

NAME

pcf8591 - driver for the PCF8591 8-bit A/D and D/A converter

SYNOPSIS

To compile this driver into the kernel, place the following lines in your kernel configuration file:

```
device pcf8591
device iicbus
```

Alternatively, to load the driver as a module at boot time, place the following line in loader.conf(5):

```
pcf8591_load="YES"
```

DESCRIPTION

The **pcf8591** driver supports reading four inputs and setting one output over I2C. The hardware supports configuring the input lines as:

- ⊕ four single-ended inputs
- ⊕ three differential inputs (one input line is shared between all three inputs)
- ⊕ two single-ended inputs and one differential input
- ⊕ two differential inputs.

The **pcf8591** driver reports data via sysctl(8) entries in the device's node in the sysctl(8) tree:

inputs.%d The input level of the corresponding input in steps between 0 and 255. Absolute voltage depends on an actual reference voltage.

On an FDT(4) based system the following properties must be set:

compatible Must be set to "nxp,pcf8591".

reg The I2C address of **pcf8591**. It should be in the range from 0x40 to 0x4f (7-bit).

The DTS part for a **pcf8591** device usually looks like:

```
/ {
```

```
...
pcf8591adc {
    compatible = "nxp,pcf8591";
    reg = <0x48>;
};
};
```

SEE ALSO

fdt(4), iicbus(4), sysctl(8)

HISTORY

The **pcf8591** driver and this manual page was written by Andriy Gapon <*avg@FreeBSD.org*>.

BUGS

The **pcf8591** driver does not support changing the input configuration. All input lines are configured as single-ended inputs.

The **pcf8591** driver does not support setting the output. It is always disabled (tri-state).