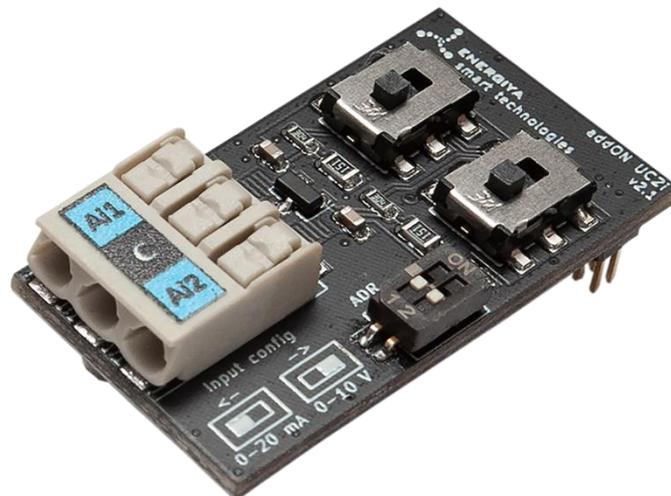


# addON UC2i

Universal Converter extension card

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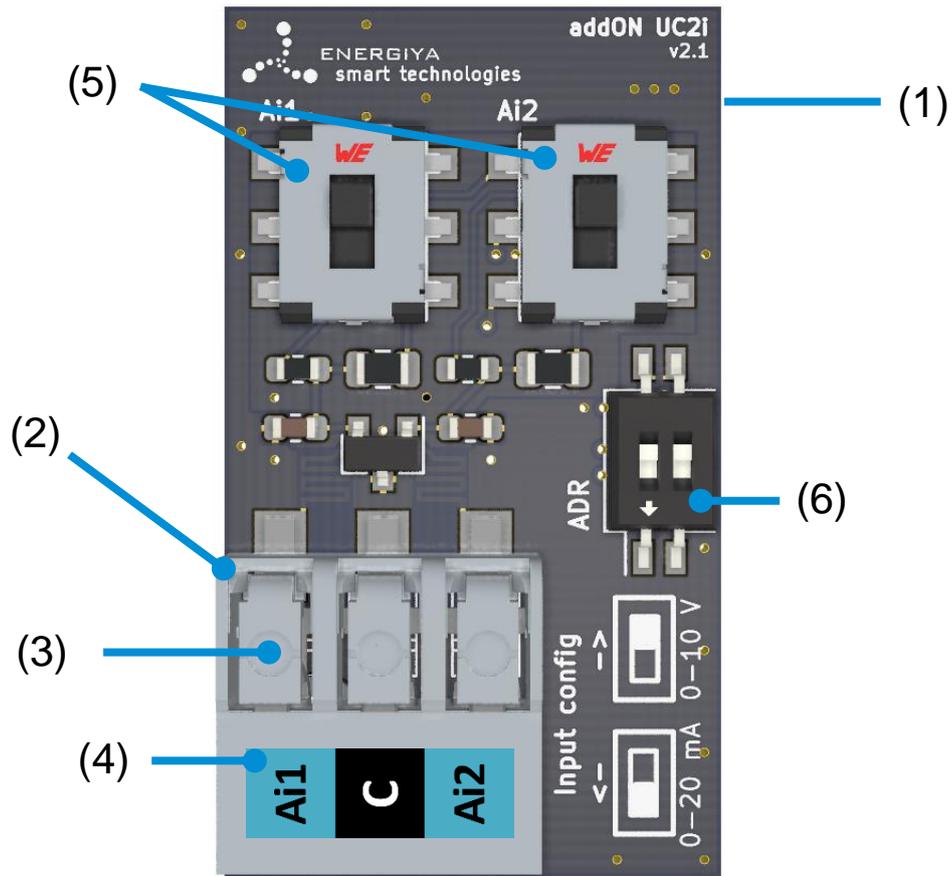


fig. 1

- 
- (1) addON connector (on bottom side)

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  - (2) screwless connector

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  - (3) wire release

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  - (4) connector description label

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  - (5) inputs configuration switches

---

  - (6) I2C address switch

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## Description

The addON expansion cards allow you to extend the functionality of IoT cards with additional inputs, outputs and interfaces.

Using the addON 8i card we will expand any IoT card by 8 digital inputs.

The addON card is compatible with all of Energiya IoT cards.

## Mounting the addON card

The addON card is mounted on top of the IoT card in a dedicated connector.

