

## mikroBUS Shuttle

PID: MIKROE-2882

Weight: 27 g

**Combine click boards™ with ease**

**mikroBUS Shuttle** is a small add-on board, which is intended to be used with Shuttle click, in order to expand the mikroBUS™ with additional stacking options. This small add-on board has one mikroBUS™ equipped on itself and it is connected to the Shuttle click via the flat ribbon cable (20cm). One Shuttle click can support up to four mikroBUS Shuttles, allowing simple and elegant stacking solution for click board™ line of products.

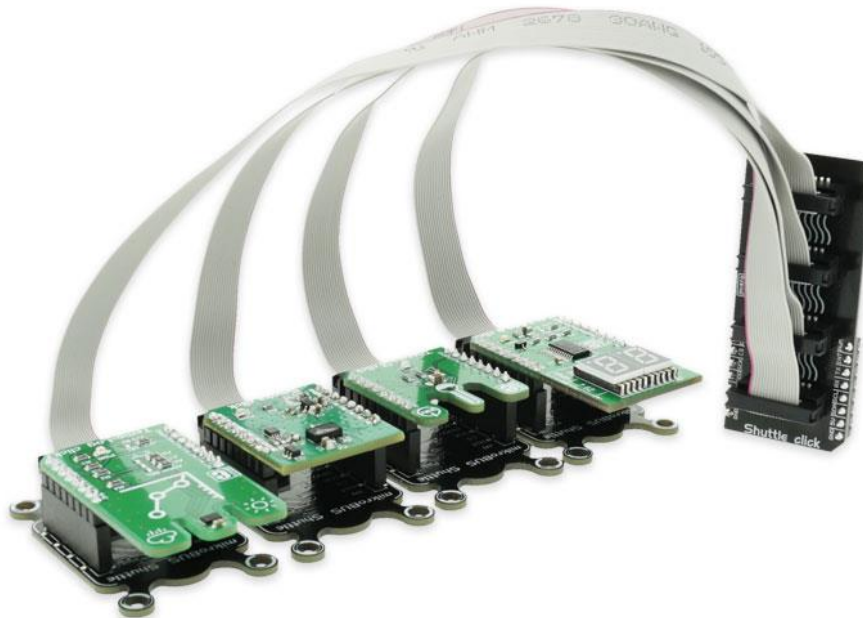
mikroBUS Shuttle is an ideal solution when there is a demand to have more click boards than the development system is able to support. Being connected with the flat ribbon cable to Shuttle click, mikroBUS Shuttle allows being freely positioned according to the requirements of the application. Four mounting holes on the corners of the mikroBUS Shuttle add-on board allow it to be fixed in the desired position.

How does it work?

mikroBUS Shuttle is designed as an add-on board for the Shuttle click, which carries one mikroBUS™ slot. Besides the mikroBUS™ slot, it is equipped with one ICD BOX header, used to connect mikroBUS Shuttle to the existing Shuttle click. It can be connected to one of the four available ICD BOX headers of the Shuttle click, with a flat ribbon cable.

mikroBUS™ socket on mikroBUS Shuttle can be populated with any click board™ from our click board™ range of products. If there is a need to fix mikroBUS Shuttle in a place, there are four mounting holes with the inner diameter of 3.2mm, that can be used for this purpose. This way, the click boards™ can be stacked in a very simple and practical way. Having this kind of stacking topology, allows for easy manipulation and reconfiguration of the stacked click boards™, retaining a perfect connection quality at all times.

When there's a need to expand the development system with even more mikroBUS™ slots, one of the free mikroBUS shuttles can be populated with yet another Shuttle click, allowing even more connections. This makes the stacking capacity almost unlimited. However, attention should be paid not to make mikroBUS™ lines too long. In situations like this, the frequency of the communication might need to be stepped down a bit, in order to compensate for the longer mikroBUS™ signal lines.



Since all of the four headers available on the Shuttle click share the same mikroBUS™ lines, an extra care should be taken when working with click boards™ that share the same pins on the mikroBUS™, either for the communication (SPI, UART, I2C) or for some other purpose (RST, INT, or other pins used as GPIO). For example, I2C and 1-Wire protocols are designed with stacking in mind, so the collision avoidance mechanisms are already in place for these protocols. It is enough to change the slave address of the click board™ and data collision won't be a problem anymore, even while sharing the same pins for the communication.

Also, since all the stacked click boards™ share the same power rails, a care should be taken when combining click boards™ with significant power consumption. The power consumption from all the click boards™ combined should not exceed the maximum power that a development system can deliver.

### Click board™ product range


The union of Shuttle click, mikroBUS Shuttle and click boards™ allows you to reach an unlimited number possibilities when it comes to combining different functionalities. You just need to choose the ones you want from our ever-growing range: environmental sensors, LEDs, speech recognition, heart rate sensors, motor control, GSM, GPS, WiFi, analog to digital converters, movement sensors.

More than 400 click boards™ that can be stacked and integrated in a simple and convenient way are at your disposal.

Turn your development system into a mikroBUS shuttle station!

### Pinout diagram

This table shows the pinout on the mikroBUS™ socket.

Notes					Notes
Analog Input	1	AN	PWM	16	PWM Output
Reset	2	RST	INT	15	Hardware Interrupt
SPI Chip Select	3	CS	RX	14	UART Receive
SPI Clock	4	SCK	TX	13	UART Transmit
SPI Master Input Slave Output	5	MISO	SCL	12	I2C Clock
SPI Master Output Slave Input	6	MOSI	SDA	11	I2C Data
Power Supply	7	3.3V	5V	10	Power Supply
Ground	8	GND	GND	9	Ground

## Onboard settings and indicators

Label	Name	Default	Description
J1	HM2X8	-	J1 Connector (IDC BOX header) has 16 pins, one for every mikroBUS™ pin. Flat ribbon cable enables connection with <b>Shuttle click</b> which has the same type of connector.

## Downloads

[mikroBUS™ standard specifications](#)

[mikroBUS Shuttle schematic](#)

[mikroBUS Shuttle - 2D and 3D files](#)