Kernel driver tps53679

Supported chips:

- Texas Instruments TPS53647

  Prefix: 'tps53647'

  Addresses scanned: -

  Datasheet: https://www.ti.com/lit/gpn/tps53647

- Texas Instruments TPS53667

  Prefix: 'tps53667'

  Addresses scanned: -

  Datasheet: https://www.ti.com/lit/gpn/TPS53667

- Texas Instruments TPS53676

  Prefix: 'tps53676'

  Addresses scanned: -

  Datasheet: https://www.ti.com/lit/gpn/TPS53676

- Texas Instruments TPS53679

  Prefix: 'tps53679'

  Addresses scanned: -

  Datasheet: https://www.ti.com/lit/gpn/TPS53679 (short version)

- Texas Instruments TPS53681

  Prefix: 'tps53681'

  Addresses scanned: -

  Datasheet: https://www.ti.com/lit/gpn/TPS53681

- Texas Instruments TPS53688

  Prefix: 'tps53688'

  Addresses scanned: -

  Datasheet: Available under NDA

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Description

Chips in this series are multi-phase step-down converters with one or two output channels and up to 8 phases per channel.

Usage Notes

This driver does not probe for PMBus devices. You will have to instantiate devices explicitly.

Example: the following commands will load the driver for an TPS53681 at address 0x60 on I2C bus #1:

```
# modprobe tps53679
# echo tps53681 0x60 > /sys/bus/i2c/devices/i2c-1/new_device
```

Sysfs attributes

in1_label	"vin"
in1_input	Measured input voltage.
in1_lcrit	Critical minimum input voltage TPS53679, TPS53681, TPS53688 only.
in1_lcrit_alarm	Input voltage critical low alarm. TPS53679, TPS53681, TPS53688 only.
in1_crit	Critical maximum input voltage.

in1_crit_alarm	Input voltage critical high alarm.
in[N]_label	"vout[1-2]" • TPS53647, TPS53667: N=2 • TPS53679, TPS53588: N=2,3
in[N]_input	Measured output voltage.
in[N]_lcrit	Critical minimum input voltage. TPS53679, TPS53681, TPS53688 only.
in[N]_lcrit_alarm	Critical minimum voltage alarm. TPS53679, TPS53681, TPS53688 only.
in[N]_alarm	Output voltage alarm. TPS53647, TPS53667 only.
in[N]_crit	Critical maximum output voltage. TPS53679, TPS53681, TPS53688 only.
in[N]_crit_alarm	Output voltage critical high alarm. TPS53679, TPS53681, TPS53688 only.
temp[N]_input	Measured temperature. • TPS53647, TPS53667: N=1 • TPS53679, TPS53681, TPS53588: N=1,2
temp[N]_max	Maximum temperature.
temp[N]_crit	Critical high temperature.
temp[N]_max_alarm	Temperature high alarm.
temp[N]_crit_alarm	Temperature critical high alarm.
power1_label	"pin".
power1_input	Measured input power.
power[N]_label	"pout[1-2]". • TPS53647, TPS53667: N=2 • TPS53676, TPS53679, TPS53681, TPS53588: N=2,3
power[N]_input	Measured output power.
curr1_label	"iin".
curr1_input	Measured input current.
curr1_max	Maximum input current.
curr1_max_alarm	Input current high alarm.
curr1_crit	Critical input current.
curr1_crit_alarm	Input current critical alarm.
curr[N]_label	"iout[1-2]" or "iout1.[0-5]". The first digit is the output channel, the second digit is the phase within the channel. Per-phase telemetry supported on TPS53676 and TPS53681 only. • TPS53647, TPS53667: N=2 • TPS53679, TPS53588: N=2,3 • TPS53676: N=2-8 • TPS53681: N=2-9
curr[N]_input	Measured output current.
curr[N]_max	Maximum output current.
curr[N]_crit	Critical high output current.
curr[N]_max_alarm	Output current high alarm.
curr[N]_crit_alarm	Output current critical high alarm. Limit and alarm attributes are only available for non-phase telemetry (iout1, iout2).