

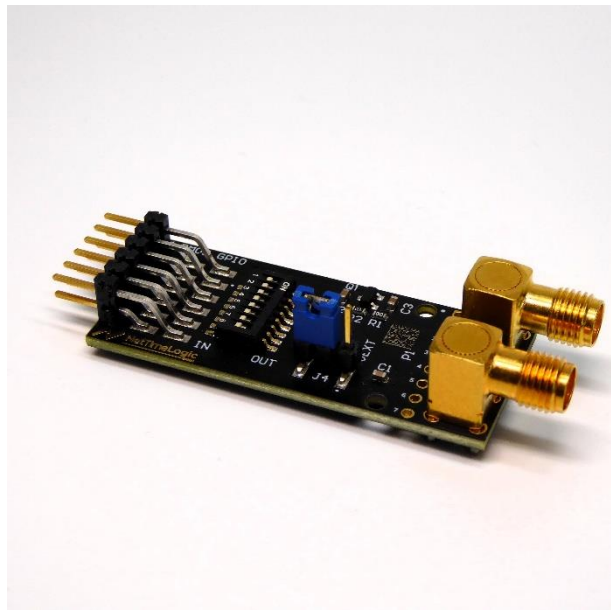
PmGpioSMA

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.

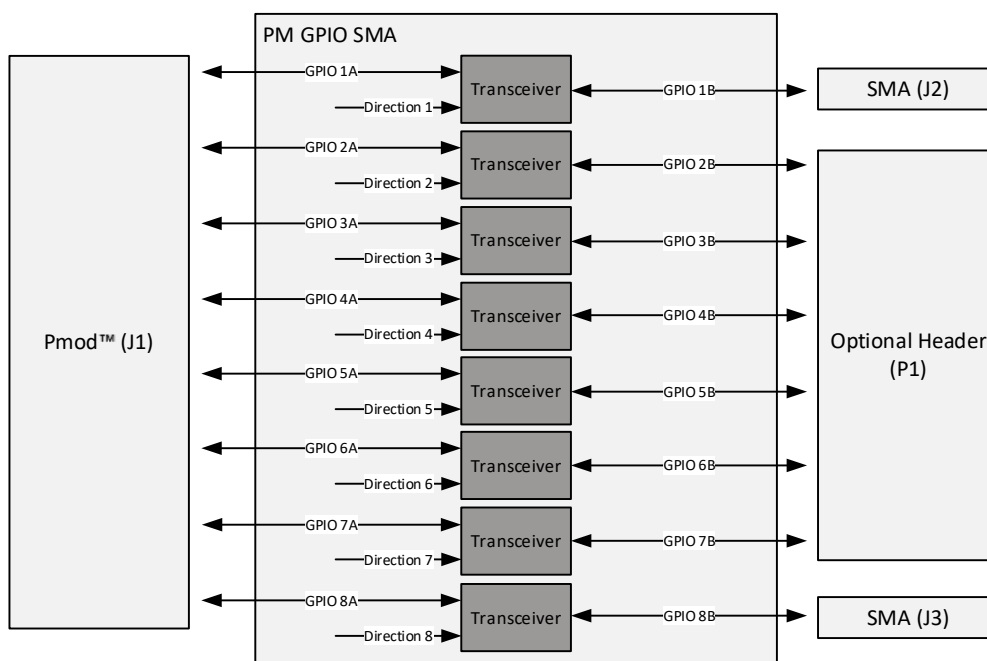
Key Features:

- 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:



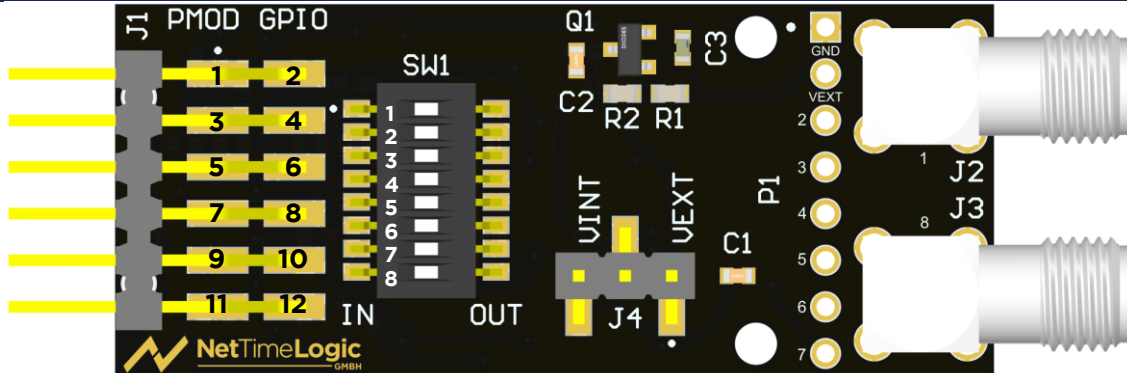
Block Diagram:



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} | V _{EXT} | | 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 |



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