



Specification Data Sheet

Overview

FIN™ (Fluid Integration) is an open, modular Building Automation Software suite developed by J2 Innovations and designed specifically for System Integrators helping them create more efficient and intelligent building systems. It integrates different devices and protocols, enables control logic, and provides tools to monitor, analyze, and visualize data. FIN™ utilizes the Project Haystack open data standard for operational efficiencies and extensible data capabilities.

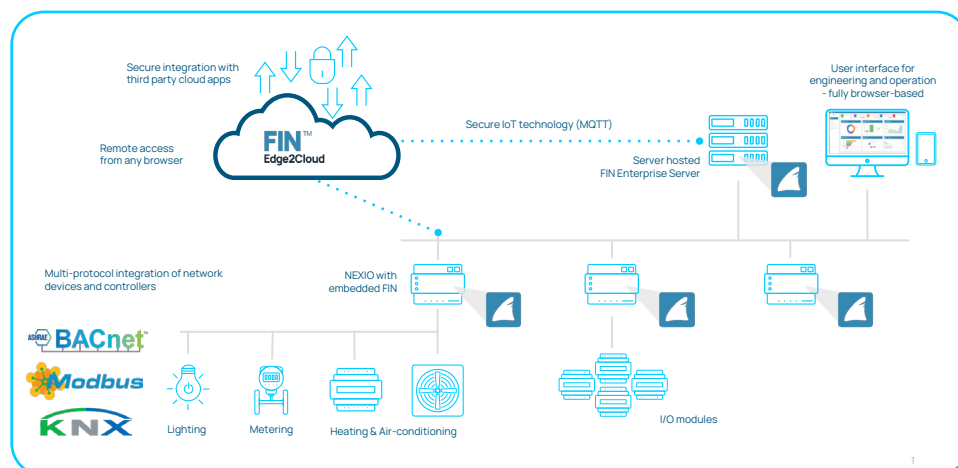
System Architecture

FIN™ can run at multiple levels of the architecture, from server-based operator workstation to embedded site level controller. For the server, FIN™ is the operator workstation (BACnet OWS certified) running on a PC or hosted server, providing supervisory and control functionality. At the embedded level, FIN™ can be bundled with the NEXIO controller to provide building level supervisory and control in an embedded platform.

FIN™ Edge2Cloud

J2's secure remote access and edge management solution, built directly into FIN™. It uses AWS with TLS 1.2 encryption to provide fully encrypted remote access to any FIN™ installation from a standard web browser anywhere in the world, any time. No VPN is required. No IT support is needed to configure it. FIN™ "pushes" the data connection from the site to the cloud using the Haystack standard, which is optimized for efficient remote connectivity. Deployment across multiple sites can be completed within minutes and sites instantly appear on a map. All you need is an internet connection at the site.

