

NEWPORT® Temperature + Humidity

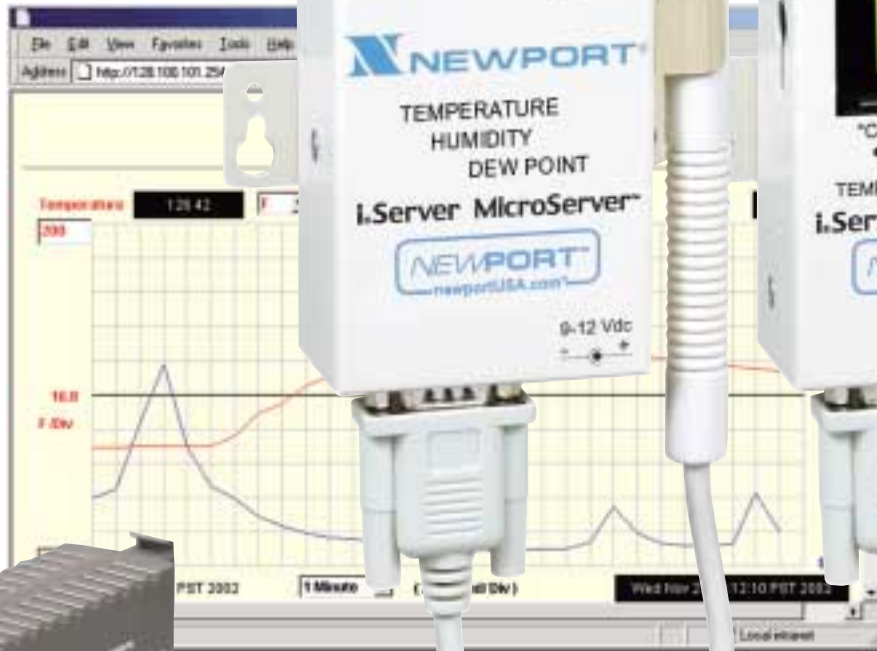
iServer MicroServer™

- ✓ Virtual Chart Recorder
- ✓ Web Server
- ✓ Accurate Readings
- ✓ Email Alarms
- ✓ Data Logging
- ✓ No Special Software Required

iTHX



FCC-B



View Temperature + Humidity with a Web Browser

The NEWPORT® iTHX transmitter let's you monitor and record Temperature, Relative Humidity and Dew Point over an Ethernet network or the Internet with no special software except a Web Browser.

The NEWPORT iTHX serves Active Web Pages to display real time readings, display charts of temperature and humidity, or log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the NEWPORT iTHX, there is no need to invest time and money learning a proprietary software program to log or chart the data.



\$295
iTHX-2



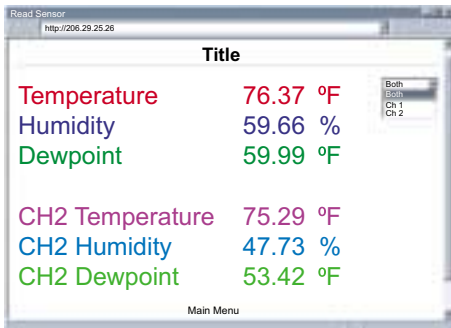
Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span (0-70°C, and 0-100% RH) or within any narrow range such as (20-30°C). When a second sensor is added, users can select a chart that records channel 1, channel 2 or the difference of the two channels.

Display and Chart Two Channels (models iTHX-W and iTHX-2 only)

The iTHX transmitters come complete with a temperature and humidity probe for measurement of a single location. With the addition of a second probe, the iTHX transmitter can measure and display temperature, humidity and dew point in a second location up to twenty feet away.

The transmitter can display and chart absolute measurements in both locations, or a differential measurement between the two locations. The second probe requires no change to the basic iTHX transmitter hardware, firmware or software.



