 or GSM/GPRS;
- Up to two external antennae (readers), with sound and light (LED) indicators;
- Operating in extended (-20°C to +85°C) temperature range;
- Power over Ethernet (PoE), optional external AC/DC adapter
- Casing to suit the needs of the user

## ITGant-6 external antenna (reader)

Reader is embedded in stainless steel pole (INOX). Functional characteristics are identical to ITGant-7.

Designed to operate in the extended temperature range (-25 to +70 ° C).

## ITGant-7 external antenna (reader)

Antenna's reading range is up to 10 cm. The external antenna is connected to the terminal using RG-174 coax cable. Antenna has its own 8-bit microprocessor and is equipped with a sound and light indicators. Communications between terminal and reader is over single coax cable (power supply to antenna, RF communication between reader and MFRC controller, inter processor communication). Reader's dimensions in the case of in-door installation: 110x30 mm. Reader's dimensions in the case of out-door installation: 85x85 mm. ITGsr-061 terminal sets up real-time clock in antenna, using it's own clock, set by server system.

Designed to operate in the extended temperature range (-25 to +70 ° C).

## ITGant-8 external antenna (reader)

Functional characteristics equivalent to ITGant-7. ITGant-8 reader is packed in standard industrial housing 45x45 mm. Frame is chosen in accordance with architectural and aesthetic requirements of interior designers. Designed to operate in the extended temperature range (-25 to +70 ° C).

## ITGant-91 external antenna (reader)

Functional tasters are realized with touch-screen monitor (diagonal of 10.9 cm). Screen content tailored to specific user requirements. RFID functionality is identical to other readers. Basic Touch screeen features:

resolution 480x272

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- diagonal 10.9 cm (4.3")
- active area 95x53.9mm
- 65K colours
- Temperature range -30 °C do +70°C

## Identification card (transponder)

The system uses ID cards (transponders) that are ISO 14443A compliant. The transponder and the reader communicate at 13.56 MHz.

## **MIFARE®** card's physical characteristics

Depend on specific application. Other forms are possible (such as: keychain, wristwatch etc.). It is possible to print different information on ID card, such as logo, owner name, identification number of workers, card's owner photo, etc.

## Extensions

The functionality of the terminal may be expanded by connecting additional modules, for example. I/O module for connecting external devices for access controls (exit buttons, intercom, alarm control panels).

Furthermore, by attaching additional HITAG module (Fig. 7 and Fig. 8) and the corresponding HITAG readers (antennas) ITGsr-061 can simultaneously identify HITAG transponders (automatically detects HITAG -1, HITAG -2 and HITAG -S) and ISO14443A transponders. This is intended for users of the old systems based on HITAG technology.

By adding I/O modules (Fig. 10), the functionality of the terminal, with the addition of electronic locks (Fig. 9), extends to the control of lockers.



Fig.1 Terminal ITGsr-061 in plastic case





Fig.2 External antenna ITGant-6

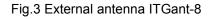




Fig. 4 External antenna ITGant-91 (touch screen: pin code entry or functional keyboard, define when ordering)



Fig. 6 External antenna ITGant-91 (touch screen: pin code entry or functional keyboard, define when ordering)



Fig. 7 HITAG "piggy-back" module

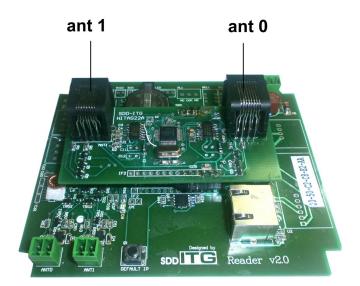


Fig. 8 HITAG "piggy-back" module mounted on the basic terminal ITGsr-061

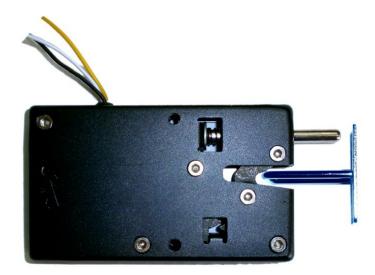
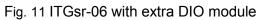


Fig. 9 Electronic lock



Fig. 10 ITGsr-061 with two I/O controll modules for up to 32 electronic locks





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