# WiFi PLUS click



WiFi PLUS click is a compact solution for adding WiFi communication to your project. The click features <u>MRF24WB0MA</u> – 2.4GHz, IEEE std. 802.11 - compliant module from Microchip, as well as <u>MCW1001</u> companion controller with on-board TCP/IP stack and 802.11 connection manager.

**WiFi PLUS click** is a compact solution for adding WiFi communication to your project. The click features <u>MRF24WB0MA</u> – 2.4GHz, IEEE std. 802.11 - compliant module from Microchip, as well as <u>MCW1001</u> companion controller with on-board TCP/IP stack and 802.11 connection manager. The combination of the MRF24WB0MA and MCW1001 results in support for IEEE Standard 802.11 and IP services.

WiFi PLUS click is designed to run on a 3.3V power supply. It communicates with the target MCU over an UART interface.

#### PCB antenna

The MRF24WB0MA RF transceiver module contains integrated PCB antenna with range up to 400m.

## MRF24WB0MA module

**MRF24WB0MA** is a low-power, 2.4 GHz, IEEE 802.11-compliant, surface mount module with all associated RF components such as crystal oscillator, bypass and bias passives with integrated MAC, baseband, RF and power amplifier, and built-in hardware support for AES, and TKIP (WEP, WPA, WPA2 security). The module has low power consumption modes. In sleep mode it uses 250  $\mu$ A (typical), and while in hibernate mode the typical power consumption is only **0.1**  $\mu$ A.

### MCW1001A companion chip

The **MCW1001A** is a companion chip to the MRF24WB0 802.11 module. It provides simple socket based method of sending and receiving data from the MRF24WB0 802.11 module. The MCW1001A has an on-board TCP/IP stack and 802.11 connection manager to simplify the connection between a wireless network and the TCP/IP stack management.

# **Key features**

- MRF24WB0MA module from Microchip
  - IEEE 802.11-compliant RF Transceiver
  - Compatible with IEEE 802.11b/g/n networks
  - Integrated PCB antenna
  - Range: up to 400m (1300 ft.)
- MCW1001A companion chip
- Interface: UART
- 3.3V power supply

Туре	Wi-Fi
Applications	WiFi PLUS click does not use the memory resources of the target microcontroller for TCP/IP stack operations, which makes this module the best choice for wide range of different devices
On-board modules	MRF24WB0MA, MCW1001
Key Features	Meets 2.4GHz, IEEE std. 802.11 standard. Integrated PCB antenna with range up to 400m
Key Benefits	MCW1001 companion controller features on-board TCP/IP stack and 802.11 connection manager
Interface	GPIO,UART
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 **WiFi PLUS click** corresponds to the pinout on the mikroBUS<sup>™</sup> socket (the latter shown in the two middle columns).

Notes	Pin	mikroBUStm				Pin	Notes
General-purpose I/O	GP0	1	AN	PWM	16	GP1	General-purpose I/O
Reset	RST#	2	RST	INT	15	GP2	General-purpose I/O
Not connected	NC	3	CS	тх	14	тх	UART transmit
Not connected	NC	4	SCK	RX	13	RX	UART receive
Not connected	NC	5	MISO	SCL	12	RTS#	Request to send
Not connected	NC	6	MOSI	SDA	11	CTS#	Clear to send
Power supply	+3.3V	7	3.3V	5V	10	NC	Not connected
Ground	GND	8	GND	GND	9	GND	Ground