

An **i-site** Family Product

## U8

Your #1 Tool for going **GREEN**

U8 is a DDC family of unitary controllers featuring complete on board intelligence. Each IZAC controller contains a powerful Sedona processor to automate and monitor any mechanical system. U8's open board construction featuring snap track mounting is designed for fast installation and efficient servicing.

The U8 has eight (8) universal inputs, eight (8) digital outputs (with on-board HOA switches) and four (4) analog outputs (0-10v). Four (4) analog outputs (0-10VDC). As well as on board status LED's verify proper operation of relays.

U8 controllers, utilizing a universal control block programming method, provide complete building automation with energy management via temperature, demand, humidity and light control plus real time monitoring data.

The powerful processor, combined with transient protection and lithium battery back up, provides precise user comfort with reliable security and system integrity.

### Mesh Networking

Mesh networking uses a star topology with no central communication device such as a router. This makes the network much more robust and reliable. All the nodes on the network will have an individual IP address and communicate directly with one another. This provides a much more reliable network in the case of hardware or software malfunctions because there is no central communications device that can bring down the entire network. Rather each controller will find an alternate communications path around the malfunctioning device. In addition all nodes can also act as a repeater for the signal. In a case where two nodes are too far apart to communicate, the first node can bounce the signal off a middle node to reach the required destination of the second node.

### 6LoWPAN

6LoWPAN is the International Open Standard that enables building the Wireless "Internet of Things". It enables using 802.15.4 and IP together in a simple well understood way. It brings IP to the smallest of devices - sensors and controllers.

### Sedona

Sedona is a software framework designed to make it easy to build smart, networked embedded devices. Some of the Sedona highlights:

- **Component Oriented Programming:** Sedona enables a style of programming where prebuilt components are assembled into applications. Components can act as services or be explicitly linked together to create data and control flow. This model is especially suited to graphical programming tools.
- **Networking:** Several protocols are bundled with Sedona to provision, program, and communicate with Sedona-enabled devices over various network topologies. You can remotely add, remove, and modify the components in your application in real-time. You can even upgrade the firmware itself over the network. All Sedona networking is designed to work over any IP network including [6LoWPAN](#).

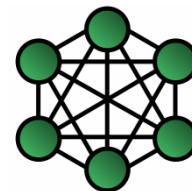
- **8 Universal Inputs**

Resistive	Thermistor
0-10v	4-20ma
Digital	
- **8 Relay Outputs**
- **4 Analog Outputs (0-10vdc)**
- **Sedona Framework**
- **6LoWPAN 802.15.4 protocol**
- **Uses higher power Sedona module reaching distances of up to 4km**

POWERED BY  
**SEDONA**  
FRAMEWORK™  
Powered by Sedona Framework

## 6LoWPAN

6LoWPAN Protocol



Mesh Networking

## HARDWARE FEATURES/BENEFITS

- Networkable via Tridium's Sedona Framework
- 6LoWPAN standard
- 2.4GHz IEEE 802.15.4 compliant
- Seamless coexistence with other 2.4Ghz technologies such as
  - Zigbee
  - Zigbee PRO
  - 802.11 WIFI
  - Bluetooth
- FCC, ETSI, TELEC approvals
- 12 bit Analog to Digital conversion
- High resolution ADC's translate to highly accurate sensor readings
- 11 bit Digital to Analog conversion
- High resolution DAC's mean tight control of any device attached to the 4 analog outputs
- Seamless integration into the Niagara Framework
- Compliant with FCC part 15 rules, ETSI ETS 300-328 and Japan ARIB STD-T66
- Flash based microcontroller allowing remote updating of any new features
- Use common industry standard programming tools such as Sedona Workbench or AX Workbench

## SPECIFICATIONS

- **Supply Voltage:** 24 VAC
- **Supply Power:** 1 VA
- **Connections:** Wire clamp type terminal blocks
- **Outputs:**
  - (8) Relay Outputs (NO, 5A @ 24VAC)
  - (4) Analog Outputs (0-10VDC)
- **Inputs:**
  - Resistive
  - Thermistor
  - 0-10vdc
  - 4-20mA
  - Digital (dry contact)

- **Case Material:** flame retardant ABS
- **Dimensions:** 6.0 x 4.0 x 1.1 inches (157 x 102 x 18.6 mm)
- **Approvals:** UL/CSA and Sedona Framework
- **Weight:** 0.48 lbs. (218 g)

### Environmental Specifications

- **Operating:** 34 to 125° F (1.1 to 51.6° C)
- **Shipping:** -40 to 140° F (-40 to 60° C)
- **Humidity:** 0 to 95% RH (non-condensing)

### Temperature Readings

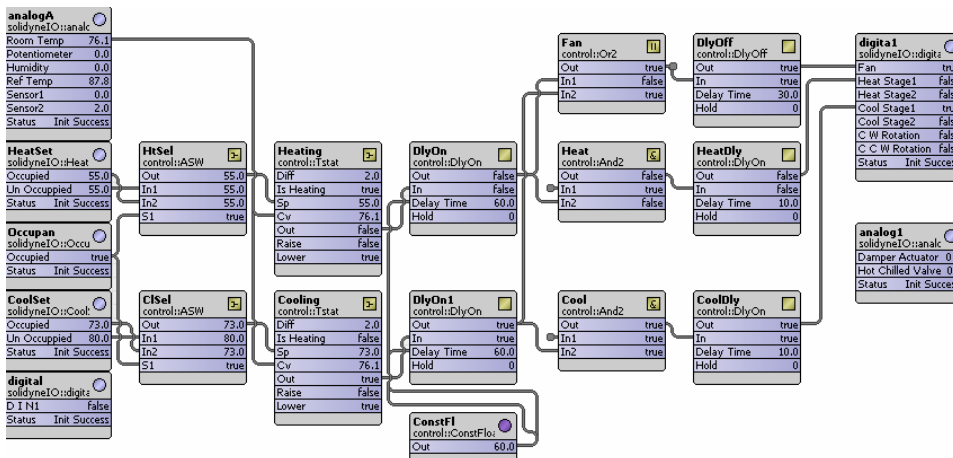
- **Accuracy** ±0.9° F offset (±0.5° C) from 40° to 104° F (4.4° to 40° C)
- **Resolution** ±0.1° F (±0.1° C)
- **Operating Range** 36 to 120° F (2.2 to 48.8° C)

### Humidity Readings

- **Range** 0 to 100% RH
- **Accuracy @ 25°C** ±2% RH (10 to 90% RH)

POWERED BY  
**SEDONA**  
 FRAMEWORK™

Agency Approvals Pending:



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