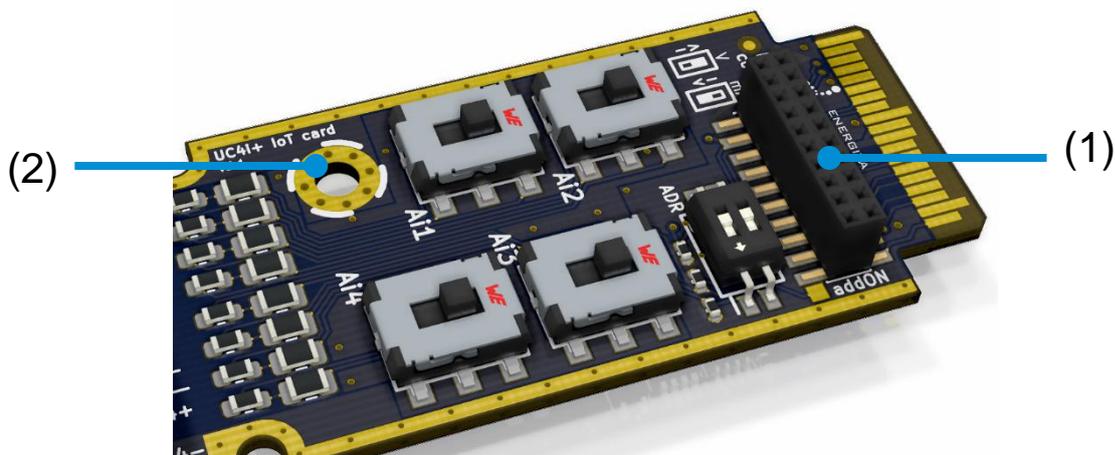


fig. 2

First place the addON card into the slot on the top of the IoT card (1). Then use the polyamide screw (supplied with the addON) to screw the expansion card to the IoT board (2).

There are two types of addON slots. Please find below the picture of correct assembly:

- 18 pin addON slot (fig. 4):

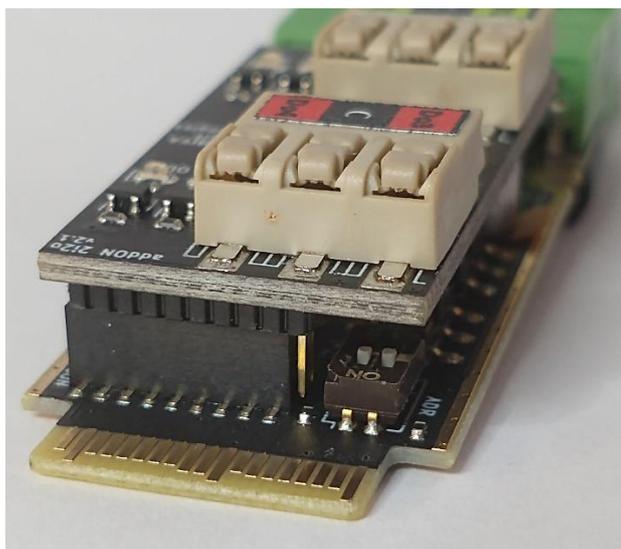


fig. 3

- 20 pin addON slot (fig. 5):

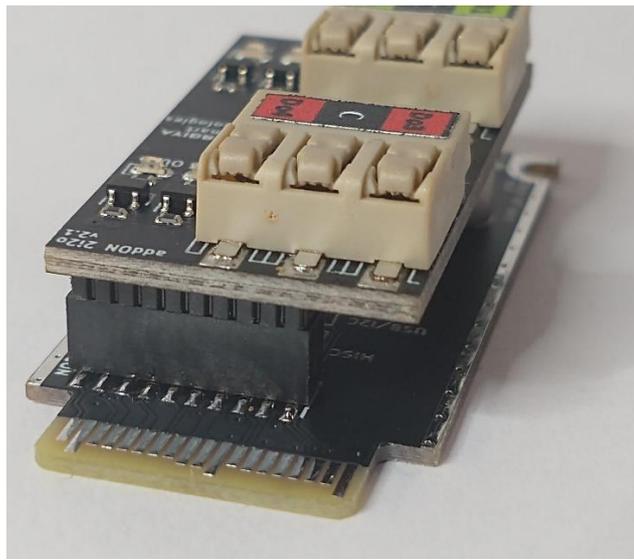


fig. 4

- Important!** Never mount or remove the addON card with power on! This way you can easily cause a short circuit and damage the card.
- Important!** Always remember to secure the card with a polyamide screw! Vibration can make slide out the card out of the connector and cause short circuit.

### addON card addressing

The card communicates via I2C bus. The device address must be determined before starting work. The ADR dipswitch is used for this purpose (see figure 2, element 2).

ON □ □ 1 2	0x68
ON □ □ 1 2	0x6C
ON □ □ 1 2	0x6A
ON □ □ 1 2	0x6E

**Analog inputs configuring**

Ai1, Ai2 switches are used to configure analog inputs (see figure 1, element 5).

Ai1/Ai2	↑ (up)	0 to 10 V DC
Ai1/Ai2	↓ (down)	0 to 20 mA DC

-  **Important!** Analog inputs must always be configured before connecting the measurement wires. Change of configuration during operation may cause damage to the channel.
-  **Important!** Take special care with the configuration. Setting the current measurement and connecting to a voltage circuit instead of a current circuit can damage the channel.
-  **Important!** Do not remove the card from the device when the inputs are connected. First disconnect the signal sources, then remove the card.

**Analog inputs wiring**

The following figure shows a description of the connector terminals and an example of how to connect devices properly.

