

# iSMA-B-MAC36NL

iSMA-B-MAC36NL is a compact **Master Application Controller** with built-in different types of I/O and operating in **Niagara Framework** environment.

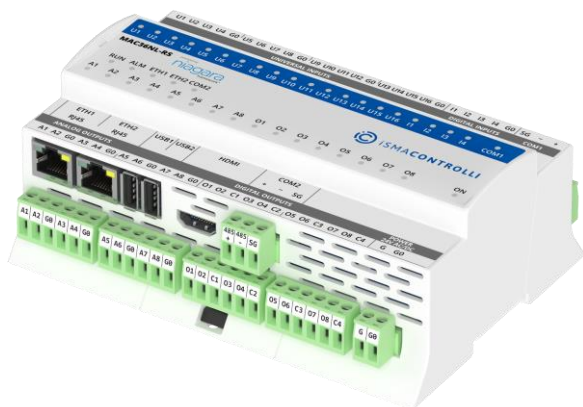
Using the specific local I/O set **16x UI, 8x AO, 4x DI** and **8x DO** allows the users to use the device in different applications. The controller provides control, data logging, alarming, scheduling, integration and visualisation.

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

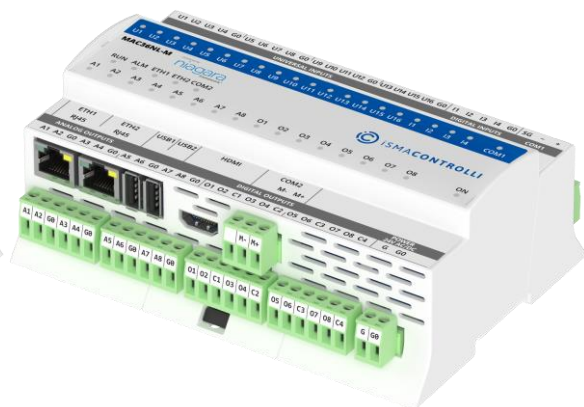
There are two more hardware versions of the controller with the **second RS485 port** and **M-Bus interface** available. **iSMA-B-MAC36NL** provides a rich graphical interface to be displayed on a standard Web browser or an external display connected to built-in **HDMI and USB port** (touchscreen support).

## 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 external display
- Built-in Web server provides graphical User interface available from 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**

# 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 k $\Omega$
- Current input 0-20 mA (external resistor 200  $\Omega$  required)
- Resistive input 0-1000 k $\Omega$
- 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
- 512 MB DDR3 SDRAM
- Removable micro-SD card – 4 GB (2 GB system reserved / 2 GB user storage)

### Communication

- RS485 half-duplex, opto-isolated
- Baud rate from 2400 to 115200
- 2x Fast Ethernet (independent)
- 2x USB (1x OTG, 1x Host)
- HDMI 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

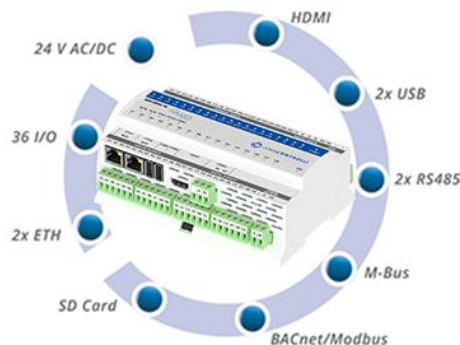
- 24 V AC/DC

### Housing

- Dimension: 160x110x62 mm
- Construction: UL approved, self-extinguishing plastic (PC/ABS)
- DIN rail mounting DIN (DIN EN 50022 norm)
- Cooling: internal air circulation

### Environment

- Operating temperature: -10°C to 50°C
- Storage temperature: -40°C to 85°C
- Relative humidity: 5% to 95%, no condensation
- Ingress Protection Rating: IP30 – for indoor installation



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