

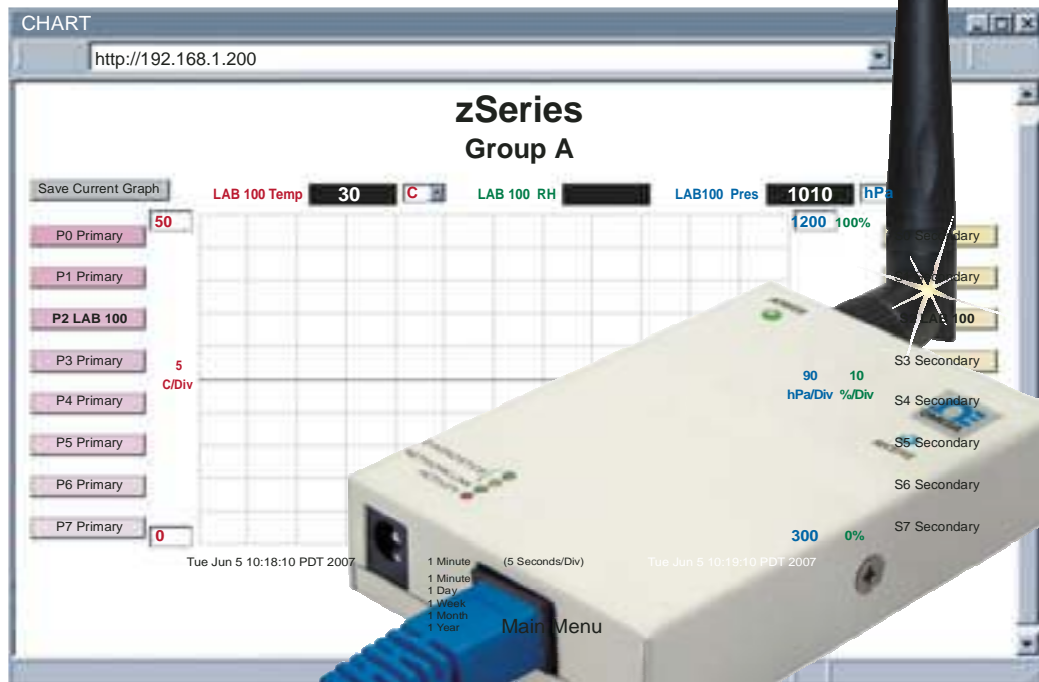
Wireless Sensor System

zSeries
Starts at
\$190



**Temperature
Humidity
Barometric
Pressure
Email Alarms
Web Server
No Special
Software
Required**

zCDR, \$390, shown
smaller than actual size.



The new OMEGA® zSeries wireless sensor system provides Web-based monitoring of temperature, humidity, and barometric pressure in critical HVAC and refrigeration applications.

The compact wireless "End Devices" mount discretely on the wall in clean rooms, laboratories, museums, computer server rooms, warehouses, and any remote facility. The wireless End Devices are powered by two "AA" 1.5V alkaline batteries (included).

The End Devices transmit up to 91 m (300') (without obstructions or interference) to a "Coordinator" connected directly to an Ethernet network and the Internet. The wireless system complies with IEEE 802.15.4 operating at 2.4 GHz.

The OMEGA zSeries system let's you monitor and record temperature, relative humidity, and barometric pressure over an Ethernet network or the Internet without any special software-just your Web Browser.

OMEGA offers a selection of End Devices for a variety of applications. Each End Device supports 1 or 2 sensors. End Devices are available with built-in sensors, with external sensor probes, and with both built-in and external sensors. The external sensors are designed for harsh environments such as outdoor weather, in HVAC ducts, in freezers and refrigerators. For example, you can select one End Device that has one internal and one external sensor to monitor temperature and humidity both inside and outside a climate-controlled facility.

Each zSeries Coordinator can directly support up to 32 end devices. The Coordinators include AC adaptors to operate on any voltage worldwide from 100 to 240 Vac and 50 to 60 Hz. The Coordinator connects directly to an Ethernet Network or the Internet. Unlike an RS232 or USB device, it does not require a host computer.

The zSeries Coordinator is an independent node on the



zED-T, \$190,
shown close to
actual size

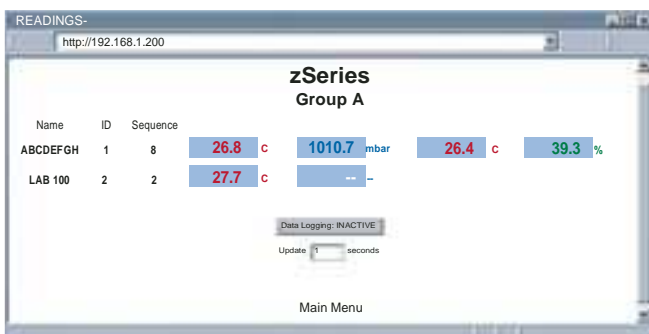
HOTLINE 1-800-327-4333SM
TO WIRELESS PRODUCTS 1-800-DAS-IEEE

network sending and receiving data in standard TCP/IP packets. It is easily configured from a Web Browser and can be password protected. From within an Ethernet LAN or over the Internet, the user simply types the IP address (such as 192.168.1.200) or an easy to remember name (such as "Warehouse 5" or "Chicago Lab") and the Coordinator serves a Web Page with the current readings.

