

MEAS HTU21D SENSOR FOR GROVE SYSTEM

Digital Humidity and Temperature Sensor

The HTU21D provides the necessary hardware to interface the HTU21D digital relative humidity and temperature sensor to any system that utilizes Grove compatible expansion ports configurable for I²C communication. The HTU21D sensor is a self-contained humidity and temperature sensor that is fully calibrated during manufacturing. The sensor module works in 5V external, and the sensor has selectable resolution, low battery detection, and checksum capability. The HTU21D has a low power stand-by mode for power-sensitive applications.

Performance

- 0% to 100% relative humidity range
- -40°C to 125°C temperature range
- Very low power consumption
- Operates in 5V.
- Fast response time – 5 seconds typical
- Built-in heater for fast recovery from saturation
- Recovers fully from condensation
- Fast conversion time – 14ms typical

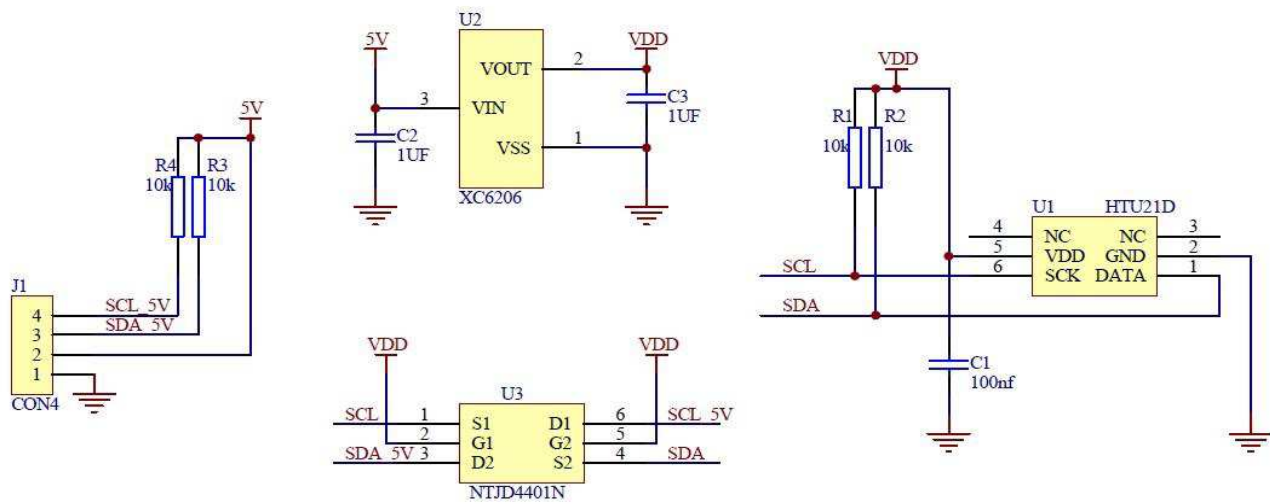
Specifications

- Measures relative humidity from 0% to 100%
- Measures temperature from -40°C to 125°C
- I²C communication
- Fully calibrated
- Fast response time
- Selectable resolution
- Very low power consumption

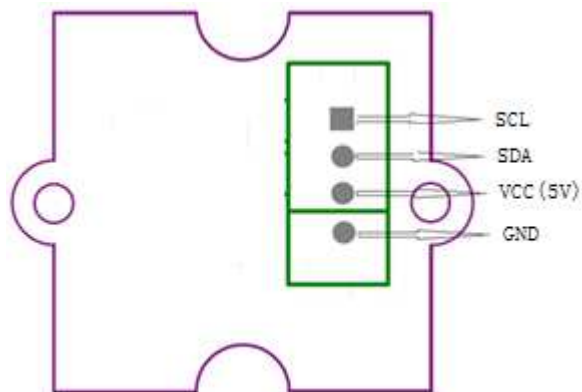
Features

- 4-pin Grove compatible connector
- I²C interface
- Selectable 8-12 bits resolution for humidity
- Selectable 11-14 bits resolution for temperature

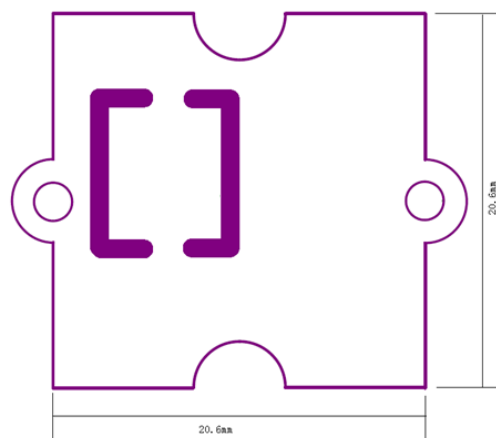
Schematic



Connector Pin Assignments (I²C Communications)



Dimensions (mm)



Detailed Description

I²C Interface:

The HTU21D Grove compliant module can interface to the host in I²C model with 5V supply, it has a Grove compatible four pins port connector configured for I²C.

External Control Signals 5V supply:

The IC operates as an I²C slave using the standard 2-wire I²C connection scheme. As IC is power rated at 3.6V, the board integrates necessary fixture such as a regulator and electrical level shift so that the SCL and SDA signals could be driven directly from an external 5V I²C lines and power supply.

Reference Material

Detailed information regarding operation of the IC:

- [HTU21D Datasheet](#)

Ordering Information

| Description | Part Number |
|--------------------|-------------|
| HTU21D GROVE BOARD | DPP301G000 |

te.com/sensorsolutions

MEAS, TE Connectivity and TE connectivity (logo) are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2016 TE Connectivity Ltd. family of companies All Rights Reserved.

PRODUCT SHEET

MEAS France SAS,
a TE Connectivity company.
Tel: +33 (0) 800-440-5100
Email: customercare.ilse@te.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[DPP301G000](#)