NAME

gpioled - GPIO LED generic device driver

SYNOPSIS

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

device gpio device gpioled

DESCRIPTION

The **gpioled** driver provides glue to attach a led(4) compatible device to a GPIO pin. Each LED in the system has a *name* which is used to export a device as */dev/led/<name>*. The GPIO pin can then be controlled by writing to this device as described in led(4).

On a device.hints(5) based system, like MIPS, these values are configurable for **gpioled**:

hint.gpioled.%d.at	The gpiobus you are attaching to. Normally assigned to gpiobus0.
hint.gpioled.%d.name	Arbitrary name of device in / <i>dev/led/</i> to create for led(4).
hint.gpioled.%d.pins	Which pin on the GPIO interface to map to this instance. Please note that this mask should only ever have one bit set (any other bits - i.e., pins - will be ignored).
hint.gpioled.%d.invert	If set to 1, the pin will be set to 0 to light the LED, and 1 to clear it.
hint.gpioled.%d.state	The initial state of the LED when the driver takes control over it. If set to 1 or 0, the LED will be on or off correspondingly. If set to -1, the LED will be kept in its original state.

On a FDT(4) based system, like ARM, the DTS part for a **gpioled** device usually looks like:

gpio: gpio {

gpio-controller; ... led0 {

> compatible = "gpioled"; gpios = <&gpio 16 2 0>; /* GPIO pin 16. */

```
name = "ok";

};

led1 {

compatible = "gpioled";

gpios = <&gpio 17 2 0>; /* GPIO pin 17. */

name = "user-led1";

};
```

Optionally, you can choose to combine all the LEDs under a single "gpio-leds" compatible node:

simplebus0 {

```
...
leds {
    compatible = "gpio-leds";
    led0 {
        gpios = <&gpio 16 2 0>;
        name = "ok"
    };
    led1 {
        gpios = <&gpio 17 2 0>;
        name = "user-led1"
    };
};
```

Both methods are equally supported and it is possible to have the LEDs defined with any sort of mix between the methods. The only restriction is that a GPIO pin cannot be mapped by two different (gpio)leds.

For more details about the gpios property, please consult /usr/src/sys/dts/bindings-gpio.txt.

The property *name* is the arbitrary name of the device in /*dev/led*/ to create for led(4).

SEE ALSO

};

fdt(4), gpio(4), gpioiic(4), led(4)

HISTORY

The **gpioled** manual page first appeared in FreeBSD 10.1.

AUTHORS

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