PWM1

UNIT PWM Module

Professional electronic component

v1.0

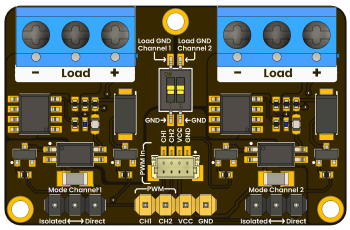
2025-09-29
Rev. A

PRODUCT OVERVIEW

The UNIT PWM Module is a compact, two-channel PCB designed to amplify pulse-width modulation signals from a microcontroller. It enables reliable switching of external loads at higher voltages and currents than the microcontroller can natively handle. With its clearly labeled screw-terminal connectors, the module is well-suited for motor speed control, high-power LED dimming, and other projects requiring precise power regulation via PWM. The board also includes a QWIIC-compatible 4-pin header, allowing for easy plug-and-play wiring and daisy-chaining of power and PWM signals using standard Qwiic cables.

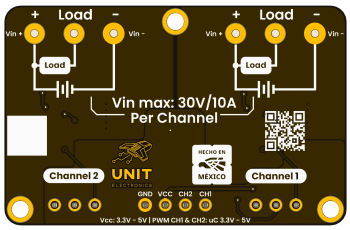
PRODUCT VIEWS

TOP VIEW



Component placement and connectors

BOTTOM VIEW



Underside components and connections

KEY TECHNICAL SPECIFICATIONS

CONNECTIVITY

Interfaces:	**I2C, SPI, UART, ADC**
Connector:	**QWIIC + Pin Headers**

KEY FEATURES

Microcontroller
PY32F003L24D6TR (32-bit ARM Cortex-M0)

Clock Speed Internal
Up to 24 MHz

ADC
12-bit ADC with multiple channels

Memory
16KB Flash, 2KB SRAM

SPI
1 channel

I2C
1 channel

UART
1 channel

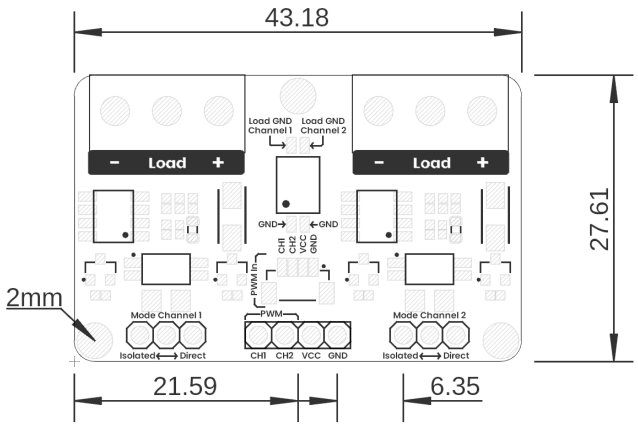
ADDITIONAL TECHNICAL INFORMATION

📦 OVERVIEW

FEATURE	DETAILS
2-channel PWM	Two independent channels for versatile control
5V logic	Compatible with 3.3V and 5V microcontrollers
5V power supply	Powers external devices up to 2A
Qwiic connector	4-pin connector for easy integration