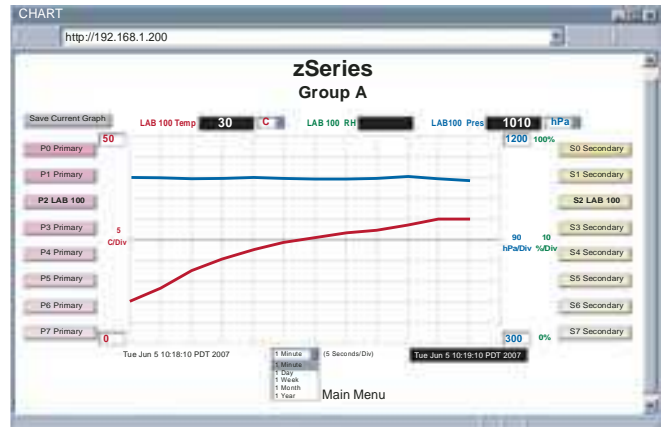


The device can trigger an alarm if variables go above or below a set point that you determine. Your alarm can be sent by email to a single user or to a group distribution list, including text messages to Internet enabled cell phones and PDA's. The OMEGA "Mail Notifier" software is a free and easy program for this application.

The OMEGA zSeries wireless sensor system is easy to install, simple to operate, and features OMEGA's award-winning i[®]Server technology with an Embedded Web Server that requires no special software.

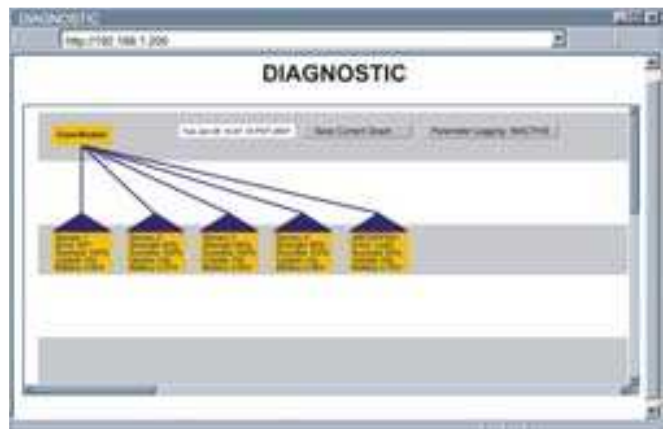


The OMEGA zSeries system serves Active Web Pages to display real time readings and charts of temperature, humidity, and barometric pressure. You can also log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic. OMEGA offers a free and easy to use program for logging data to Excel.



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 OMEGA zSeries system there is no need to invest time and money learning a proprietary software program to log or chart the data.

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 (-40 to 125°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C).



OMEGA offers an OPC Server software (\$295) that makes it easy to integrate the zSeries wireless sensor system with many popular Data Acquisition and Automation programs offered by Omega, Wonderware, iConics, Intellution, Rockwell Automation, and National Instruments, among others.

WIRELESS TRANSMITTERS AND RECEIVERS

Specifications

Sensor Specifications (zED)

Relative Humidity

Accuracy/Range zED-BTH, zED-TH, -THP:

±2% for 10 to 90%; ±3% for 0 to 10% and 90 to 100%

Hysteresis: ±1% RH

Non-linearity: ±3%

Repeatability: ±0.1%

Resolution: 0.1%

Temperature

Accuracy/Range*

zED-T (Internal Sensor):

±0.5°C for 10 to 55°C (±0.9°F for 50 to 131°F)

±1°C for -18 to 10°C (±1.8°F for -0.4 to 50°F)

-TP1, -TP2 (External Sensor):

±0.5°C for 10 to 85°C (±0.9°F for 50 to 185°F)

±1°C for -40 to 10°C and 85 to 125°C (±1.8°F for

-40 to 50°F and 185 to 257°F)

Accuracy/Range*

zED-BTH, zED-TH (Internal Sensor):

±0.5°C for 0 to 45°C (±0.9°F for 32 to 113°F)

±1°C for -18 to 0°C and 45 to 55°C (±1.8°F for

-0.4 to 32°F and 113 to 131°F)

