



Niagara Edge 10

Features overview

Introducing Niagara Edge 10



IP-based IO controller
Powered by Niagara Framework
5 UI • 3 DO • 2 AO
1 485 Serial Port
2 Ethernet Ports capable of daisy chaining
Expansion up to four (4) IO-R processors

Fan Coil Unit • Single Stage AHU
Water Source HP • Pressure Dep Zone Control
Boiler Hot Water Reset, etc....

Performance
and power



Deterministic
Runtime Engine

Cybersecurity



Built-in Niagara
security

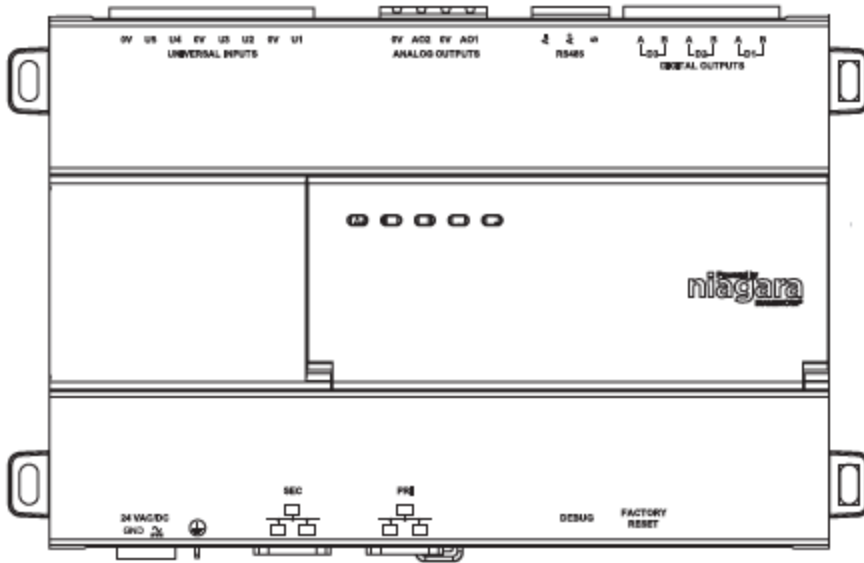
Time and
labor savings



Enhanced Niagara
workflows

Niagara Edge 10 is a 10-point IP-based field equipment controller that runs the Niagara Framework® at the edge. By leveraging the Niagara Framework, Niagara Edge 10 offers a single-tool infrastructure, the ability to create smarter, more efficient systems, and world-class security.

