

Wireless Communications Interface

PRODUCT OVERVIEW



The nVent RAYCHEM Elexant 9200i is a Wireless Communications Interface that provides an alternative solution to hardwired Remote Monitoring and Configuration of Electric Heat Tracing (EHT) systems. It integrates with nVent RAYCHEM Supervisor software and EHT controllers, helping reduce total cost of ownership of a project.

The Elexant 9200i product line consists of the following:

- Standalone enclosures
- A wireless communications option within a given Control Panel
- External antenna packages

A minimum of two radio transceivers are required to establish a network. Standalone enclosures can be configured in many ways, enabling the customer to choose from a range of options: enclosure material, radio frequency, and antenna type.

Installation

The Elexant 9200i comes ready to install, eliminating the need for custom modifications. Components are approved for both indoor and outdoor locations. Wiring is as simple as connecting the incoming power and communications wiring. If so chosen, the external antenna and associated coaxial cable, need be mounted and routed as per the requirements of the system.

Interfacing with and programming transceivers is accomplished through the specific transceiver Manufacturer's radio programming software and applicable interface cable.

Communication

Each Elexant 9200i comes equipped with an interface that allows connection to the nVent RAYCHEM Supervisor software and nVent EHT Controllers.

Supporting Information

Further information pertaining to transceiver hardware and software can be found within associated manufacturer's documentation.

Features

- **Available in three frequencies for global coverage:**
 - 868 MHz, 900 MHz, 2.4 GHz
- **Multiple network topologies & modes**
 - Point to Point / Star, Line / Mesh
 - I/O Data, Serial, PLC / Modbus RTU
- **Multiple Radio setup types**
 - Parent, Child, Repeater / Child
 - 128 bit Advanced Encryption Standard (AES)
- **Self-Healing**
 - Radios auto-negotiate alternate pathways in the event of a lost path
- **Long distance coverage**

PRODUCT SPECIFICATIONS

Technical details

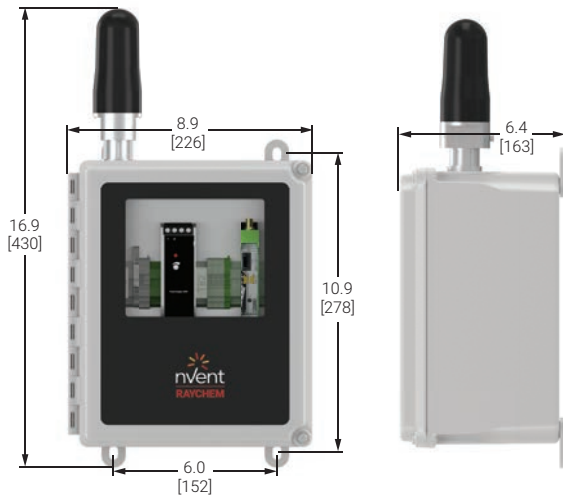
Electromagnetic Compatibility	Conformance with EMC Directive's 2004/108/EC and 2004/30/EU
Supply Voltage	100 – 240 VAC, 50-60 Hz
Internal power consumption	< 9 W (900 MHz), 2 W (868 MHz & 2.4 GHz)
Transmission power	< 1 W

Environmental

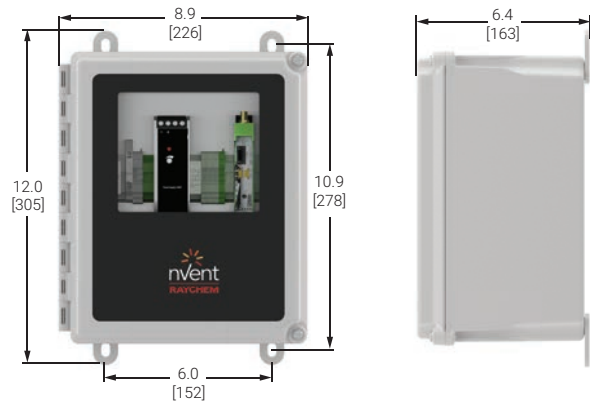
Protection	NEMA 4X, IP64 (FG enclosure), IP 66 (Stainless Steel Enclosure)
Materials	Fiberglass (FG) or Stainless Steel (SS304)
Ambient operating temperature	-40°C to 47°C (-40°F to 116°F) cULus variants -40°C to 52°C (-40°F to 125°F) IECEx/ATEX/UKEx variants
Ambient storage temperature	-40°C to 85°C (-67°F to 185°F)
Relative humidity	20% to 85% noncondensing
Environment	PD2, CAT III
Max. altitude	2,000 m (6,562 ft)

Typical enclosure dimensions (inches [mm])