Reading Sensor Web Page

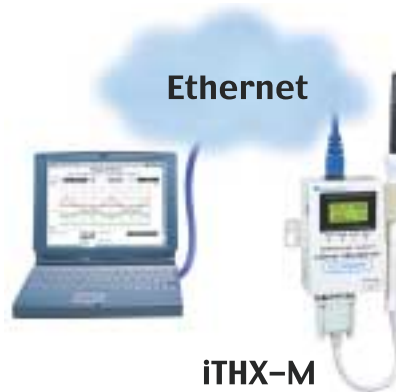
A second probe can be added at the time of purchase or in the future. NEWPORT offers a choice of industrial probes in 2" and 5" lengths, and a wand style for ambient indoor applications. A simple DB-9 "Y" connector is available for adding a second probe to model iTHX-W. No connector is required to add a second probe to the DIN rail mounted iTHX-2.

Dual channel measurement is available on model iTHX-W and iTHX-2 only; it is not available on model iTHX-M.

Award-winning Technology

The NEWPORT iTHX is simple to install and use, and features NEWPORT's award-winning iServer technology that requires no special software except a Web Browser.

The iTHX connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a Web Browser and can be password protected.



View Temperature + Humidity over the Ethernet or Internet

From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom 5" or "Midwest Server Room" in any Web Browser, and the iTHX serves a Web Page with the current readings.

Typical Applications

The NEWPORT iTHX is great for monitoring temperature + humidity in applications such as: clean rooms, computer rooms, HVAC systems, pharmaceutical and food processing and storage, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, museums, manufacturing, greenhouses, farm animal shelters, and many more.

Industrial Probes: THP-5, iTHP-2



NEW iTHX-M with Flash Memory and LCD Display

The NEWPORT model iTHX-M with LCD display, adds several valuable features in addition to the backlit local display of temperature and humidity.

The "Memory" model comes complete with a removable 2 Megabyte Flash Memory card that can store one full year of readings taken at one minute intervals (or two months of readings taken at ten second intervals).

Up to four years of temperature + humidity readings can be stored on the 8 Megabyte card.

With data being recorded in the built-in nonvolatile flash memory, a failure on the Ethernet network will not interrupt the data record.

Alarm Relays

The NEWPORT iTHX-M features two 1.5 Amp relays. With the easy Web-based setup page, the two relays can be programmed for any combination of temperature or humidity, and high or low set points. The relays can also be programmed to remain latched and require a manual reset if a limit is exceeded.

Email Alarms

In addition to the mechanical alarm relays, all NEWPORT iTHX models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including an Internet enabled pager or cell phone.

Battery Backup

The iTHX-M comes with an ac adapter. A standard 9 Volt Alkaline battery (also included) allows the device to log data for up to 10 days without external ac power. In locations without power or network accessibility, the iTHX-M continues logging data to its flash memory. The stored data can later be downloaded over the Ethernet.

NEWPORT iServer products are designed and manufactured in Santa Ana, California.

NIST Traceable Calibration Certificate available.
In compliance with ISO9001:2000, ISO10012-1, 1992(E), ANSI/NCSL Z540-1, 1994 and MIL-STD-45662A.

Temperature + Humidity



Sensor Specifications

Relative Humidity (RH)

Accuracy/Range: $\pm 2\%$ for 10 to 90%
 $\pm 3\%$ for 0 to 10% and 90 to 100%

Non-linearity: $\pm 3\%$

Response Time: 4 seconds
(63% slowly moving air)

Repeatability: $\pm 0.1\%$

Resolution: 0.03%, 12 bit

Temperature (T)

Accuracy*: $\pm 0.5^\circ\text{C}$

Range*: 0°C to 70°C (32°F to 158°F)

*Extended temp accuracy / range when 3 ft (or longer) cable is used:
 $\pm 0.5^\circ\text{C}$ ($\pm 1^\circ\text{F}$) for 0 to 80°C (32 to 176°F).
 $\pm 1^\circ\text{C}$ ($\pm 2^\circ\text{F}$) for -40 to 0°C and 80 to 124°C (-40 to 32°F and 176 to 254°F)

Note: extended temperature range is for probe only, the iServer's operating temperature is 0 - 70°C .

