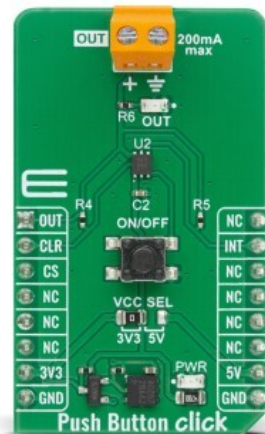


Push Button Click



PID: MIKROE-6811

Push Button Click is a compact add-on board that provides reliable ON/OFF control and battery freshness management through a pushbutton interface, designed for low-power embedded applications. It is based on the [MAX16169](#), a nanoPower pushbutton ON/OFF controller from [Analog Devices](#) with an integrated debounce circuit, latch, and interrupt functionality. The MAX16169 accepts a noisy input from a mechanical switch and delivers a clean, latched output capable of sourcing up to 200mA, while its ultra-low supply current of less than 40nA ensures minimal battery drain. An asynchronous CLR pin allows external reset of the output state, while a green LED provides visual feedback when the load is active. Push Button Click is ideal for portable medical devices, handheld electronics, industrial systems, IoT nodes, and other battery-powered applications requiring simple and efficient user-controlled power management.

For more information about **Push Button Click** visit the official [product page](#).

How does it work?

Push Button Click is based on the MAX16169, a nanoPower pushbutton ON/OFF controller from Analog Devices with an integrated debounce circuit, latch, and interrupt functionality. This board provides reliable on/off control and battery freshness management through a pushbutton interface, designed for low-power embedded applications. It accepts a noisy input from a mechanical switch (ON/OFF) and delivers clean, latched digital outputs capable of sourcing up to 200mA, ensuring stable and predictable switching behavior in noisy or harsh environments. This board is ideal for portable medical devices, handheld consumer electronics, industrial equipment, IoT devices, and other battery-powered systems requiring simple yet efficient user-

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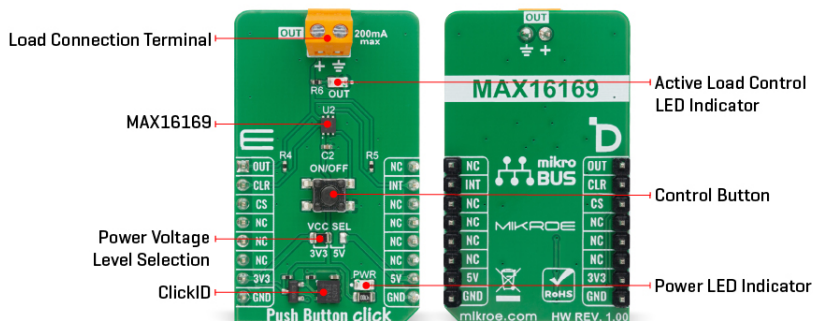


ISO 27001: 2013 certification of informational security management system.
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controlled power management.



The MAX16169 generates a one-shot interrupt signal on INT pin upon a valid button press, allowing the host MCU to detect and respond to user input without continuous polling. If the switch closure duration exceeds the defined shutdown period, the interrupt remains active longer, enabling flexible timing control and enhanced responsiveness in various user-interface scenarios. With an ultra-low supply current consumption of less than 40nA, the MAX16169 ensures minimal battery drain, making it ideal for use as a “battery freshness seal” that preserves energy during device storage or transport.

The OUT terminal/pin provides a latched output that can either drive a low-current load directly or act as a logic control signal for a higher-power regulator, featuring less than 30mV voltage drop at full 200mA load. An asynchronous CLR pin allows an external signal to reset the latched output to the OFF state at any time, providing additional control flexibility. Visual feedback of the output state is provided through a green LED connected to the OUT terminal, allowing users to easily monitor when the load is engaged or disconnected.

This Click board™ can operate with either 3.3V or 5V logic voltage levels selected via the VCC SEL jumper. This way, both 3.3V and 5V capable MCUs can use the communication lines properly. Also, this Click board™ comes equipped with a library containing easy-to-use functions and an example code that can be used as a reference for further development.

