# MADGETECH
## WE BUILD DATA LOGGERS
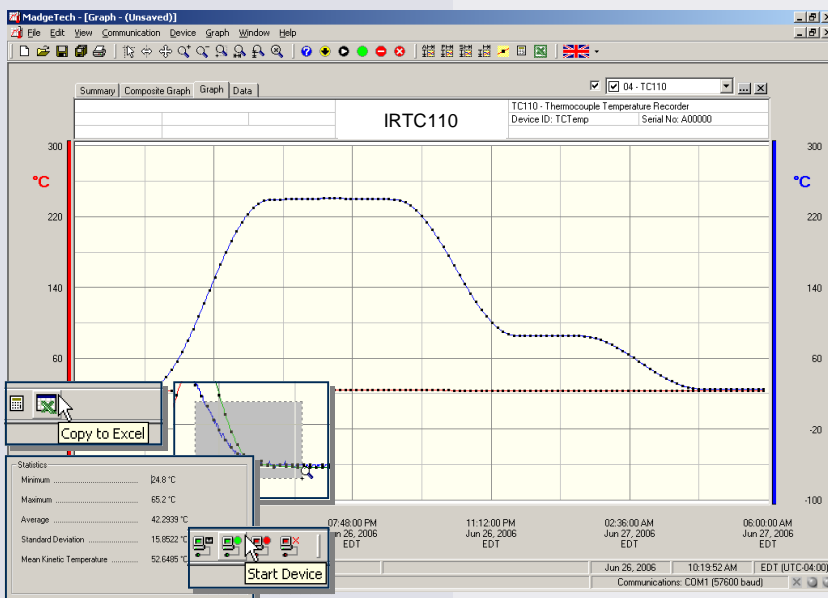
# IRTC110
## INFRARED THERMOCOUPLE DATA LOGGER

## Features

- 10 year battery life
- Wide temperature range
- Uses thermocouple type K (contact sales for other types)
- High speed download
- N.I.S.T. traceable
- Real-time operation
- Low cost
- Programmable start time
- Miniature size

## Applications

- Non-contact temperature monitoring
- Flow monitoring
- Surface Temperature
- Process verification and validation
- Remote areas
- Moving Objects
- Long distance temperature measurement
- Heavy Equipment

The IRTC110 is a miniature, battery powered, stand alone, infrared thermocouple based temperature recorder, for nearly instantaneous, non-contact, temperature measurements. The IRTC110 features a real-time clock module that extends the battery life to >10 years and allows for high speed downloads. This is an all-in-one compact, portable, easy to use device that will measure and record up to 16,383 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer and its small size allows it to fit almost anywhere. The IRTC110 makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.

**MadgeTech Data Recorder Software** displays temperature data in an easy to use graph.

The Windows®-based software package allows the user to effortlessly collect, display and analyze data. A variety of powerful tools allow you to examine, export, and print professional looking data with just a click of the mouse.

Click MadgeTech Software for more information or to download the software.

# IRTC110 SPECIFICATIONS*

| | |
|---|---|
| **Internal Channel Temperature Range:** | -40 to +80°C |
| **Temperature Resolution:** | 0.1°C |
| **Logger Calibrated Accuracy:** | ±0.5°C (0 to +50°C) |
| **Remote Channel** | |
| **Thermocouple Type:** | K (Infrared, contact sales for other types) |
| **Thermocouple connection:** | Female subminiature (SMP) |
| **Cold Junction Compensation:** | Automatic, based on internal channel |
| **Maximum Thermocouple Resistance:** | 3000Ω |

| Thermocouple Type: | Range (°C) | Sensor |
|---|---|---|
| K | *Contact for available ranges.* | ±2.0°C |

| | |
|---|---|
| **Field of View:** | 60° (1:1) |
| **Minimum Spot Size:** | 8 mm (0.3") |
| **Spectral Response:** | 6.5 to 14 microns |

| | |
|---|---|
| **Start Modes:** | Software programmable immediate start or delay start up to six months in advance |
| **Real Time Recording:** | May be used with PC to monitor and record data in real time |
| **Memory:** | 16,383 readings per channel for a total of 32,766 readings; software configurable memory wrap |
| **Reading Rate:** | 1 reading every 2 seconds to 1 every 12 hours |
| **Calibration:** | Digital calibration through software |
| **Calibration Date:** | Automatically recorded within device |
| **Battery Type:** | 3.6V lithium battery included, **user replaceable** |
| **Battery Life** | 10 years (15 minute reading rate at 25°C) |
| **Data Format:** | Date and time stamped °C, °F, K, °R |
| **Time Accuracy:** | ±1 minute/month (at 20 to 30°C) |
| **Computer Interface:** | PC serial or USB (interface cable required); 57,600 baud |
| **Software:** | Windows 95/98/ME/NT/2000/XP/Vista based software |
| **Operating Environment:** | -17 to 70°C (1 to 158°F) |
| **Dimensions:** | 1.7" x 2.3" x 0.8" (44mm x 59mm x 21mm) |
| **Data Logger Probe Dimensions:** | 3.25" L x 1.80 cm Dia. (1.28 x 0.71"); 0.9 m (36") PFA coated unshielded stranded wire |
| **Weight:** | 2.1 oz (60 g) |

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE,DISASSEMBLE, HEAT ABOVE 212°F, INCINERATE OR EXPOSE CONTENTS TO WATER

## SOFTWARE FEATURES

| | |
|---|---|
| **Multiple Graphs:** | Simultaneously analyze data from several units or deployments; easily switch to a single data series |
| **Graphical Cursor:** | One click displays readings by time, value, parameter or sample number |
| **Data Table:** | Instantly access tabular view for detailed dates, times, values, and annotations |
| **Scaling Options:** | Autoscale function fits data to the screen, or allows user to manually enter their own values |
| **Formatting Options:** | Change colors, line styles, plotting options, show or hide channels quickly |
| **Statistics:** | Calculate averages, min, max, standard deviation, and mean kinetic temperature with the touch of a button |
| **Export Data:** | Export data in a variety of common formats, or switch to Excel® with a single click |
| **Calibration:** | Automatically calculate and store calibration parameters |
| **Logger Configuration:** | Easy set up and launch of data loggers with immediate or delayed start, preferred sample rate, and device ID |
| **Communications:** | Automatically sets up communications port, or lets user select configuration |

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY AND REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

## ORDERING INFORMATION

| Model | Description | Price (U.S.) |
|---|---|---|
| IRTC110 | Thermocouple Recorder with infrared thermocouple. | $399.00 |
| IFC110 | Software, manual and RS232 interface cable | $99.00 |
| IFC200 | Software, manual and USB interface cable | $119.00 |
| NIST | N.I.S.T. Calibration Certificate | Call for Pricing |
| LTC-7PN | Replacement battery for IRTC110. | $10.00 |

For Quantity Discounts call 603-456-2011 or email sales@madgetech.com

### ASK ABOUT OUR OTHER DATA RECORDERS

| | |
|---|---|
| Temperature | Pulse/Event/State |
| Humidity | Low Level Current |
| Pressure | Low Level Voltage |
| pH | RF Transmitters |
| Level | Intrinsically Safe |
| Shock | Spectral Vibration |
| LCD Display | |

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