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SBS EDGE XN4

OPEN ROOM AUTOMATION

NIAGARA I/O CONTROLLER

Take advantage of the possibilities of a high-performance and globally standardized platform for room and building automation of heating, ventilation and air conditioning systems, energy management systems and room automation solutions.

With the SBS series, OAS offers IoT solutions and services that go far beyond ordinary room and building automation.

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IoT Solutions and Services for Smart Automation

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Enabling a single-tool infrastructure from edge to cloud

is excited to introduce SBS EDGE XN4 — our first IP-based IO controller that harnesses the full power of the Niagara Framework® at the edge. By running Niagara at the edge, systems integrators can reduce training costs, learning curves and proprietary tools with an industrystandard framework. In addition, they can take advantage of new and improved workflows that will save on installation time and maintenance costs.

Building owners can take advantage of high-value apps from the Niagara Community and connect directly to apps hosted in the cloud. Built-in analytics create smarter, more efficient buildings, and improve decision-making. Additionally, Niagara's world-class security features protect all levels of the building infrastructure — giving owners greater peace of mind.

A flexible solution for the Niagara Community

Our goal with SBS EDGE XN4 (Niagara Edge 10) is to bring the power of the Niagara Framework to the edge and make it easier to connect and control systems and optimize performance within the IoT. That's why we are evolving our software to include tools to assist in the configuration and management of edge devices. These tools are open and available for everyone running Niagara, regardless of hardware platform.

Introducing SBS EDGE XN4

Network

Edge 10 controllers can be daisy chained to continue network connectivity and eliminate the need for separate wiring back to a switch. Connect Niagara Edge 10 controllers to your main building or IT network and manage them directly with a Supervisor alongside of a JACE®. Use the secondary Ethernet port of the JACE 8000 to create a private network of Niagara Edge 10 controllers

Product definition

Tridium's Niagara Edge 10 is an IP-based field equipment controller powered by the Niagara Framework®. Niagara Edge 10 controllers drive applications such as zone temperature control, and the operation of fan coil units, singlestage air handling units, water-source heat pumps and more. Niagara Edge 10 controllers run the full Niagara stack, with 10 points of on-board IO and IO-R expansion capability. Niagara Edge 10 licensing supports three devices and 50 total points to harness the full power of Niagara at the edge.

Easily manage and deploy updates

Edge devices typically have a single purpose, with multiple devices serving the same function. Use Niagara to create application templates and deploy to multiple devices with specific properties unique to each device.

Connectivity

When data from external sources — i.e. thermostats, variable speed drives, or smart sensors — is required to drive an application, the Niagara Edge 10 allows for connections to those types of external sources using BACNet/ IP, Modbus, and SNMP over an IP network and/or BACnet and Modbus over a 485 network.

Keep your network secure

Security is always critical, but implementing it across numerous devices on a network can be tedious. Tridium has built tools that assist systems integrators in provisioning and managing security settings across devices.

Quickly build your network

Based on the volume of edge devices at a site, adding devices to your Supervisor may be a challenge. Join edge devices to your network more quickly with tools that ease the process of adding and managing a field of edge devices, which reduces overall installation and configuration time.

niagara edge

Specifications

Technical data

- Powered by the Niagara Framework®
- 5 universal inputs
- 3 digital outputs
- 2 analog outputs
- 1 485 serial port
- 2 ethernet ports that support daisy-chain topology
- Expandable via two IO-R-34 modules
- ACE Deterministic runtime engine (ACE Deterministic runtime engine available in Niagara 4.8)
- 24VAC/DC source

Hardware

Niagara 4 – Requires Niagara 4.7 or later

- NXP iMX6 SoloX2: 800 MHz ARM Cortex-A9/M4
- 512 MB DDR SDRAM
- 2GB total eMMC flash storage with user space set at 1GB
- 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
- 2 10/100MB Ethernet ports capable of daisy chaining
- 1 RS-485 serial port
- Real-time clock
- Secure boot

Expandability

Two (2) IO-R-34 or four (4) IO-R16 connected over a shielded 485 bus. IO-R-16 expansion requires a separate power supply for each IOR-16 module.

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Environmental Specifications

- Operating temperature: -20 to 60°C
- Storage temperature: -40 to 85°C
- Humidity: 5-95% non-condensing
- Shipping & vibration: ASTM D4169, Assurance Level II
- MTBF: 10 years

Agency Certifications

- FCC Part 15, class b
- C-UL
- CE
- UL916, Open Energy Management Class 2
- RoHS2
- REACH
- WEEE
- CAN/CSA-C22.2 No. 205-12

For more information contact **sales@oa-systems.de** or visit our store at **www.oa-systems.de**

niagara 4
Open for innovation

Niagara 4 builds on the legacy of the Niagara Framework® in new and exciting ways. It's less reliant on browser plug-ins, faster and easier to use. End users can now directly access, analyze and act on a wide range of operational data as a result of several innovative changes.

An all-new user interface

Niagara 4 features a bold and intuitive new interface. Modern and easy to use, the platform utilizes HTML5 to provide an array of rich features.

Moving Niagara to the edge

Niagara 4 is available on the Niagara Edge 10 controller and has been ported to a variety of partner-branded IP-based controllers. As a result, users have choice and great advantages in a single-tool infrastructure from edge to cloud, saving training costs and speeding learning curves.

Easier Integration

Niagara 4's new templating feature enables tags to be applied to devices quickly, and allows applications to be prebuilt against a set of standardized templates which then can be quickly created and reused. In other words, once a template is made, it can be redeployed as often as needed in other instances.

More data at your fingertips

With a simple point-and-click or drag-anddrop, users can instantly fi nd and display critical information from their desktop, tablet or mobile device.

Powerful integration

Niagara 4 takes a "defense-in-depth" approach to Internet of Things security. Building on the security of previous Niagara versions, Niagara 4 is secure by default. Authentication requires users to choose strong credentials, and both data in motion and sensitive data at rest are encrypted. Niagara 4 also uses Role-Based Access Control (RBAC), making user permissions easy to confi gure and less error-prone. Niagara 4 also can be integrated with existing enterprise identity and access management systems, such as LDAP and Kerberos. All user actions and securityrelated events are recorded in Niagara's security log for traceability. A built-in Security Dashboard provides a comprehensive and actionable view of the security posture of your Niagara environment.

Faster, more powerful development

Developers will fi nd improved documentation, a rich open API library, BajaScript 2.0, semantic data modeling via tags and other ready-made tools to greatly speed and support development. Anyone familiar with open Web development can now create a custom UI in Niagara

Clear transition from Niagara AX to Niagara 4

Tridium has engineered Niagara 4 and the new JACE® 8000 controller to be easy to add to, or upgrade from, your current Niagara-based systems.

niagara 4

Odering Information

Part number	Description
OAS-SBS-EDGE-XN4	SBS EDGE XN4- 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.

IoT Solutions and Services for Smart Automation

Individual solutions for intelligent buildings / smart building solutions - we offer you everything you need for this. From the automation and control technology of your lighting and facade control to the automation of the heating, ventilation and air conditioning system, we offer you both individual components and standardized and proven SBS complete solutions.

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niagara framework®

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