Kernel driver max197

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Supported chips:

- Maxim MAX197

  Prefix: 'max197'

  Datasheet: http://datasheets.maxim-ic.com/en/ds/MAX197.pdf
- Maxim MAX199

  Prefix: 'max199'

  Datasheet: http://datasheets.maxim-ic.com/en/ds/MAX199.pdf

Description

The A/D converters MAX197, and MAX199 are both 8-Channel, Multi-Range, 5V, 12-Bit DAS with 8+4 Bus Interface and Fault Protection.

The available ranges for the MAX197 are {0,-5V} to 5V, and {0,-10V} to 10V, while they are {0,-2V} to 2V, and {0,-4V} to 4V on the MAX199.

Platform data

The MAX197 platform data (defined in linux/platform_data/max197.h) should be filled with a pointer to a conversion function, defined like:

```
int convert(u8 ctrl);
```

ctrl is the control byte to write to start a new conversion. On success, the function must return the 12-bit raw value read from the chip, or a negative error code otherwise.

Control byte format:

Bit	Name	Description
7,6	PD1,PD0	Clock and Power-Down modes
5	ACQMOD	Internal or External Controlled Acquisition
4	RNG	Full-scale voltage magnitude at the input
3	BIP	Unipolar or Bipolar conversion mode
2,1,0	A2,A1,A0	Channel

Sysfs interface

in[0-7]_input	The conversion value for the corresponding channel. RO
in[0-7]_min	The lower limit (in mV) for the corresponding channel. For the MAX197, it will be adjusted to -10000, -5000, or 0. For the MAX199, it will be adjusted to -4000, -2000, or 0. RW
in[0-7]_max	The higher limit (in mV) for the corresponding channel. For the MAX197, it will be adjusted to 0, 5000, or 10000. For the MAX199, it will be adjusted to 0, 2000, or 4000. RW