

JACE®-603



Overview

Tridium's JACE (Java Application Control Engine), JACE-603 is an embedded controller/server platform designed for remote monitoring and control applications. The unit combines integrated control, supervision, data logging, alarming, scheduling and network management functions, integrated IO with Internet connectivity and web serving capabilities in a small, compact platform. The JACE-603 makes it possible to control and manage external devices over the Internet and present real time information to users in web-based graphical views.

In addition to supporting Tridium's Niagara^{AX} Framework applications, the JACE-603 can optionally support Tridium's Niagara R2 applications. This option provides the ideal platform for projects currently utilizing Tridium's Niagara R2 technology where a cost effective migration to Tridium's flagship Niagara^{AX} Framework is desired. The Niagara^{AX} Framework compatible platform can be installed and optionally configured to support a facility utilizing a Niagara R2 Framework application today. At a later date, the facility can migrate to a Niagara^{AX} Framework application, thus spreading the cost of the migration across multiple phases.

The JACE-603 is part of the Tridium portfolio of Java-based controller/server products, software applications and tools, designed to integrate a variety of devices and protocols into unified, distributed systems. Tridium products are powered by the Niagara^{AX} Framework®, the industry's leading software technology that integrates diverse systems and devices into a seamless system. Niagara^{AX} supports a range of protocols including LonWorks®, BACnet®, Modbus, oBIX and many Internet standards. The Niagara^{AX} Framework also includes integrated management tools to support the design, configuration and maintenance of a unified, real-time controls network. The integral IO, LonWorks® FTT-10A port, RS-485 port, RS-232 port, metal enclosure and line voltage input power supply, make this platform ideal for a wide variety of integration applications.

Applications

The JACE-603 is ideal for smaller facilities, remote sites, and for distributing control and monitoring throughout large facilities. It is also ideal for managing and controlling today's energy applications. On-board universal inputs and Form C relay outputs are available for applications where local control is required. The JACE-603 includes one LonWorks® FTT-10A port and one RS-485 port providing support for a wide range of field buss connections to remote I/O and stand-alone controllers. In small facility applications, the JACE-603 is all you need for a complete system. The JACE-603 serves data and rich graphical displays to a standard web browser via an Ethernet LAN or remotely over the Internet. In larger facilities, multi-building applications and large-scale control system integrations, AX Supervisor™ software can be used to aggregate information (real-time data, history, alarms, etc.) from large numbers of JACE-603s JACEs into a single unified application.

Features

- Embedded PowerPC Platform@ 524MHz
- One LON FTT10A port for LON device integration
- Direct, on-board I/O with six universal inputs, and 4 Form C relay outputs
- One RS-485 port for connection to open and proprietary protocol devices
- One RS-232 port for Integration or technical support
- Web UI services to support many simultaneous users over the intranet or Internet via a standard web browser
- One Niagara^{AX} Framework option slot supporting NPB-XXX option modules. This feature is not available for Niagara R2 applications.

Ordering Information

Item	Description
T-603/T-603I	Base Unit including two Ethernet ports, one RS-232 port, one RS-485 port, one LonWorks® FTT-10A port, six universal inputs, and four Form C relay outputs. Web User Interface and Niagara Connectivity included. oBIX Client/Server BACnet and LONworks driver included.
R2-6XX	Capability to utilize a Niagara R2 based application.
NPM-256	Upgrade RAM memory to 256 MB DDR.

Note: Refer to current price list for additional options.

Specifications

Platform

- PowerPC 440 524 MHz processor
- 128MB DDR RAM & 128 MB Serial Flash
- Optional 256 MB DDR RAM
- SLA Battery Backup
- Real-time clock

Communications

- Two 10/100 Mb Ethernet port – RJ-45 connection.
- One RJ-45 connector for RS-232 port.
- One screw terminal RS-485 port (up to 78,600 baud for MSTP).
- One LonWorks port – FTT-10A with Weidmuller connector.
- One Niagara^{AX} option slot (see available option modules below)

Battery Backup

- Battery backup provided for all on board functions.
- Battery is monitored and trickle charged.
- Battery maintains processor operation through power failures for a pre-determined interval, then writes all data to flash memory, shuts processor down, and maintains clock for a minimum of five years.

Available Niagara^{AX} Option Modules (Not available for Niagara R2 applications)

- NPB-LON LON® Card
- NPB-232 RS 232 Card
- NPB-2X-485 Dual Port RS 485 Card
- NPB-GPRS-W GPRS Modem with Wyleless SIM Card
- NPB-ZWAVE-US ZWAVE Card/Driver Bundle US
- NPB-ZWAVE-EU ZWAVE Card/Driver Bundle EU
- NPB-SED-001 Sedona Wired/Wireless Card

Operating System

- QNX Real-time Operating System
- Sun HotSpot JVM Java Virtual Machine
- Requires Niagara^{AX} 3.6.47 or higher; or Niagara R2 2.301.535 or higher

Power Supply

- T-603-AX: 120VAC, 50/60 Hz.,
- T-603I-AX: 230VAC, 50/60 Hz.,
- 25 VA maximum.
- Lead wires for hot/neutral (wire nut), stud for ground connection. JACE T-403I has two-screw terminal strip for AC power connections, plus a stud for ground.

Chassis

- Housed in metal enclosure, Intended for indoor wall mounting only.
- Cooling: Internal air convection.
- Dimensions: 11" wide X 14" high X 2.5" deep (27.94 cm wide X 35.56 cm high X 6.35 cm deep).
- Weight: Net 4 lbs. (1.814 kg), Gross 5 lbs. (2.268 kg).

