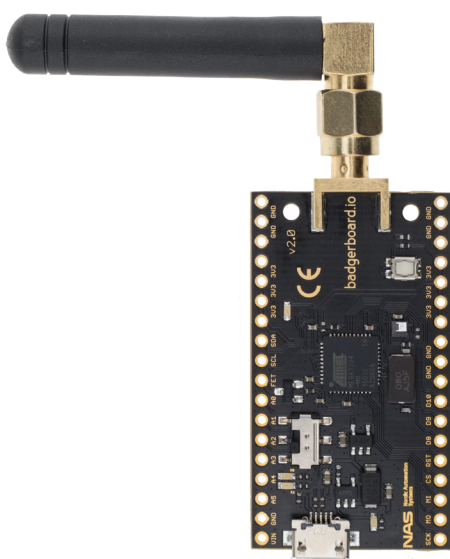


LoRaWAN™ DEVELOPMENT BOARD UX2001

BADGERBOARD



LoRaWAN™ Development Board is an Arduino compatible development board for creating LoRaWAN™ devices.

The Development Board is ready to use out of the box. It has built-in temperature and humidity sensors for instant testing of the LoRaWAN™ network in your area.

OVERVIEW

Easy to use

The board is fully Arduino compatible. Does not need any external programmer.

Minimal design

Small board design with Microchip RN2483 module.

Plug and play

Network ready when powered on.

APPLICATIONS

LoRaWAN™ device development

Various easily configurable interfaces available for development.

Possible applications

- Smart metering
- Smart grids
- Smart cities
- Wearables
- Healthcare
- Agriculture
- Connected homes
- Tracking
- Process automation
- Vehicle telematics

FEATURES

- LoRaWAN™
- LEDs (TX, RX, status, charge)
- Relay switching (Open-drain FET)
- SMA antenna included
- USB programmable
- JST battery connector
- On/off button
- Reset button
- Built in temperature and humidity sensor
- LiPo charger
- Micro USB connector
- 1x I²C
- 13x GPIO
 - 9x ADC
 - 1x SPI (4xGPIO)
 - 3x PWM

SPECIFICATIONS

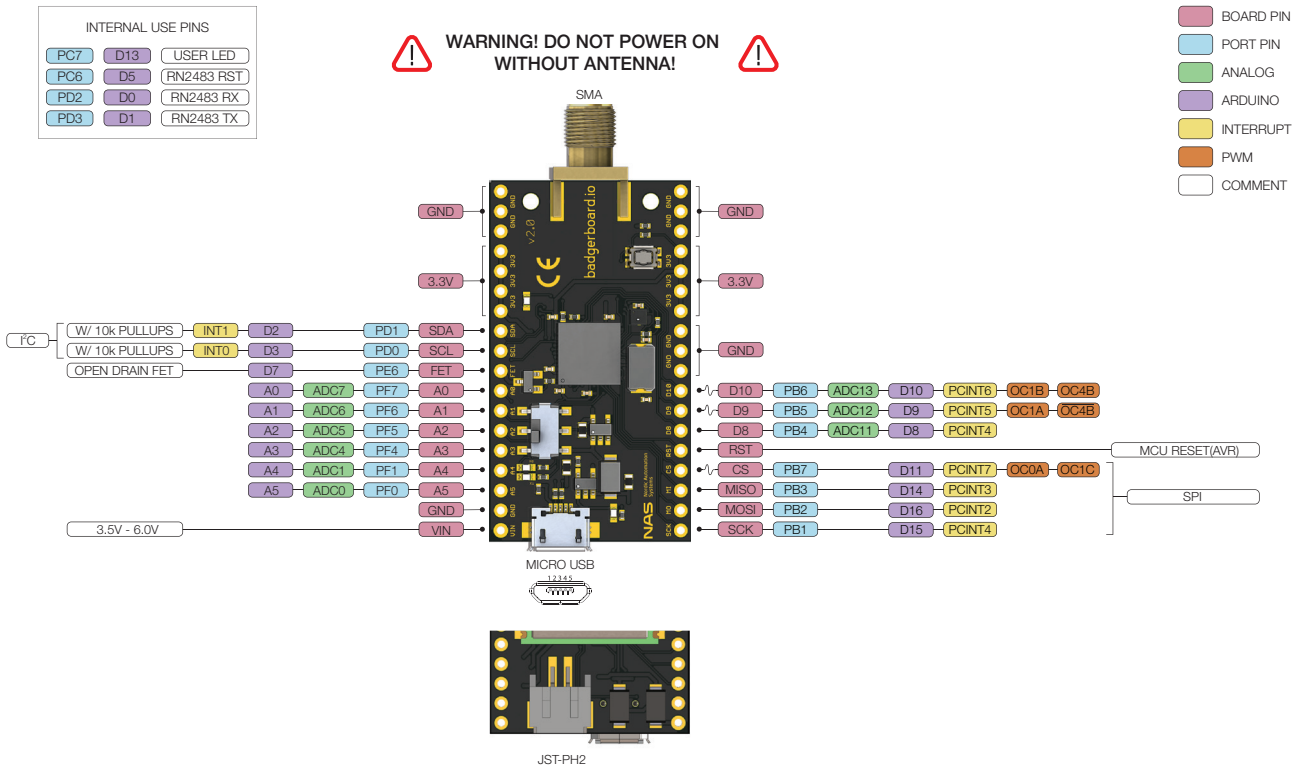
Length:	55.6 mm
Width:	25.8 mm
Height:	10 .0 mm
Weight:	9 g
Operating temperature:	-20°C .. +65°C
Frequency:	430MHz, 868 MHz, 915MHz, 922 MHz
Communication range:	up to 15 km*
Tx power:	up to +14 dBm
Rx Sensitivity:	-148 dBm
Antenna connection:	SMA
Power consumption:	Stand by: 3.5 mA Tx: 50 mA Rx: 20 mA
LiPo charging current:	100 mA
Humidity sensor accuracy:	+/-3.5% (0-80 %)
Humidity sensor resolution:	16 bit
Temperature sensor measuring range:	-40 °C .. +120 °C
Temperature sensor accuracy:	+/-0.5 °C (+15 °C .. +40 °C) +/-1 °C (0°C .. +60 °C)
Temperature sensor resolution:	16 bit
Max input voltage:	6 V
Operation voltage:	3.3 V
MAC Layer:	LoRaWAN™
Physical Layer:	LoRa®
Communication:	I ² C, SPI, USB