FIN™ Framework flexible architecture



FIN™ supports

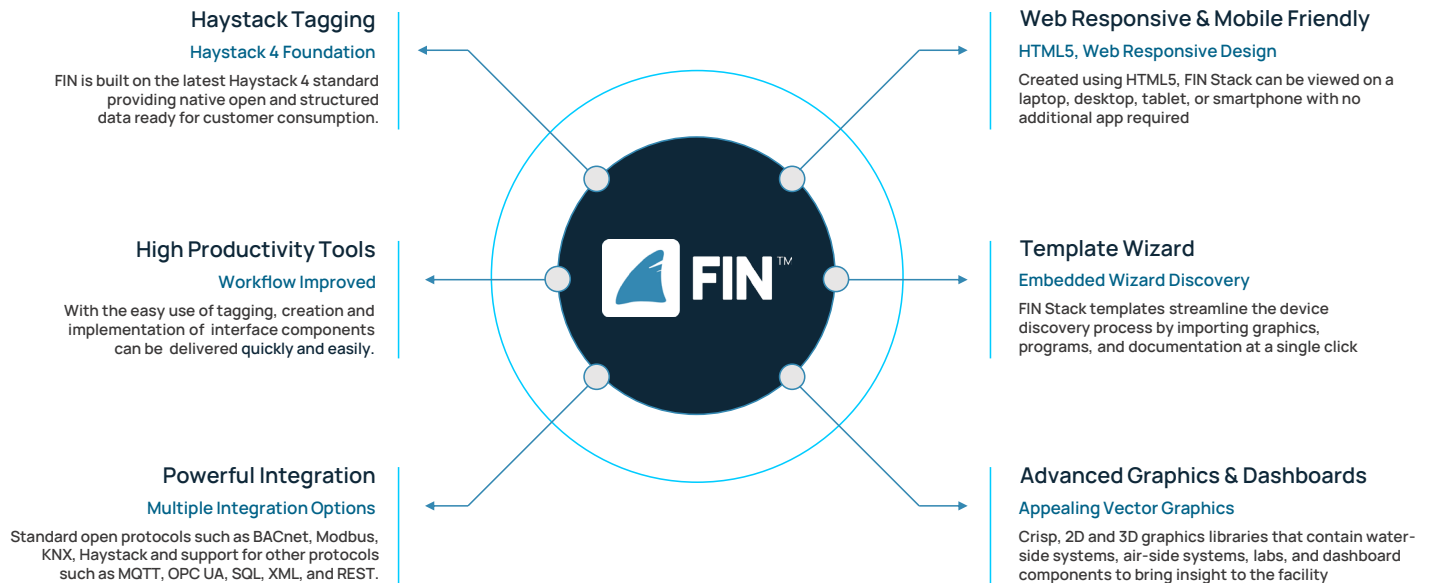


...and more

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FIN™ has built-in apps for a simplified approach

With FIN™, you can manage your buildings and their environments with flexibility and optimal responsiveness – any time, anywhere. Our comprehensive suite of intuitive apps enables the rapid development of integrated building management solutions.



Benefits

- Faster to engineer
- Intuitive user experience
- Easy and secure cloud connectivity
- Accessible from any smart device
- Runs on edge controller, server, or in the cloud

