IC1



ICP-10111 Barometric Pressure Sensor Module

v1.0 2025-09-25 Rev. A

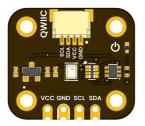
Professional electronic component

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

Primary I²C (up to 400 kHz, address

Interface:

Connector Type: **Qwiic + Pin Headers**

> Logic VCC-referenced (1.8V - 5.5V

Levels: tolerant)

MECHANICAL

Board Dimensions: 20.32 mm × 17.78 mm

Mounting Holes: 4 × Ø 2.2 mm

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 I2C communications. 1.8 V to VCC Serial clock line for I2C communications.

KEY FEATURES

? feature not specified

No specific features found



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



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

Pressure Sensor Temperature Coefficient Offset

Temperature Sensor Absolute Accuracy ±0.4°C

Temperature operating range -40 °C to 85 °C

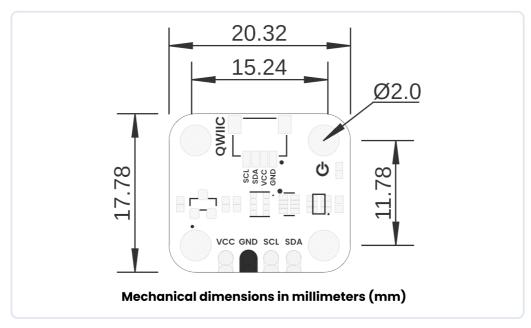
Host Interface I2C at up to 400 kHz

Single Supply voltage 1.8V ±5%

RoHS and Green compliant Yes

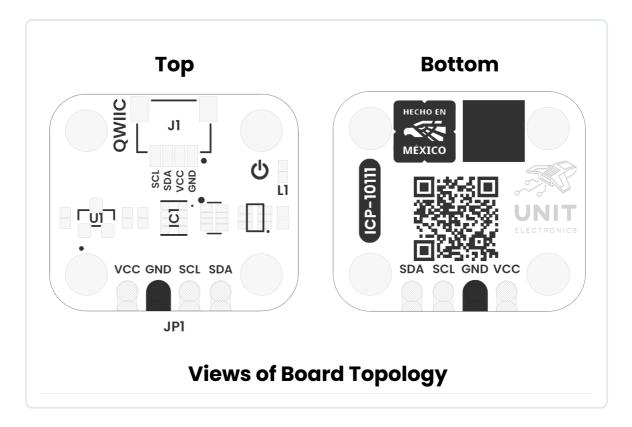
HARDWARE DOCUMENTATION

MECHANICAL DIMENSIONS



Physical dimensions and mounting specifications (measurements in millimeters)

SYSTEM TOPOLOGY

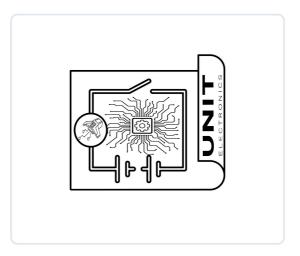


Connection topology and system integration diagram

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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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L1	Power On LED
U1	ME6206A18XG 1.8V Regulator
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CIRCUIT SCHEMATIC



Complete circuit schematic showing all component connections

View Complete Schematic PDF

PIN DESCRIPTION

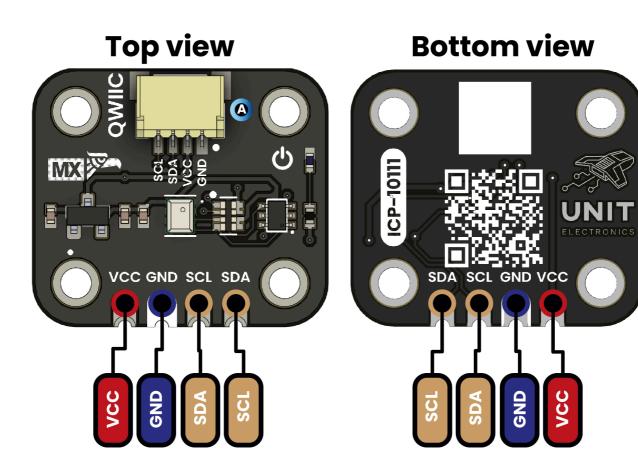
Detailed pin assignment and electrical specifications

SIGNAL DESCRIPTION	I .
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.
0 V	Common reference for power and signals.
1.8 V to VCC	Serial data line for I ² C communications.
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PIN CONFIGURATION LAYOUT

Physical connector layout and pin positioning

PINOUT



Description:









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

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Professional Technical Datasheet

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