

JENEsys Edge® VAV

PRODUCT DATA SHEET



The JENEsys Edge® VAV is the industry's first IP-based, variable air volume controller developed and built utilizing the Niagara Framework®. The device, when combined with other JENEsys Edge devices, further leverages and interconnects with Lynxspring's horizontal, Niagara IP architecture and topology.

Built on Lynxspring's extensible Onyx® IP hardware platform, Helix® operating system and Niagara 4 with a **50 point 3-device license**, the JENEsys Edge VAV enables users to utilize Niagara ProBuilder/Workbench software, Niagara programming tools, and the FOX Protocol for easy setup, programming, commissioning, and control.

JENEsys Edge® VAV Specifications

- ✓ Powered by the Niagara Framework® N4 licensed for 50 points & 3 devices with perpetual maintenance included; supports 10:1 supervisor license scheme
- ✓ Uses standard Niagara 4 drivers
- ✓ Primarily uses IP networking for Niagara FOX communications
- ✓ Up to 25 controllers are supported on a single Spanning Tree IP Protocol Network
- ✓ Capable of stand-alone operation
- ✓ Web Browser HMI included
- ✓ Field configurable using a Web Browser or ProBuilder/Workbench
- ✓ Includes pressure independent and pressure dependent applications
- ✓ All applications are compliant with ASHRAE® G36 Standardized Sequences
- ✓ 14 total Inputs/Outputs on-board:
 - 4 Digital Outputs
 - 4 Analog Outputs
 - 6 Universal Inputs
- ✓ 1 Differential Pressure Input
- ✓ 4G eMMC Flash Memory
- ✓ 1GHz AM335x ARM Cortex A8 Processor
- ✓ 35 mm DIN rail or flat panel mounting
- ✓ Available ancillary parts from Lynxspring include wall sensors, actuators, relays, sensors, etc.

The JENEsys Edge VAV has been strategically designed to provide a dynamic solution that reduces deployment time, lowers installation costs, is simple to manage, and is easy to update using Onyx tools and Niagara.

The feature set includes a robust set of ready-to-use sequences based on the latest ASHRAE Guideline 36 (G36), enhanced high-definition graphics, and Spanning Tree Protocol (STP) communication. The JENEsys Edge VAV comes fully loaded with the required tools for installers, technicians, and service maintenance personnel including balancing, continuous commissioning, single-point configuration, addressing, and high-definition graphical user interfaces.

VAV applications include but are not limited to:

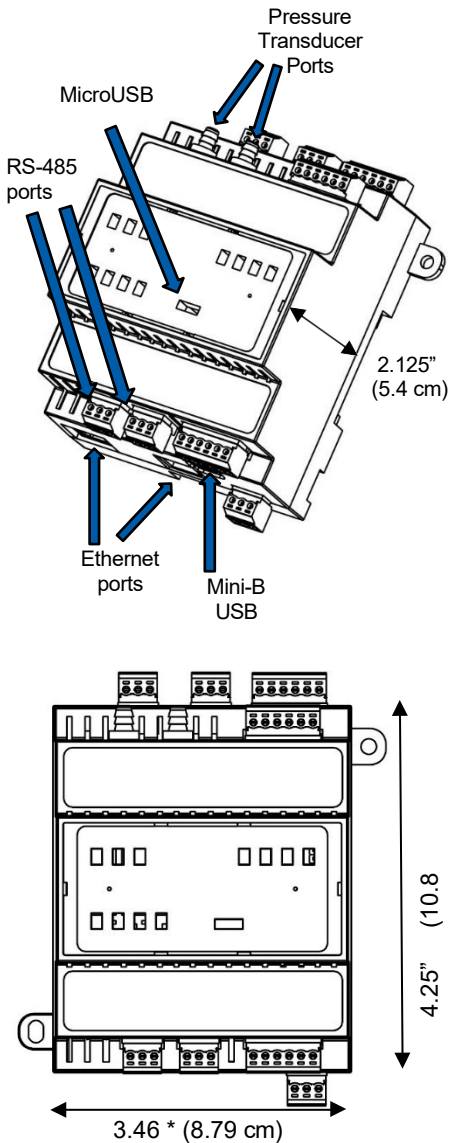
- VAV Terminal Unit – Cooling Only
- VAV Terminal Unit with Reheat
- Variable & Constant Volume Fan:
 - Parallel Fan-Powered Terminal Unit
 - Series Fan-Powered Terminal Unit
- Dual-Duct VAV Terminal Unit
 - Snap-Acting Control
 - Mixing Control with Inlet Airflow Sensors
 - Mixing Control with Discharge Airflow Sensor
 - Cold-Duct Minimum Control
- Ventilation Only
- California Title 24 compliance
- Options: CO2, Occupancy, Programmable Outputs, et al.

