JENE-PC8000 - Wi-Fi Enabled
EMBEDDED IOT CONTROLLER
PRODUCT DATA SHEET

LYNXSPRING®

Overview

The JENE-PC8000 is a compact, embedded Internet of Things (IoT) controller and server platform for connecting multiple and diverse devices and sub-systems. With Internet connectivity and Web-serving capability, the JENE-PC8000 controller provides integrated control, supervision, data logging, alarming, scheduling and network management. It streams data and rich graphical displays to a standard web browser via an Ethernet or wireless LAN, or remotely over the Internet.

The licensing model for the JENE-PC8000 controller is simplified and features standard drivers along with optional I/O and field bus expansion modules for ultimate flexibility and expandability. The JENE-PC8000 controller operates with Niagara 4, the latest version of the Niagara Framework®, for optimum performance.

Applications

A JENE-PC8000 is ideal for any size facility. In larger facilities, multi-building applications and large-scale control system integrations, Niagara 4 Supervisors can be used with JENE-PC8000 controllers to aggregate information, including real-time data, history and alarms, to create a single, unified application.

Features

- **Platform:** TI AM3352: 1000MHz ARM® Cortex™-A8
- **Standard:** Two RJ-45 Ethernet Ports, two RS-485 Ports
- **Interoperable:** Supports BACnet®, LonWorks®, FOX, Modbus®, oBIX, SNMP, and legacy protocols.
- **Versatile:** Fully-customizable with an array of software drivers and custom modules.
- **Reliable:** 1GB DDR3 SDRAM and removable micro-SD card with 4GB flash total storage/2GB user storage.
- **Fast:** Onboard 1GB Ethernet communication provides rapid data transmission.
- **Expandable:** Add up to 16 optional 16 point remote I/O modules.
- **Implementation:** Stand-alone application control, energy management, and multi-protocol integration.

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powered by
niagara
framework®

Specifications

PLATFORM

Operating System	
Processor	TI AM3352: 1000MHz ARM® Cortex™-A8
Memory	1GB DDR3 SDRAM
	Removable micro-SD card with 4GB flash total storage/2GB user storage
Real-Time Clock	Yes
Secure Boot	Yes
Niagara AX Version	Runs Niagara 4.1 and later

COMMUNICATION PORTS

Ethernet Port	(2) RJ-45 10/100MB Ethernet ports
RS-485 Port	(2) isolated RS-485 with selectable bias and termination
USB Port	USB type A connector (Back-up and restore support)
Wi-Fi (Client or WAP)	IEEE802.11a/b/g/n
	IEEE802.11n HT20 @ 2.4 GHz
	IEEE802.11n HT20/HT40 @ 5GHz
	Configurable radio (Off, WAP, or Client)
	WPAPSK/WPA2PSK supported

CHASSIS

Construction	Base: Plastic, DIN rail or screw mount options. Cover: Plastic
Cooling	Internal air convection
Dimensions	7.05" (179mm) W x 4.33" (110mm) H x 2.41" (51.1mm) D

ENVIRONMENT

Operating Temperature Range	-20 to 60°C (32 to 122°F)
Storage Temperature	-40 to 70°C (32 to 158°F)
Storage Relative Humidity Range	5% to 95%, non-condensing
Shipping & Vibration	ASTM D4169, Assurance Level II
MTTF	10 Years+

AGENCY LISTINGS

Compliance	UL 916
	CE EN 61326-1
	FCC Part 15 Subpart B, Class B
	FCC Part 15 Subpart C
	C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
	1999/5/EC R&TTE Directive
	CCC
	SRRC
	RSS
	ROHS