Advanced tools capabilities

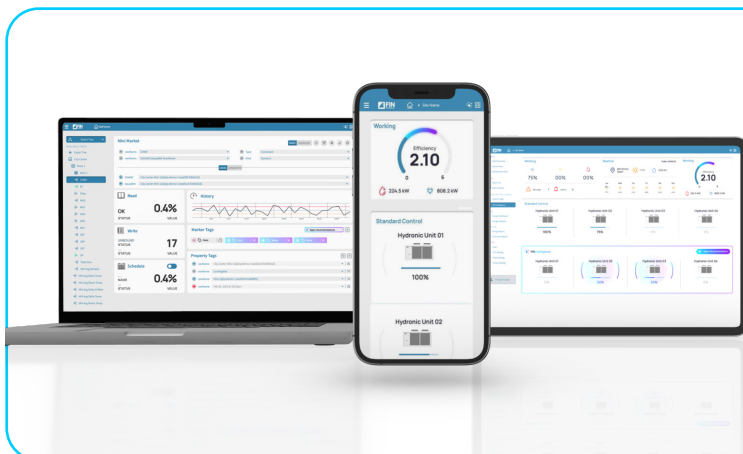
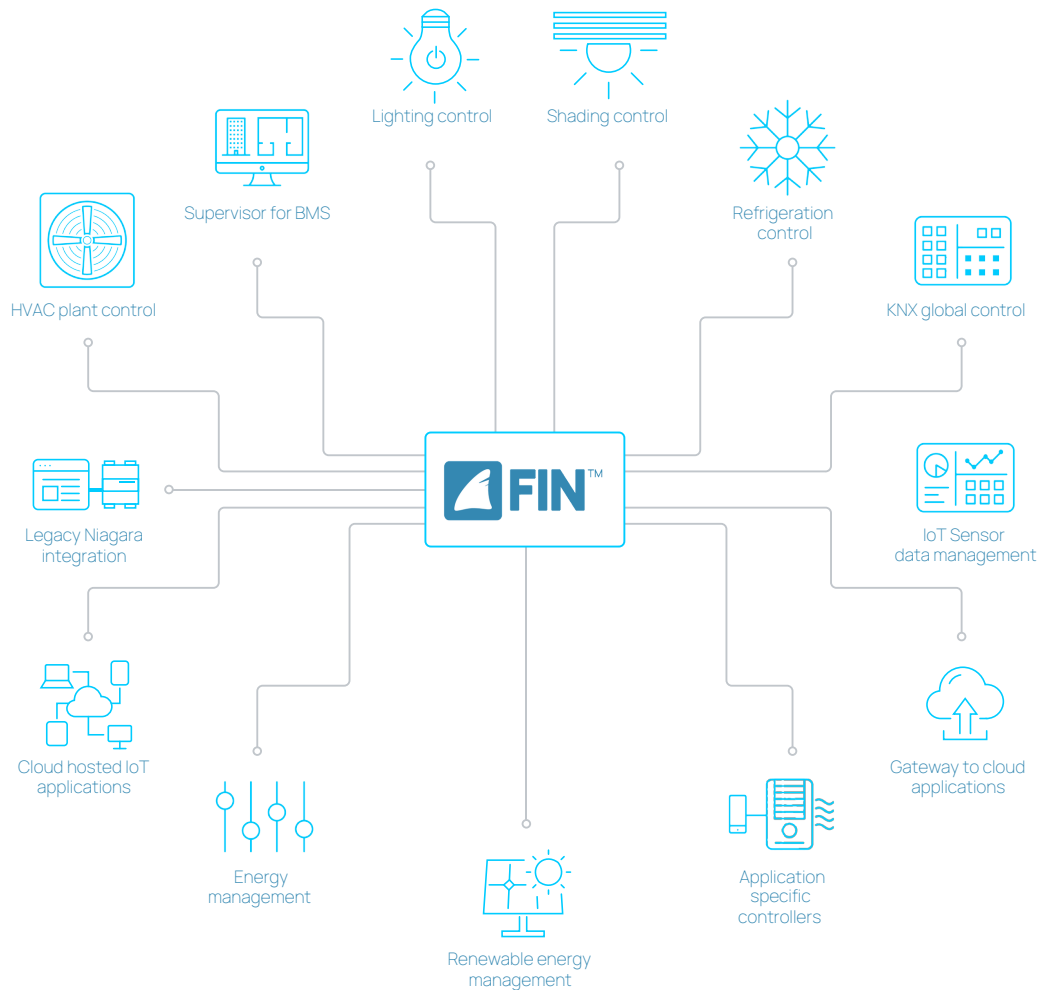
- Graphics Builder
- Database Builder
- Logic Builder
- Haystack Tagging
- Data Modeling server, or in the cloud

Browser-based

- Configuration Apps
- End User Desktop
- End User Mobile Tablet/Phone

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FIN™ brings big data into a more manageable environment and then applies advanced applications for scheduling, command/control, logging, alarming, and visualization.



Full functionality on all devices

- Implements responsive web design and a mobile friendly focus.
- Utilizes browser based tools and embraces the HTML5 standard.
- Runs full application suite functionality across all browser clients (desktop, tablet, and mobile devices).

