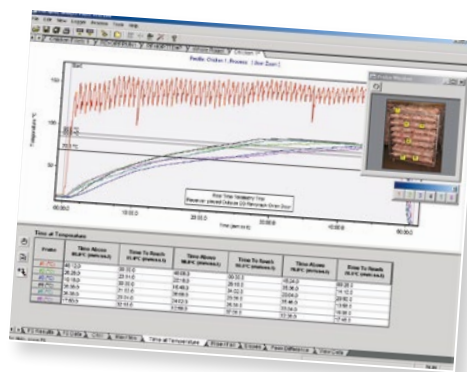# Food Tracker®
RF Telemetry System

REAL-TIME OVEN MONITORING

The Datapaq® Food Tracker® Telemetry System consists of the MultiPaq21 TM Data Logger/TM21 RF Transmitter protected by a specially designed thermal barrier, thermocouples, Insight™ Software, and antenna/receiver. The MultiPaq21, encased in a thermal barrier, rides on the conveyor belt and collects temperature data from various locations of the product during the cooking process.

Seeing temperature data live means you can detect problems in the cook cycle immediately.

For batch or rotating batch processes, it is possible to see immediately when a safe cook is achieved. This allows the cook cycle to be customized, improving productivity and yield. Data analysis and alarms can be set to confirm that target CCp's (maximum temperature, time at temperature, °C/°F) have been achieved.

Food Tracker® Insight™ software displays live temperature data transmitted from the product in the oven to your PC screen.

IMMEDIATE PROBLEM SOLVING:

* See immediately when safe cook is achieved
* Receive instant access to temperature data for immediate problem solving
* Test the effects of changes to oven settings during the cook process
* Compare actual food product temperatures to specifications during the process to improve productivity and yield
* Adjust temperature settings safely to save on fuel costs
* Ideal for setting up temperature profiles for new food products

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 collect all data with one installation of Datapaq Insight™ software
* Receivers connected in series with low-loss RS485 digital communications bus, maximizing signal strength
* Comprehensive on screen, real-time system diagnostics reports signal status for each transmitting logger and receiver
* Transmission performance optimized for high-temperature operation with internal self-calibration routines
* Radio system has full approval to geographical regulations (in EU, CAN, and USA)
* Ultra low power consumption extends battery life and operating life
* In-logger data storage backs up transmitted data, ensuring integrity of data
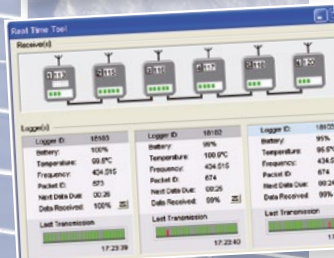
TM21 Transmitter (TX1401)

Transmitter fitted inside data logger

Multipaq21 logger range	DP2182TM, DP2186TM (8 Channel Type K & T)
Frequency ranges*	Euro 434.065-434.740 MHz
	USA 463.525-463.975 MHz
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
	USA-FCC CFR 47 Part 90

* Contact Datapaq for frequency ranges for other countries

MultiPaq21 TM21 Transmitting Antenna (TX2071)

PTFE flexible coaxial cable. Maximum operating temperature 265°C (509°F) fitted with reflecting ground plate.

TM21 Primary Receiver (Euro RX4200, USA RX4100)

Primary Receiver with integral USB comms to PC. Powered by CH0070. Requires TM0160 RS485 terminator, if used in isolation. Operates with helical-coil receiver antenna RX1010.

Dimensions (H x W x L)	44 x 139 x 98 mm (1.7 x 5.5 x 3.9 in)
Frequencies – To match transmitter	
Operating Temperature Range	0°C to 50°C (32°F to 122°F)
2-line 16-character status LCD	
On board status LED	

TM21 Secondary Receiver (Euro RX4201, USA RX4101)

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

Employs UGEF unity-gain end-feed antenna (RX1023 / RX1024)	
Dimensions (H x W x L)	44 x 139 x 98 mm (1.7 x 5.5 x 3.9 in)
Operating Specification as TM21 primary receiver (see above)	
Maximum number of secondary receivers in one system	9
On board status LED	
Receiver Antenna Stand RX1020	

Adjustable antenna stand used to support both UGEF antenna and receiver unit.

UGEF Antenna and Receiver Box Mounting Kit RX2502

Comprises receiver box mounting assembly RX2501 & RX2500 UGEF antenna mount bracket.

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

Fluke Process Instruments