POWER

Power Supply	24VAC/DC power supply
Battery	Batteryless

EXPANSION MODULES SUPPORTED

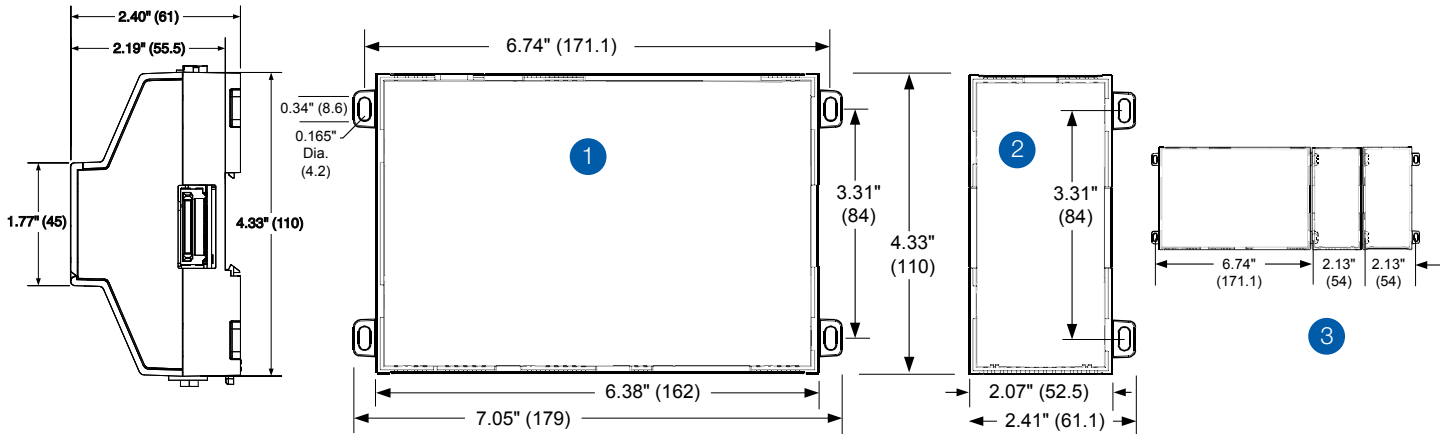|	
NPB-8000-LON: 4	Max 4
NPB-8000-232: 4	Max 4
NPB-8000-2X-485: 2	Max 2

I/O MODULES SUPPORTED

J-T-IO-16-485	Max 16

Dimensions

2.40" (61)
2.19" (55.5)
0.34" (8.6)
0.165" Dia. (4.2)
1.77" (45)
4.33" (110)
6.74" (171.1)
3.31" (84)
4.33" (110)
6.38" (162)
7.05" (179)
3.31" (84)
2.07" (52.5)
2.41" (61.1)
6.74" (171.1)
2.13" (54)
2.13" (54)

Compatible with (DIN43880) enclosures

Suitable for mounting to a panel or to an EN50022 standard 35mm rail

Mounting Instructions

1. JENE-PC8000 Controller. Allow at least 1.5" (38mm) clearance around all sides and minimum 3" (76mm) at bottom for Wi-Fi antenna.

2. Expansion module. Up to four (4) may be used. See "Expansion Modules and I/O Modules Configurations".

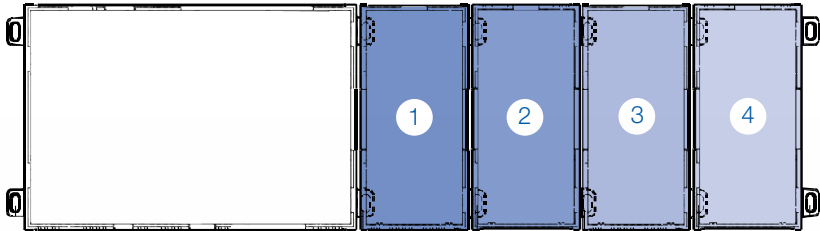3. Distances between center of tabs from one unit to another unit.

Expansion Modules and I/O Modules Configurations

Maximum Combinations

EXPANSION 1	EXPANSION 2	EXPANSION 3	EXPANSION 4
232 or LON	232 or LON	232 or LON	232 or LON
485	232 or LON	232 or LON	232 or LON
485			
485	485	232 or LON	
485	485		
485	485		
485	485		

Ordering Information

JENE-PC8000 NIAGRA 4 CONTROLLERS

PART NUMBER	PART DESCRIPTION
JENE-PC8000 Demo	Base unit includes two isolated RS-485 ports, two RJ-45 10/100MB Ethernet ports, USB Backup & Restore, Wi-Fi connectivity, all available Lynxspring drivers and a 500 device license. Hardware Accessories purchased separately
JENE-PC8005	JENE-PC8000 Controller with 5 Device Core & 250 Points. Includes standard open drivers. Supports up to 5 devices or 250 points. Requires Niagara 4.0 or higher.
JENE-PC8005-SMA-1YR-INIT	JENE-PC8005 - Initial 18 month maintenance must be purchased in conjunction with initial controller purchase. Optional 3 or 5 year maintenance may be substituted.
JENE-PC8010	JENE-PC8000 Controller with 10 Device Core & 500 Points. Includes standard open drivers. Supports up to 10 devices or 500 points. Requires Niagara 4.0 or higher.
JENE-PC8010-SMA-1YR-INIT	JENE-PC8010 - Initial 18 month maintenance must be purchased in conjunction with initial controller purchase. Optional 3 or 5 year maintenance may be substituted.
JENE-PC8025	JENE-PC8000 Controller with 25 Device Core & 1,250 Points. Includes standard open drivers. Supports up to 25 devices or 1,250 points. Requires Niagara 4.0 or higher.
JENE-PC8025-SMA-1YR-INIT	JENE-PC8025 - Initial 18 month maintenance must be purchased in conjunction with initial controller purchase. Optional 3 or 5 year maintenance may be substituted.
JENE-PC8100	JENE-PC8000 Controller with 100 Device Core & 5,000 Points. Includes standard open drivers. Supports up to 100 devices or 5,000 points. Requires Niagara 4.0 or higher.
JENE-PC8100-SMA-1YR-INIT	JENE-PC8100 - Initial 18 month maintenance must be purchased in conjunction with initial controller purchase. Optional 3 or 5 year maintenance may be substituted.
JENE-PC8200	JENE-PC8000 Controller with 200 Device Core & 10,000 Points. Includes standard open drivers. Supports up to 200 devices or 10,000 points. Requires Niagara 4.0 or higher.
JENE-PC8200-SMA-1YR-INIT	JENE-PC8200 - Initial 18 month maintenance must be purchased in conjunction with initial controller purchase. Optional 3 or 5 year maintenance may be substituted.

