

Wireless Tag Reader

TR-434-A intelligent, networked UHF Tag Reader, part of Pultronics Wireless Temperature Monitoring System is built for fixed position sensing in temperature controlled environment (refrigerators, server rooms, laboratories, warehouses) and/or to monitor assets moving through a supply chain. It provides highly accurate, real-time sensor-to-database data collection without human intervention in multiple wireless applications such as:

- identification
- tracking and tracing
- localization
- **temperature monitoring**

The TR-434-A is designed for scalable, streamlined, 'plug-and-play' and easy-to-manage data collection system with reliable performance even in noisy RF environment, with simplified centralized remote management and a low cost of ownership.

Powerful remote monitoring and management software tools reduce ongoing costs of ownership while robust physical design ensures reliable, low-maintenance operation in demanding environments.

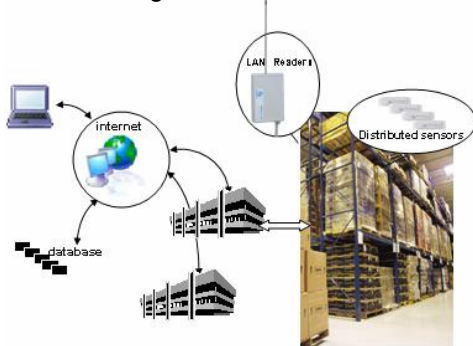


Figure 1 Internet based remote temperature monitoring

Technical Specifications

Parameter	Value
Wireless Performance	
Type	Wireless
Operating frequency	433.92 MHz, ISM Band
Reading range	100 m outdoors
Antenna	Integrated
Read rate	Over 50 tag/s
Connectivity	
Network	10/100 BaseT Ethernet – RJ45
Visual Indicators	Status PWR - power (green), TAG - Tag message received (red), RNG - device in short range (green), 100 - 100 BaseT Ethernet (red), LNK - Ethernet connected (green), USB - USB port active (red)
Internet protocols	TCP/IP, UDP, HTTP (optional)
Optional external interfaces	Optional USB - Mini-B USB connector, Optional RS232 - mini-DIN 8, Optional miniSD card slot, Optional power jack 2.5mm DIN (9 to 24V)
Electrical	
Power supply	PoE 9 to 24 V (Power over Ethernet)
Temperature	Operating temperature -20 to +60 °C
Dimensions	111.25 x 75 x 25.2mm
Package	Plastic, ABS
Other features	
IP addressing	Static and dynamic
Firmware upgrade	Web based, remote firmware upgrade
Real time clock	Clock synchronized through the network
Memory buffer	4 Mb flash memory
Certifications and compliance	FCC part 15.231(b), (c) FCC part 15.231(b), (e) FCC part 15.205 & 15.209 IC RSS-210 Issue 5, Part 6 IC RSS-102 EN 300 220-2 2000 EN 300 489-3 2000 EN61000-6-4 EN55022 EN55024



Figure 2 Sensor Tag and Reader devices

Using an advanced UHF radio frequency technology, Tag Reader receives SensorTag data from distances of up to 100 meters (300 feet). The RF transmission does not require a line-of-sight, data can be received through walls or other obstacles. Due to highly sophisticated anti-collision and anti-aliasing algorithms, system can simultaneously handle over 16 millions uniquely identifiable sensors.

Pultronics System operates continuously without human intervention. The measured data is documented and reports are generated. The appropriate alarms are sent if predefined temperature range was exceeded. Pultronics software package enables users to achieve high-speed acquisition of real-time data from world-wide locations.

Applications

- Remote temperature monitoring, real-time and history of temperature profiles inside refrigeration equipment, cold-room, containers, laboratory, server rooms, warehouse, or other facilities
- Temperature monitoring and temperature related alarms without human intervention
- Fixed position or portable monitoring solutions

About Pultronics

With over 10 years of experience Pultronics is a proven expert in the micro-transmitter system design including design of ASICs (Application Specific Integrated Circuit) resulting in smallest existing active tags.

Contact Pultronics

phone (514) 341-7001 or toll-free 1-877-997-7007, visit www.pultronics.com, or e-mail: support@pultronics.com

Benefits

Features	Benefits
Read range 100m (outdoors)	Allows automated measurements without human intervention. Antennas can be placed far from Sensor Tags, where the internet access is already available. In most locations Antenna does not require electrician to install.
Operating frequency, 433.92 MHz, ISM (Industrial Medical and Scientific) Band	Allows low-power, long range and high data rate with minimal interference from other instruments
Maximum number of unique transmitters, 16 mln	Allows a world wide deployment
Read rate 50 tag/s	Allows high throughput and reliable identification of fast moving-objects
IP addressable, configured through the software	Can be instantaneously installed and setup through the software. Does not require electrician to install. Allows modular 'plug-and-play' increments to the existing system. Allows firmware upgrade through the software.
Sensor to database technology	Temperature versus time profiles available for each sensor. Software definable low and high temperature limits. When temperature exceeds high or low limits, System can automatically generate and send alarms to a person in charge.
Flash memory buffer	The collected data is preserved in the occurrence of a power failure or unavailable connection to a server.
Real time clock	Time and location are added for each data record
Optional communication interfaces	The ability to incorporate audible or visual alarms, light sensors and other automated equipment enables a wide range of applications

