Kernel driver sht21

Supported chips:

- Sensirion SHT21

  Prefix: 'sht21'

  Addresses scanned: none

  Datasheet: Publicly available at the Sensirion website

  https://www.sensirion.com/file/datasheet_sht21

- Sensirion SHT25

  Prefix: 'sht25'

  Addresses scanned: none

  Datasheet: Publicly available at the Sensirion website

  https://www.sensirion.com/file/datasheet_sht25

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Description

The SHT21 and SHT25 are humidity and temperature sensors in a DFN package of only 3 x 3 mm footprint and 1.1 mm height. The difference between the two devices is the higher level of precision of the SHT25 (1.8% relative humidity, 0.2 degree Celsius) compared with the SHT21 (2.0% relative humidity, 0.3 degree Celsius).

The devices communicate with the I2C protocol. All sensors are set to the same I2C address 0x40, so an entry with I2C_BOARD_INFO("sht21", 0x40) can be used in the board setup code.

sysfs-Interface

temp1_input
- temperature input

humidity1_input
- humidity input

eic
- Electronic Identification Code

Notes

The driver uses the default resolution settings of 12 bit for humidity and 14 bit for temperature, which results in typical measurement times of 22 ms for humidity and 66 ms for temperature. To keep self heating below 0.1 degree Celsius, the device should not be active for more than 10% of the time, e.g. maximum two measurements per second at the given resolution.

Different resolutions, the on-chip heater, and using the CRC checksum are not supported yet.