NAME

htu21 - driver for HTU21D and compatible temperature and humidity sensors

SYNOPSIS

To compile this driver into the kernel, place the following lines in your kernel configuration file:

device htu21
device iicbus

Alternatively, to load the driver as a module at boot time, place the following line in loader.conf(5):

htu21_load="YES"

DESCRIPTION

The **htu21** driver provides temperature and relative humidity readings over I2C bus for the supported sensors:

- HTU21D
- SHT21
- Si7021

The **htu21** driver reports data via sysctl(8) entries in the device's node in the sysctl(8) tree:

temperature The temperature, in hundredths of Kelvin.

humidity   The relative humidity, in hundredths of a percent.

crc_errors   The number of CRC errors in reading the measurements from the device.

power   The good power indication. This can be useful with battery powered sensors.

heater   The built-in heater control. The heater can be used for testing and for recovery from saturation after high humidity.

hold_bus   Whether the sensor should hold SCL low while performing the measurement. Normally, the sensor releases the bus and NACKs all accessed until the measurement is completed. The hold mode may be useful in mult-master environments.

On an FDT(4) based system the following properties must be set:

compatible Must be set to "meas,htu21".

reg   The I2C address of **htu21**. Although, it is hard-wired to 0x40 (7-bit) on all supported
               sensors.

The DTS part for a **htu21** device usually looks like:

```
/ {

        ...
        htu21d {
                compatible = "meas,htu21";
                reg = <0x40>;
        };
};
```

SEE ALSO
fdt(4), iicbus(4), sysctl(8)

HISTORY
The **htu21** driver and this manual page was written by Andriy Gapon *<avg@FreeBSD.org>*.

BUGS
There is no way to control the measurement resolution.

Some sensor variants do not provide a serial number or use an incompatible format. The **htu21** driver
does not distinguish those variants and may complain about incorrect serial number checksum.