



A Fluke Company

# Tpaq21 Radio Telemetry System

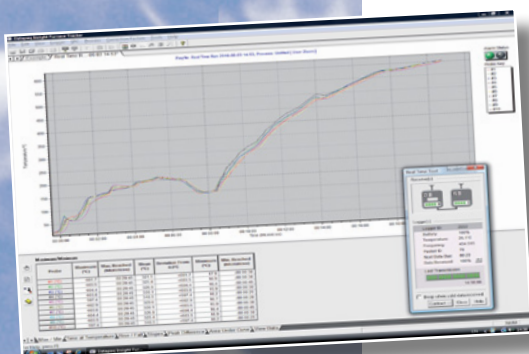
*Live real-time temperature data direct  
from your thermal process*



The Datapaq® Tpaq21 radio telemetry system utilizes the latest radio-frequency technology to allow data transmission from the data logger in real time. As the Datapaq system travels through the process, product and process temperature data can be viewed, analyzed and reported instantaneously. This technology can be applied to monitoring key thermal processes in most industrial heating applications.

## SYSTEM FEATURES

- System can be tailored to meet your specific process requirements
  - Batch Process(es) – Simple primary receiver kit
  - Demanding Conveyorized Processes – Primary receiver complemented with add-on modular secondary receivers
- Automatic frequency selection from software, minimizing interference and maximizing signal quality
- Intelligent listen-before-transmit feature enables the system to operate with multiple loggers on the same transmitting frequency and data collection with one installation of Datapaq Insight™ software
- Receivers connected in series with low-loss RS485 digital communications bus, maximizing data reception
- Comprehensive on screen real time system diagnostics reporting signal status for each transmitting logger and receiver
- Transmission performance optimized for high-temperature operation with internal self-calibration routines
- Ultra low power consumption extends battery life and operating life
- In-logger data storage backs up transmitted data ensuring integrity of data



## FEATURES AND BENEFITS

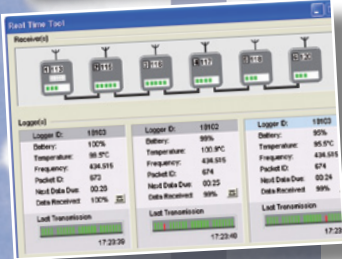
**Rapid QA** – Know that your product has been thermally processed to specification before the Datapaq system has even exited the process.

**Improve the productivity of any batch process** – Know when critical product temperature has been achieved and allow the process to be completed or moved on to the next phase. Optimize cycle times with confidence.

**Rapid fault-finding** – See immediately when process problems are being experienced without having to wait until the completion of the process. Allow corrective action earlier, saving time and reducing possible scrap.

**Improve efficiency of process optimization** – Use live data to view the effect of any process-parameter changes on the temperature profile instantly.

# TECHNICAL SPECIFICATIONS



## TM21 Transmitter (TX1401)

Transmitter fitted inside data logger

### Tpaq21 logger range

10 Channel, Type K, N, R, S, B,  
70°C & 110°C (158°F to 230°F) Operation

### Frequency ranges\*

Europe/China	434.065-434.740 MHz
USA/Canada	463.525-463.975 MHz
Japan	429.275-429.725 MHz

\* Contact Datapaq for frequency ranges for other approved countries

### Operating Temperature Range

-20°C to 110°C (-4°F to 230°F)

### Transmission Range

200 m (656 ft) "in open field conditions"

### Max Number of

#### Transmitters per System

6

#### Sampling Interval Range

1 sec to 10 min

#### Interleaving Limits

10

### Approvals\*

EU CEPT/ERC/70-03E	Canada RSS-119
USA FCC CFR 47 Part 90	Taiwan NCC-LP0002
Japan ARIB STD-T67	China CMIT-2010DJ5117

\* Contact Datapaq for frequency ranges for other approved countries

## TM21 Primary Receiver (Euro RX4200, USA RX4100, Rest of World RX4000)\*\*

Primary Receiver with integral USB comms to PC. Powered by CH0070. Equipped with Type N RF connector.

### Dimensions (H x W x L)

44 x 139 x 98 mm

### Frequency

To match transmitter

### Antenna

Desk Top 15 cm

### Operating Temperature

0°C to 50°C

### Status display

2 line 16 character backlit LCD

## TM21 Secondary Receiver (Euro RX4201, USA RX4101, Rest of World RX4001)\*\*

Secondary receiver connected in series to the TM21 primary receiver with RS485 communication cable (10 to 100 m / 32 to 328 ft).

### Dimensions (H x W x L)

44 x 139 x 98 mm

### Frequency

To match transmitter

### Antenna

Unity gain end feed with type N connector

### Operating Temperature

0°C to 50°C

### Status display

single power and status LED

### Maximum quantity

Max 6 secondary connected to 1 primary receiver

\*\* Update: Approvals now obtained for use in Thailand and Mexico. Please contact us for details.

## Insight Software

- Automatic intelligent frequency selection and set-up
- Real time tool detailing quality of data transmission for each logger / receiver and system status information
- Live real-time analysis of process data and review against process set-up (zones, temperature set-points, overlays)
- Event markers log events at the precise point they happen on the profile
- Automatic data-saving to PC during run to guarantee data protection

## The Worldwide Leader in Temperature Profiling



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