NAME

   ds1307 - 64 x 8, serial, i2c real-time clock

SYNOPSIS

   device iic
   device iicbus
   device ds1307

DESCRIPTION

   The **ds1307** serial real-time clock (RTC) is a low-power, full binary-coded decimal (BCD)
   clock/calendar plus 56 bytes of NV SRAM.

   The **ds1307** has a built-in power-sense circuit that detects power failures and automatically switches to
   the backup supply. Timekeeping operation continues while the part operates from the backup supply.

   Access to **ds1307** settings is made with the sysctl(8) interface:

   dev.ds1307.0.%desc: Maxim DS1307 RTC
   dev.ds1307.0.%driver: ds1307
   dev.ds1307.0.%location: addr=0xd0
   dev.ds1307.0.%pnpinfo: name=rtc compat=maxim,ds1307
   dev.ds1307.0.%parent: iicbus1
   dev.ds1307.0.sqwe: 1
   dev.ds1307.0.sqw_freq: 32768
   dev.ds1307.0.sqw_out: 0

   dev.ds1307.%d.sqwe   If set to 1, the SQW pin drives a square-wave of *dev.ds1307.%d.sqw_freq*
                              frequency. If set to 0, the output level of SQW pin is controlled by
                              dev.ds1307.%d.sqw_out.

   dev.ds1307.%d.sqw_freq   Select the frequency of the SQW pin when the square-wave output is enabled
                              on *dev.ds1307.%d.sqwe*. It can be set to 1, 4096, 8192 and 32768.

   dev.ds1307.%d.sqw_out   Set the output level of the SQW pin when *dev.ds1307.%d.sqwe* is set to 0.

   Please check the **ds1307** datasheet for more details.

   On a device.hints(5) based system, such as MIPS, these values are configurable for **ds1307**:

   hint.ds1307.%d.at   The iicbus(4) that the **ds1307** is connected to.

hint.ds1307.%d.addr The i2c address of **ds1307**.

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

compatible Must always be set to "dallas,ds1307" or "maxim,ds1307".

reg   The i2c address of **ds1307**. The default address for **ds1307** is 0xd0.

SEE ALSO
fdt(4), iic(4), iicbus(4), sysctl(8)

HISTORY
The **ds1307** driver first appeared in FreeBSD 11.0.

AUTHORS
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