Environment

- Operating temperature range: 0° to 50°C (32°F to 122°F)
- Storage Temperature range: 0° to 70°C (32°F to 158°F)
- Relative humidity range: 5% to 95%, non-condensing

Inputs/Outputs

- Four Form C (SPDT) relay outputs rated for 24 VAC/DC @ 2 Amps resistive.
 - One LED indicator for each relay.
- Six Universal Inputs for 10K ohm Type III
 - (10K 4A1-International) Thermistor, 4/20 mA current loop, 0 to 10 volt, or dry contact.
 - 12-bit A/D converter.
 - Thermistor Sensor Range -23.3°C to 57.2°C (-10° to 135° F). Input accuracy is in the range of ±1% of span, type III thermistor curve supported.
 - 0–10 volt or 4/20 mA accuracy is ±2% of span, without user calibration. Uses an external resistor for current input (four provided). Self powered or board powered sensors accepted.
 - Dry contacts (on UI) 20 Hz max. frequency (25 ms minimum pulse width). 3V open circuit, 300 mA short-circuit current.
- Board provides 20 VDC @ 80 mA to drive 4/20 mA powered sensors.
- 24 VDC terminal and external resistor can be used if monitoring contacts that require higher voltages or higher current.
- All I/O connections are screw terminals on 0.2" centers.

Other

- Maximum Lon devices = up to 124
- Maximum MSTP devices per RS-485 port = 31 standard load
 - 124 ¼ load devices; requires one MSTP driver per port.
- Port speeds supported are:
 - 4800 baud
 - 9600 baud
 - 19,200 baud
 - 38,400 baud
 - 57,600 baud
 - 76,800 baud

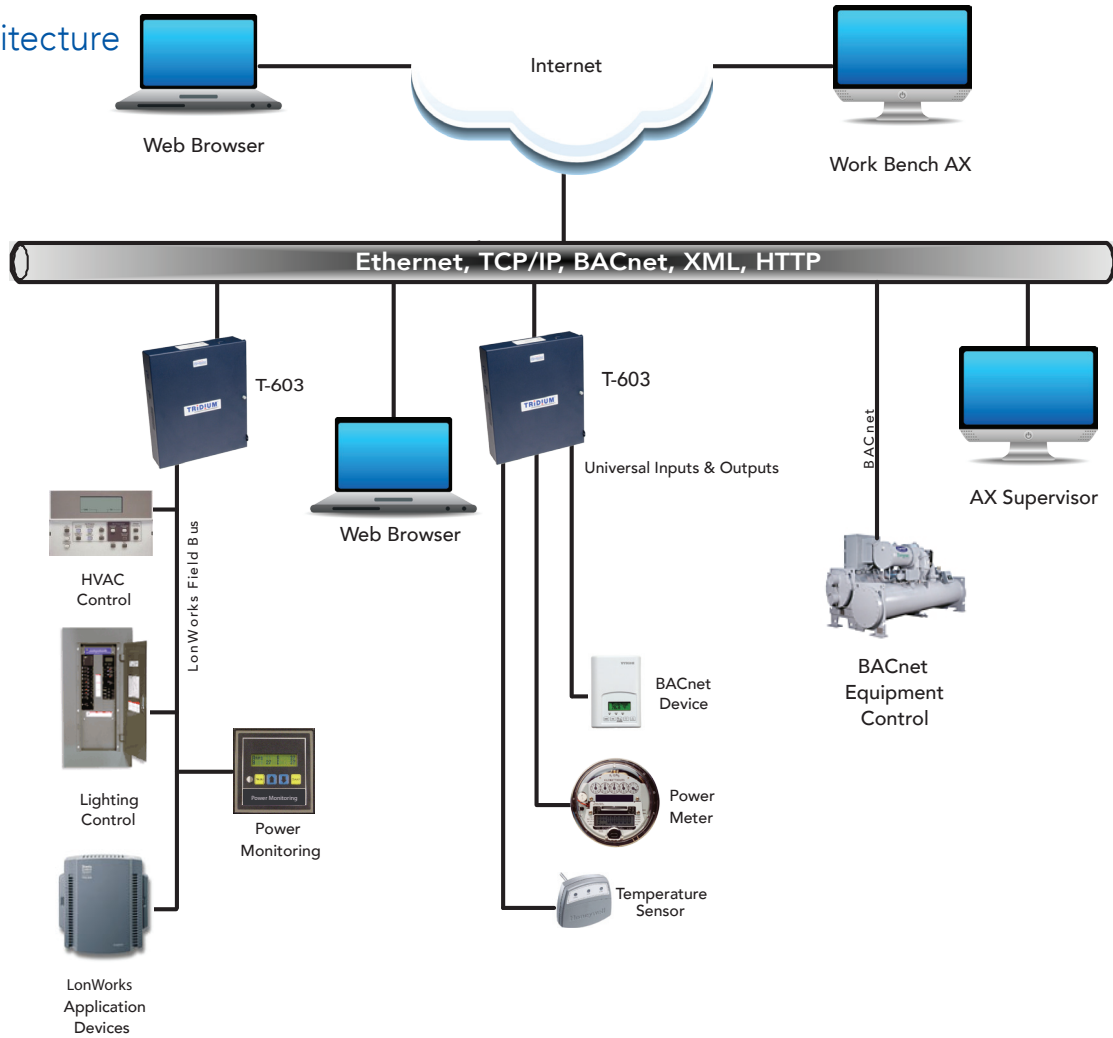
Agency Listings

- RoHS Compliant
- BTL
- UL 916
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
- FCC part 15 Class B

RoHS
Compliant



Architecture



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