



The XW-110 is an easy-to-use wireless temperature sensor with a built-in web server. It measures environmental temperature using an internal sensor (included), or you can attach an external temperature probe (optional) for precise measurement outside of the unit. Users can view current temperature using a web browser, smart phone app, or the XW-110 can send temperature information via email. The XW-110 can be easily and quickly

mounted to a wall or any other workable surface.

Stand-Alone mode makes the XW-110 a self-contained device that requires no additional servers or ControlByWeb devices. In this mode the XW-110 products can provide live, real-time temperatures status directly to users through web browsers or the CBW Mobile app. In addition, stand-alone mode offers the ability to simply monitor temperature status and send out email alerts (which can be converted to text message alerts) either periodically or whenever an alarm condition occurs.

### Stand-Alone Mode Configuration Options

**-View Real-Time Temperatures** - Use the XW-110's built in web pages to view real-time temperatures: Connects directly to Wi-Fi network, no gateway devices required - AC adapter for main power and batteries for backup - No cloud server required.

**-Email alerts during alarm conditions** - Send emails for high/low temp alarms: Connects directly to Wi-Fi network, no gateway devices required - Battery/AC adapter powered DHCP or static IP address (no static IP required) - No cloud server required - No port forwarding required - Supports encrypted & un-encrypted email servers.

**-Control relays in remote locations** - Control the relays on other ControlByWeb devices to turn on lights, bells, alerts, etc.: Connects directly to Wi-Fi network - no gateway devices required - Battery or AC adapter powered - Control remote relays on other ControlByWeb products.

### Slave mode Configuration Options:

Slave mode is used for measuring and reporting the temperature to other ControlByWeb devices. In this mode the XW-110's web interface is not directly accessible to the user, instead temperature status is simply transmitted to another ControlByWeb device that supports temperature monitoring, such as the X-600M controller, which acts as a "master" device. The master device uses the XW-110's temperature information as it would use information collected by any other sensor.

*Note on power: The XW-110 is powered by an external 5VDC wall transformer, or by two internal AA batteries. Only use batteries to provide backup power, or for modes where the web server is not being used. Some configurations consume more power than others which can make battery*

## PRODUCT OVERVIEW

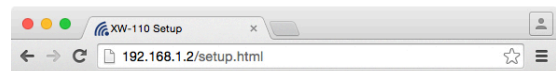
*operation impractical. Having more features enabled and/or increased sampling frequencies lead to lower battery life.*

There is no special software to download, no drivers to install, and no monthly subscription. Using the XW-110 is just as easy to monitor whether you are in the field, in the office, or on vacation. It is the ultimate solution to your wireless temperature monitoring needs!

## Features:

- Monitor one temperature sensor
- Wireless Wi-Fi 802.11 b/g/n
- Transmission range up to 250ft\*
- No sensor calibration needed
- Small data packets provide long battery life
- Built-in web server for configuration and remote monitoring
- Temperature sensor is accurate to +/-0.5°C from -10°C to +85°C
- Powered by external DC power adapter or two AA batteries (battery usage for backup/low power applications only)
- Longer length air/submersible temperature probes available - Sensors are interchangeable and need no calibration
- Temperature status can control relay on another ControlByWeb device
- Protocols supported: HTTP, XML, SMTP
- Simple and easy to use

\*Transmission distance can vary depending upon environmental conditions, interference from other Wi-Fi devices, obstacles, etc.



## XW110™ Wireless Temperature Sensor

Main WiFi Networks Email Password Sensor Control Page

### SENSOR SETTINGS

Sensor Description: XW-110

Update Interval: 15 Minutes Seconds

Units: Fahrenheit Celsius

High Alarm: 100.0

Low Alarm: 40.0

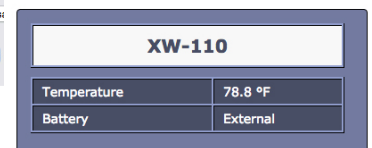
Deadband: 1.5

Email Option: No email mess

Remote Relay Action: No Action

Submit Reset Changes

Sensor Page



Control Page

## APPLICATIONS & SPECS

Monitoring temperature on a computer/smartphone



### Models:

- XW-110B

### Power Requirements

- Voltage: 2AA batteries, or external 5VDC power supply
- Max Current: 500ma max (via DC power wall adapter)
- DC Jack: 5.5mm barrel x 2.5mm center pin (positive)

### Battery

- Internal: Two replaceable 1.5V "AA" cells
- Power Consumption: 27-770uA sleep, 59mA active RX, 229mA TX (at +12dBm)
- Battery Life: Up to 1-year, depending on mode, security and reporting frequency. Battery life is affected by mode, reporting interval, security, DHCP, DNS, battery temperature, and other variables.
- Battery Usage: Battery voltage is measured and periodically reported

### Wireless

- Network Standards: IEEE 802.11 b/g/n
- Frequency Band: 2.412 - 2.462 GHz
- Wi-Fi Security Standards: Open, WEP, WPA, WPA2
- Network Settings: DHCP or Static
- Wireless Range: Up to 250ft (typical for Wi-Fi devices) depends on environment
- Antenna: Integral chip antenna, 1.9 dBi.
- RF Output Power (typ): 14dBm (802.11b/g), 12dBm (802.11n)

### Operation

- Provisioning: Via internal web server (no cables or PC utilities needed)
- Access Point: Yes, push button activated (setup via web page)
- WPS: Yes, push button activated (Wi-Fi Protected Setup)
- Connectivity: Intermittently connected or always connected
- XCD Data Packet: UDP, 10-bytes (See Appendix A)
- Remote Server: ControlByWeb's X-600M™, X-300™ or cloud-based server
- Polling: state.xml (only with always-connected)

### Internal Push Buttons

- Button 1: Force access-point mode
- Button 2: Activate WPS mode

### Temperature Sensors

- Maximum Number of Sensors: 1
- Type: Digital "1-wire" thermometer probe
- Temperature Range: -67°F to 257°F (-55°C to +125°C)
- Accuracy: ±0.5°C (from -10°C to +85°C)
- Sensor Functions: Monitor Temperature, Email Alerts, Control Remote Relay

### Protocols

- HTTP, XML, SMTP, Remote Services

### Physical

- Location: Indoor use or NEMA-4 protected location
- Using Alkaline Batteries: -18°C to 55°C (0°F to 130°F)
- Operating Temperature: -40°C to 65°C (-40°F to 150°F)
- Storage Temperature: -40°C to 85°C (-40°F to 185°F)
- Humidity: 5-95%, non-condensing
- Size:
  - 3.16 (80mm) wide
  - 3.04in (77mm) tall
  - 0.91in (23mm) deep
- Weight: 2.4 oz (68g), no batteries
- Enclosure Material: Lexan 940 Polycarbonate Plastic
- Enclosure Flame Rating: UL94 V0

### Password Settings

- Password protection on setup page: Yes
- Password protection on control page: Optional
- Password Encoding: Base 64
- Max Password Length: 13 Characters

### Electromagnetic Compliance

- FCC ID: 2AE4Z-XWD001
- IC: 21441-XWD001
- FCC 47CFR15 (Class B)
- IEC CISPR 22, CISPR 24
- EN55024 ITE Immunity (2010)
- EN55022 Emissions (2010)

### Product Safety Compliance

- IEC 61010-1