Note: These applications will only work with Lynxspring controllers

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Dimensions



Specifications

Operating System	Helixx® Framework by Lynxspring® and Niagara Framework® (N4)
Processor	1 GHz AM335x ARM Cortex A8
Memory	512 MB DDR3L 800 MHz, 4 GB 8-bit Embedded MMC on-board Flash
Real-Time Clock (RTC)	Battery-powered clock included to store description/setup values including year, month, date, hours, minutes and seconds.

COMMUNICATION PORTS

2 Ethernet Ports	10/100 Mbps (RJ-45 Connector) bridged for Spanning Tree Protocol
2 RS-485 Ports	RS-485 serial port with 3-screw connector
Mini-B USB	USB Client Connector utilizes 5-pin Mini-B USB cable
Micro USB	Serial shell access
Onyx Network	3-wire (LxH LxL SHLD) high-speed differential serial signal

INPUTS AND OUTPUTS

6 Universal Inputs	Type-3 10 K ohm thermistors; resistance 0-100 K ohms; 0-10 Vdc; 0- 20 mA using a 499-ohm resistor; pulse input: up to 500 Hz; 12-bit A/D resolution
4 Digital Outputs	Form A contacts, 24 V at 0.5 A
4 Analog Outputs	0-10 Vdc
Connector Screw Size	3/32" slotted
Supported Wire Size	28-16 AWG
Pressure Transducer	0-2 inch wc, 14-bit accuracy, 10 psi burst, 1% total error band over the temperature compensated range
Housing	UL94V-0

POWER

Power Input	External 24 Vac/dc +10%/-10%, 50/60 Hz, 20 VA per VAV with peripherals (Maximum 5 devices including peripherals per 100VA Class 2 Transformer)
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Construction	Base: Plastic, DIN rail or screw mount	Cover: Plastic
Cooling	Internal air convection	
Dimensions	3.46" (8.79 cm) width x 4.25" (10.8 cm) length x 2.125" (5.4 cm) depth	
Mounting	Flat panel and 35 mm DIN rail mounting options standard	

ENVIRONMENT

Operating Temperature	0 – 60 °C (32 –140 °F)
Storage Temperature	0 – 70 °C (32 –158 °F)
Relative Humidity Range	5 – 95% RH, non-condensing

CERTIFICATIONS

Compliance	UL916:2015 (5th Edition) CSA C22.2 No. 205-17 (3rd Edition) CE Emissions: FCC 47 CFR Part 15B, ICES-003, EN 5032:2015/AMD:2019 (CISPR 32), AS/NZS CISPR 32:2015, EN 61000-6-3:2007/A1:2011 Immunity: EN 61000-6-1:2007 EMC and CISPR 35:2016
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WEIGHT

JENE-EG414-VAV	0.6 pounds	Product and Packaging	0.8 pounds
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Ordering Information

PART NUMBER(S)	DESCRIPTION
JENE-EG414-VAV	Packaging will include one (1) JENEsys Edge VAV controller (LICENSE WITH MAXIMUM OF 50 POINTS, 3 DEVICES)

Accessories: Damper actuator, valve, valve actuator, space sensor, duct sensor, relays



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