

IC1



ICP-10111 Barometric Pressure Sensor Module

v1.0

2025-09-30

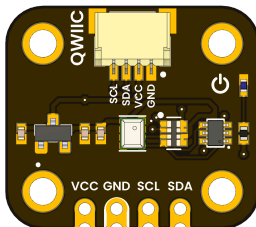
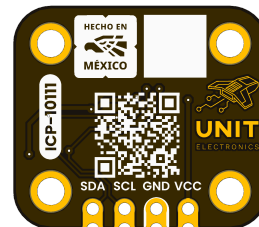
Rev. A

Professional electronic component



PRODUCT OVERVIEW

The UNIT ICP-10111 Barometric Pressure Sensor Module is a compact and efficient sensor designed for high-accuracy atmospheric pressure measurements with low power consumption. Based on MEMS capacitive technology, this module offers ultra-low noise performance, exceptional relative accuracy, and stable sensor throughput. Ideal for weather monitoring, altitude measurement, and environmental sensing, it delivers industry-leading precision in demanding applications.

PRODUCT VIEWS

TOP VIEW*Component placement and connectors***BOTTOM VIEW***Underside components and connections*


KEY TECHNICAL SPECIFICATIONS


 CONNECTIVITY		 MECHANICAL	
Primary Interface:	I ² C (up to 400 kHz, address 0x63)	Board Dimensions:	20.32 mm × 17.78 mm
Connector Type:	Qwiic + Pin Headers	Mounting Holes:	4 × Ø 2.2 mm
Logic Levels:	VCC-referenced (1.8V – 5.5V tolerant)	Weight:	~2.5 g
		Package Type:	Compact breakout board

PIN CONFIGURATION

VOLTAGE LEVEL	FUNCTION
3.3 V – 5.5 V	Provides power to the on-board regulator and sensor core.
0 V	Common reference for power and signals.
1.8 V to VCC	Serial data line for I ² C communications.
1.8 V to VCC	Serial clock line for I ² C communications.

KEY FEATURES

 feature not specified
No specific features found

 **Key Applications**
Weather Stations & Barographs, Altimeters & UAVs, Indoor/Outdoor Navigation and more

TYPICAL APPLICATIONS

Weather Stations & Barographs	Altimeters & UAVs	Indoor/Outdoor Navigation
Wearables & IoT	Climatology & Research	Weather Forecasting

ADDITIONAL TECHNICAL INFORMATION

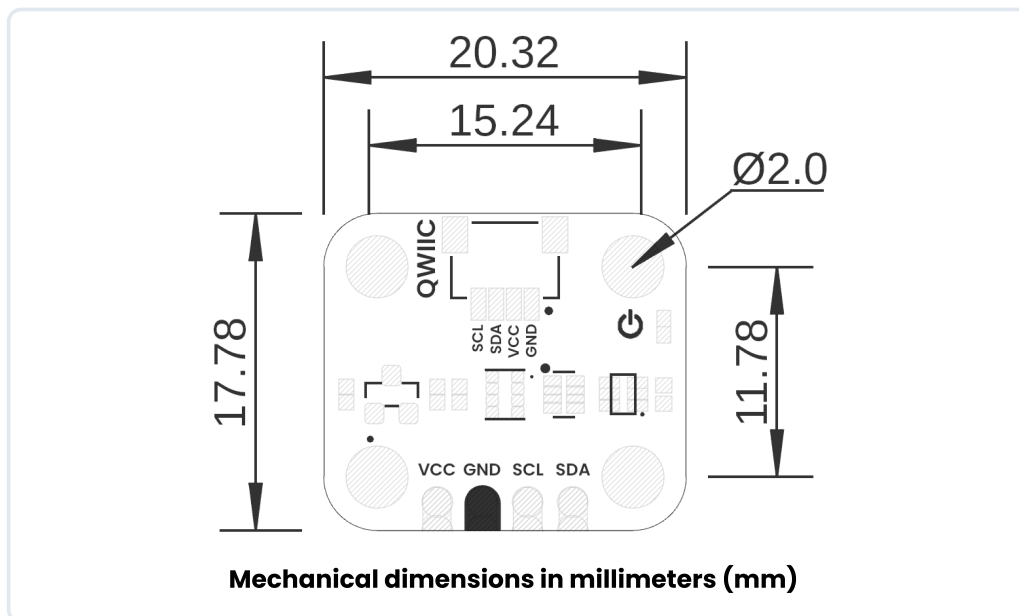
OVERVIEW

FEATURE	SPECIFICATION
Pressure operating range	30 to 110 kPa
Noise and current consumption	ULN mode: 0.4 Pa @ 10.4 µALN mode: 0.8 Pa @ 5.2 µALP mode: 3.2 Pa @ 1.3 µA
Pressure Sensor Relative Accuracy	±1 Pa for any 10 hPa change over 950 hPa–1050 hPa at 25°C
Pressure Sensor Absolute Accuracy	±1 hPa over 950 hPa–1050 hPa, 0°C to 65°C

