

# lamaPLC: PCF857x I/O Expander chip/modul with I<sup>2</sup>C communication

The PCF857x series consists of I<sup>2</sup>C-based general-purpose I/O (GPIO) expanders manufactured by NXP and Texas Instruments. They allow microcontrollers (such as Arduino, ESP32, or Raspberry Pi) to control multiple digital pins with only two wires: Serial Data (SDA) and Serial Clock (SCL).



Feature	PCF8574 / PCF8574A	PCF8575
<b>GPIO Count</b>	8-bit (8 pins)	16-bit (16 pins)
<b>I<sup>2</sup>C Base Address</b>	<b>0x20</b> (PCF8574) / <b>0x38</b> (PCF8574A)	<b>0x20</b>
<b>Max Devices on 1 Bus</b>	8 units	16 units
<b>Operating Voltage</b>	2.5V to 6V	2.5V to 5.5V
<b>Interrupt Output</b>	Yes (Open-drain INT)	Yes (Open-drain INT)

## Main Control & Power Header

- VCC: Power input. Connects to 3.3V or 5V to match your microcontroller's logic levels.
- GND: Common ground reference.
- SDA: Serial Data line for I<sup>2</sup>C communication.
- SCL: Serial Clock line for I<sup>2</sup>C communication.
- INT: Interrupt output (Active Low). Pulls low to alert the microcontroller when an input pin changes state, eliminating the need for software polling.

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