Ai1, Ai2	analog inputs
C	common

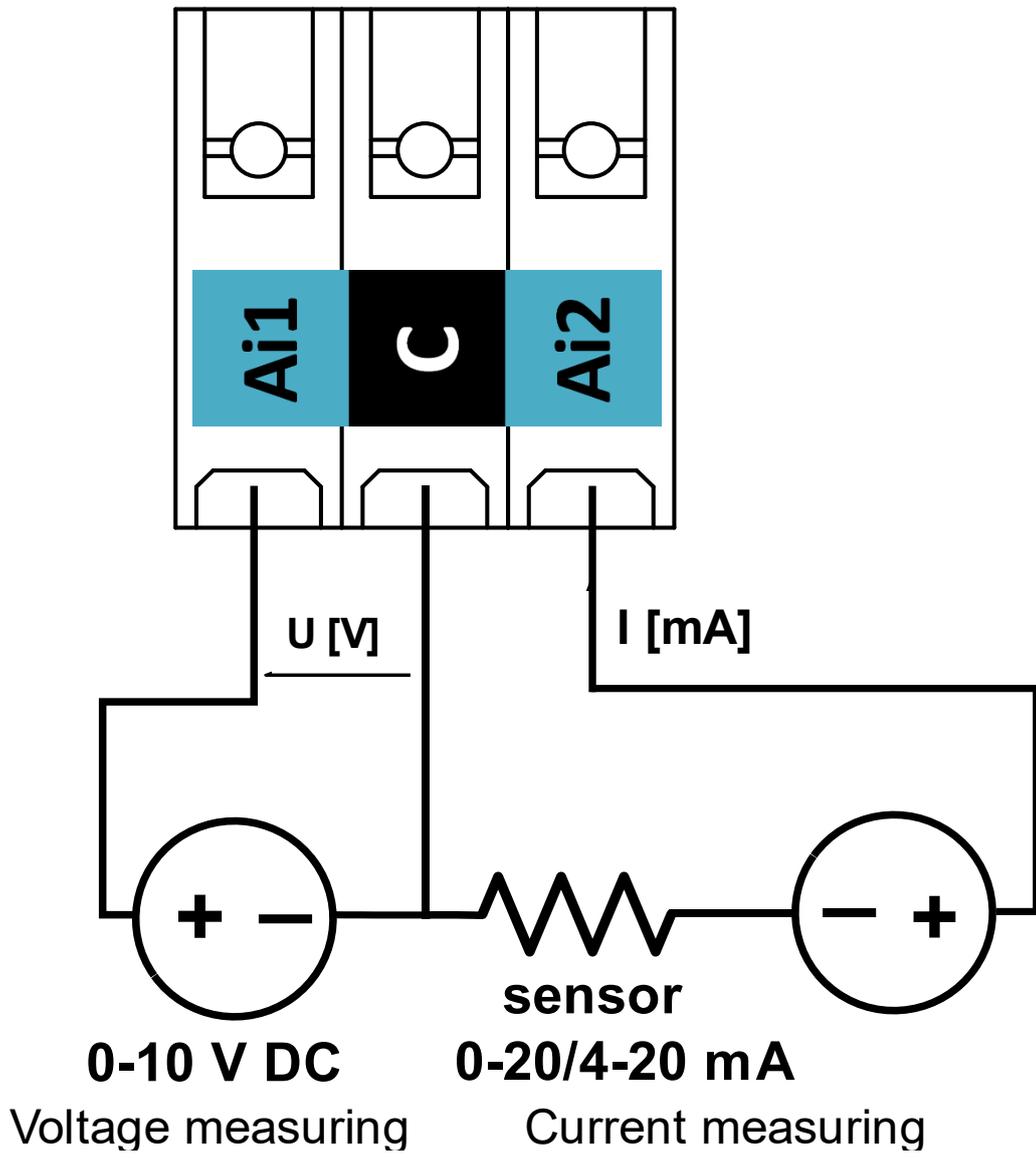


fig. 5

## Specifications

Dimensions (W x H x D)	19.3 x 33.6 x 11.5 mm
Operating temp	-40 to +85°C
Weight	5 g
Current consumption	8 mA
Configurable analog inputs (0-20 mA / 4-20 mA / 0-10 VDC)	2
Programmable data rate options and resolution	3.75 SPS (18 bit resolution) 15 SPS (16 bit resolution) 60 SPS (14 bit resolution) 240 SPS (12 bit resolution)
I2C address configuration	4 addresses
Connector type	screwless connector
Wire range	0.2 to 1.0 mm <sup>2</sup> (24 to 17 AWG)
Reverse polarity protection	yes
ESD protection	yes
Latching cover for FX30	yes

## Troubleshooting

Incorrect or zero measurement results	<b>At first</b> check Ain switch configuration and <b>then</b> check the polarities of connected wires
Too high or too low measurement results	Check programmable gain amplifier
After instalation the device does not work	Restart program or host, chcek I2C address switch or scan I2C bus

Send us your feedback and suggestion to help us improve our products! 😊 [info@energiya.pl](mailto:info@energiya.pl)



Please consider the environment before printing this manual.