FEATURE	SPECIFICATION
Pressure Sensor Temperature Coefficient Offset	±0.5 Pa/°C over 25°C to 45°C at 100 kPa
Temperature Sensor Absolute Accuracy	±0.4°C
Temperature operating range	-40 °C to 85 °C
Host Interface	I2C at up to 400 kHz
Single Supply voltage	1.8V ±5%
RoHS and Green compliant	Yes

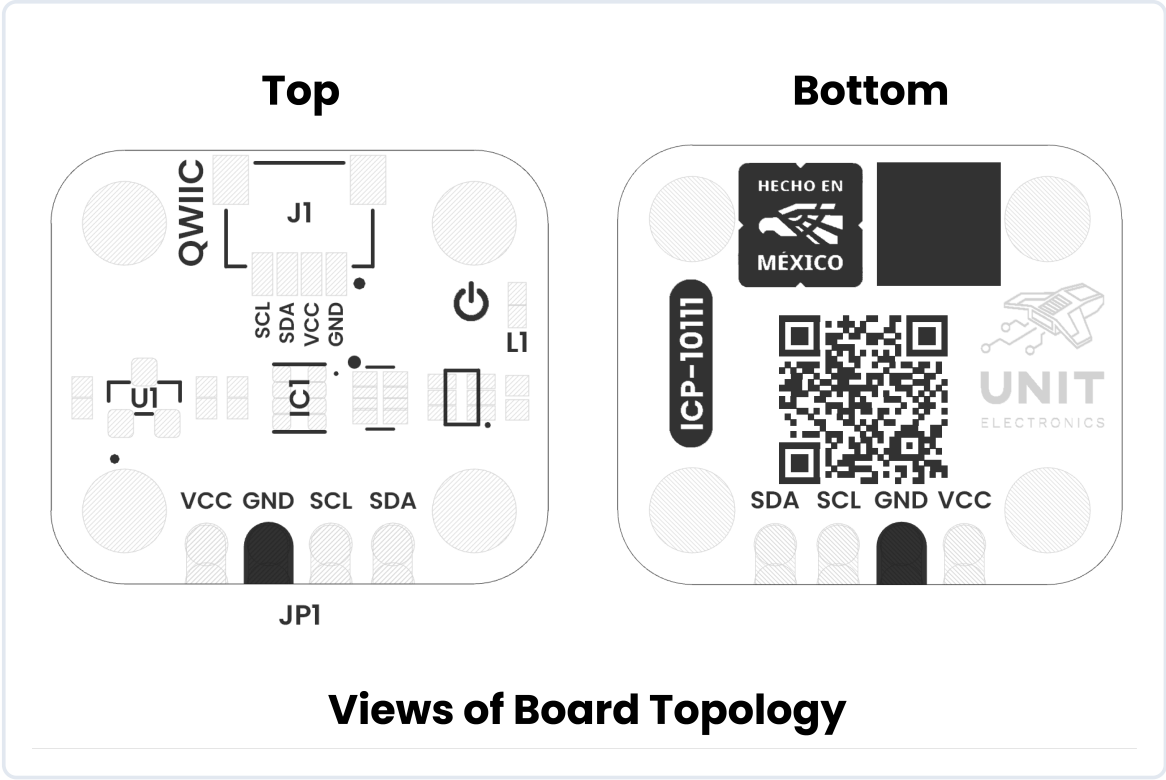
HARDWARE DOCUMENTATION

MECHANICAL DIMENSIONS



Physical dimensions and mounting specifications (measurements in millimeters)

SYSTEM TOPOLOGY



Connection topology and system integration diagram

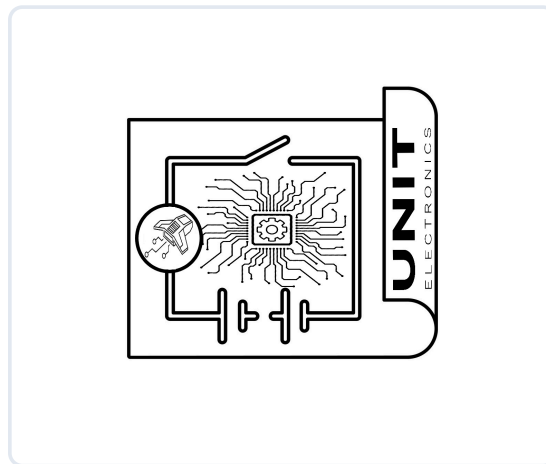
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COMPONENT REFERENCE