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NEXIO Embedded Controller for FIN™

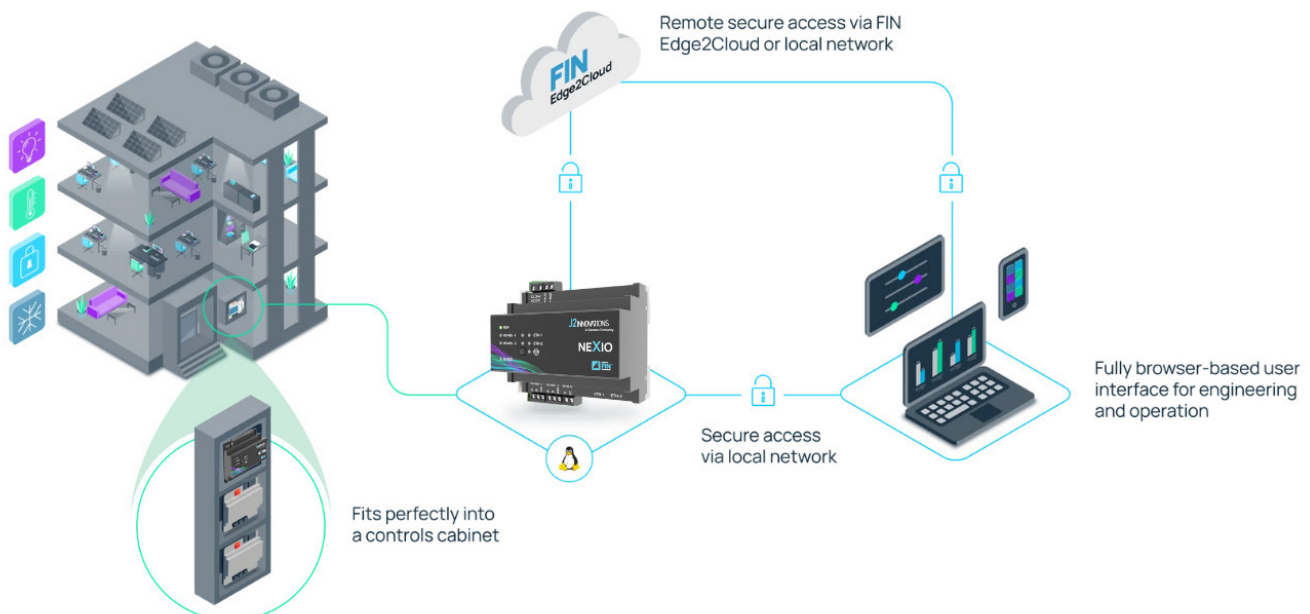


Get more simplicity and flexibility for your FIN project with a unique hardware and software bundle with the new NEXIO Embedded Controller, purpose-built to run FIN Framework locally at the job site. Manufactured in Italy, NEXIO offers a high performance edge controller with quick and easy installation.

- Supports up to 5000 points
- 2 Ethernet ports, 2 Serial Port, and M-BUS
- Support for BACnet MSTP/IP, Modbus RTU/IP, KNX-IP
- Hotspot WiFi for configuration
- Operating voltage AC 24 V or DC 24 V
- Remote access via FIN Edge2Cloud

For more information and to
download the data sheet at:
j2inn.com/nexio

NEXIO with FIN



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Available in EMEA only

NEXIO IO Expansion Modules



NEXIO IO Expansion Modules, designed to work seamlessly with our NEXIO embedded controller to deliver smart buildings, smart equipment, and IoT solutions. The NEXIO controller is engineered to maximize FIN Framework-based applications while extending its functionality with flexible local input and output support.

The NEXIO expansion modules support a range of IO capabilities through three unique devices:

- IO-402, supporting 4 analog outputs (AOs)
- IO-442, supporting 2 resistive sensors, 4 Universal Inputs (UIs), and 4 Digital Outs (4 DOs)
- IO-482, supporting 8 universal UIs.

The devices operate on a flexible range of power, with 12-24 volts DC/AC. Each device is designed to snap into DIN Rail for panel mounting. The IO expansion modules are wired and communicate with the NEXIO controller through the Modbus/RTU protocol.

