# enteliZONE®

## Wireless BACnet Thermostat: eZNTW

### Description

The eZNTW is a fully programmable thermostat equipped with EnOcean® wireless connectivity and onboard Wi-Fi option. Featuring a standard temperature sensor with humidity, $CO_2$ and motion options, the eZNTW also offers a choice of backlit colors that provide additional user feedback and esthetic appeal. The eZNTW NFC technology enables installers to use NFC-enabled mobile devices to configure the thermostat.

The eZNTW delivers custom solutions specific to the needs of each market, and provides building occupants with an intuitive touch-interface to adjust their individual comfort levels.

### Application

The eZNTW is designed for a wide range of sensing applications, from basic temperature monitoring, to indoor air quality and occupancy sensing.

eZNTW is ideal for new or retrofit projects where wiring is difficult or costly. Wire-free connectivity increases flexibility of installation, and allows motion and temperature sensors to be installed at optimal locations for best energy management results.

eZNTW is well-suited for multiple market applications like hotels, dormitories, schools and hospitals. eZNTW maximizes operational efficiency in the hospitality market by integrating with hotel management systems and room locks.

### Features

- BACnet/IP over Wi-Fi, BACnet MS/TP, Delta LINKnet communication
- EnOcean wireless for zone-level control, including sensors and outputs
- GCL+ programmable: Button layout, display, backlit colors, EnOcean wireless control for HVAC and room peripherals like door contact, motion sensor, lighting and blinds control
- RGB backlight with large LCD screen allows choice of colors to indicate conditions, alarms and night mode
- Capacitive touch zones allow custom button sizes
- Slider to quickly adjust setpoint or tap for precise changes
- USB Service port, software enabled or disabled. Service tool not required.
- Easy network set up using NFC with smartphone, or configuration page in web browser

### Specifications

**Inputs**
1 10kΩ input (12 bit A/D)

**LCD**
2-line custom segmented display with icons

**Buttons**
2 rows of 4 capacitive touch zones, allowing up to 8 individual buttons or combined to form larger buttons

**Backlight**
RGB LED backlight for multicolor LCD and button illumination

**Temperature**
Digital Temperature Sensor
+/- 0.2°C (+/- 0.36°F)

**Digital Humidity Sensor (Optional)**
Accuracy +/- 3%

**$CO_2$ Sensor (Optional)**
Dual Beam, Self Calibrating NDIR Detection

Range: 0-2000 ppm

Accuracy @ 25°C (77°F):
± (50 ppm + 2% of value)

Temperature Dependence: 2 ppm/°C (1 ppm/°F) typical

Pressure Dependence: 0.13% of reading per mm Hg

Stability: 20 ppm/year (typical)

**Occupancy Sensor (Optional)**
Passive infrared motion (PIR) sensor

Range: 5 m (16.4 ft.)

