

**NAME**

**isl** - Intersil(TM) I2C ISL29018 sensor driver

**SYNOPSIS**

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

```
device isl  
device ig4  
device iicbus
```

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

```
isl_load="YES"  
ig4_load="YES"
```

On many Chromebook models this driver can be automatically configured with the help of the chromebook\_platform(4) driver. Alternatively, the **isl** driver can be manually configured in */boot/device.hints*:

```
hint.isl.0.at="iicbus0"  
hint.isl.0.addr="0x88"  
hint.isl.1.at="iicbus1"  
hint.isl.1.addr="0x88"
```

**DESCRIPTION**

The **isl** driver provides access to sensor data provided by the Intersil(TM) I2C ISL29018 Digital Ambient Light Sensor and Proximity Sensor with Interrupt Function. Functionality is basic and provided through the sysctl(8) interface.

On a system using device.hints(5), these values are configurable for **isl**:

*hint.isl.%d.at* target iicbus(4).

*hint.isl.%d.addr* **isl** i2c address on the iicbus(4).

**SYSCTL VARIABLES**

The following sysctl(8) variables are available:

*dev.isl.X.als* Current ALS (Ambient Light Sensor) readout.

*dev.isl.X.ir* Current IR (InfraRed) sensor readout.

*dev.isl.X.prox* Current proximity sensor readout.

*dev.isl.X.resolution* Current sensor resolution.

*dev.isl.X.range* Current sensor range.

## EXAMPLES

### Ambient light sensor read out

```
$ sysctl dev.isl.0.als  
dev.isl.0.als: 64
```

### Automatically adjust brightness

This requires the port *graphics/intel-backlight* and only works with laptops using a supported Intel(R) GPU.

```
$ pkg install intel-backlight  
$ sh /usr/local/share/examples/intel-backlight/isl_backlight.sh
```

## SEE ALSO

chromebook\_platform(4), ig4(4), iicbus(4)

## AUTHORS

The **isl** driver was written by Michael Gmelin <[freebsd@grem.de](mailto:freebsd@grem.de)>.

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## BUGS

The **isl** driver detects the device based from the I2C address. This might have unforeseen consequences if the initialization sequence is sent to an unknown device at that address.