Intelligent Solution Managing Automation

iSMA-B-MAC36NL

iSMA-B-MAC36NL is a compact Master Application Controller with built-in different types of I/O and operating in the Niagara Framework environment. Using the specific local I/O set 16x UI, 8x AO, 4x DI and 8x DO allows users to use the device in different applications. The controller provides control, data logging, alarming, scheduling, integration and visualization.

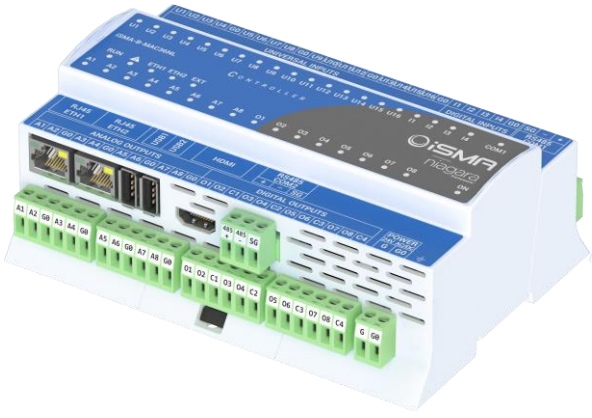
To allow IP connectivity there are 2x Fast Ethernet ports that can operate as two independent ports. Built-in 1x RS485 can be used to expand the number of I/O by connecting iSMA-B-MINI or iSMA-B-MIX series I/O modules or to integrate with other subsystems.

There are two more hardware versions of the controller with the second RS485 port and M-Bus interface available.

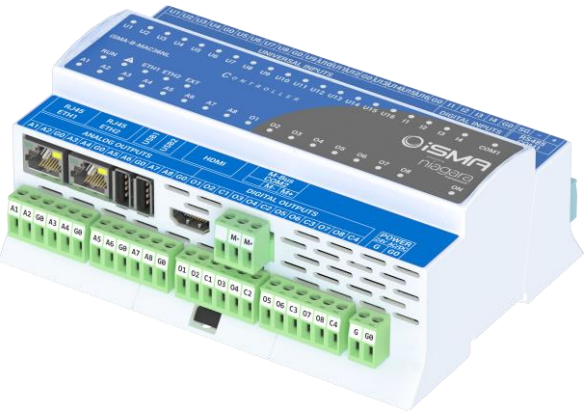
iSMA-B-MAC36NL provides a rich graphical interface to be displayed on a standard Web browser or an external display connected to a built-in HDMI and USB port (touchscreen support).

Key Features

- Niagara 4,4, 4.6, 4.7, 4.8, 4.9, 4.10
- Real-time programming
- 2x Fast Ethernet (independent)
- 1x RS485 (opto-isolated)
- Second RS485 (opto-isolated, optional hardware version)
- M-Bus interface (optional hardware version)
- 2x USB (touchscreen, mouse, keyboard support)
- 16x UI, 8x AO, 4x DI and 8x DO
- HDMI to connect an external display
- Built-in Web server provides graphical User interface available from the Web browser level
- SD card to collect real-time data, history and alarms
- Hardware replacement by SD Card
- Different licensing models for various application types



iSMA-B-MAC36NL-RS



iSMA-B-MAC36NL-M

powered by niagara framework®

iSMA-B-MAC36NL

Specification

16x Universal Inputs (16UI)

All Universal Inputs have 16-bit ADC which support the following types of inputs:

- Temperature input supports the following types of sensors: series NTC 10K3A1 (°C), NTC 10K4A1 (°C), NTC Carel 10K (°C), NTC 20K6A1(°C), NTC 2.2K3A1(°C), NTC 3K3A1(°C), NTC 30K6A1 (°C), SIE1 (°C), TAC1 (°C), SAT1 (°C), Pt1000 (°C), Ni1000 (°C), NI1000 21C (°C), NI 1000 LG (°C), NTC 10K Type2 B=3975K (°F), NTC 10K Type3 B=3695K (°F), NTC 20K B=4262K (°F), NTC 3K B=3975K (°F), PT1000 (°F), NI 1000 (°F), NI1000 70F (°F)

For sensors, Pt1000 and Ni1000 use only 16-bit resolution

- Voltage input 0-10 V DC, input resistance 100 kΩ
- Current input 0-20 mA (external resistor 200 Ω required)
- Resistive input 0-1000 kΩ
- Dry contact input

4x Digital Inputs (4DI)

- Dry contact inputs
- Fast pulse counter up to 100 Hz saved on SD card

8x Analog Outputs (8AO)

All Analog Outputs are equipped with 12-bit ADC. They support the following output types:

- Voltage: 0-10 V DC max. load up to 20 mA
- PWM: 0,01 Hz, 0,1 Hz, 1 Hz, 10 Hz, 100 Hz

8x Digital Outputs (8DO)

- Relay Output (NO): max. 3 A @ 230 V AC and max. 3 A @ 30 V DC

Platform

- Multicore Cortex-A Series ARM Processor
- 1 GB DDR3 SDRAM
- Removable micro-SD card – 4 GB (2 GB system reserved/ 2 GB User storage)

Communication

- RS485 half-duplex, optoisolated
- Baud rate from 2400 to 115200
- 2x Fast Ethernet (independent)
- 2x USB (1x Host, 1x OTG)
- HDMI 1.4 type A (standard)
- Micro SD card slot
- Second RS485 port (option)
- M-bus Interface (option)

Protocols

- Modbus TCP
- Modbus RTU/ASCII
- BACnet IP
- BACnet MS/TP
- oBiX
- SNMP
- KNX IP
- M-Bus
- M-Bus IP
- LON IP

Power supply

- 24 V AC/DC

Housing

- Dimensions: 160x111x62 mm (6.3x4.4x2.45 in)
- Construction: UL approved, self-extinguishing plastic (PC/ABS)
- DIN rail mounting (DIN EN 50022 norm)
- Cooling: passive external air circulation

Environment

- Operating temperature: 0°C to 50°C (32°F to 122°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Relative humidity: 5% to 95%, no condensation
- Ingress Protection Rating: IP30 – for indoor installation