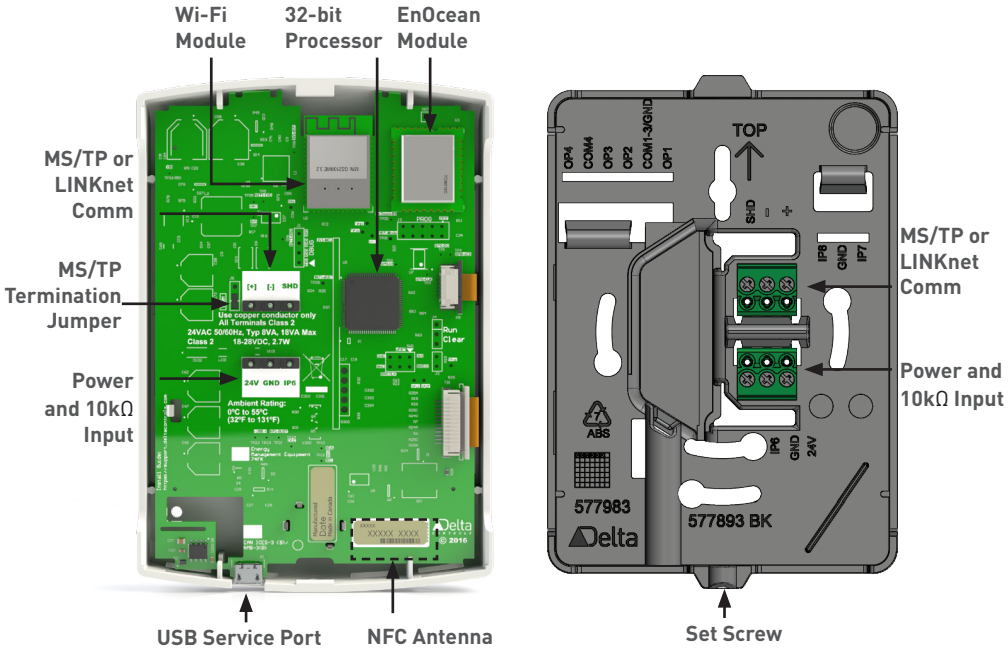
Coverage: 100° Horizontal

**Connectors**
Screw-type terminal connectors

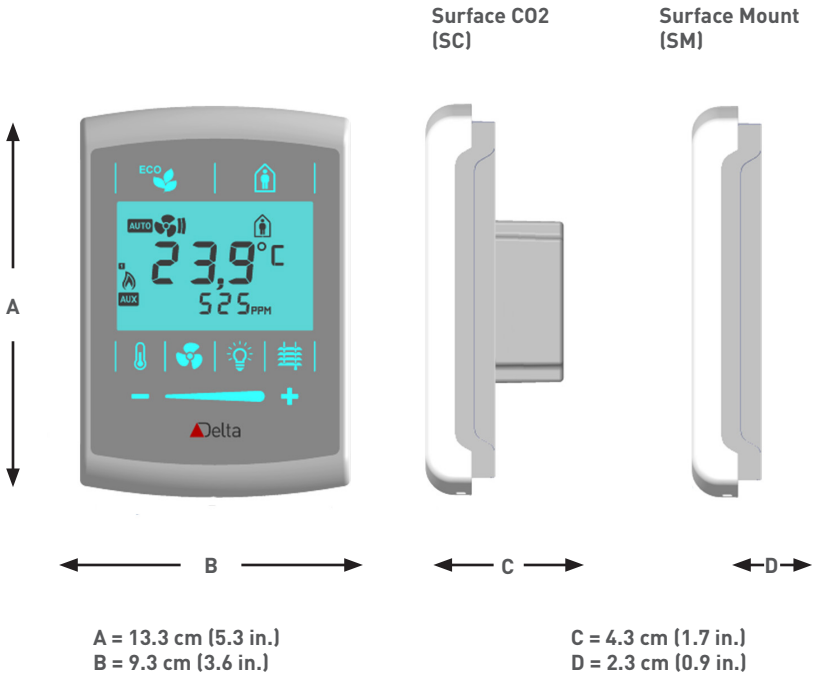
**Wiring Class**
Class 2 / SELV

# enteliZONE®

## eZNTW: Board Layout Diagram




## eZNTW: Dimensions and Backplates




A = 13.3 cm (5.3 in.)
B = 9.3 cm (3.6 in.)

C = 4.3 cm (1.7 in.)
D = 2.3 cm (0.9 in.)

## Specifications (Continued)

**Power (Wi-Fi option)**
24 V AC/DC, 10 VA / 3 W max

**Power (without Wi-Fi option)**
24 V AC/DC, 8 VA / 2 W max

**Technology**
32-bit processor
Internal A/D, Flash and RAM

**Communications**
BACnet/IP over Wi-Fi
(802.11b, g, n @ 2.4 GHz)

EnOcean (902 MHz or 868 MHz)

RS-485 port (Wi-Fi option)
Delta LINKnet (up to 76800 bps)
Supports up to 4 LINKnet devices, max 2 DFM devices

RS-485 port (without Wi-Fi option)
BACnet MS/TP (up to 76800 bps)

USB Service Port

Near Field Communication (NFC)
Passive 2-way short range

**Ambient**
0° to 55°C (32° to 131°F)
10 - 90% RH (non-condensing)

**Dimensions**
With SM backplate:
13.3 x 9.3 x 2.3 cm (5.3 x 3.6 x 0.9 in.)

With SC ($CO_2$) backplate:
13.3 x 9.3 x 4.3 cm (5.3 x 3.6 x 1.7 in.)

Mounted Surface Profile
Surface Mount (SM, SC backplates):
2.3 cm (0.9 in.)

**Weight**
168 g (0.37 lb)

**IP Rating**
IP20

**Compliance**
CE
FCC Class B

**Listings**
UL 916 Listed

Subject to change without notice.

Copyright © 2018 Delta Controls. All rights reserved.



Delta CONTROLS
A Delta Group Company

## Ordering

The product number of the eZNTW is eZNTW-ww-xxx-aaa-B-cc-ddd-eee where the letters correspond to the different options listed below:

### Wi-Fi Option (-ww-)

| | |
|---|---|
| **Wi**[1] | Wi-Fi Connectivity 802.11b, 802.11g and 802.11n (2.4 GHz) , Delta LINKnet and EnOcean |
| (No Wi-Fi) | BACnet MS/TP and EnOcean |

[1]If no Wi-Fi option is selected, it is assumed that you are ordering the MSTP version.