IO Modules

FIN-NEXIO-IO-442	FIN Hardware NEXIO IO module with 4 UI, 4 DO, 2 SI
FIN-NEXIO-IO-402	FIN Hardware NEXIO IO module with 4 AO
FIN-NEXIO-IO-482	FIN Hardware NEXIO IO module with 8 UI



Ordering information

Project licenses are ordered by simply mixing and matching the part numbers that add up to the capacity required for the project (or round up to the next larger part number).

FIN can be installed on a Windows or Linux server

FIN 5 Framework Project Licenses for Servers with Maximum Additional Histories

FIN-00100-SVRMAX	FIN server license 100 CAPs, max HIS	FIN server license, provides 100 capacity units (which includes 100 histories)
FIN-00200-SVRMAX	FIN server license 200 CAPs, max HIS	FIN server license, provides 200 capacity units (which includes 200 histories)
FIN-00500-SVRMAX	FIN server license 500 CAPs, max HIS	FIN server license, provides 500 capacity units (which includes 500 histories)
FIN-0001K-SVRMAX	FIN server license 1,000 CAPs, max HIS	FIN server license, provides 1,000 capacity units (which includes 1,000 histories)
FIN-0002K-SVRMAX	FIN server license 2,000 CAPs, max HIS	FIN server license, provides 2,000 capacity units (which includes 2,000 histories)
FIN-0005K-SVRMAX	FIN server license 5,000 CAPs, max HIS	FIN server license, provides 5,000 capacity units (which includes 5,000 histories)
FIN-0010K-SVRMAX	FIN server license 10,000 CAPs, max HIS	FIN server license, provides 10,000 capacity units (which includes 10,000 histories)
FIN-0020K-SVRMAX	FIN server license 20,000 CAPs, max HIS	FIN server license, provides 20,000 capacity units (which includes 20,000 histories)
FIN-0050K-SVRMAX	FIN server license 50,000 CAPs, max HIS	FIN server license, provides 50,000 capacity units (which includes 50,000 histories)

FIN can be bundled with NEXIO

FIN 5 Framework Embedded Device Hardware + Bundled Software MAX

FIN-NEXIO-100-EMBMAX	FIN hardware NEXIO based edge device +100 CAPs, max HIS	FIN embedded device hardware based on NEXIO platform+license provides 100 capacity units (which includes 100 histories)
FIN-NEXIO-200-EMBMAX	FIN hardware NEXIO based edge device +200 CAPs, max HIS	FIN embedded device hardware based on NEXIO platform+license provides 200 capacity units (which includes 200 histories)
FIN-NEXIO-500-EMBMAX	FIN hardware NEXIO based edge device +500 CAPs, max HIS	FIN embedded device hardware based on NEXIO platform+license provides 500 capacity units (which includes 500 histories)
FIN-NEXIO-01K-EMBMAX	FIN hardware NEXIO based edge device +1,000 CAPs, max HIS	FIN embedded device hardware based on NEXIO platform+license provides 1,000 capacity units (which includes 1,000 histories)
FIN-NEXIO-02K-EMBMAX	FIN hardware NEXIO based edge device +2,000 CAPs, max HIS	FIN embedded device hardware based on NEXIO platform+license provides 2,000 capacity units (which includes 2,000 histories)

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Enterprise Server part numbers

FIN 5 Framework Project Licenses for Enterprise Servers with Maximum Additional Histories

FIN-0010K-ENTMAX	FIN enterprise server license 10,000 CAPs, max HIS	FIN enterprise server license, provides 10,000 capacity units (which includes 10,000 histories)
FIN-0050K-ENTMAX	FIN enterprise server license 50,000 CAPs, max HIS	FIN enterprise server license, provides 50,000 capacity units (which includes 50,000 histories)
Notes	Enterprise max server license can only be used to connect via FIN Network using the Haystack protocol.	

