Thinkify, LLC
Product Brief – TR-200

The Insight^{tm} TR-200 Gen2 Desktop Reader

Product Overview

The Insight^{tm} TR-200 Gen2 Desktop Reader

For desktop and office applications, a full-blown enterprise-class RFID reader is often a poor fit. Expensive, bulky and hard to use, these devices are a clumsy solution outside of a portal. Unfortunately, this class of device has been the only option for people trying to take advantage of RFID in "non-supply chain" applications.

That's changed with The TR-200 – an easy to use, integrated Gen2 RFID reader/writer designed specifically for this environment. With its small, elegant form factor, its ability to be powered by USB and a powerful software interface, the TR-200 is a simple and flexible answer to the problem of bringing Gen2 RFID to the desktop.

Software provided gets you up and running quickly, reading and programming tags. A powerful API shields you from the details of the low level communication interface while allowing you to focus on the task at hand.

A software keyboard wedge also allows tags to be automatically entered into other MS Windows applications with zero programming.

Target Applications

- File / Document Tracking
- Tag Commissioning / Programming
- Point-of-Sale
- Library Check in / Check out
- Asset Tracking / Monitoring

Features

Small Size

Measuring just ~5.5" x 4" x 1.3" (14 cm x 10.2 cm x 3.3 cm) the TR-200 consumes very little space on the desktop.

Instant On

The TR-200 is ready to accept commands in less than a second from power up, eliminating the lengthy boot cycles of some other readers.

Low Power Consumption

An efficient RF amplifier scheme allows the TR-200 run off of USB power while still having excellent read range. This efficient RF design allows the unit to run much cooler than other designs, improving the product's lifetime and eliminating the need for expensive heat sinks.

High Performance

- Best-in-class read performance with up to 190 tags-per-second read rate.
- 0.3 Watts power output for longer range applications. 1.5 Meters with supplied low gain antenna. > 3M with a 6 dBi gain antenna
- Highly sensitive receiver architecture.
- Dense Reader Mode receiver filtering for good performance in multi-reader environments.
- Extremely low current use.

Designed for Global Operation

The *Insight^{tm}*s frequency range spans US, China and EU bands allowing you to use just one reader in deployments across the enterprise.

Developer-Friendly

The insight was designed with developers in mind. It features a simple and powerful control protocol and well-documented APIs in several languages-- Java, Ruby, and C#. Units can be configured for autonomous operation; providing data only on external trigger conditions. The API supports device configuration, tag reading and programming (including extended memory areas).

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Technical Specifications

Frequency	860~960MHz (Depends on regulatory region)
Physical	Width: 10.2 cm, Length: 14 cm, Height: 3.3 cm, Weight: 120 g
Regulatory Compliance	FCC 15.247, RoHS
RFID Protocols	ISO-18000-6C (EPC Class 1/ Gen2)
Tag Compatibility	Works with all Gen2-compliant (ISO-18000-6C) RFID chips. Verified with Alien, Avery Dennison, Impinj, TI, UPM Raflatac
Read Rate	Up to 190 tps (50 tps typical)
Read Range	Approx. 3m with 6 dBi linearly polarized antenna Approx 1.5m with supplied 2 dBi linear antenna
Antenna Connection	One (1) 50 Ohm port, SMA connector
RF Power Output	15 to >27 dBm adjustable in 1 dB steps
Host Connections	USB 2.0 RS232 (Internal)
GPIO	(TTL Level) 2 inputs, 2 outputs (Internal) or 1 input, 2 outputs with optional, integrated proximity sensor
Supply Voltage	External 5V Input (Optional) or USB Connection
Power consumption	Standby at 400 uA,Max of 400 mA
LEDs	Power, Tag Sense, Tag Read, Fault, User1, User2 LEDs can be controlled by User Applications as well.
Software SDK	C#, JAVA, RUBY

Developer's Kit Includes

Everything you need to start reading tags within minutes of opening the box

- USB cable
- Software driver
- Easy-to-use demonstration software
- SDK with sample code
- Product documentation (On CD)

About Thinkify

Thinkify is a privately-held technology company in Morgan Hill, California that is enabling common objects, devices and whole environments to become aware of their contents using RFID.

We specialize in embedded RFID applications.

Thinkify – Making things think.[tm]

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