Specifications



Runs Niagara 4.7 or later

NXP iMX6 SoloX2: 800Mhz ARM Cortex-A9/M4

512 MB DDR SRAM

2 GB eMMC flash storage

Powered from 24VAC/DC source

5 Universal Inputs: Type 3 (10K) thermistors, 0-100K ohm, 0-10VDC, 0-20mA with external resistor, Dry Contact

2 Analog Outputs: 0-10Vdc, 4mA max output current

3 Digital Outputs: Triac, 24VAC @.5 amp rated

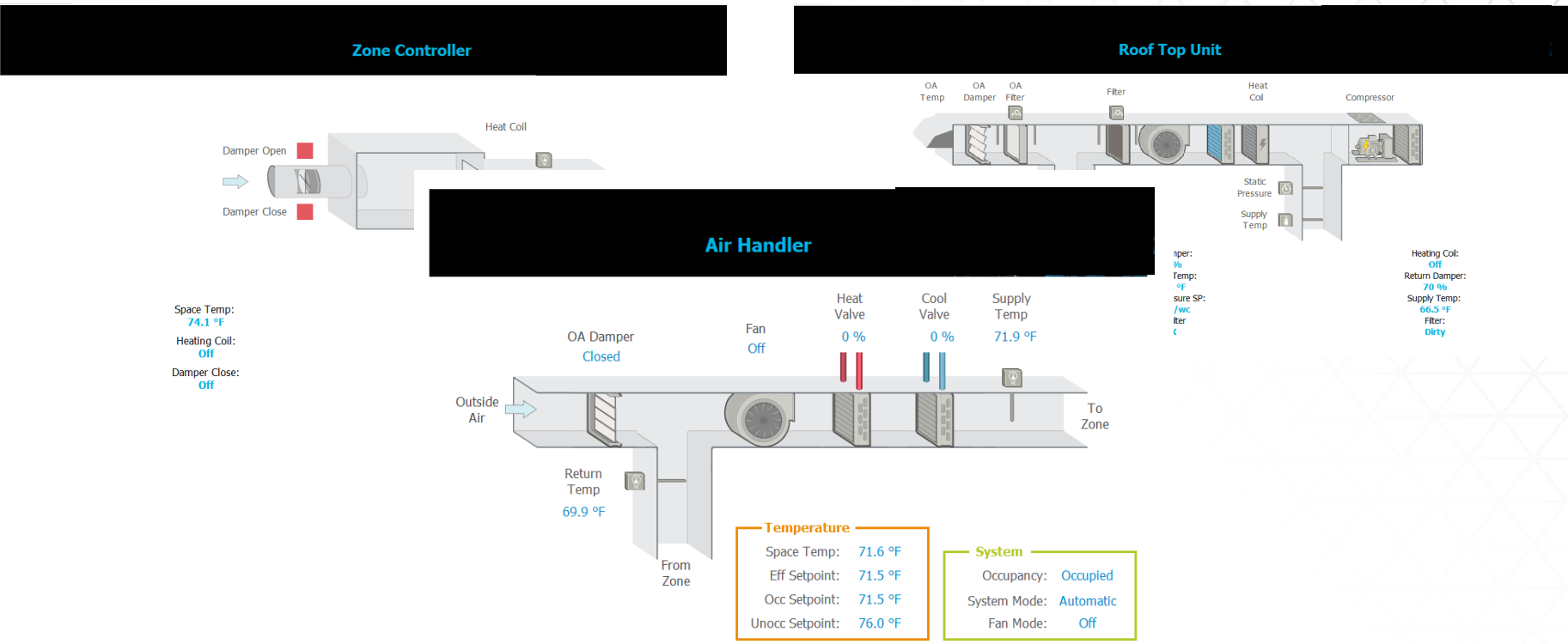
2 10/100MB Ethernet ports capable of daisy chaining

1 RS-485 serial port

Real-time clock

Secure boot

Applications



Niagara Edge 10 has 10 points of onboard IO, perfect for powering fan coil units, single-stage air handling units, zone control, heat pumps and more. Expand the IO with up to four (4) IO-R processors to open up even more possibilities.

Niagara's power at the edge

The screenshot displays the Niagara Edge 10 interface. On the left is a 'Wire Sheet' showing a hierarchical tree of components including 'spaceTemp', 'LoopPoint', 'Tstat', and 'setpointSelect'. The central 'alarmConsole' window shows a table of recent alarms:

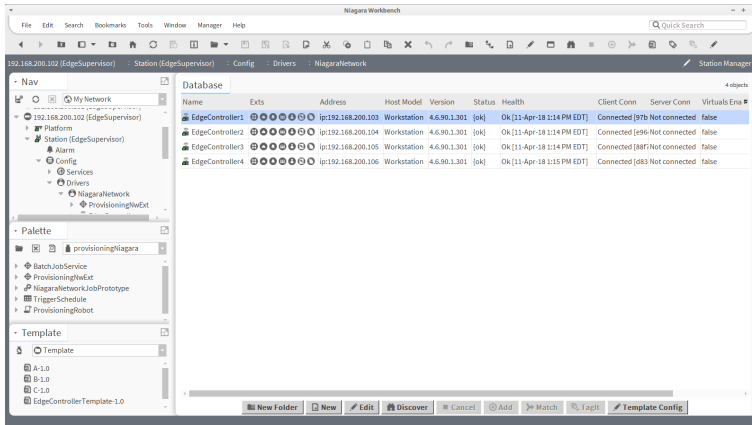
Info	Timestamp
<input type="checkbox"/>	22-Jun-18 6:00:06 F
<input type="checkbox"/>	22-Jun-18 6:00:05 F
<input type="checkbox"/>	21-Jun-18 6:00:05 F
<input type="checkbox"/>	21-Jun-18 6:00:04 F
<input type="checkbox"/>	19-Jun-18 6:00:06 F