* Communication range is dependent on the location of the device and nearest base station.

CONNECTION SPECIFICATIONS

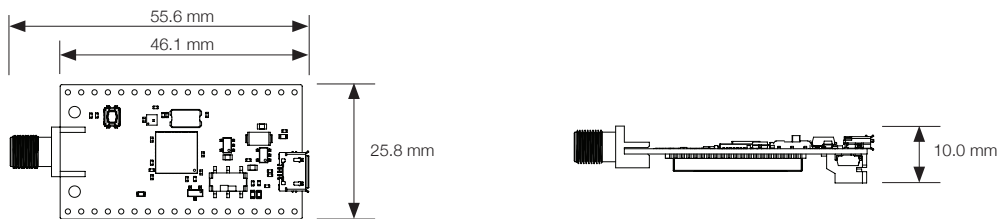
Digital	Max input voltage: 3.3 V
SPI	Min clock: 250 KHz Max clock: 4 MHz
Open Drain FET	Max current: 200 mA Max voltage: 24 V Max switching frequency: 1 kHz

PINOUT DIAGRAM



DIMENSIONS / PACKAGING

Dimensions



Packaging

1 pcs ESD bag

ORDERING INFORMATION

Article / SKU	Package qty	Frequency	Region
UX2001A#0001EU	1	868 MHz	EU
UX2001B#0001AU	1	922 MHz	AU
UX2001C#0001US	1	915 MHz	US
UX2001D#0001AS	1	923 MHz	AS
UX2001F#0001KR	1	922 MHz	KR
UX2001G#0001EU	1	433 MHz	EU

CONTACT INFORMATION

Nordic Automation Systems AS

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info@nasys.no

Note: All Company, brand and product names may be trademarks that are the sole property of their respective owners.

PINOUT DIAGRAM

INTERNAL USE PINS	
PC7	USER LED
PC6	RN2483 RST
PD2	RN2483 FX
PD3	RN2483 TX
D2	
D3	
D7	
A0	
A1	
A2	
A3	
A4	
A5	

BOARD PIN
PORT PIN
ANALOG
ARDUINO
INTERRUPT
PWM
COMMENT

⚠ WARNING! DO NOT POWER ON WITHOUT ANTENNA!

