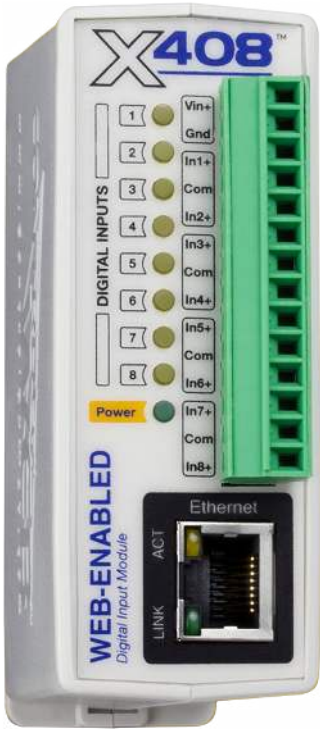The X-408™ is a fully-featured, web-enabled digital input monitoring device.

It is ideal for applications that require discrete input monitoring over an IP network.

Digital inputs can be connected to: Buttons/Switches, water sensors, float switches, security sensors, limit switches, counters, flow sensors, and more.

The values from the digital inputs can be monitored over any TCP/IP network including private networks, IP-based industrial control networks, and the Internet.

Users can operate the X-408 using a web browser, the CBW Mobile app, or custom applications written for a computer, PLC, or other automation controller.

**Frequency/Counter Inputs**

Configure an input for discrete, counter, or frequency measurement.

**Peer-to-Peer Communication**

Share real-time input states with other ControlByWeb devices.

**Email/Text Alerts**

Customizable email/text alerts based on input states.

**Logging/ Graphing**

Log and graph digital input states over time.

**I/O Mirroring**

Mirror the state of the inputs' to relays on remote devices.

**Communication Protocols**

The X-408 supports a number of Ethernet protocols including: HTTP/HTTPS, Modbus TCP/IP, SNMP V1,V2 & V3, NTP, SMTP(Encrypted), and FTP/FTPS. The status of the device can be retrieved in human readable formats XML and JSON.
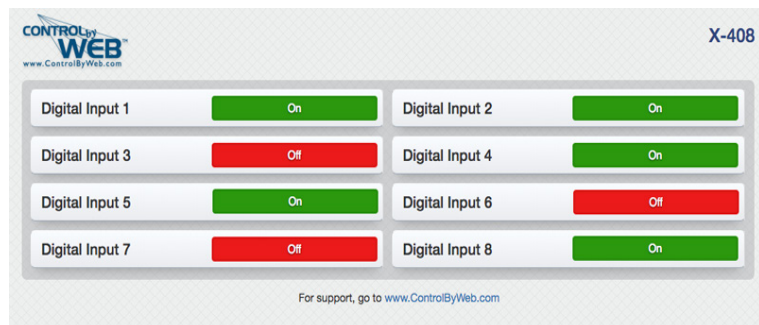
The X-408 supports TLS V1.2 encryption as well as cloud integration (optional) for easier configuration and access. Specifically the X-408 supports HTTPS connections, can send encrypted emails, can communicate with remote devices using TLS, and send logged data to FTP servers over an encrypted connection.

**INCLUDES 400-SERIES ADVANCED FEATURES**

The X-408 also has other robust features found in other 400-Series products: Task Builder, encryption, intuitive user interface, much more.
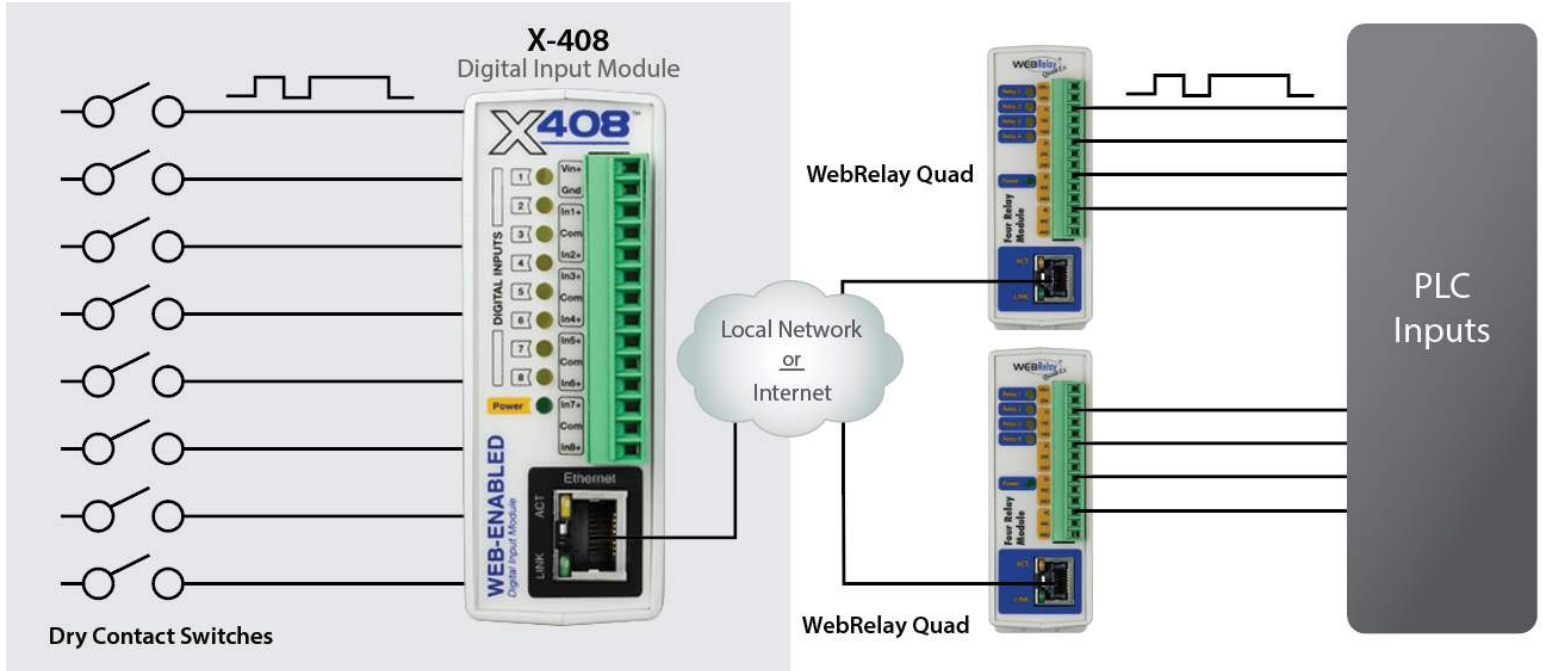
## Features:

