Skywire click

PID: MIKROE-2405

Weight: 30 g

Condition: New product

Skywire™ click is an adapter click, which hosts NimbeLink/Skywire™ cellular modems (using stacking headers) to MikroElektronika development boards. It carries the MCP1826 low dropout regulator from Microchip.

NOTE: the Skywire™ modem and the Thermo 3 click are not included in this offer.

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Skywire™ click is an adapter click, which hosts **NimbeLink/Skywire™ cellular modems** (using stacking headers) to **MikroElektronika development boards**. It carries the MCP1826 low dropout regulator from Microchip. Skywire™ click is designed to run either on 3.3V or 5V power supply. The click communicates with the target MCU over UART interface, and the following mikroBUS™ pins: PWM, AN, INT, RST, CS.

NOTE: the Skywire™ modem and the Thermo 3 click are not included in this offer.

Additional mikroBUS™ socket

Skywire™ click has the capability to host an additional mini sized click board™. It also has its own power supply to make the needed voltage for the modules.

Skywire cellular modems

Skywire™ cellular modems are the smallest on the market today. This product family from NimbeLink covers everything from **2G and 3G to LTE**. They all share the same footprint and pinout, and are flexible for implementation.

Key features

- MCP1826 LDO regulator
  - 1000 mA Output Current Capability
  - Output voltage range of 0.8V to 5.0V
- Additional socket for a mini sized click board™
- Interface: UART
- 3.3V or 5V power supply

SPECIFICATION

Product Type	Adapter
On-board modules	MCP1826 LDO regulator
Key Features	Additional socket for mini sized click board™, MCP1826 LDO regulator, 3.3V or 5V power supply
Key Benefits	Adapts Nimbelink/Skywire modules with MikroElektronika development systems
Interface	UART
Power Supply	3.3V or 5V
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **Skywire click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	mikroBUS™				Pin	Notes
Enable	**EN**	**1**	AN	PWM	**16**	**CTS**	Clear To Send
RESET	**RST**	**2**	RST	INT	**15**	**AD1_J**	ADC IN
Request To Send	**RTS**	**3**	CS	TX	**14**	**TX**	UART transmit
Not connected	NC	**4**	SCK	RX	**13**	**RX**	UART receive
Not connected	NC	**5**	MISO	SCL	**12**	NC	Not connected
Not connected	NC	**6**	MOSI	SDA	**11**	NC	Not connected
Power supply	**+3.3V**	**7**	3.3V	5V	**10**	**+5V**	Power supply
Ground	**GND**	**8**	GND	GND	**9**	**GND**	Ground

Programming

The following code snippet starts the main function in the Skywire application.

This is a simple main function, which excepts a call and replies with an SMS to caller. The content of the SMS is the current temperature measurement in degrees Celsius.

```
01: void main()
02: {
03:     measure_f = false;
04:     system_init();
05:     skywire_power_on();
06:     at_init( rsp_handler, UART3_Write, buffer, sizeof( buffer ) );
07:     at_cmd_save( "+CLCC", 1000, NULL, NULL, NULL, callerid_handler );
// Assigning caller ID handler
08:     at_cmd_single( "AT" );
09:     at_cmd_single( "AT+CSCS="GSM"" );
10:     at_cmd_single( "AT+CMGF=1" );
```

```
11:     while( 1 )
12:     {
13:         at_process();
14:
15:         if( measure_f )
16:         {
17:             measure_temp();
18:             at_cmd_single( "AT+CLCC" );
19:             at_cmd_single( "ATH" );
20:             Delay_ms( 2000 );
// Delay needed after ATH
21:             reply_to_caller();
22:             measure_f = false;
23:         }
24:     }
25: }
```

Jumpers and settings

The following table describes the functions of the onboard jumpers.

Designator	Name	Default Position	Default Option	Description
JP1	PWR.SEL.	Left	3.3V	Power Supply Voltage Selection 3.3V/5V, left position 3.3V, center position 5V
ADC1	ADC1	Populated	3.3V	Connects ADC1 pin of the modem to the mikroBUS pin