Response Time: 5 seconds
(63% slowly moving air)

Repeatability: $\pm 0.1^\circ\text{C}$

Resolution: 0.01°C , 14bit

Probe Physical Dimensions

Wand Probe iTHX-W, iTHX-M:
 $\varnothing 19.1\text{mm}$ x 198.1mm ($0.75''$ x $7.8''$)

Industrial Probe iTHX-2:
 $\varnothing 16\text{mm}$ x 137mm ($0.63''$ x $5''$)

iServer Specifications

Interfaces

Ethernet: 10Base-T (RJ45)

Sensor: Digital 4-wire (DB-9) for iTHX-W, iTHX-M
(8 pos. screw terminal) for iTHX-2

Supported Protocols

TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet

Indicators (LED's)

Network Activity, Network Link, Transmit and Receive/Diagnostics

LCD Display

16 Digits 6mm ($0.23''$) for iTHX-M

Memory

512 Kbytes Flash, 16 Kbytes SRAM

Memory Data Flash Card

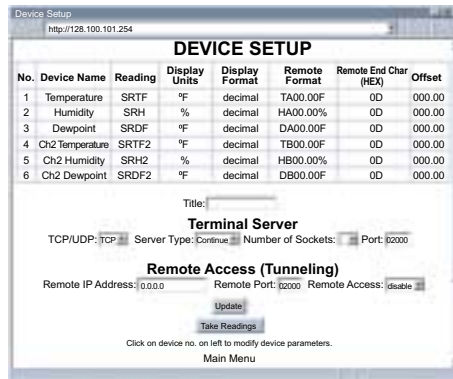
2 M bytes: 2 months of data storage at 10 second logging intervals or 1 year at 1 minute intervals for iTHX-M

Relay Outputs

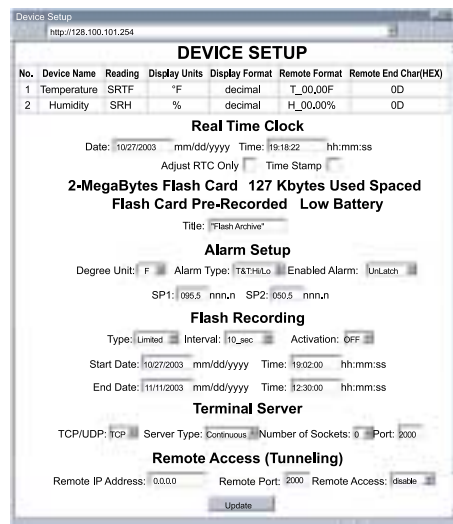
Two Relays 1.5A @ 30 Vdc iTHX-M

Management

Device configuration and monitoring through embedded WEB server.



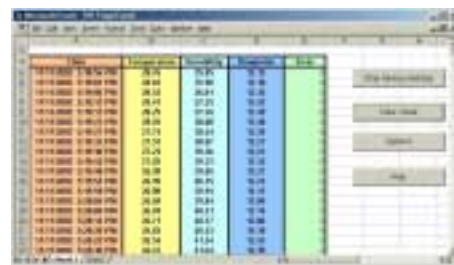
iTHX-W and iTHX-2
Device Configuration Web Page



iTHX-M Device Configuration
Web Page

Software

Firmware upgradeable. Including an Excel program for automatic data logging within definable time intervals, compatible with all Windows operating systems.



