

JACE®-NXT



Overview

The JACE-NXT is a powerful embedded controller built with the full functions of the Niagara Framework® suite and provides a total building automation solution. Users can seamlessly integrate LonWorks®, BACnet®, Modbus®, OPC®, oBIX, and other standard protocols with legacy systems to deliver a unified real-time controls network. The suite includes a browser-based graphical user interface, allowing users to view and manipulate underlying systems without the need for dedicated workstations or client software. The

JACE-NXT is an updated version of the JACE-NXS. It is faster and includes more memory for both Flash storage and RAM. It also contains a Lon FTT10A communications card and RS-485 port with the packaging, power supply and UPS options being similar to that of the predecessor JACE-NXS.

With the JACE-NXT, users have the ability to create a customized user interface that combines intuitive navigation screens with dynamic, real-time displays, third party graphic images, jpegs, or gif images. Unique software technology eliminates the need for page refreshes or data updates, minimizing required bandwidth. JACE® products from Tridium, bundle this software capability in a hardware platform that is easily installed in any building control environment. JACEs connect to system field busses and provide real-time control functions as constant streams of data from individual systems, and are instantly transformed to a common object model within the device. Functioning as a fully distributed system when multiple units are networked together, the JACE provides unsurpassed scalability and reliability. In this configuration, Tridium's AX Web Supervisor® can be used to network multiple JACE controllers and manage enterprise-level control functions. The appropriate JACE model is determined by connectivity and computing power requirements.

Applications

The JACE-NXT is ideally suited for integration, monitoring and control in all commercial and light industrial installations.

It combines greater computing power with 2-Gigabyte DDR3 RAM standard, 2-Gigabyte Flash drive or optional hard drive, and a fast 1.2 GHz Celeron processor in a fan-less enclosure. The JACE-NXT-AX-FL offers increased reliability with no moving parts, and an integral UPS power supply. This superior computing and processing power makes it ideal for installations where large amounts of archives and graphics are required. Additionally, because it has a PC processor platform with a hard disk and is offered with embedded Microsoft™ Windows XP, the JACE-NXT is perfect for organizations whose IT policies dictate Microsoft products or when applications such as OPC require a Windows-based operating system. This unit is available with either Tridium R2 or AX software.

The unit is available as either a wall or panel-mount (din-rail). Panel mounting brackets are included with each unit along with the standard din-rail mount. Built-in communication ports provide controller flexibility to meet most connectivity requirements.

Features

- High performance Intel Celeron Microprocessor at 1.2 GHz for fast, reliable processing
- Real-time Niagara Framework® software control engine for local, closed-loop control across multiple protocols
- Integral energy management options
- Trending, scheduling, and alarm notification via email
- Distributed architecture for scalability and reliability
- Can be integrated with other JACE controllers and an AX Supervisor for large-scale systems and deployment
- Available with Flash memory storage with no moving parts or a Hard Drive based version

Ordering Information

Part Number	Description
T-NXT-FL-AX	JACE-NXT with 2 GB Flash Memory and 2GB RAM, universal input power supply, and UPS module with battery and AX software -Version 3.5 or later required. Base Unit includes one RS-232 port, one electrically isolated RS-485 port, two 10/100/1000 Mb Ethernet Network Interfaces, one Lonworks™ FTT10A interface port, and four USB ports. Also includes UI Web Server and Niagara Connectivity.
T-NXT-HD-AX	JACE-NXT with 2 GB RAM, 250 GB Hard drive, universal power supply and AX software -Version 3.5 or later required. Base Unit includes one RS-232 port, one electrically isolated RS-485 port, two 10/100/1000 Mb Ethernet Network Interfaces, one Lonworks™ FTT10A interface port, and four USB ports. Also includes UI Web Server and Niagara Connectivity.
T-NXT-R2	JACE-NXT with 250 GB hard drive and R2 software. Base Unit includes one RS-232 port, one electrically isolated RS-485 port, two 10/100/1000 Mb Ethernet Network Interfaces, one Lonworks™ FTT10A interface port, and four USB ports. Each unit also includes a universal input power supply.
Hardware Option	
T-NXT-UPS	Optional UPS for T-NXT-R2 or T-NXT-HD-AX, this option is already included in the T-NXT-FL-AX.

