

**NAME**

**superio**, **superio\_devid**, **superio\_dev\_disable**, **superio\_dev\_enable**, **superio\_dev\_enabled**, **superio\_find\_dev**, **superio\_get\_dma**, **superio\_get\_iobase**, **superio\_get\_irq**, **superio\_get\_ldn**, **superio\_get\_type**, **superio\_read**, **superio\_revid**, **superio\_vendor**, **superio\_write** - Super I/O bus interface

**SYNOPSIS**

```
#include <sys/bus.h>
```

```
#include <dev/superio/superio.h>
```

```
uint16_t
```

```
superio_devid(device_t dev);
```

```
void
```

```
superio_dev_disable(device_t dev, uint8_t mask);
```

```
void
```

```
superio_dev_enable(device_t dev, uint8_t mask);
```

```
bool
```

```
superio_dev_enabled(device_t dev, uint8_t mask);
```

```
device_t
```

```
superio_find_dev(device_t dev, superio_dev_type_t type, int ldn);
```

```
uint8_t
```

```
superio_get_dma(device_t dev);
```

```
uint16_t
```

```
superio_get_iobase(device_t dev);
```

```
uint8_t
```

```
superio_get_irq(device_t dev);
```

```
uint8_t
```

```
superio_get_ldn(device_t dev);
```

```
superio_dev_type_t
```

```
superio_get_type(device_t dev);
```

```
uint8_t
```

```
superio_read(device_t dev, uint8_t reg);
```

```
uint8_t
```

```
superio_revid(device_t dev);
```

```
superio_vendor_t
```

```
superio_vendor(device_t dev);
```

```
void
```

```
superio_write(device_t dev, uint8_t reg, uint8_t val);
```

## DESCRIPTION

The **superio** set of functions are used for managing Super I/O devices. The functions provide support for raw configuration access, locating devices, device information, and device configuration.

### The controller interface

The **superio\_vendor**() function is used to get a vendor of the Super I/O controller *dev*. Possible return values are SUPERIO\_VENDOR\_ITE and SUPERIO\_VENDOR\_NUVOTON.

The **superio\_devid**() function is used to get a device ID of the Super I/O controller *dev*.

The **superio\_revid**() function is used to get a revision ID of the Super I/O controller *dev*.

The **superio\_find\_dev**() function is used to find a device on the superio(4) bus, specified by *dev*, that has the requested type and logical device number. Either of those, but not both, can be a wildcard.

Supported types are SUPERIO\_DEV\_GPIO, SUPERIO\_DEV\_HWM, and SUPERIO\_DEV\_WDT. The wildcard value for *type* is SUPERIO\_DEV\_NONE. The wildcard value for *ldn* is -1.

### The device interface

The **superio\_read**() function is used to read data from the Super I/O configuration register of the device *dev*.

The **superio\_write**() function is used to write data to the Super I/O configuration register of the device *dev*.

The **superio\_dev\_enable**(), **superio\_dev\_disable**(), and **superio\_dev\_enabled**() functions are used to enable, disable, or check status of the device *dev*. The *mask* parameter selects sub-functions of a device that supports them. For devices that do not have sub-functions, *mask* should be set to 1.

### The accessor interface

The **superio\_get\_dma()** is used to get a DMA channel number configured for the device *dev*.

The **superio\_get\_iobase()** is used to get a base I/O port configured for the device *dev*. The device may expose additional or alternative configuration access via the I/O ports.

The **superio\_get\_irq()** is used to get an interrupt number configured for the device *dev*.

The **superio\_get\_ldn()** is used to get a Logical Device Number of the device *dev*.

The **superio\_get\_type()** is used to get a type of the device *dev*.

## SEE ALSO

superio(4), device(9), driver(9)

## AUTHORS

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