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VYKON JACE-5R-AX



Overview

VYKON® is an open, intelligent automation solution that meets all the challenges of real-world integration and enterprise connectivity and ensures the interoperability among diverse facility systems.

Built on Tridium's Niagara^{AX} Framework®, the VYKON suite of products permit users to seamlessly integrate LonWorks®, BACnet® IP, BACnet MSTP, Modbus®, OPC®, and other protocols and/or legacy systems to provide a unified, real-time controls network. The product suite includes a browser-based graphical user interface allowing users to view and control underlying systems without the need for dedicated workstations or thick client software.

VYKON JACE® (Java Application Control Engine) products bundle this software capability in a hardware platform that can be installed in all building control environments. JACEs connect to system field busses and provide real-time control functions as data from individual systems are transformed to a common object model within the JACE. JACEs provide a fully distributed system when multiple units are networked together, which provides scalability and reliability. In this configuration, the VYKON AX Supervisor® can be used to manage enterprise-level control functions with a network of JACEs.

Applications

Specifically designed for commercial and data center applications, the JACE 5R-AX is ideally suited for users who require a compact controller that can be 19" rack or wall mounted. Its low 1U (1.75") height requires little room in crowded racks. A single JACE 5R-AX controller supports a network of devices via the LonWorks port, or through the four RS-485 ports, or the two RS-232 ports with the appropriate protocol driver.

The JACE 5R-AX can integrate a combination of LON, Modbus, BACnet, or legacy devices with the appropriate optional drivers.

Features

- Embedded 250 MHz RISC Microprocessor platform with 256 MB RAM/128 MB storage Flash
- 19" standard Rack Mount configuration; 1U height
- One LON FTT10A port for LON device integration; optional driver required.
- Four RS-485 ports (electrically isolated) for connection to open and proprietary protocol devices
- Two RS-232 ports for serial communication device Integration
- Includes User Interface (Web Server) to serve graphical information to a standard Web Browser
- Includes connectivity services to enable the JACE-5-R-AX to communicate with other JACEs or to the AX Supervisor
- BTL® listed when BACnet driver is used – complies with B-BC (BACnet Building Controller)
- One 10/100 Mb Ethernet RJ-45 connector

Ordering Information

Part Number	Description
J5-R-AX	JACE-5R rack mount with AX software – includes rack mount brackets
J5R-WMT-BKT	Optional wall mount brackets – adapts rack enclosure to wall mounting
10148	RJ-45 to DV-9 connector adaptor for RS-232 ports
10180	4 foot RJ-45 cable with male RJ-45 plugs on each end
10181	10 foot RJ-45 cable with male RJ-45 plugs on each end
10182	25 foot RJ-45 cable with male RJ-45 plugs on each end

Specifications

Platform – JACE 5R-AX

- CPU- 250 MHz RISC type processor
- 256 MB Ram, 128MB Flash for database backup
- One 10/100 Mb Ethernet RJ-45 connector

Communications

- One 10/100 Mb Ethernet port – RJ-45 connection
- Two RJ-45 connectors for RS-232 ports
- Four RS-485 ports (up to 76,800 baud) electrically isolated, screw terminal block connections for each trunk
- One LonWorks port – FTT-10A with Weidmuller style connector
- Fox (Niagara Network) and oBIX driver included, other drivers optional
- User Interface service (Web Server) included
- Niagara connectivity included

Operating System

- QNX® Operating System with IBM J9™ Java Virtual Machine
- Niagara^{AX} Software

Power Supply

- 24VAC, 50/60 Hz, or 24 VDC
- 20 watts maximum
- Externally accessible 2 Amp fuse
- Screw terminal block for power input connections

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, the processor then shuts down, and the clock is maintained for a minimum of five years

Chassis - Housed in metal enclosure,

- Intended for indoor rack or wall mounting only
- Cooling: Internal air convection
- Dimensions: 17" wide X 12" deep X 1.75" high
(431.8 mm wide X 304.8 mm wide X 44.5 mm high)
- Weight: Net 6 lbs. (2.72 kg), Gross 7 lbs. (3.18 kg)
- Optional Wall Mounting Brackets

Agency Listings

- RoHS Compliant
- UL 916
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
- CE
- FCC part 15 Class A
- BTL B-BC BACnet Building controller listed when the BACnet driver is installed and configured (Release 3.2.20.1 or greater)



Environment

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

Other

- Maximum Lon devices = up to 124 plus three repeaters
- Maximum MSTP devices per RS-485 port = 31 standard load; 124-¼ load devices
- RS-485 Port speeds supported up to 76.8 KBps
- RS-232 Port speeds supported up to 115.2 KBps

Architecture