Maintenance

Maintenance is a key ingredient in our strategy to keep the software always up-to-date with our latest innovation and assures that the product is following the latest requirements of Cyber-Security, system stability and system compatibility with latest Operating Systems (e.g. Windows, LINUX, Java). FIN software maintenance includes platform releases, extension packs, service packs, and FIN Edge2Cloud Essentials. For the initial 12 months, software maintenance is free of charge.

To add maintenance for subsequent years, use the part numbers you chose when you ordered and add -MAINT to each line item.

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FIN™- Core Specifications

Platform Type and Architecture

Modularity	Open, modular software framework for building automation and IoT
Hardware Platform	Hardware agnostic (runs on embedded devices, gateways, or servers)
Deployment	Deployable as: • Controller • Gateway • HMI (interface) • Server
Cloud Connectivity	Supports edge computing and scalable cloud deployments

System Requirements

The following are recommended Hardware Requirements when installed on a Server

CPU	Modern x86-64 CPU (Intel Xeon, Intel Core, AMD Ryzen)
Operating System	Windows, Linux
Supported Platforms	Deployable as: • x86_64-pc-windows-msvc • i686-pc-windows-msvc Linux: • aarch64-linux-musl • aarch64-linux-gnu • armv7-linux-gnueabi • x86_64-linux-gnu • i686-linux-gnu • x86_64-linux-musl
CPU Power	2GHz+
RAM	4GB (8-16GB+ Recommended)
Flash	32GB SSD
Interface	Gigabit LAN
Java	v11 or newer (Open JDK is recommended)



Supported Protocols (Integration layer)

Communication Protocols	• BACnet (IP & MS/TP) • Modbus (RTU & IP) • KNX • OPC UA • MQTT • M Bus • Trend • Haystack • SNMP • SQL
BACnet Certification	BTL Certified BACnet Operator Workstation (OWS)

Data & Database Capabilities

Database	Built on a high-performance time-series database
Database Optimization	• Real-time data ingestion • Historical analysis
Ontology	Project Haystack semantic data model

Core Functional Modules

Integrate	• Connect multiple vendor devices and systems using open protocols via serial or IP • Supports open APIs and custom connectors
Control	Visual logic builder for equipment and system control enables: • Automation logic • Smart alarms • Fault Detection & Diagnostics (FDD)
Manage	• Full monitoring and management of devices/systems • Scales from small sites to large multi-site deployments
Analyze	• Built-in analytics tools for performance optimization • Handles large volumes of operational data
Visualize	• Custom dashboards and graphics (HTML5-based) • Reporting tools (e.g., Energy Usage, project documentation)
Remote Connectivity	• Secure cloud connectivity via Edge2Cloud • Remote access without VPN (encrypted via AWS)



Application and UI Layer

User Access	HTML5 web-based interface (accessible via browser)
User Applications	• Dashboard apps • Database builder (DB Builder) • Graphics and control interfaces
Mobile Support	Supports mobile-responsive UI

Security and Access Control

Browser Communication	HTTPS communication
User Management	• Role-based user management • No limit on the amount of Users • Users Group management
Login Protection	Password policies and login controls
Cloud Security	• TLS 1.2 encryption using Amazon Web Services • Authentication & access control via Edge2Cloud

Cloud and Remote Management (Edge2Cloud)

Remote Access	Secure remote access without VPN
Functionality	Centralized management of devices and multiple sites
Features	• User & device management • Remote dashboards • Backup & monitoring
Scalability	Scalable to hundreds of thousands of sites

Operating Environments

Operating System	• Linux (embedded/edge) • Windows (server deployments)
Embedded Hardware Compatibility	• J2 Innovations NEXIO • Siemens F200 • Siemens X500
Cloud Platforms	• AWS • Google Cloud



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Extensibility and Development

Data Interoperability	Open APIs (Haystack-based REST APIs)
Connectivity	Custom connector development supported
Site Configuration	Template-driven configuration for rapid deployment

Contact

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