

Kernel driver smsc47m1

Supported chips:

- SMSC LPC47B27x, LPC47M112, LPC47M10x, LPC47M13x, LPC47M14x, LPC47M15x and LPC47M192

Addresses scanned: none, address read from Super I/O config space

Prefix: 'smc47m1'

Datasheets:

http://www.smc.com/media/Downloads_Public/Data_Sheets/47b272.pdf

http://www.smc.com/media/Downloads_Public/Data_Sheets/47m10x.pdf

http://www.smc.com/media/Downloads_Public/Data_Sheets/47m112.pdf

<http://www.smc.com/>

- SMSC LPC47M292

Addresses scanned: none, address read from Super I/O config space

Prefix: 'smc47m2'

Datasheet: Not public

- SMSC LPC47M997

Addresses scanned: none, address read from Super I/O config space

Prefix: 'smc47m1'

Datasheet: none

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Description

The Standard Microsystems Corporation (SMSC) 47M1xx Super I/O chips contain monitoring and PWM control circuitry for two fans.

The LPC47M15x, LPC47M192 and LPC47M292 chips contain a full 'hardware monitoring block' in addition to the fan monitoring and control. The hardware monitoring block is not supported by this driver, use the smc47m192 driver for that.

No documentation is available for the 47M997, but it has the same device ID as the 47M15x and 47M192 chips and seems to be compatible.

Fan rotation speeds are reported in RPM (rotations per minute). An alarm is triggered if the rotation speed has dropped below a programmable limit. Fan readings can be divided by a programmable divider (1, 2, 4 or 8) to give the readings more range or accuracy. Not all RPM values can accurately be represented, so some rounding is done. With a divider of 2, the lowest representable value is around 2600 RPM.

PWM values are from 0 to 255.

If an alarm triggers, it will remain triggered until the hardware register is read at least once. This means that the cause for the alarm may already have disappeared! Note that in the current implementation, all hardware registers are read whenever any data is read (unless it is less than 1.5 seconds since the last update). This means that you can easily miss once-only alarms.

The lm_sensors project gratefully acknowledges the support of Intel in the development of this driver.