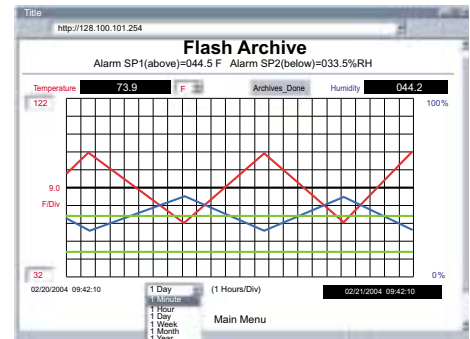
iTHX Datalogging Spreadsheet

Embedded WEB Server

Serves WEB pages containing real-time data and live updated charts within definable time intervals.



iTHX-W and iTHX-2
Adjustable Chart Web Page



iTHX-M Adjustable Chart
Web Page with Set Points

Power

Input: 9-12 Vdc iTHX-W, iTHX-M
10-32 Vdc iTHX-2

Safety Qualified ac power adapter:
Nominal Output: 9 Vdc @ 0.5A
included for iTHX-W, iTHX-M

Switching Power Supply sold separately for iTHX-2

Consumption: 2.5 W max.

Battery: 9Vdc, Alkaline iTHX-M

Environmental

Operating Temperature:
 0 to 70°C (32 to 158°F)

Storage Temperature:
 -40 to 125°C (-40 to 257°F)

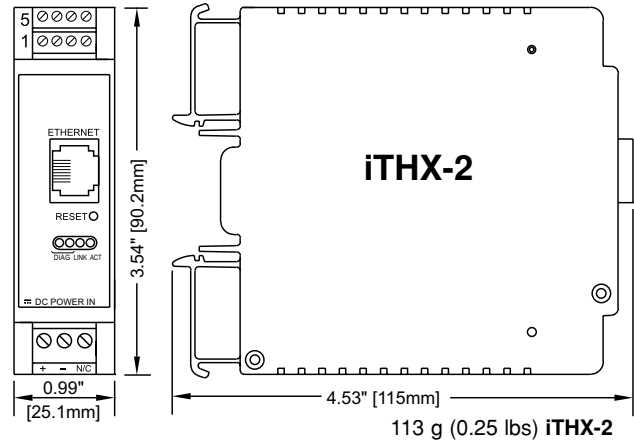
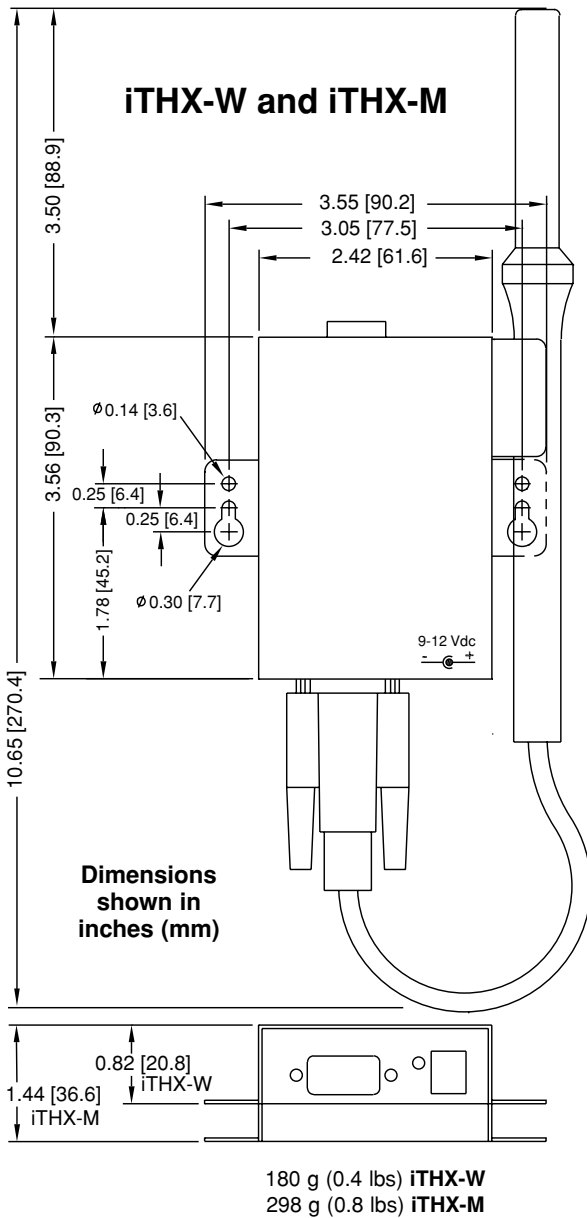
Packaging

Material: Metal case with flange mount for iTHX-W, iTHX-M.

