

# NIO 50

Industrial Wi-Fi Serial/Ethernet Device Server



## Main Features

- Support transparent Modbus TCP/RTU, Modbus ASCII & MQTT
- Web-based configuration
- 9600~115200 bps baudrate for RS-232/422/485 transmissions
- Secure data access with WPA, WPA2
- 1 x 10/100 Fast Ethernet port
- Support 9~36V wide range DC input with 2 pin Phoenix Contact terminal block
- Support -20~70°C extended operating temperature
- LED indicators to display: Power, Serial Status and Wi-Fi RSSI signal strength

## Product Overview

NIO 50 brings IoT connectivity into factories, gearing unconnected industrial equipment and machines for smart manufacturing and Industry 4.0. The NIO 50 delivers data acquisition capability, IoT connectivity, convenience of remote monitoring, and industrial durability to provide end-to-end connectivity for the Industrial Internet of Things (IIoT). For Fieldbus-based controllers, legacy manufacturing machines, and serial-based devices, NIO 50 fills the communication gap between edge nodes to the cloud, enabling field data to be harnessed for manufacturing process optimization, remote management, and preventive maintenance.

## Specifications

### CPU Support

- Onboard STM32F407ZE processor

### Main Memory

- 512KB (embedded Flash in STM32)

### Serial Port

- 1 x RS232/422/485 (software selectable)

### Wireless

- Wi-Fi: 802.11 b/g/n 1x1

### Ethernet

- 1 x 10/100 Base-TX
- MDI/MDIX Auto cross

### Reset

- 1 X Reset/restore to default push button

### Physical and Power

- DC 9~36V with 2 pins Phoenix contact terminal block
- Din-Rail(optional)/Wall mountable
- Dimension: 110 mm X 87 mm X 25 mm
- Weight: 600 g

### SW Features

- OS: FreeRTOS
- Management
- Web GUI for configuration
- Ethernet Firmware upgrade
- SNTP client (real IP, static)
- Factory default/ Reset  
(press reset button 3 seconds interval for factory default)

### Environment Protection

- Operating temperature: -20°C~70°C
- Storage temperature: -40°C~85°C

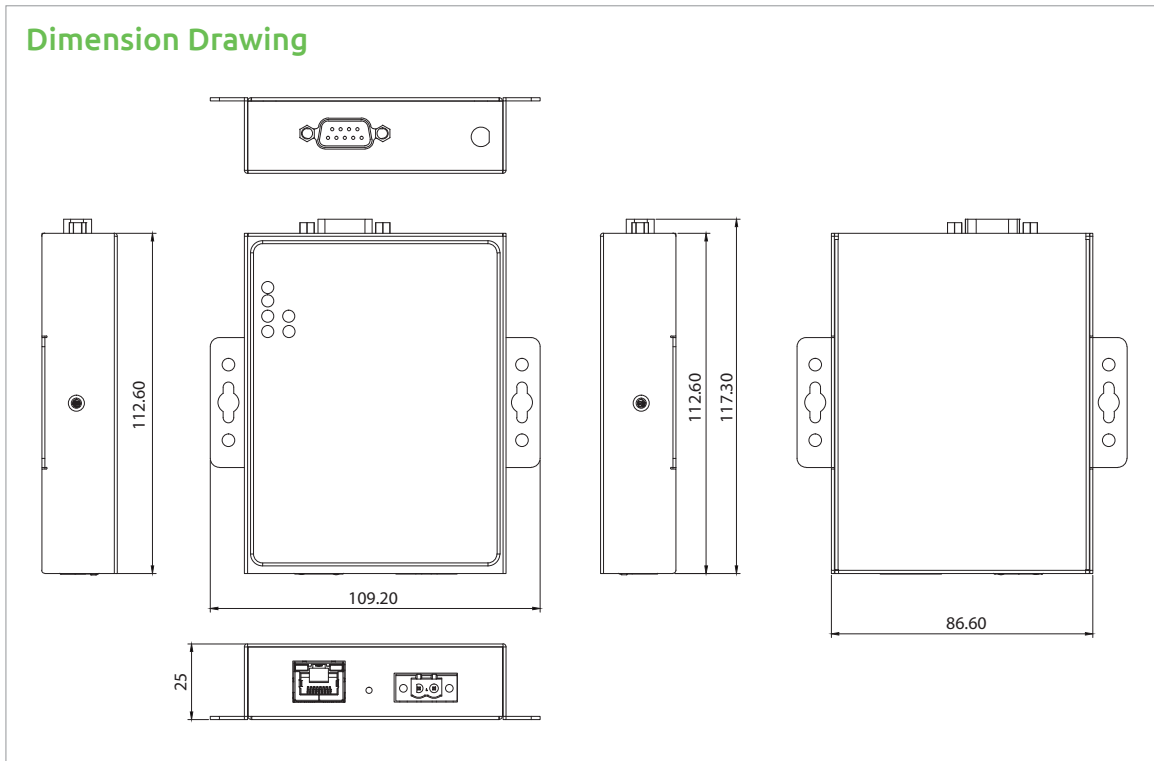
### Relative Humidity

- Operating: 5%~95%, non-condensing

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## Dimension Drawing



## Certification

- EMI: FCC, CE Class A
- RF:
  - FCC: PART15C
  - CE: EN 300328
- EN60950-1
- EMC: EN 301 489-1/17, FCC Part 15 Subpart B, EN 55022/55024

## Ordering Information

- ♦ **NIO 50 (P/N: 10T00005000X0)**  
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## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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