Kernel driver ltc2945

Supported chips:

- Linear Technology LTC2945

  Prefix: 'ltc2945'

  Addresses scanned: -

  Datasheet:

  https://www.analog.com/media/en/technical-documentation/data-sheets/2945fb.pdf

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Description

The LTC2945 is a rail-to-rail system monitor that measures current, voltage, and power consumption.

Usage Notes

This driver does not probe for LTC2945 devices, since there is no register which can be safely used to identify the chip. You will have to instantiate the devices explicitly.

Example: the following will load the driver for an LTC2945 at address 0x10 on I2C bus #1:

```
$ modprobe ltc2945
$ echo ltc2945 0x10 > /sys/bus/i2c/devices/i2c-1/new_device
```

Sysfs entries

Voltage readings provided by this driver are reported as obtained from the ADC registers. If a set of voltage divider resistors is installed, calculate the real voltage by multiplying the reported value with (R1+R2)/R2, where R1 is the value of the divider resistor against the measured voltage and R2 is the value of the divider resistor against Ground.

Current reading provided by this driver is reported as obtained from the ADC Current Sense register. The reported value assumes that a 1 mOhm sense resistor is installed. If a different sense resistor is installed, calculate the real current by dividing the reported value by the sense resistor value in mOhm.

in1_input	VIN voltage (mV). Voltage is measured either at SENSE+ or VDD pin depending on chip configuration.
in1_min	Undervoltage threshold
in1_max	Overvoltage threshold
in1_lowest	Lowest measured voltage
in1_highest	Highest measured voltage
in1_reset_history	Write 1 to reset in1 history
in1_min_alarm	Undervoltage alarm
in1_max_alarm	Overvoltage alarm
in2_input	ADIN voltage (mV)
in2_min	Undervoltage threshold
in2_max	Overvoltage threshold
in2_lowest	Lowest measured voltage
in2_highest	Highest measured voltage
in2_reset_history	Write 1 to reset in2 history
in2_min_alarm	Undervoltage alarm
in2_max_alarm	Overvoltage alarm
curr1_input	SENSE current (mA)
curr1_min	Undercurrent threshold
curr1_max	Overcurrent threshold
curr1_lowest	Lowest measured current
curr1_highest	Highest measured current
curr1_reset_history	Write 1 to reset curr1 history
curr1_min_alarm	Undercurrent alarm
curr1_max_alarm	Overcurrent alarm

power1_input	Power (in uW). Power is calculated based on SENSE+/VDD voltage or ADIN voltage depending on chip configuration.
power1_min	Low lower threshold
power1_max	High power threshold
power1_input_lowest	Historical minimum power use
power1_input_highest	Historical maximum power use
power1_reset_history	Write 1 to reset power1 history
power1_min_alarm	Low power alarm
power1_max_alarm	High power alarm