

# μNoad R550: ISA100.11a

Wireless Modem



## Key Features & Benefits

- Full ISA100.11a compliance
- Easy integration with existing industrial devices
- Allows for wireless monitoring of industrial devices
- 10 dBm, 2.4 GHz wireless communication
- Secure communication utilizing AES-128 bit encryption
- Low power operation
- Compact package with DIN rail mounting
- Very small footprint
- Supports all industry standard DC supply of 12, 24, 48 VDC
- Wide temperature specification
- ESD protected up to 15 kV (HBM)

## Overview

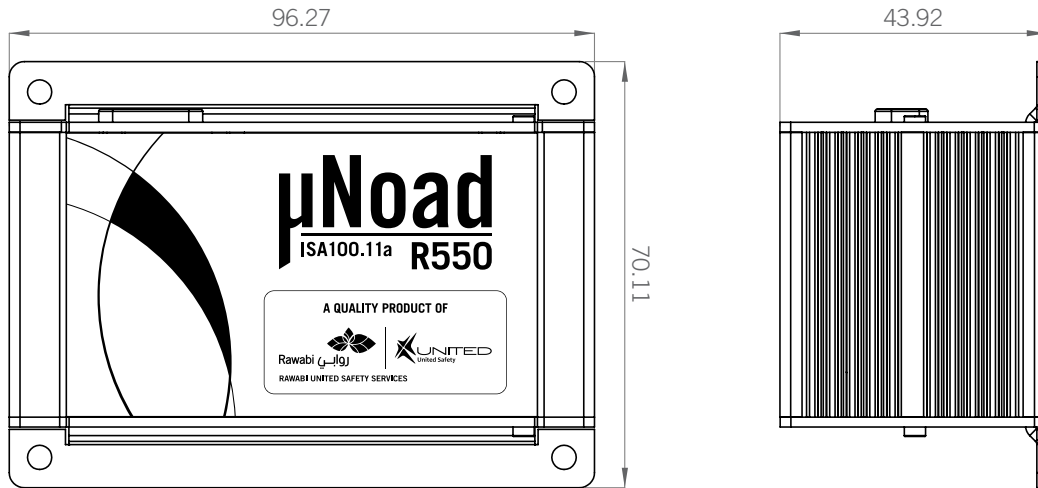
The μNoad R550 is RUSS' low-power, low-cost, fully ISA100.11a compliant wireless communication smart modem that can be used for automation, data acquisition, and data logging applications. ISA100.11a is a robust wireless communication standard for the industrial automation marketplace and the μNoad R550 can allow easy integration of traditional wired systems and older wireless based ones into ISA100.11a networks, all in an ultra-compact package. The μNoad R550 implements carrier sense multiple access, frequency hopping, and automatic repeat requests, enabling it to function reliably in even noisy environments.

Using the industry standard RS-232 serial interface, the μNoad R550 can communicate with a multitude of existing or upcoming systems and sensors. The μNoad R550 is compatible with a multitude of sensor types, ranging from temperature sensors to gas monitors. The μNoad R550 wireless radio modem operates securely on the 2.4 GHz open radio spectrum and is FCC and CSA approved.

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## Mechanical Dimensions



## Technical Specifications

<b>Processor</b>	Architecture	32-bit
	Family	ARM7
<b>Power</b>	Input Voltage	5 – 42 V
	Typical Power Consumption	0.16 W
	Peak Power Consumption	0.275 W
<b>Communication Ports</b>	RS-232	1 (DB-9) 250 kbps maximum bitrate
	<b>Radio</b>	Operating frequency
	Number of Channels	15
	Channel Separation	5 MHz
	Occupied Channel BW	2.65 MHz
	Frequency Accuracy	±40 ppm
	Modulation	O-QPSK
	Raw Data Rate	250 kbps
	Receiver Sensitivity	-98 dBm
	Output Power	10 dBm Typical 9 – 12 dBm
<b>Antenna</b>	Connector	SMA – female
	Impedance	50 Ω
<b>Physical Characteristics</b>	Dimensions	70.11 x 96.27 x 43.92 mm
	Weight	~ 250 g
<b>Environmental</b>	Operating Temperature	-25 to 70 °C
	Relative Humidity	Up to 80 % (non-condensing)