



MESHLE Universal Switch Interface

Overview

MDBT-UNI-SWITCH – Bluetooth Module based on Nordic nRF52840 SoC Solution (Revision 2 IC) with pre-flashed MESHLE Universal Switch Interface (1-Channel/2-Channel/Shutter/Binary Input) Interface Firmware. Suitable ideally for Light, Motor Control or converting binary input into mesh signals. For the detailed module datasheet see [MDBT50Q-1MV2](#)

Hardware Features

- BT5.4 qualified module designed based on Nordic nRF52840 SoC solution
- Compact size with 10.5 x 15.5 x 2.05 mm
- Complete BT5.4 / BT5.3 / BT5.2 / BT5.1 / BT5 low energy solution with integrated chip antenna
- Pre-Certified Module: FCC / IC / CE / Telec / KC / SRRRC / NCC / WPC Certified & CE RED / RCM Compliant.
- 32-bit ARM® Cortex™ M4F CPU
- Supply: 1.7V – 5.5V
- Operating Temp: -40°C to +85°C

Software Features

<ul style="list-style-type: none">• Password-protected Bluetooth mesh network• Configuration and control via smartphone• Interchangeable Interface• All features of Shutter/Switch/Binary Input Interfaces• Group control	<ul style="list-style-type: none">• Timers• Rules• Adjustable start up state• Firmware Update Over The Air (OTA)	<ul style="list-style-type: none">• Support Bluetooth EnOcean-Sensors & Kinetic Wall Switches• Remote Control*• Voice Control*• Cloud Dashboard* <p>*Gateway is required</p>
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Variations

1. 1-Ch Switch
2. 2-Ch Switch (3-Ch and 4-Ch also available on request)
3. Roller Shutter
4. Binary Input

All interfaces are available as PWM or SPI Output Signal

Pinout

Pin-Label	Pin-Function	Pin-Name	Pin-Number	Input / Output	1-Ch Switch	2-Ch Switch	3-Ch Switch
GPIO0	Channel 1	P0.13	37	OUT	Ch1	Ch1	Ch1
GPIO1	Channel 2	P0.14	36	OUT		Ch2	Ch2
GPIO2	Channel 3	P0.15	39	OUT			Ch3
GPIO3	Channel 4	P0.16	38	OUT			
GPIO4	Channel 5	P0.17	41	OUT			
INP1	PIR 1 / PUSH BUTTON / SWITCH	P0.26	19	IN (Pulled Down)			
INP2	PIR 2 / PUSH BUTTON / SWITCH	P1.10	03	IN (Pulled Down)			
TxD	Terminal	P0.06	22	OUT	UART Terminal Interface t - Run Tests (Quality control) - Change Product Interface firmware) - Set Parameters (Parameters)		
RxD	Terminal	P0.08	24	IN			
Enable Terminal	Enable Terminal	P0.31	12	IN (Pulled Up)			
LED1	Info LED	P0.27	16	OUT	Info LED shows the state (connected to network) or mode when connected to the Info LED Button. See "Info LED" section for more details.		
Soft Reset BTN0	Reset-/Program-Button	P0.11	27	IN (Pulled Up)	Software Reset Button is used to reset the device to factory settings, change device settings (not supported by firmware). See "Buttons" section for more details.		
BTN1	Button 1	P0.12	29	IN (Pulled Up)	Optional buttons available when connected to the device. Described in "Buttons" section.		
BTN2	Button 2	P0.24	48	IN (Pulled Up)			

Pin-Label	Pin-Function	Pin-Name	Pin-Number	Input / Output	1-Ch Switch	2-Ch Switch	3-Ch Switch
BTN3	Button 3	P0.25	49	IN (Pulled Up)			
BTN4	Button 4	P1.08	25	IN (Pulled Up)			
DIP0		P1.01	61	IN (Pulled Up)	Optional DIP switches are See "DIP Switches" section		
DIP1		P1.02	50	IN (Pulled Up)			
DIP2		P1.03	60	IN (Pulled Up)			
DIP3		P1.04	56	IN (Pulled Up)			
RX	UART	P1.00	47	IN	UART Interface for device See "UART Interface" section		
TX	UART	P1.09	26	OUT			
AIN0	Overheat Protection	P0.02	11	IN (Pulled Up)	Optional Analog Input for Input" section for more info		
XL1*	External Oscillator	P0.00	17		All MESHLE Modules must be connected. See "External Oscillator" Schematics for more info		
XL2*	External Oscillator	P0.01	18				
SWDIO	Debug-/Flash-Interface	SWDIO	51		Optional, but preferable to UART interface.		
SWDCLK	Debug-/Flash-Interface	SWDCLK	53				
VDD*	+3V3	VDD	28		Power supply		

Pin-Label	Pin-Function	Pin-Name	Pin-Number	Input / Output	1-Ch Switch	2-Ch Switch	3-Ch Switch
VDDH*	+3V3	VDDH	30				
GND*	Ground	GND_1, GND_2, GND_3, GND_4, GND_5	1, 2, 15, 33, 55, GND				

*-marked pins must be connected in order for the module to work

Reference Circuit