### EnOcean Frequency Options (-xxx-)

| | |
|---|---|
| **En902** | EnOcean 902 MHz for North America |
| **En868** | EnOcean 868 MHz for Europe |

### Sensor Options (-aaa-)[2]

| | |
|---|---|
| **C** | Temperature and $CO_2$ |
| **HM** | Temperature, Humidity and Motion |
| **CHM** | Temperature, $CO_2$, Humidity and Motion |

[2]Temperature sensor included in all models.

### Backlit Display (-B-)

| | |
|---|---|
| **B** | RGB Backlit Display / Buttons is a standard feature |

### Backplate Options (-cc-)

| | |
|---|---|
| **SC** | Surface $CO_2$[3] Backplate |
| **SM** | Surface Mount Backplate |

[3]$CO_2$ sensor options require Surface $CO_2$ backplate.

### Button Overlay Options (-ddd-)

| | |
|---|---|
| **###** | Standard Button Overlay Number |
| **###** | Library Button Overlay Number[4] |
| **999** | Custom Button Overlay[3] |

[4]See eZNS Button Overlay Design Guide. Expect up to 8 weeks for delivery. Additional charges apply.

### Button Overlay and Front Color Options (-eee-)

| | |
|---|---|
| **WWG** | White Button Overlay, White Front with Grey Backplate (default) |
| **GWG** | Grey Button Overlay, White Front with Grey Backplate |
| **BBB** | Black Button Overlay, Black Front with Black Backplate |
| **Custom** | Custom Color Options[5] |

[5]Contact inside sales for pricing and more information.

# enteliZONE®

## Complementary System Components Ordering

Expand the eZNTW functionality with other Delta Controls LINKnet and wireless EnOcean system components. Ideal for retrofits, energy-efficient green buildings, schools and hospitality applications.

These options and more are available on the Delta Controls Online Ordering web site.

### EnOcean Wireless Devices Product Numbers

| | 902 MHz | 868 MHz | EnOcean Devices |
|---|---|---|---|
| | **PTM265UW** | **PTM265YW** | Single decorator style switch, white |
| | **PTM265DUW** | **PTM265DYW** | Dual decorator style switch, white |
| | **PTM265KCAU** | **PTM265KCAY** | Key card activated switch, white |
| | **MC-21U** | **MC-21Y** | Window or door magnet contact switch |
| | **ERC0I-AU** | -- | 4 channel contact interface, 4 outputs, independent dry contact relays (type-c), additional functionality as a radio repeater; power supply 8-30 VDC or 24 VAC |
| | **ERNR-AIU** | -- | Split duplex relay, provides top half as a non-switched receptacle and bottom half as switched receptacle |
| | **ER1C-FLU-120 / 277 / 347** | -- | Power load controller, N.O. relay rating 20 A @ 120 or 277 VAC, 15 A @ 347 VAC |
| | **ERM-FLU-277** | **ERM-FLY-277** | Electrical loads control module, power supply 120-277 VAC, N.O. relay rating 15 A @ 120-277 VAC |
| | **ERM-FSU-24** | **ERM-FSY-24** | Signal dry contact relay 3 A @ 30 VDC, power supply 24 VAC/DC; additional functionality as radio repeater |

### LINKnet Expansion Field Modules Product Numbers

| | | |
|---|---|---|
| | **DFM-404** | LINKnet expansion field module, 4 universal inputs, 4 TRIAC outputs, 24 VAC |
| | **DFM-440** | LINKnet expansion field module, 4 universal inputs, 4 analog outputs, 24 VAC |

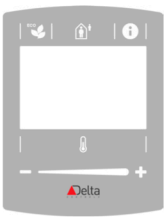
enteliZONE is a registered trademark of Delta Controls Inc.
BACnet is a registered trademark of the American Society of Heating, Refridgerating and Air Conditioning Engineers Inc.
Wi-Fi® is a registered trademark of the Wi-Fi Alliance.
EnOcean® EnOcean Alliance logo, EnOcean Alliance member logo and EnOcean Alliance technology logo (=ingredient logo) are registered trademarks of EnOcean GmbH and EnOcean Alliance Inc. All other product or service names are the property of their respective owners.

© EnOcean Alliance Inc., 2017.

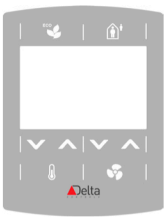
Oracle and Java are registered trademarks of Oracle and/or its affiliates.

Updated June 2018

## eZNTW: Standard Button Overlay Options



Overlay 003



Overlay 005

Overlay 009

Overlay 015

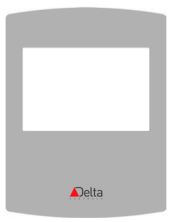
Overlay 027

Overlay 045

Overlay 046

Overlay 047

Overlay 053



Overlay 100

## eZNTW: Button Overlay and Front Color Options

WWG: White Button Overlay, White Front, Grey Back

GWG: Grey Button Overlay, White Front, Grey Back

BBB: Black Button Overlay, Black Front, Black Back