

Kernel driver lm70

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Supported chips:

- \* National Semiconductor LM70  
Datasheet: <http://www.national.com/pf/LM/LM70.html>
- \* Texas Instruments TMP121/TMP123  
Information: <http://focus.ti.com/docs/prod/folders/print/tmp121.html>

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Description

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This driver implements support for the National Semiconductor LM70 temperature sensor.

The LM70 temperature sensor chip supports a single temperature sensor. It communicates with a host processor (or microcontroller) via an SPI/Microwire Bus interface.

Communication with the LM70 is simple: when the temperature is to be sensed, the driver accesses the LM70 using SPI communication: 16 SCLK cycles comprise the MOSI/MISO loop. At the end of the transfer, the 11-bit 2's complement digital temperature (sent via the SIO line), is available in the driver for interpretation. This driver makes use of the kernel's in-core SPI support.

As a real (in-tree) example of this "SPI protocol driver" interfacing with a "SPI master controller driver", see `drivers/spi/spi_lm70llp.c` and its associated documentation.

The TMP121/TMP123 are very similar; main differences are 4 wire SPI interface (read only) and 13-bit temperature data (0.0625 degrees celsius resolution).

Thanks to

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