



VYKON Edge Controller 10

Features overview

Introducing VYKON Edge Controller 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 via single IO-R-34

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

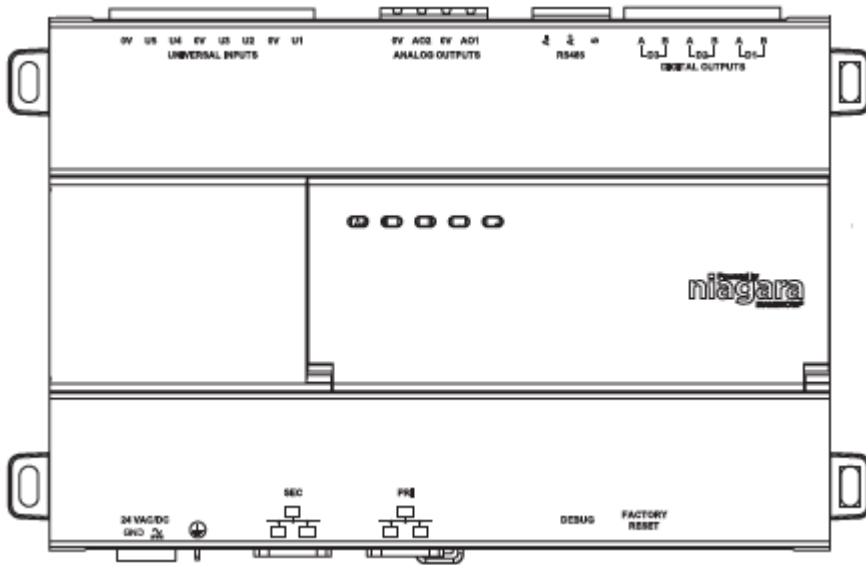
Time and
labor savings



Enhanced Niagara
workflows

VYKON Edge Controller 10 is a 10-point IP-based field equipment controller that runs the Niagara Framework® at the edge. By leveraging the Niagara Framework, VYKON Edge Controller 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

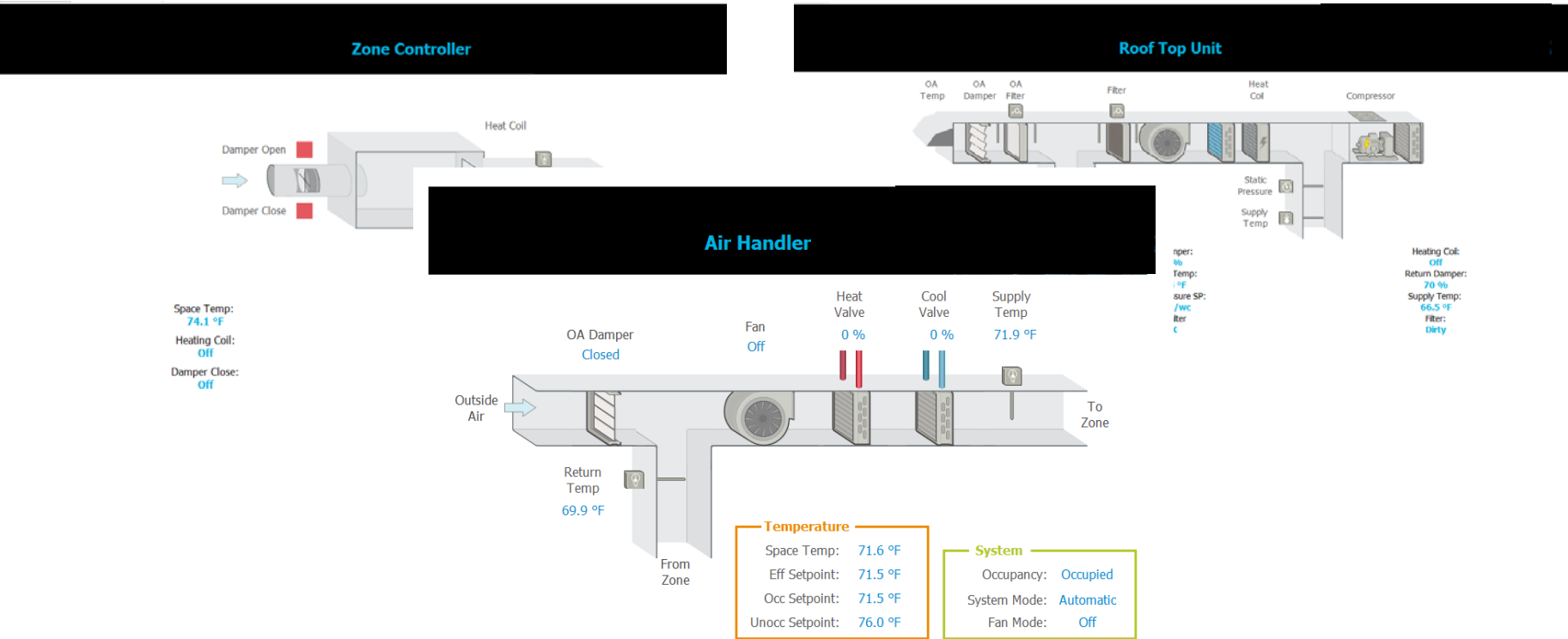
2 10/100MB Ethernet ports capable of daisy chaining