- Eight optically-isolated digital inputs
- Each input can be configured as:
  - Discrete On/Off
  - Counters
  - Frequency measurements
- Monitor, log, and control 32 remote modules, or up to 64 I/O
- User Permissions: Admin, Manager, User
- Tasks
  - 50 Scheduled
  - 50 Conditional
  - 20 Override Schedules
- Send email alerts based on user-defined conditions (supports encrypted email servers, such as Gmail)
- Real-Time Clock with NTP server synchronization
- Automatic daylight savings and leap year adjustment
- No software required
- Customizable web-based Control Page
- BASIC script support for advanced flexibility
- Configurable logging
- Graphing (logged data)
- HTTPS/TLS encrypted
- Static or DHCP IP address configuration
- Modbus, SNMP, Remote Service, IP Filtering
- Field updatable
- Removable 14-Terminal connector for easy installation
- Rugged DIN-Rail/wall-mountable enclosure



*Example Control Page*

## APPLICATIONS & SPECS

### I/O Mirroring using the X-408 and other ControlByWeb Products



### Power Requirements

- **Voltage:**
  - X-408-I: 9-28 VDC
  - X-408-E: POE and/or 9-28VDC
- **Max Current:** 240mA

### Real-Time Clock

- Manual or NTP(Network Time Protocol) setup
- **NTP Sync Period:** Once, Daily, Weekly, On Power-up
- Auto Daylight Savings Adjustment

### Digital Inputs

- **Number of Inputs:** 8
- **Type:** Optically-Isolated
- **Voltage Range:** 4-26 VDC
- **Current:** 950uA @ 4V, 8.5mA @ 26V
- **Minimum Hold Time:** 20mS
- **Input Functions:** Monitor State, Control Relays, Control Remote Relays, Scalable Counter, On Timer, Total On Timer, Frequency
- **Maximum Count:** 24-bit
- **Max Count Rate:** 20Hz Max (Dependent on Configuration)
- **Edge Trigger:** Rising, Falling or Both

### Capacitor Power Backup

- **Backup Functions:** Retain Real-Time Clock, External Variables, Relay State, and Counters
- **Backup Duration:** 2 weeks minimum

### Network

- **Type:** 10/100 Base-T Ethernet Port
- **Setup:** Static IP address assignment. TCP port selectable

### Connectors

- **Power/Input/Relays:** 14-Position, 3.81mm, Removable
- **Network:** 8-pin RJ-45

### LED Indicators

- **Number of LEDs:** 3
  - Power on
  - Network linked
  - Network activity

### Physical

- **Operating Temperature:** -40°F to 150°F (-40°C to 65.5°C)
- **Size:**
  - 1.41in (35.7mm) wide
  - 3.88in (98.5mm) tall
  - 3.1in (78mm) deep (not including connector)
- **Weight:** 5 oz (142 grams)
- **Enclosure Material:** Lexan 940 Polycarbonate Plastic
- **Enclosure Flame Rating:** UL94 V0

### Protocols

- HTTP, HTTPS, SSL, XML, Modbus TCP/IP, SNMP, SMTP, Remote Services

### Logging

- **Log File Size:** 512K (up to 8,448 logs)
- **Storage:** Nonvolatile Flash
- **Buffer Architecture:** Circular Buffer
- *Log data can be periodically read and stored on a computer*

### Advanced Features

- Task Builder
- BASIC interpreter
- Remote services

### Password Settings

- **Password protection on setup page:** Yes
- **Password protection on control page:** Optional
- **Password Encoding:** Base 64
- **Max Password Length:** 18 Characters

### Electromagnetic Compliance

- IEC CISPR 22, CISPR 24
- EU EN55024, EN55022
- X-408-I: FCC 47CFR15 (Class B)
- X-408-E: FCC 47CFR15 (Class A)

### Product Safety Compliance

- IEC 61010-1

CE

www.ControlByWeb.com

Phone: 1-435-750-5999

Email: Sales@ControlByWeb.com