On the right, a 3D cutaway diagram of a 'Roof Top Unit' is shown with various components labeled: OA Temp, OA Damper, OA Filter, Filter, Heat Coil, Compressor, Return Temp, Return Damper, Static Pressure, and Supply Temp. Below the diagram, the following data is displayed:

- OA Temp: 69.6 °F
- Compressor: Running
- Static Pressure: 3.8 in/wc
- Operating Mode: Cooling
- OA Damper: 20 %
- Return Temp: 74.4 °F
- Static Pressure SP: 3.8 in/wc
- OA Filter: OK
- Heating Coil: Off
- Return Damper: 70 %
- Supply Temp: 66.5 °F
- Filter: Dirty

Leverage the entire Niagara Framework using Niagara Edge 10. Wiresheet, alarming, history, schedules, web server, graphics and more are available and ready for use at the edge.

New tools



New tools can be used to streamline the time it takes to bootstrap and configure a Niagara-based edge device.

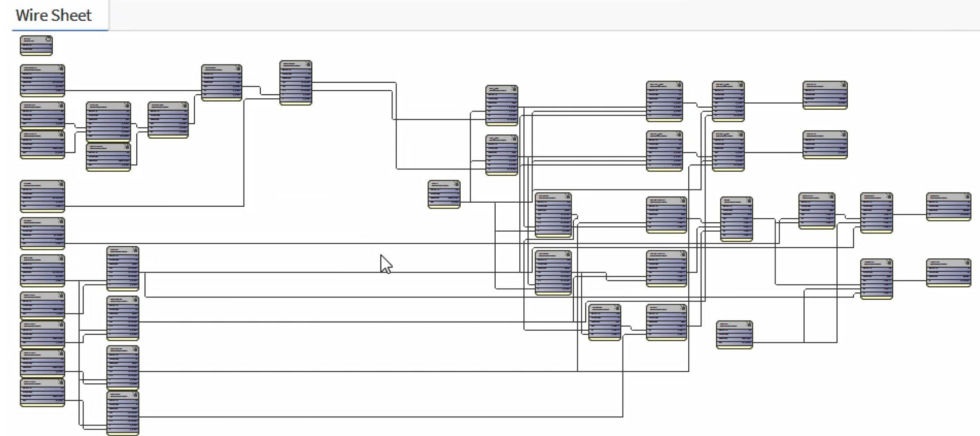
- Simplify the process of getting devices into the Niagara network
- Secure devices in bulk by provisioning certificates and security settings
- Utilize prebuilt applications and provision them with unique configuration by device across the Niagara network

Daisy chaining



Eliminate costly wiring back to a switch for every controller by taking advantage of the Niagara Edge 10's native ability to daisy chain an IP connection.

Deterministic Runtime Engine



The Deterministic Runtime Engine* enables deterministic timing when servicing the IO, as well as fast startup times. Create deterministic applications in wiresheet as you would in normal Niagara applications.

*The Deterministic Run Time Engine will not be included in the initial release.

Ordering information



Part	Description
EDGE-10	Niagara Edge 10 field controller with 10 points of onboard IO, 1 RS-485 serial port, and 2 10/100 Ethernet ports. Supports expansion with up to four (4) IO-R processors. Includes Niagara N4 and drivers for BACnet, Modbus and SNMP. Supports up to 3 devices or 50 points. Includes all software updates released for commercial use by Tridium for the life of N4, but not for any later versions.