Kernel driver sht15

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Supported chips:

- Sensirion SHT10

  Prefix: 'sht10'
- Sensirion SHT11

  Prefix: 'sht11'
- Sensirion SHT15

  Prefix: 'sht15'
- Sensirion SHT71

  Prefix: 'sht71'
- Sensirion SHT75

  Prefix: 'sht75'

Datasheet: Publicly available at the Sensirion website

http://www.sensirion.ch/en/pdf/product_information/Datasheet-humidity-sensor-SHT1x.pdf

Description

The SHT10, SHT11, SHT15, SHT71, and SHT75 are humidity and temperature sensors.

The devices communicate using two GPIO lines.

Supported resolutions for the measurements are 14 bits for temperature and 12 bits for humidity, or 12 bits for temperature and 8 bits for humidity.

The humidity calibration coefficients are programmed into an OTP memory on the chip. These coefficients are used to internally calibrate the signals from the sensors. Disabling the reload of those coefficients allows saving 10ms for each measurement and decrease power consumption, while losing on precision.

Some options may be set via sysfs attributes.

Notes:

- The regulator supply name is set to "vcc".
- If a CRC validation fails, a soft reset command is sent, which resets status register to its hardware default value, but the driver will try to restore the previous device configuration.

Platform data

- checksum: set it to true to enable CRC validation of the readings (default to false).
- no_otp_reload: flag to indicate not to reload from OTP (default to false).
- low_resolution: flag to indicate the temp/humidity resolution to use (default to false).

Sysfs interface

temp1_input	temperature input
humidity1_input	humidity input
heater_enable	write 1 in this attribute to enable the on-chip heater, 0 to disable it. Be careful not to enable the heater for too long.
temp1_fault	if 1, this means that the voltage is low (below 2.47V) and measurement may be invalid.
humidity1_fault	same as temp1_fault.