HARDWARE DOCUMENTATION

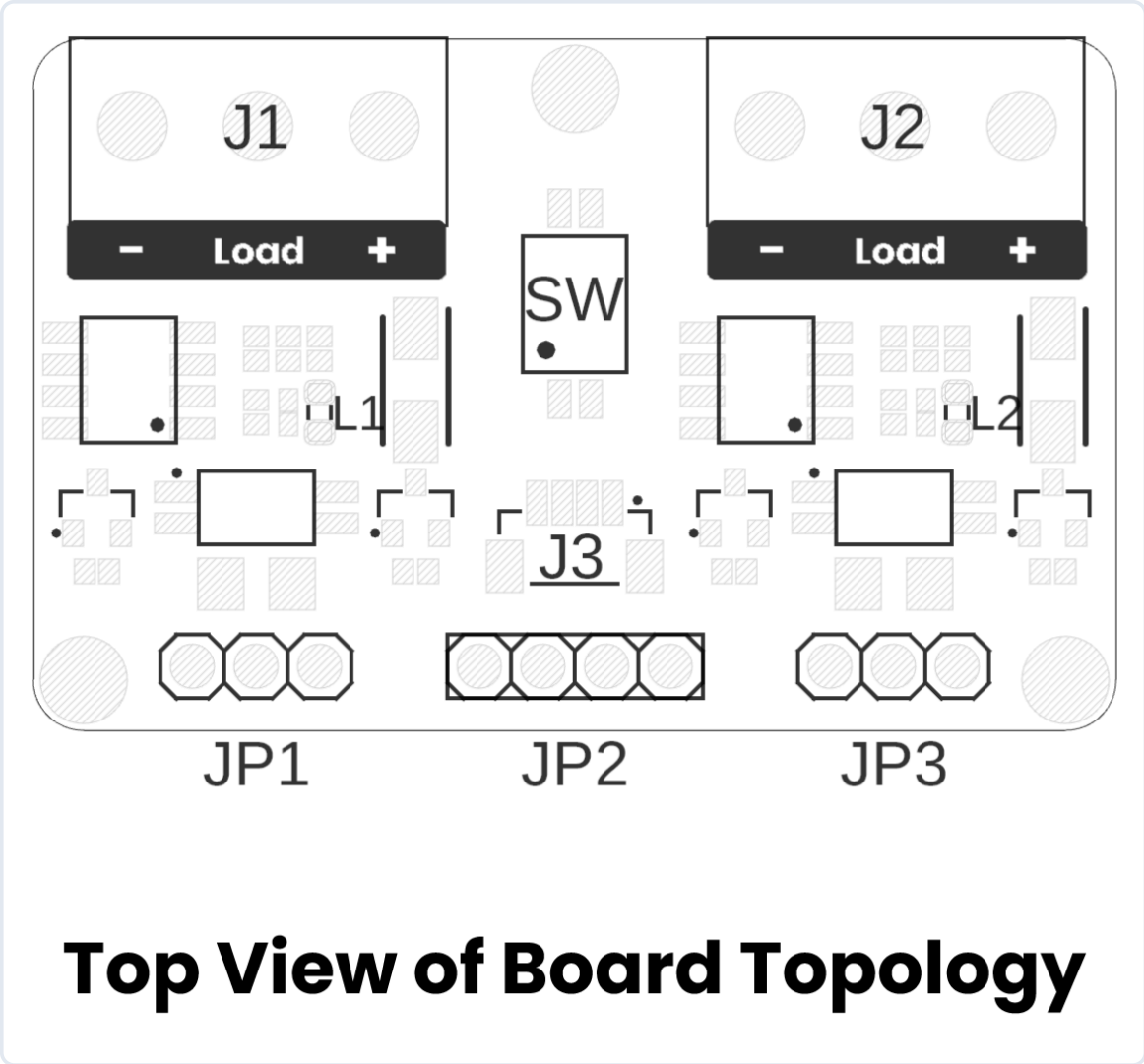
MECHANICAL DIMENSIONS



Board Dimensions in Millimeters

Physical dimensions and mounting specifications (measurements in millimeters)

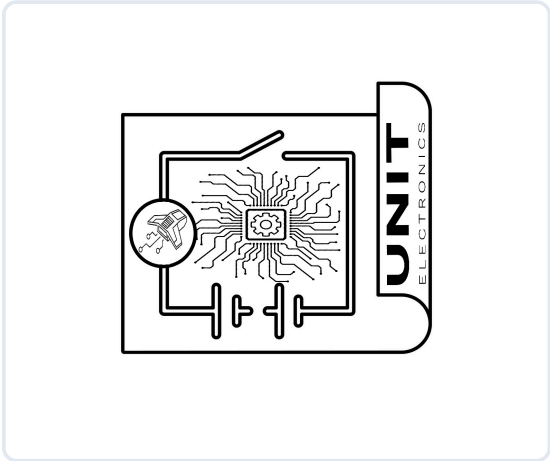
SYSTEM TOPOLOGY



Connection topology and system integration diagram

Click image to open in full size

CIRCUIT SCHEMATIC



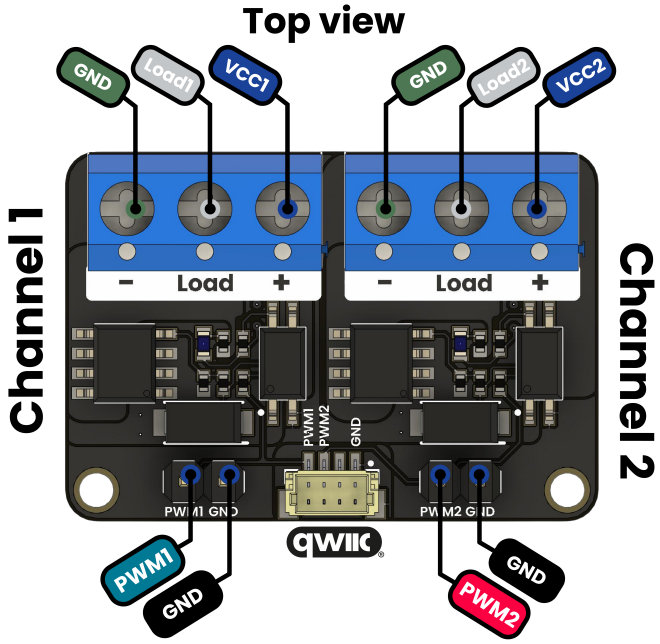
Complete circuit schematic showing all component connections

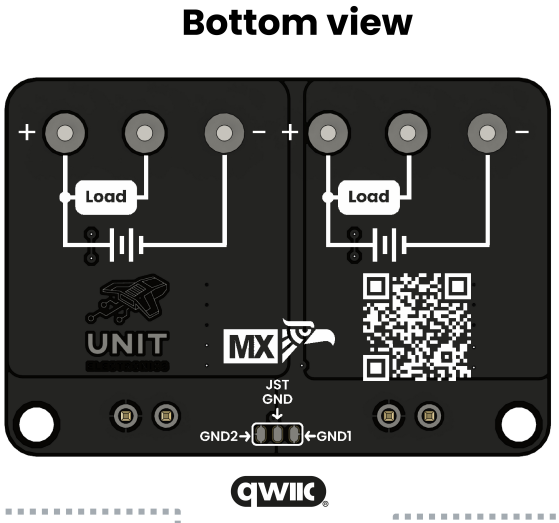
View Complete Schematic PDF

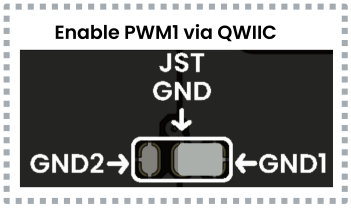
PIN CONFIGURATION LAYOUT

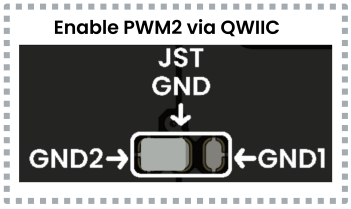
Physical connector layout and pin positioning

PWM Module









Complete pin configuration diagram showing all connectors, pin assignments, and electrical connections for proper integration