Polycarbonate case with DIN Rail mount for iTHX-2

Dimensions: Refer to Mechanical Specifications page.

Mechanical Specifications



iDRN-PS-1000

- 24Vdc Supply
- Switching Power Supply powers up to 7 units

Mounts to 35mm DIN rails

Model No.	Description	Price
iTHX-2	iServer MicroServer™ for Temperature + Humidity and Dew Point. Two Channel Capability.	295
	* Standard Industrial Probe 5" (137mm), Cable 20ft (6.1m), Stripped Wire Leads. No Entry Required.	N/C
	-2 Industrial Probe 2" (51mm), Cable 3 ft (0.9 m) with Stripped Wire Leads. Substitution for 5" Probe.	N/C
Accessories		
iTHP-2	Industrial Probe 2" (51 mm), Cable 3 ft (0.9 m) with Stripped Wire Leads.	115
iTHP-5	Industrial Probe 5" (137 mm), Cable 20 ft (6.1 m) with Stripped Wire Leads.	125
iDRN-PS-1000	Power Supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units).	150
CAL-3-HU	NIST Traceable Calibration Certificate. Three (3) Humidity Points: 25%, 50%, 75%. Temperature 25°C. (For New Units)	125
CT485B-CAL-KIT	Calibration Kit, 33% and 75% RH Standards	75

Model No.	Description	Price
iTHX-W	iServer MicroServer™ for Temperature + Humidity and Dew Point. Two Channel Capability.	295
iTHX-M	iServer MicroServer™ for Temperature + Humidity, LCD Display, 2M bytes Flash Memory Card, 2 Relay Alarm, and Battery Back-up. Single Channel Only.	395
	* Standard 8" (203mm) Wand Probe, Cable 6" (152 mm) with DB9 Connector. No Entry Required.	N/C
	-2 Industrial 2" (51mm) Probe, Cable 3 ft (0.9 m) with DB9 Connector. Substitution for Wand Probe.	15
	-5 Industrial 5" (137mm) Probe, Cable 20 ft (6.1 m) with DB9 Connector. Substitution for Wand Probe.	25
Accessories		
iTHP-W	Wand 8" (203mm) Probe, Cable 3 ft (0.9 m) with DB9 Connector.	100
iTHP-W-6	Replacement 8" (203mm) Wand Probe, Cable 6" (152 mm) with DB9 Connector.	100
iTHP-2-DB9	Industrial 2" (51mm) Probe, Cable 3 ft (0.9 m) with DB9 Connector.	115
iTHP-5-DB9	Industrial 5" (137mm) Probe, Cable 20 ft (6.1 m) with DB9 Connector.	125
DB9-Y	DB9 "Y" Connector Adapter for 2 Probes with DB9 Connector (iTHX-W).	25
DB9-CA-3	Extension Cable, 3 ft (0.9m) with DB9 Connector.	15
iTH-MC2	Memory Data Flash Card, 2M byte / 1 Year @ 1 Minute Intervals (iTHX-M).	10
iTH-MC4	Memory Data Flash Card, 4M byte / 2 Years @ 1 Minute Intervals (iTHX-M).	20
iTH-MC8	Memory Data Flash Card, 8M byte / 4 Years @ 1 Minute Intervals (iTHX-M).	30
CAL-3-HU	NIST Traceable Calibration Certificate. Three Humidity Points: 25%, 50%, 75%. Temp 25°C. (For New Units)	125
CT485B-CAL-KIT	Calibration Kit, 33% and 75% RH Standards	75