REF.	DESCRIPTION
IC1	ICP-10111 Barometric Pressure Sensor
L1	Power On LED
U1	ME6206A18XG 1.8V Regulator
JP1	2.54 mm Castellated Holes
J1	QWIIC Connector (JST 1 mm pitch) for I2C

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CIRCUIT SCHEMATIC



Complete circuit schematic showing all component connections

[View Complete Schematic PDF](#)

PIN DESCRIPTION

Detailed pin assignment and electrical specifications

SIGNAL DESCRIPTION

FUNCTION	NOTES
Power Supply	3.3V or 5V
Ground	Common ground for all components

VOLTAGE LEVEL	FUNCTION
3.3 V – 5.5 V	Provides power to the on-board regulator and sensor core.
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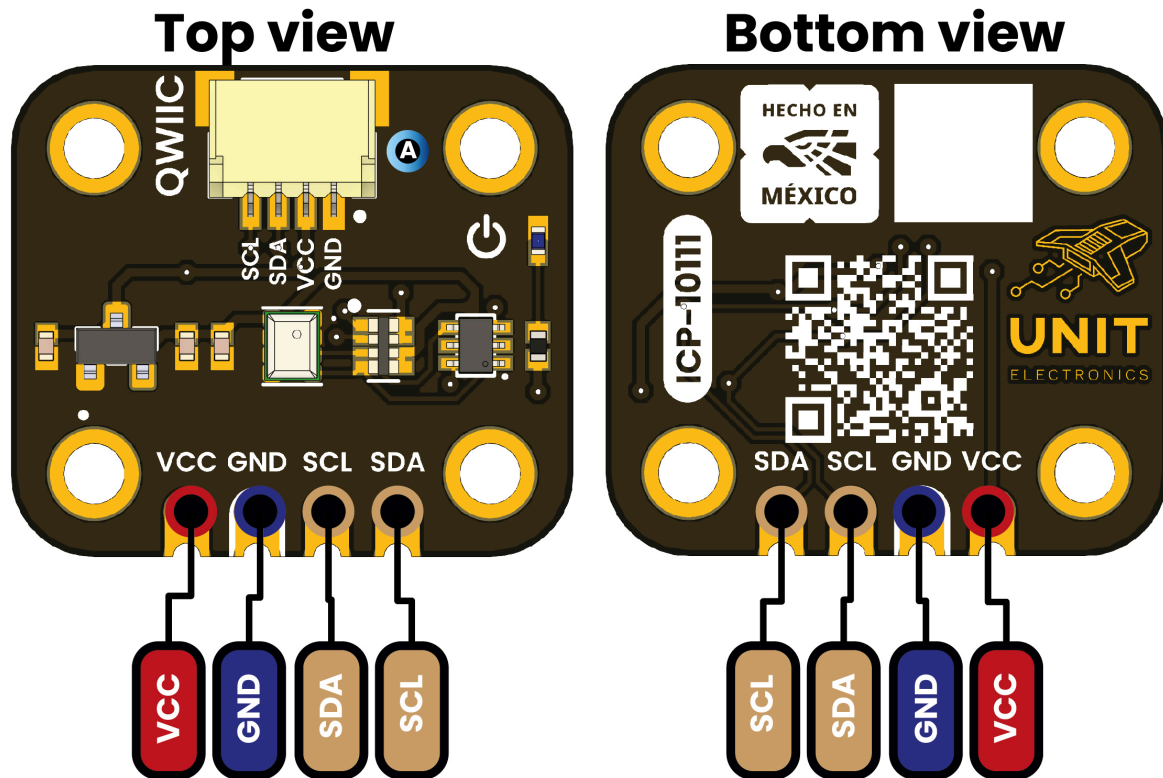
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PIN CONFIGURATION LAYOUT

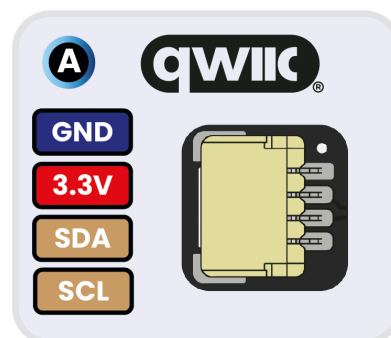
Physical connector layout and pin positioning

PINOUT



Description:

- Supply voltage
- GND
- I2C



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