1 RS-485 serial port

Real-time clock

Secure boot

Applications



VYKON Edge Controller 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 an IO-R-34 to open up even more possibilities.

Niagara's power at the edge

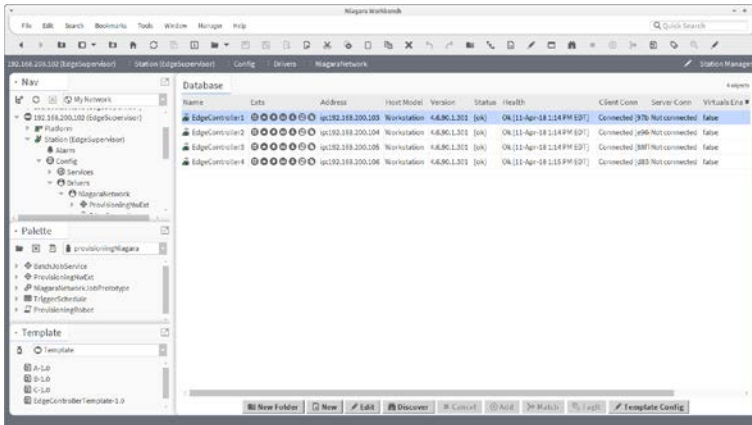
The image displays the Niagara Edge Controller 10 interface, divided into three main sections:

- Wire Sheet:** A graphical representation of the control system's wiring, showing connections between various components like 'spaceTemp', 'LoopPoint', and 'TotalTemp'.
- alarmConsole:** A panel for monitoring and managing alarms. It includes a navigation menu (Config, Home, Files, etc.), a 'Time Range' selector, and a table of recent alarm events.
- Roof Top Unit:** A 3D cutaway diagram of a rooftop HVAC unit. Below the diagram, key operational parameters are listed in a color-coded format.

Parameter	Value
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 VYKON Edge Controller 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

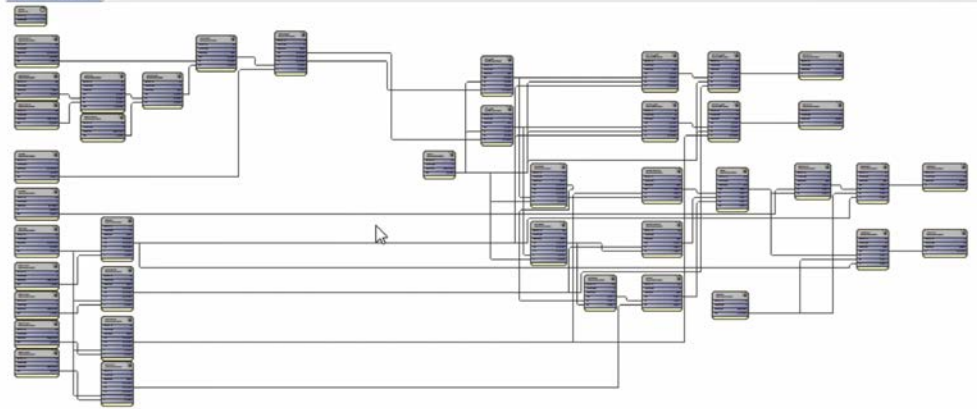


Eliminate costly wiring back to a switch for every controller by taking advantage of the VYKON Edge Controller 10's native ability to daisy chain an IP connection.

Deterministic Runtime Engine



Wire Sheet



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
VEC-10	Vykon Edge Controller field controller with 10 points of onboard IO, 1 RS-485 serial port, and 2 10/100 Ethernet ports. Supports 1 IO-R-34. 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.