

PmGpioSMA

This Pmod™ compatible module provides 2 general-purpose inputs and outputs (GPIO) via SMA connectors. The direction can be set via dipswitches. Additionally, it is also a level shifter to/from a voltage that can be provided from external or the internal 3.3V. Via an optional pin header the other GPIOs can be used internally.

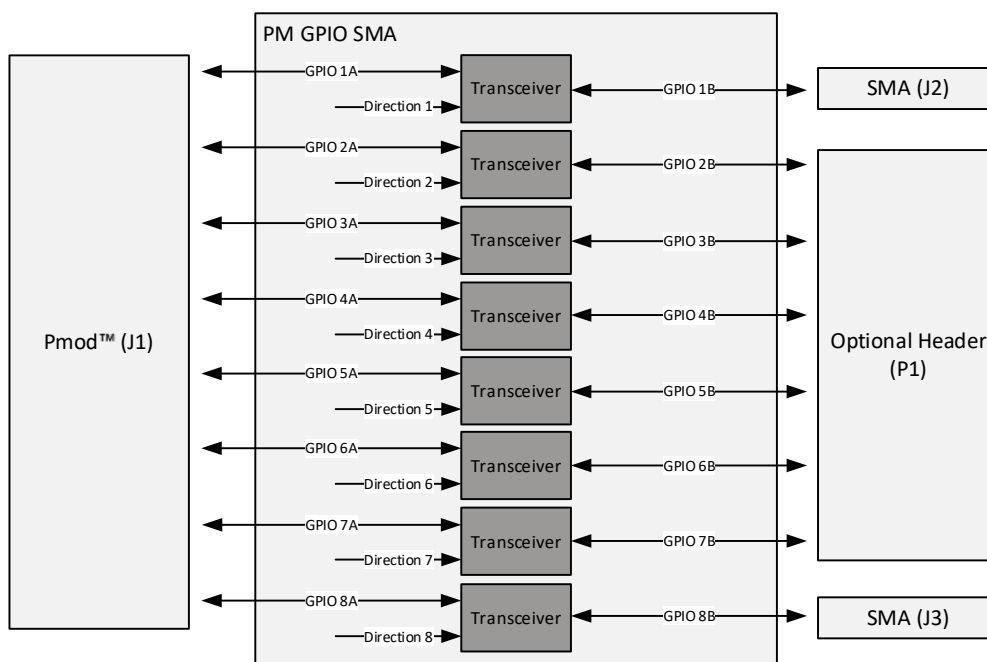
Key Features:

- 2 SMA GPIOs
- Internally supplied with 3.3V
- Selectable external voltage for level shifting between 1.65V and 5.5V (only via an internal pin header available)
- Translation logic between the two voltage levels
- Changeable I/O direction via dipswitches

Module:



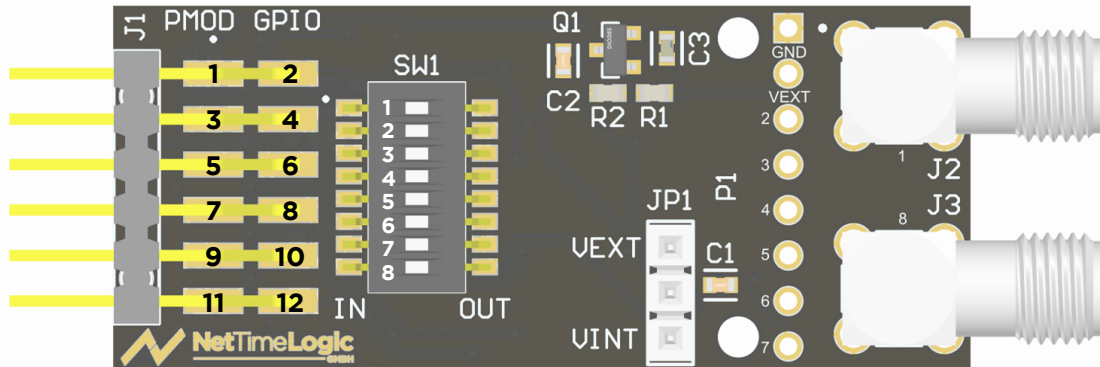
Block Diagram:



Specification:

Level Shifter	SN74LVC1T45 Single-Bit Dual-Supply Bus Transceiver
Config	Jumper (JP1) on upper position → V _{CCB} to V _{EXT} Jumper (JP1) on lower position → V _{CCB} to V _{INT} (VCC) Dipswitch (SW1) on left position → A: input; B: output Dipswitch (SW1) on right position → A: output; B: input
Output	GPIO 1B (J2): ±24mA @ 3.3V; GPIO 8B (J3): ±24mA @ 3.3V

Pmod™ Pins and Module Overview:



Pin	Signal	Direction	Description
Header J1 (Pmod™)			
1	GPIO 1A	In/Out	I/O Pin 1A
2	GPIO 2A	In/Out	I/O Pin 2A
3	GPIO 3A	In/Out	I/O Pin 3A
4	GPIO 4A	In/Out	I/O Pin 4A
5	GPIO 5A	In/Out	I/O Pin 5A
6	GPIO 6A	In/Out	I/O Pin 6A
7	GPIO 7A	In/Out	I/O Pin 7A
8	GPIO 8A	In/Out	I/O Pin 8A
9	GND		GND connection to the carrier board
10	GND		GND connection to the carrier board
11	VCC		3.3V supply from the carrier board
12	VCC		3.3V supply from the carrier board
SMA J2 & J3			
1	GPIO 1B	In/Out	I/O Pin 1B
8	GPIO 8B	In/Out	I/O Pin 8B
Header P1 (optional)			
GND	GND		Common Ground Pin
V _{EXT}	VEXT		External Voltage (1.65V - 5.5V)
2	GPIO 2B	In/Out	I/O Pin 2B
3	GPIO 3B	In/Out	I/O Pin 3B
4	GPIO 4B	In/Out	I/O Pin 4B
5	GPIO 5B	In/Out	I/O Pin 5B
6	GPIO 6B	In/Out	I/O Pin 6B
7	GPIO 7B	In/Out	I/O Pin 7B