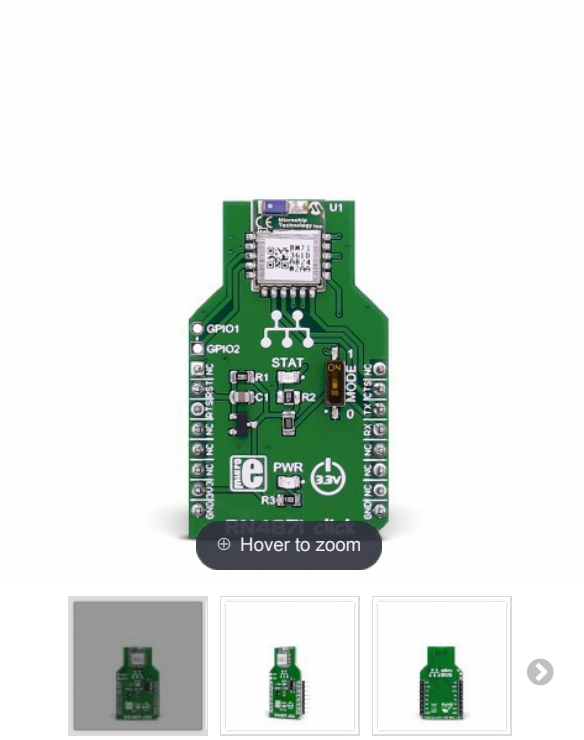


RN4871 click

PID: MIKROE-2544

Weight: 25 g

RN4871 click carries the RN4871 **Bluetooth®** 4.2 low energy module from Microchip.

The click is designed to run on a 3.3V power supply. It uses ASCII Command Interface over UART for communication with target microcontroller, with additional functionality provided by the following pins on the mikroBUS™ line: RST, CS, and INT.

Quantity 1 - +

Add to Cart

Looking for customized version of this product?

If you have other questions about this product contact us here.

LEAVE A MESSAGE

LEAVE A MESSAGE

Table of contents

RN4871 click carries the RN4871 **Bluetooth®** 4.2 low energy module from Microchip. The click is designed to run on a 3.3V power supply. It uses ASCII Command Interface over UART for communication with target microcontroller, with additional functionality provided by the following pins on the mikroBUS™ line: RST, CS, and INT.

RN4871 module features

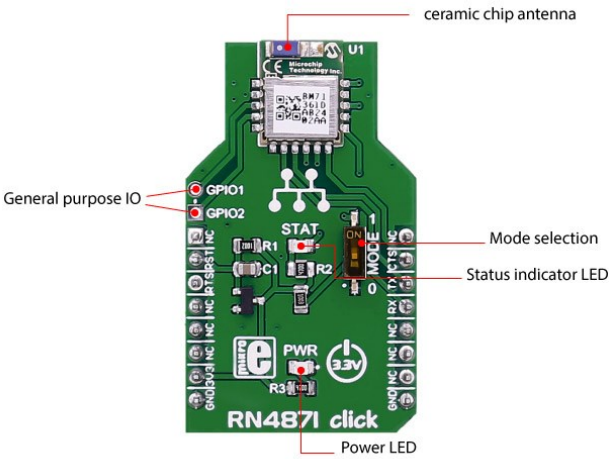
The RN4871 Bluetooth Low Energy module integrate Bluetooth 4.2 baseband controller, on-board Bluetooth stack, digital and analog I/O, and RF power amplifier into one solution.

The module contains an integral ceramic chip antenna.

All products in the RN series can be dynamically configured by the host microcontroller with a few simple ASCII commands.

The RN4871 **supports both peripheral and central Generic Access Profile (GAP) roles**, actively scanning for other connectable devices instead of waiting for incoming connection requests. The peripherals are usually small, low power devices like sensors and monitors, that broadcast information to the central device. The central device can communicate with multiple peripherals.

RN4871 click features



Specifications

Type	Bluetooth,BLE
Applications	Health/Medical Devices, Sports Activity/Fitness Meters, Beacon Applications, Internet of Things (IoT) Sensor Tag, Remote Control, Wearable Smart Devices and Accessories, Smart Energy/Smart Home, Industrial Control
On-board modules	RN4871 Bluetooth module from Microchip
Key Features	Low energy module
Interface	UART,GPIO
Input Voltage	3.3V
Compatibility	mikroBUS
Click board size	M (42.9 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **RN4871 click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	mikroBUS				Pin	Notes
	NC	1	AN	PWM	16	NC	
Module Reset	RST_N	2	RST	INT	15	**UART_CTS**	UART Clear To Send
UART Ready To Send	**UART_RTS**	3	CS	TX	14	**UART_TXD**	UART Data output
	NC	4	SCK	RX	13	**UART_RXD**	UART Data input

	NC	5	MISO	SCL	12	NC	
	NC	6	MOSI	SDA	11	NC	
Power supply	**+3.3V**	7	3.3V	5V	10	NC	
Ground	**GND**	8	GND	GND	9	**GND**	Ground

Maximum ratings

Description	Min	Typ	Max	Unit
Supply Voltage	1.9		3.6	V
Frequency Band	2.402		2.480	GHz
Operating Temperature Range	-20°C		+70°C	
Sensitivity		90dBm		

Programming

Code examples for RN4871 click, written for MikroElektronika hardware and compilers are available on Libstock.

Code snippet

The following code snippet shows send function for RN4xxx clicks. If the message type is correct, it will estabilish connection with the device specified by the address in the parameter and then send the properly formated data.

```
#define BTCMD( TXT ) UART2_Write_Text( TXT )
void RN4xxx_send(char *pAddr, T_RN4xxx_message msgData )
{
   static char msgTxt [255];

   if (msgData.msgType ==  'Q')
   {
       /*Connects to a device with specified adress*/
       BTCMD("C,1,");
       BTCMD (pAddr);
       BTCMD("r");
       Delay_ms(3000);
       /*Secures the connection, entering data stream mode*/
       BTCMD("Br");
       Delay_ms(3000);
   }
   /*Sentence construction */
   msgTxt[0] = '#';
   msgTxt[1] = msgData.msgType;
   msgTxt[2] = ',';
   msgTxt[3] = msgData.dataType/0x100;
   msgTxt[4] = msgData.dataType%0x100;
   msgTxt[5] = ',';
   msgTxt[6] = msgData.id;
   msgTxt[7] = ',';
   msgTxt[8] = '';
   strcat (msgTxt, msgData.payload);
   strcat (msgTxt, "*rn");

   BTCMD ( msgTxt );

   if (msgData.msgType ==  'Q')
   {
       Delay_ms(3000);
       /*Enters CMD mode*/
        BTCMD("$");
       Delay_ms(100);
       BTCMD("$$$");
       Delay_ms(1000);
       /*Kills connection*/
       BTCMD("K,1r");
```

```
42         Delay_ms(500);
43     }
44 }
```

Downloads

- mikroBUS™ Standard specification
- RN4871 datasheet
- LibStock: RN4871 click library
- RN4871 click schematic

YOU MIGHT ALSO NEED

PRODUCTS IN THE SAME CATEGORY

Add your suggestion

More technical documentation

More software examples

Send