Introduction

The DFRobot I2C Address Shifter is designed to modify the I2C address of connected sensors for Arduino, Raspberry Pi, and other development boards. By inserting this module between the host board (such as an Uno R3 or Pi 4) and an I2C sensor, identical sensors can operate simultaneously on the same bus. The plug-and-play module features a compact design for easy integration into I2C cascading systems, with four switch-selectable addresses and over 20 additional options via resistor soldering.

Plug-and-Play Hardware Solution

The I2C Address Shifter eliminates the need for software-based port switching, simplifying system integration. Address conversion occurs entirely within the module, ensuring compatibility without modifying existing code or risking I2C timing conflicts.

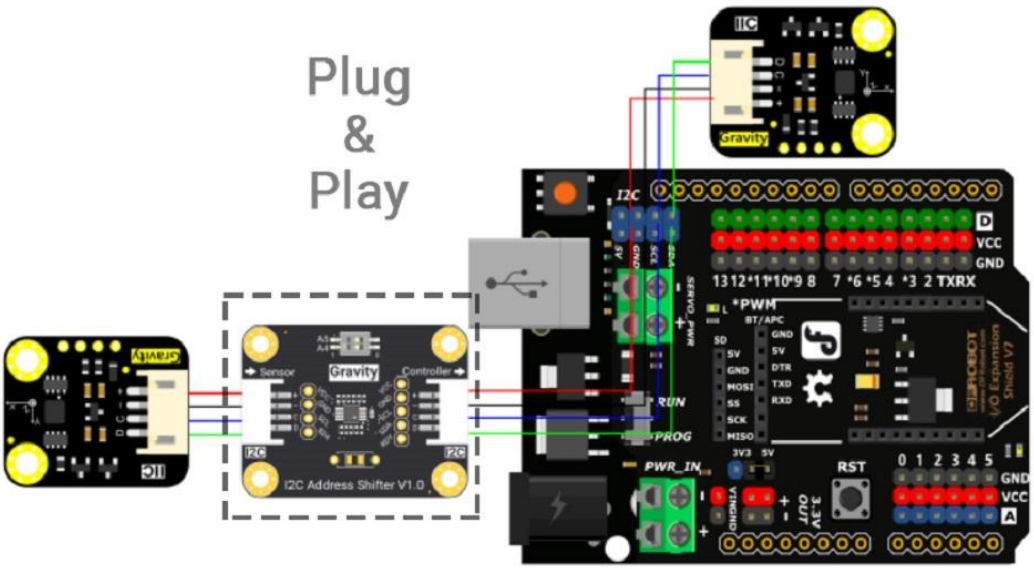

Figure: Wiring Diagram of I2C Address Shifter, sensors and Arduino UNO

Flexible Address Configuration

With four address options accessible via DIP switches and expandable options through resistor soldering, the module supports diverse addressing requirements. This flexibility allows users to deploy multiple identical sensors on a single I2C bus effortlessly.

Compact and Universal Compatibility

The module's small form factor and broad compatibility with I2C sensors make it ideal for space-constrained projects. It seamlessly integrates into existing setups without requiring additional hardware adjustments.

Applications

Sensor Arrays: Deploying multiple identical sensors (e.g., light, temperature) in IoT or agricultural monitoring systems.

Robotics: Enabling obstacle-avoidance robots with redundant TOF sensors on a single I²C bus.

Industrial Automation: Streamlining production line setups with address-conflict-free sensor networks.

Specification

Woking voltage: 2.25~5.5V DC

Working current: 2mA@3.3V

Working temperature: 0~70℃

Dimension: 42*32mm Mounting hole: φ3.0mm

Documents

Product wiki

Tutorial: How to use the Gravity: I2C Address Shifter with Arduino UNO

Tutorial: How to Resolve I2C Address Conflict

FAQ

Schematic

Datasheet

PCB layout

Dimensional drawing

STEP model

Shipping List

Gravity: I2C Address Shifter x1

XH2.54-10pin Header x1

Double end PH2.0-4P cable x1

Gravity sensor cable x1

Arduino

Gravity

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