DEVICE PACKS (OPTIONAL CAPACITY UPGRADE PACKS - AVAILABLE AT THE TIME OF PURCHASE OF THE INITIAL CORE SOFTWARE)

PART NUMBER	PART DESCRIPTION
DEVICE-10	Up to 10 devices/500 point upgrade (can be purchased during initial licensing)
DEVICE-25	Up to 25 devices/1,250 point upgrade (can be purchased during initial licensing)
DEVICE-50	Up to 50 devices/2,500 point upgrade (can be purchased during initial licensing)
DEVICE-UP-10	Up to 10 devices/500 point upgrade (can be purchased post initial licensing)

DEVICE PACKS (OPTIONAL CAPACITY UPGRADE PACKS - AVAILABLE AFTER PURCHASE OF THE INITIAL CORE SOFTWARE)

PART NUMBER	PART DESCRIPTION
DEVICE-UP-25	Up to 25 devices/1,250 point upgrade (can be purchased post initial licensing)
DEVICE-UP-50	Up to 50 devices/2,500 point upgrade (can be purchased post initial licensing)

I/O MODULES

PART NUMBER	PART DESCRIPTION
J-T-IO-16-485	Remote I/O module, compatible with the JENE-PC8000 controller. Communication using RS-485, maximum I/O supported J-T-IO-16-485 modules: 16

EXPANSION MODULES

PART NUMBER	PART DESCRIPTION
JENE-PC8000-485	Add on dual port RS-485 module
JENE-PC8000-LON	Add on single port LON FTT10A module
JENE-PC8000-232	Add on single port RS-232 module

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DRIVERS

PART NUMBER	PART DESCRIPTION
DR-CCN-N4	Carrier Comfort Network Niagara 4 driver.

STATION PACKS

PART NUMBER	PART DESCRIPTION
JENE-PC8000-AX	Enables JENE-PC8000 controller to run Niagara AX (3.8U). 3.8U Build with JENE-PC8000 controller support.

POWER SUPPLY OPTIONS

PART NUMBER	PART DESCRIPTION
JENE-PC-PWR	24V power supply for J-T-IO-16-485
JENE-PC-PWR-UN	Universal power supply for J-T-IO-16-485
JENE-PC-WWPM-120	Universal power supply for JENE-PC8000 controller

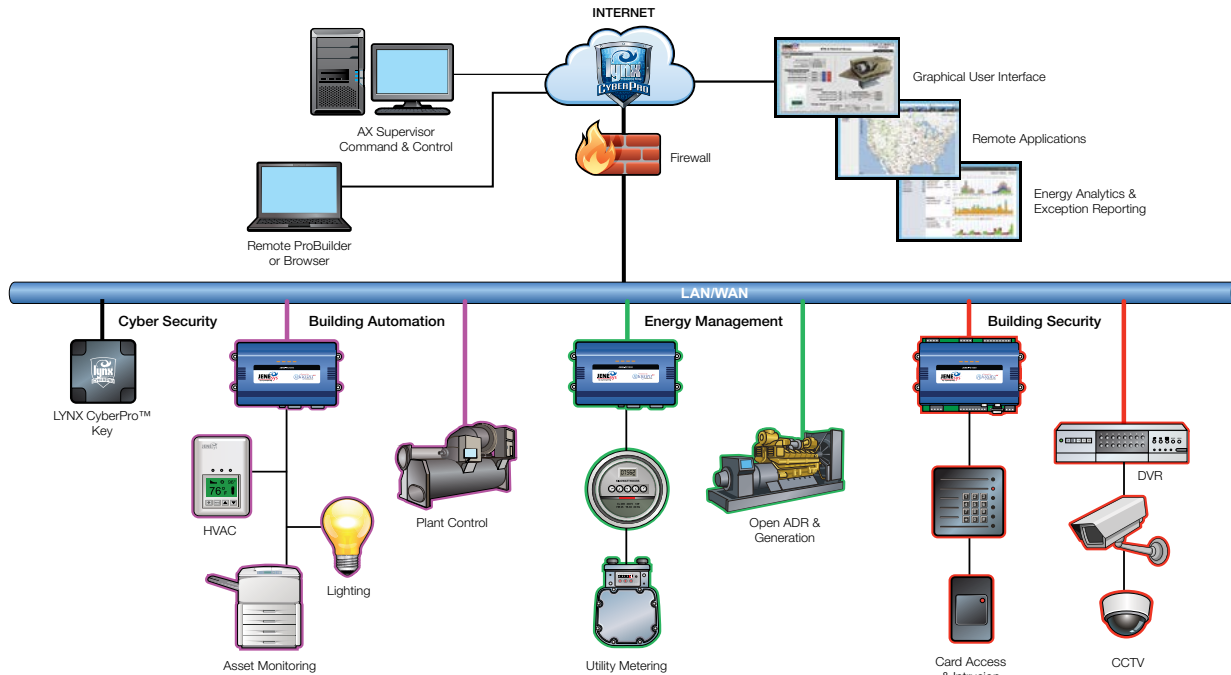**MAINTENANCE (INCLUDES NEW AND INTERIM RELEASES FROM ONE (1) YEAR FROM PURCHASE DATA)**

