



HORIZONTAL NIAGARA IP EDGE ARCHITECTURE

One Platform. Many Possibilities. ™



Building Automation and Integration's IP Transformation at the Edge

With the convergence of building management and information technology systems, IP-enabled edge devices are becoming a common element and more prevalent within buildings of all types. IP-enabled devices take advantage of embedded connectivity and offer many benefits. Some of these benefits include the use of existing network infrastructures, no special training is required for installation, several connectivity options are available (fiber, wireless, VPN etc.) and agility, interoperability, speed, and adaptability are pushing expanded applications.

As a result, the traditional vertical building controls topology is flattening to one that is horizontal. (*Reference diagrams below*).

A Horizontal Architecture Offers Several Advantages

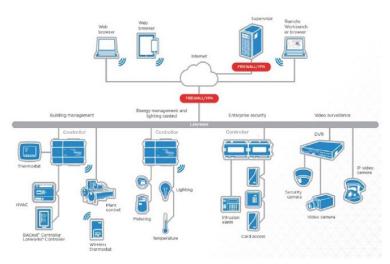
- Uses commonly accepted IT best practices at the connectivity, integration, automation, and enterprise-levels. This enables you to install edge devices on existing IT infrastructure within a building or enterprise.
- Uses standard IT communication services over an Intranet, Wide Area Network (WAN), or public Internet.
- One web-based interface allows you to access, monitor, and control the devices from a supported web browser connected to the network.
- The user interface and online system configuration software embedded in the devices allows configuration, commissioning, data archiving, monitoring, commanding, and system diagnostics from the device with web browser software.
- The use of one platform for all controllers (primary, field, equipment, plant, unitary, VAV and various applications support connectivity to open network standards).
- Expandable I/O point capacity allows you to connect multiple I/O modules to the field controllers, which greatly expands field-level control abilities.
- Devices have the power to independently exchange information with the rest of the network and not depend on it to perform critical functions.



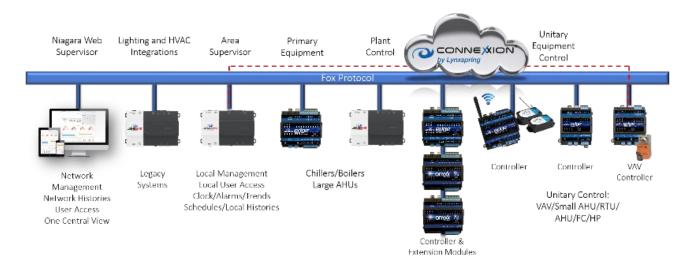
Horizontal Niagara IP Edge Architecture by Lynxspring

The horizontal Niagara IP edge architecture combines Lynxspring's JENEsys Edge and Onyxx portfolio of IP programmable controllers, gateways, and extender modules configured into an interoperable, horizontal topology and harmonious network for advanced control and cost optimization.

Vertical Architecture



Horizontal Niagara IP Edge Architecture



This topology enables users to maximize their experience with Niagara using the same programming tools, Workbench and Fox Protocol and make use of a single platform across the entire building architecture to manage and control closer to where the data actually is whether it be equipment, a reduced setup and management costs, reduced complexity and have the ability to add their own value-added applications.



Horizontal Niagara IP Edge Architecture

- ✓ Single, unified software platform (Field Controller to the UI to the Cloud)
- ✓ Secure IP Network/Enhanced Security at Device-Level
- ✓ Support for Multiple Protocols and 3rd Party Applications (BACnet/IP, BACnet/MS/TP, Modbus, Wi-Fi, Cellular, Monnit)
- ✓ No protocol, line speed or media changes
- ✓ IP-based Peer-to-Peer Communications
- ✓ Independent of Supervisory Network Controllers
- ✓ Easier/Faster Patching and Remediation
- ✓ Legacy/Application Integration Capabilities
- ✓ Simplified Installation/ Simplified Access to BAS Data
- ✓ Cost Effective Supervisory Upgrades
- Run Applications Like Analytics at the Edge
- ✓ Support for Legacy BAS Drivers



About Lynxspring, Inc.

Embracing open software and hardware platforms, Lynxspring develops, manufactures, and distributes edge-to-enterprise solutions and IoT technology to create intelligent buildings, smart equipment control, and IoT applications. Lynxspring technologies and solutions simplify connectivity, visibility, integration, interoperability, data access, normalization, and analytics from the edge-to-the-enterprise. The company's solutions are deployed in millions of square feet of commercial settings in the United States and internationally.

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