

Kernel driver i2c-ocores

Supported adapters:

- * OpenCores.org I2C controller by Richard Herveille (see datasheet link)
 Datasheet: <http://www.opencores.org/projects.cgi/web/i2c/overview>

Author: Peter Korsgaard <jacmet@sunsite.dk>

Description

i2c-ocores is an i2c bus driver for the OpenCores.org I2C controller IP core by Richard Herveille.

Usage

i2c-ocores uses the platform bus, so you need to provide a struct `platform_device` with the base address and interrupt number. The `dev.platform_data` of the device should also point to a struct `ocores_i2c_platform_data` (see `linux/i2c-ocores.h`) describing the distance between registers and the input clock speed. There is also a possibility to attach a list of `i2c_board_info` which the i2c-ocores driver will add to the bus upon creation.

E.G. something like:

```
static struct resource ocores_resources[] = {
    [0] = {
        .start = MYI2C_BASEADDR,
        .end   = MYI2C_BASEADDR + 8,
        .flags = IORESOURCE_MEM,
    },
    [1] = {
        .start = MYI2C_IRQ,
        .end   = MYI2C_IRQ,
        .flags = IORESOURCE_IRQ,
    },
};

/* optional board info */
struct i2c_board_info ocores_i2c_board_info[] = {
    {
        I2C_BOARD_INFO("tsc2003", 0x48),
        .platform_data = &tsc2003_platform_data,
        .irq = TSC_IRQ
    },
    {
        I2C_BOARD_INFO("adv7180", 0x42 >> 1),
        .irq = ADV_IRQ
    }
};

static struct ocores_i2c_platform_data myi2c_data = {
    .regstep = 2, /* two bytes between registers */
    .clock_khz = 50000, /* input clock of 50MHz */
};
```

```

                                i2c-ocores..txt
    .devices                    = ocores_i2c_board_info, /* optional table of devices */
    .num_devices                = ARRAY_SIZE(ocores_i2c_board_info), /* table size */
};

static struct platform_device myi2c = {
    .name                       = "ocores-i2c",
    .dev = {
        .platform_data         = &myi2c_data,
    },
    .num_resources               = ARRAY_SIZE(ocores_resources),
    .resource                    = ocores_resources,
};

```