PART NUMBER	PART DESCRIPTION
JENE-PC8005-1YR	JENE-PC8005 - 1 year maintenance.
JENE-PC8005-3YR	JENE-PC8005 - 3 year maintenance
JENE-PC8005-5YR	JENE-PC8005 - 5 year maintenance.
JENE-PC8010-1YR	JENE-PC8010 - 1 year maintenance.
JENE-PC8010-3YR	JENE-PC8010 - 3 year maintenance
JENE-PC8010-5YR	JENE-PC8010 - 5 year maintenance.
JENE-PC8025-1YR	JENE-PC8025 - 1 year maintenance.
JENE-PC8025-3YR	JENE-PC8025 - 3 year maintenance
JENE-PC8025-5YR	JENE-PC8025 - 5 year maintenance.
JENE-PC8100-1YR	JENE-PC8100 - 1 year maintenance.
JENE-PC8100-3YR	JENE-PC8100 - 3 year maintenance
JENE-PC8100-5YR	JENE-PC8100 - 5 year maintenance.
JENE-PC8200-1YR	JENE-PC8200 - 1 year maintenance.
JENE-PC8200-3YR	JENE-PC8200 - 3 year maintenance
JENE-PC8200-5YR	JENE-PC8200 - 5 year maintenance.

All JENE-PC8XXX parts include a Niagara 4 license and Lynxspring's standard driver suite. Please see Lynxspring standard driver suite documentation for more details.

JENEsys® Platform

The JENEsys® platform (building operating system) is an open, unified, operational and informational system that combines equipment and device connectivity, integration and interoperability, supervision and control, energy management, visualization and actionable information (data & analytics) into a single, integrated architecture within a cyber-secured environment. JENEsys® is scalable and allows organizations to continually build off the same network deployment and add additional applications as desired.

The deployment of JENEsys® hardware and software is the method by which building automation is expertly configured to a client's best needs. JENEsys® enables users to deploy optimal energy and facility operational strategies, capitalize on accurate and concise intelligence relating to the performance of their facilities, reduce energy consumption and costs, gain knowledge of individual usage and trends related to their building systems and equipment from one source, all within a cloud or hosted environment.

- Choice – eliminates building managers and owners from being held captive to proprietary, closed technologies
- Enables multi-vendor integration and interoperability between devices from different manufacturers and disparate systems
- Flexibility/Options – allows facility managers, operators and owners to purchase different products from different manufacturers and choose the solutions that best fit their specific needs
- Simplifies facility operations – users can manage all of their diverse systems via a single, easy-to-use, web-based interface
- Combines the capabilities of network management, protocol conversion, distributed control, and the user interface into a single software solution that can operate on a wide range of hardware platforms from the very small to the very large
- API's are available to enable independent third parties to develop complementary, enterprise applications that can work effectively with the system

- Data from the system is easily stored and retrieved from a common database and can be used throughout the system
- Future Expansion – offers support for a wide range of applications and the scalability to easily add future service and product upgrades
- Building managers and operators can continue to work with the products and vendors they trust, while gaining all the benefits of an integrated and interoperable system
- Provides operational efficiencies that reduce business risk
- Makes it easier to control and manage buildings and realize facility operational efficiencies, ensure occupant comfort and code compliances
- Reduces system complexity and costs. Maximizes lifetime value of building systems and equipment
- One platform that can be supported by whatever vendor or vendors a building owner, operator or facility manager chooses

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