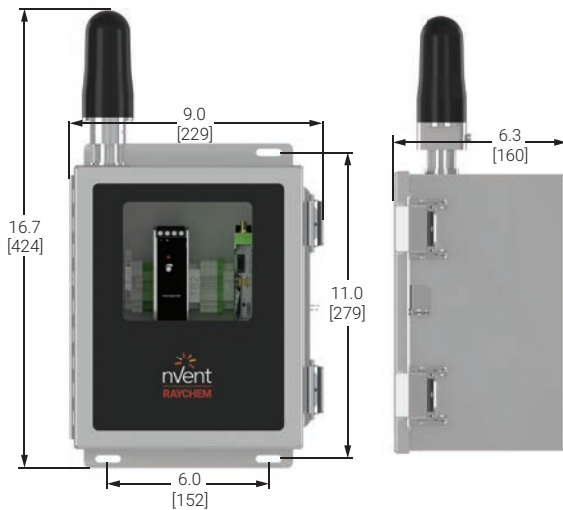
Elexant 9200i-X-PC-XXX-FW



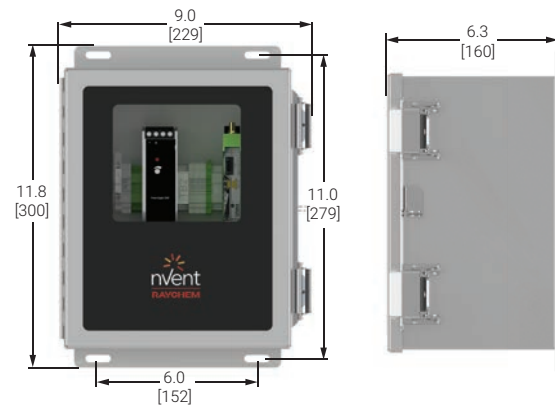
Elexant 9200i-X-PC-XXX-FW-EXT



Elexant 9200i-X-PC-XXX-SW



Elexant 9200i-X-PC-XXX-SW-EXT



Mounting

Fiberglass enclosure	Surface mount with four holes on 6.0 in. x 10.9 in. (152 mm x 278 mm) centers - hole diameter: 0.3 in (8 mm)
Stainless Steel enclosure	Surface mount with four holes on 6.0 in. x 11 in. (152 mm x 279 mm) centers - hole diameter: 0.3 in (8 mm)

Configuration

Refer to Manufacturers documentation for supporting information:

Method	Phoenix Contact: RAD-XXXX-IFS PSI-CONF	User Manual(s) Programming Software
Connection	Phoenix Contact: RAD-CABLE-USB	Radio Programming interface cable
Radio Parameters	Appropriate parameters are provided through Engineering Services	

Connection terminals

Power supply input	Fuse terminal, 26 – 10 AWG (0.14 – 6 mm ²), torque 0.6 – 0.8 Nm Neutral terminal, 20 – 10 AWG (0.5 – 6 mm ²), cage clamp Ground (Earth), 20 – 10 AWG (0.5 – 6 mm ²), cage clamp
RS-485 communications	Comm terminals, 22 – 12 AWG (0.25 – 4 mm ²), cage clamp Ground (Earth), 22 – 12 AWG (0.25 – 4 mm ²), cage clamp

Communications

Radio

Type	Phoenix Contact: 868 MHz, 900 MHz, and 2.4 GHz types available
Quantity	Phoenix Contact: Up to 250 transceivers per network (900 MHz & 2.4 GHz) Up to 99 transceivers per network (868 MHz)

RS-485

Type	RS-485, 2-wire
Cable	Shielded, Twisted pair
Length	4,000 ft. (1,200 m) maximum
Quantity	Up to 32 devices per serial port (Typical)

APPROVALS

For use in hazardous area Class I, Division 2 / Zone 2 (Gas) - applicable to Enclosures

Temperature classification

T4

Product certification



More details about product certification, approvals and conditions of safe use are available in the installation manual at www.nVent.com/RAYCHEM.

ORDERING DETAILS*

nVent RAYCHEM Elexant 9200i Wireless Enclosures

(See Notes 1 and 2)