Specifications

Platform

- High Speed Intel Celeron 1.2 GHz, 800 MHz FSB
- 2 Gigabyte, DDR3 1066, SDRAM
- 2 Gigabyte Compact Flash for storage or 250 GB HD (in appropriate model, in lieu of Flash memory storage)
- Two Ethernet ports 10/100/1000 Mbit autosensing with RJ-45 style connectors
- Real-time clock with lithium battery backup

Power Supply

- Input voltage: JACE-NXT (any version) 24 volts, DC supplied via included universal input 100 VAC-240 VAC power supply
- Input frequency: 47 to 63Hz
- Input power: 2A Max/115V and 1A Max/230V for the included Universal Power Supply, mains AC voltage is not to be applied directly to the JACE-NXT
- Battery backup unit is included with Flash memory equipped JACE-NXT - providing approximately 15 minutes backup time, depending on battery state-of-charge and environmental conditions. This unit is optional for the T-NXT-R2 and T-NXT-AX-HD

Communication Ports– Base Unit

- Two 10/100/1000-Mbit Ethernet ports–RJ 45 connection
- One high-speed RS-232 serial port; DB-9 connector
- One RS-485 Port, electrically isolated with three terminal connector
- One Lon FTT10 A port (78 Kbps) with standard two-terminal Weidmuller style connector
- Four standard USB ports which support the UPS monitor and can be used to transfer data to memory from a “thumb-drive” for updates, etc.

Operating System

- Embedded version of Microsoft Windows™ XP, Microsoft Java Virtual Machine or Sun Hotspot VM, depending on version
- Includes either R2.3.532 or later or AX 3.5 or later - plus Lon and oBIX drivers, along with the Niagara Web server (UI) software. Other drivers and software options are available separately

* Note: BACnet MSTP driver is not available for this JACE; BACnet IP or BACnet over Ethernet is available. Also does not support Tridium IO modules.

Chassis

- Construction: Heavy-duty aluminum and steel chassis
- Cooling: Convection Fin cooling / no fans
- Dimensions: 133mm (5-1/4”) W x 89mm (3-1/2”) H x 262mm (10-5/16”) L. Units in mm and (inches)
- Weight: Net 4.5Kg. (9.9 lbs.) / Gross 6.3Kg. (13.9 lbs.)

Environment

T-NXT-AX-FL	0° to 50°C (32° to 122°F) for horizontal mounting position, or 0° to 45°C (32° to 113°F) for vertical mounting position. Refer to Installation Guide for mounting details
T-NXT-AX-HD	5° to 40°C (41° to 104°F) in either mounting position
T-NXT-R2	5° to 40°C (41° to 104°F) in either mounting position

Storage temperature – all models: All models 0°C to 70°C (32°F to 158°F)

Relative humidity – all models: All models 5 to 80% at 25°C (77°F), non-condensing



Vibration, in operation (tested to DIN IEC 60068-2-6):

- Flash-based model: 5 to 9 Hz: 3.5 mm, 9 to 500 Hz: 9.8 m/s²;
- Hard drive version and wall mounting: 10 to 58 Hz: 0.0375mm, 58 to 200 Hz: 4.9 m/s²
- Hard drive version and DIN mounting or vertical installation: vibration not permitted

Resistance to shock, in operation (tested to DIN IEC 60068-2-27):

- Flash-based model: 150 m/s², 11 ms
- Hard drive version: 50 m/s², 30 ms

Agency listings:

- RoHS Compliant 
- UL 916
- BTL listed as a B-BC device when optional BACnet driver is used 
- FCC part 15, Class A
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 “Signal Equipment”

- CE - Device fulfills requirements for the EC directive "204/108/EEC Electromagnetic Compatibility," and the following fields of application apply according to its CE label:

Area of use	Emitted Interference	Noise Immunity
Residential area, business and trade areas and small business	EN 61000-6-3: 2007	EN 61000-6-1: 2007
Industry	EN 61000-6-4: 2007	EN 61000-6-2: 2005

Architecture