-THP (External Sensor):

±0.5°C for 0 to 45°C (±0.9°F for 32 to 113°F)

±1°C for -18 to 0°C and 45 to 70°C (±1.8°F for

-0.4 to 32°F and 113 to 158°F) ±2 for -40 to -18°C

and 70 to 124°C (±3.6°F for -40 to -0.4°F and

158 to 255°F)

Accuracy/Range*

zED-BT (Internal Sensor):

±0.8°C @ 20°C (±1.5°F @ 68°F)

±2°C for -18 to 55°C (±3.6°F for -0.4 to 131°F)

-BTP (External Sensor):

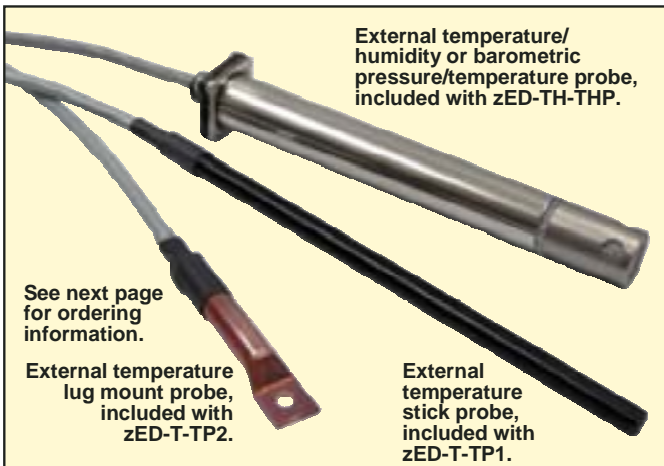
±0.8°C @ 20°C (±1.5°F @ 68°F)

±2°C for -40 to 85°C (±3.6°F for -40 to 185°F)

* **Note:** extended temperature ranges are for external probes only, the End Device's operating temperature is -18 to 55°C (-0.4 to 131°F).

Repeatability: ±0.1°C for zED-BTH, zED-TH, -THP

Resolution: 0.1°C



Barometric Pressure

Accuracy/Range zED-BTH, zED-BT, -BTP:

±2 mbar for 10 mbar to 1100 mbar (1 KPa to 110 KPa)

Resolution: 0.1 mbar

External Probe Specifications (zED)

Industrial Probe: 316 SS housing, 137 x Ø 16 mm (5 x Ø 0.63") for zED-xx-BTP, zED-xx-THP

Stick Probe: ABS tubing, 152.4 x Ø 6.35 mm (6 x Ø 0.25") for zED-xx-TP1

Lug Mounted Probe: Copper tubing, 53.4 x Ø 7.92 mm (2.1 x Ø 0.312"); mounting hole Ø 4.72 mm (Ø 0.186") for zED-xx-TP2

Standard Cable: 3 m (10') long x Ø 5.72 mm (0.225"); -40 to 125°C (-40 to 257°F) for -TPI, -TP2, -THP; -55 to 105°C (-67 to 221°F) for -BTP

Optional MIL Spec Cable (-ET): Ø 2.62 mm (0.103"); -80 to 200°C (-112 to 392°F)

Interface Specifications (zCDR)

Ethernet: 10Base-T (RJ45)

Supported Protocols: TCP/IP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet

LED Indicators: Network Activity, Network Link, Diagnostics, Receive and Power

Management: Device configuration and monitoring through embedded WEB server

Embedded WEB Server: Serves WEB pages (JAVA™ Applets) containing real-time data and live updated charts within definable time intervals

Power (zCDR)

Power Input: 9 to 12 Vdc

Consumption: 2.5 W max

Safety Qualified AC Power Adaptor: Included

Nominal Output: 9 Vdc @ 0.5 A

Input: 100 to 240 Vac, 50/60 Hz

Power Adaptor Operating Temperature: 0 to 40°C (32 to 104°F)

Power (zED)

Alkaline Battery: Two 1.5 Vdc (included)

Lifetime: Estimate of 2 yrs with frequency of 1 reading per 2 min

Wireless Communication

Protocol: IEEE 802.15.4

Frequency: 2.4 GHz (2400 to 2483.5 MHz), DSSS, 16 channels

Network Topology: Star Topology

Range: Up to 91 m (300') without obstructions or interference

Environment

Operating Temperature: -18 to 55°C (-0.4 to 131°F) for zED;