Description	Catalog Number	Part Number	Weight (kg/lbs)
Elexant 9200i 868 MHz Phoenix Contact module in FG enclosure with window, antenna, and pre-drilled holes for power (M25) and communications (M20)	10392-100	9200i-E-PC-868-FW	3.9 / 8.6
Elexant 9200i 868 MHz Phoenix Contact module in FG enclosure with window, external antenna connection, and pre-drilled holes for power (M25) and communications (M20) - antenna & coax sold separately	10392-101	9200i-E-PC-868-FW-EXT	3.2 / 7.1
Elexant 9200i 868 MHz Phoenix Contact module in SS enclosure with window, antenna, and pre-drilled holes for power (M25) and communications (M20)	10392-102	9200i-E-PC-868-SW	6.7 / 14.7
Elexant 9200i 868 MHz Phoenix Contact module in SS enclosure with window, external antenna connection, and pre-drilled holes for power (M25) and communications (M20) - antenna & coax sold separately	10392-103	9200i-E-PC-868-SW-EXT	6.0 / 13.2
Elexant 9200i 900 MHz Phoenix Contact module in FG enclosure with window and antenna	10392-104	9200i-A-PC-900-FW	3.9 / 8.6
Elexant 9200i 900 MHz Phoenix Contact module in FG enclosure with window and external antenna connection - antenna & coax sold separately	10392-105	9200i-A-PC-900-FW-EXT	3.2 / 7.1
Elexant 9200i 900 MHz Phoenix Contact module in SS enclosure with window and antenna	10392-106	9200i-A-PC-900-SW	6.7 / 14.7
Elexant 9200i 900 MHz Phoenix Contact module in SS enclosure with window and external antenna connection - antenna & coax sold separately	10392-107	9200i-A-PC-900-SW-EXT	6.0 / 13.2
Elexant 9200i 2.4 GHz Phoenix Contact module in FG enclosure with window and antenna	10392-108	9200i-A-PC-024-FW	3.9 / 8.6
Elexant 9200i 2.4 GHz Phoenix Contact module in FG enclosure with window and external antenna connection - antenna & coax sold separately	10392-109	9200i-A-PC-024-FW-EXT	3.2 / 7.1
Elexant 9200i 2.4 GHz Phoenix Contact module in SS enclosure with window and antenna	10392-110	9200i-A-PC-024-SW	6.7 / 14.7
Elexant 9200i 2.4 GHz Phoenix Contact module in SS enclosure with window and external antenna connection - antenna & coax sold separately	10392-111	9200i-A-PC-024-SW-EXT	6.0 / 13.2
Elexant 9200i 2.4 GHz Phoenix Contact module in FG enclosure with window, antenna, and pre-drilled holes for power (M25) and communications (M20)	10392-112	9200i-E-PC-024-FW	3.9 / 8.6
Elexant 9200i 2.4 GHz Phoenix Contact module in FG enclosure with window, external antenna connection, and pre-drilled holes for power (M25) and communications (M20) - antenna & coax sold separately	10392-113	9200i-E-PC-024-FW-EXT	3.2 / 7.1
Elexant 9200i 2.4 GHz Phoenix Contact module in SS enclosure with window, antenna, and pre-drilled holes for power (M25) and communications (M20)	10392-114	9200i-E-PC-024-SW	6.7 / 14.7
Elexant 9200i 2.4 GHz Phoenix Contact module in SS enclosure with window, external antenna connection, and pre-drilled holes for power (M25) and communications (M20) - antenna & coax sold separately	10392-115	9200i-E-PC-024-SW-EXT	6.0 / 13.2

* Not all variants are available in all regions

nVent RAYCHEM Elexant 9200i Wireless Antenna Packages

All Antenna Packages listed are accessories to the Enclosures shown above, and are shown to assist the customer in product selection. However, they are not included in the approvals of the Enclosures. Each component of the antenna packages must have its own suitable certification for each use case. Refer to the section on 'SPECIFIC CONDITIONS OF SAFE USE' in the Installation Manual for further information.

(See Notes 1 and 2)

Description	Catalog Number	Part Number	Weight (kg/lbs)
Elexant 9200i 868 MHz Antenna Package Accessory - OMNI 2 dBi antenna with 3 meter coaxial cable, antenna bracket, and gland	10392-151	9200i-E-PC-ANT-868-OM1-3	1.4 / 3.1
Elexant 9200i 868 - 900 MHz Antenna Package Accessory - OMNI 2 dBi antenna with 3 meter coaxial cable, antenna bracket, and gland	10392-152	9200i-A-PC-ANT-900-OM2-3	1.4 / 3.1
Elexant 9200i 2.4 GHz Antenna Package Accessory - 2 dBi antenna with 3 meter coaxial cable, antenna bracket, and gland	10392-153	9200i-C-PC-ANT-024-OM3-3	1.4 / 3.1
Elexant 9200i 868 - 900 MHz Antenna Package Accessory - OMNI 5 dBi YAGI antenna with 3 meter coaxial cable, antenna bracket, and gland	10392-154	9200i-C-PC-ANT-900-YA1-3	2.1 / 4.6
Customized Antenna Package Accessory	9200i-ANT-C	9200i-ANT-C	N/A

Notes:

- Many countries restrict the use of specific Radio Frequencies. In general, the following frequencies can be used accordingly:
 - 868 MHz – EMEA
 - 900 MHz – North America
 - 2.4 GHz – Global
- Further information pertaining to specific regional information can be found within the manufacturer's documentation.

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