Specifications

Type	Pushbutton/Switches
Applications	Ideal for portable medical devices, handheld electronics, industrial systems, IoT nodes, and other battery-powered applications requiring simple and efficient user-controlled power management
On-board modules	MAX16169 - nanoPower pushbutton ON/OFF controller and battery freshness seal from Analog Devices
Key Features	nanoPower pushbutton ON/OFF controller with integrated debounce, latch, and interrupt functionality, ultra-low supply current

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	consumption, latched output capable of sourcing up to 200mA with less than 30mV voltage drop, one-shot interrupt output for event detection, asynchronous CLR pin for external reset control, green LED indicator for visual output status feedback, and more
Interface	GPIO
Feature	ClickID
Compatibility	mikroBUS™
Click board size	M (42.9 x 25.4 mm)
Input Voltage	3.3V or 5V

Pinout diagram

This table shows how the pinout on Push Button Click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	mikroBUS				Pin	Notes
Push-Pull Latched Output	OUT	1	AN	PWM	16	NC	
Clear Input	CLR	2	RST	INT	15	INT	One-Shot Interrupt
ID COMM	CS	3	CS	RX	14	NC	
	NC	4	SCK	TX	13	NC	
	NC	5	MISO	SCL	12	NC	
	NC	6	MOSI	SDA	11	NC	
Power Supply	3.3V	7	3.3V	5V	10	5V	Power Supply
Ground	GND	8	GND	GND	9	GND	Ground

Onboard settings and indicators

Label	Name	Default	Description
LD1	PWR	-	Power LED Indicator
LD2	OUT	-	Active Load Control LED Indicator
JP1	VCC SEL	Left	Power Voltage Level Selection 3V3/5V: Left position 3V3, Right position 5V
T1	ON/OFF	-	Control Button

Push Button Click electrical specifications

Description	Min	Typ	Max	Unit
Supply Voltage	3.3	-	5	V
Output Current	-	-	200	mA

Software Support

[Push Button Click](#) demo application is developed using the [NECTO Studio](#), ensuring

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compatibility with [mikroSDK](#)'s open-source libraries and tools. Designed for plug-and-play implementation and testing, the demo is fully compatible with all development, starter, and mikromedia boards featuring a [mikroBUS™](#) socket.

Example Description

This example demonstrates the use of the Push Button Click board by reading the output and interrupt pin states. The OUT pin state is logged whenever it changes, and if the output remains active longer than the timeout period, it is automatically cleared. If the button is pressed and held longer than 8 seconds, the output shuts down.

Key Functions

- `pushbutton_cfg_setup` This function initializes Click configuration structure to initial values.
- `pushbutton_init` This function initializes all necessary pins and peripherals used for this Click board.
- `pushbutton_clear_output` This function clears the output by toggling the CLR pin.
- `pushbutton_get_out_pin` This function returns the OUT pin logic state.
- `pushbutton_get_int_pin` This function returns the INT pin logic state.

Application Init

Initializes the log interface and the Push Button Click driver.

Application Task

Monitors the OUT pin state, logs changes, resets the timeout counter when the button is pressed, and clears the output after a timeout period or if the button is pressed longer than 8 seconds.

Application Output

This Click board can be interfaced and monitored in two ways:

- Application Output - Use the "Application Output" window in Debug mode for real-time data monitoring. Set it up properly by following [this tutorial](#).
- UART Terminal - Monitor data via the UART Terminal using a [USB to UART converter](#). For detailed instructions, check out [this tutorial](#).

Additional Notes and Information

The complete application code and a ready-to-use project are available through the NECTO Studio Package Manager for direct installation in the [NECTO Studio](#). The application code can also be found on the MIKROE [GitHub](#) account.

Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

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[Click boards™](#)

[ClickID](#)

Downloads

[Push Button click example package](#)

[Push Button click 2D and 3D files v100](#)

[Push Button click schematic v100](#)

[MAX16169 datasheet](#)

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