0 to 70°C (32 to 158°F) for zCDR, 90% RH non-condens sing

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

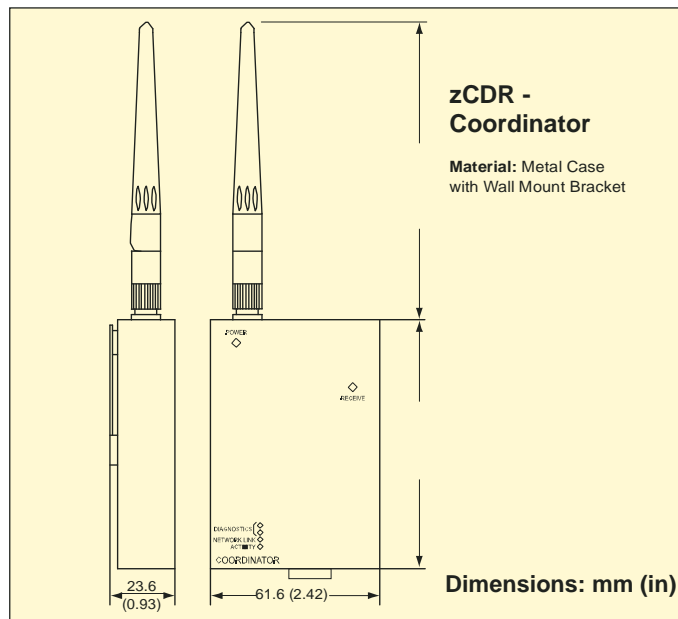
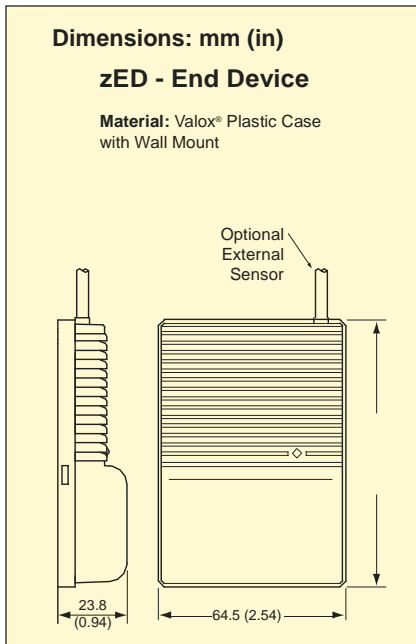
Packaging See mechanical section

General

Agency Approval: FCC Part 15C; CE EMC 2004/108/EC, LVD 2006/95/EC, RTT&E 1999/5/EC

Software: iConnect (configuration software for the Ethernet interface), iLog (Excel-based software for automatic data logging), and Mail Notifier (email alarm notification software)

WIRELESS TRANSMITTERS AND RECEIVERS



■ MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)		
Model No.	Description	Price
zCDR	Coordinator, which can support up to 32 end devices	\$390
zED-T	End device unit with internal temperature sensor	190
zED-T-TP1	End device unit with internal temperature sensor and external temperature sensor with stick probe	290
zED-T-TP2	End device unit with internal temperature sensor and external temperature sensor with lug mount probe	290
zED-TH	End device unit with internal temperature and humidity sensor	300
zED-TH-THP	End device unit with internal and external temperature and humidity sensor	490
zED-THP	End device unit with external temperature and humidity sensor	380
zED-BT	End device unit with internal barometric pressure and temperature sensor	300
zED-BTH	End device unit with internal barometric pressure, temperature and humidity sensor	390
zED-B-THP	End device unit with internal barometric pressure sensor, external temperature and humidity sensor	500
zED-BT-BTP	End device unit with internal barometric pressure and temperature sensor and external barometric pressure and temperature sensor industrial probe	500
Replacement Probes		
zTHP	External industrial probe with temperature and humidity sensor, 3 m (10') cable	\$190
zTP1	External stick probe with temperature sensor, 3 m (10') cable	100
zTP2	External lug mount probe with temperature sensor, 3 m (10') cable	100
zBTP	External industrial probe with barometric pressure, temperature sensor, 3 m (10') cable	200
Calibration		
CAL-3-HU	NIST-traceable calibration certificate; 3 humidity points: 25%, 50%, 75%, one temperature point: 25°C (for new units)	\$250
CAL-3-HU-P-T	NIST-traceable calibration certificate; 3 humidity, barometric pressure, and temperature points (for new units)	500
CAL-3-P	NIST-traceable calibration certificate; 3 barometric pressure points, temperature 25°C (for new units)	250
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards	150

Other sensor combinations available, contact our Sales Department for more information.
Ordering Example: Two zED-T-TP2 end units with an internal temperature sensor and an external temperature sensor in a lug mounting probe housing with 20' cable and zCDR coordinator, \$290 x 2 + 390 = **\$970**. For MIL Spec cable add suffix "-ET", and \$2 for each foot of cable, zED-T-TP1-ET, \$290 + 20 = **\$310**, or for different lengths, such as 5' cable, zED-T-TP1-ET5, \$290 + 10 = **\$300**. Not available for -BTP probes.