Kernel driver ina3221

Supported chips:

- Texas Instruments INA3221

  Prefix: 'ina3221'

  Addresses: I2C 0x40 - 0x43

  Datasheet: Publicly available at the Texas Instruments website

  https://www.ti.com/

Author: Andrew F. Davis <afd@ti.com>

Description

The Texas Instruments INA3221 monitors voltage, current, and power on the high side of up to three D.C. power supplies. The INA3221 monitors both shunt drop and supply voltage, with programmable conversion times and averaging, current and power are calculated host-side from these.

Sysfs entries

in[123]_label	Voltage channel labels
in[123]_enable	Voltage channel enable controls
in[123]_input	Bus voltage(mV) channels
curr[123]_input	Current(mA) measurement channels
shunt[123]_resistor	Shunt resistance(uOhm) channels
curr[123]_crit	Critical alert current(mA) setting, activates the corresponding alarm when the respective current is above this value
curr[123]_crit_alarm	Critical alert current limit exceeded
curr[123]_max	Warning alert current(mA) setting, activates the corresponding alarm when the respective current average is above this value.
curr[123]_max_alarm	Warning alert current limit exceeded
in[456]_input	Shunt voltage(uV) for channels 1, 2, and 3 respectively
in7_input	Sum of shunt voltage(uV) channels
in7_label	Channel label for sum of shunt voltage
curr4_input	Sum of current(mA) measurement channels, (only available when all channels use the same resistor value for their shunt resistors)
curr4_crit	Critical alert current(mA) setting for sum of current measurements, activates the corresponding alarm when the respective current is above this value (only effective when all channels use the same resistor value for their shunt resistors)
curr4_crit_alarm	Critical alert current limit exceeded for sum of current measurements.
samples	Number of samples using in the averaging mode. Supports the list of number of samples: 1, 4, 16, 64, 128, 256, 512, 1024
update_interval	Data conversion time in millisecond, following: update_interval = C x S x (BC + SC) • C: number of enabled channels • S: number of samples • BC: bus-voltage conversion time in millisecond • SC: shunt-voltage conversion time in millisecond Affects both Bus- and Shunt-voltage conversion time. Note that setting update_interval to 0ms sets both BC and SC to 140 us (minimum conversion time).