

PC164 Real Time Clock (RTC)

- Base address for accessing the time is 0x85.8000.0E00 (*page B-4 of the PC164 TRM*)
- To access the various time and alarm registers first write the register number to the base address, the value of that register can then be read from 0x85.8000.0E20. (*NB. All the registers return a single byte value BUT must be read using a 32 bit read cycle*)
- The return value of the register is in the second byte of the 32 bit word read from address 0x85.8000.0E20, i.e. if the data value read is 0xFFFF260D then the register value is 0x26.
- The table of registers is:

| Number | Type | Name |
|--------|------|--------------------|
| 0 | R/W | Seconds |
| 1 | R/W | Seconds (Alarm) |
| 2 | R/W | Minutes |
| 3 | R/W | Minutes (Alarm) |
| 4 | R/W | Hours |
| 5 | R/W | Hours (Alarm) |
| 6 | R/W | Day of Week |
| 7 | R/W | Day of Month |
| 8 | R/W | Month |
| 9 | R/W | Year |
| A | R/W | |
| B | R/W | (Bit 0: Read only) |
| C | R | |
| D | R | |
| E-FF | R/W | General purpose |

- Periodic interrupt rate is set using the first 4 bits of register A i.e. the first of the two hex

digits. The lower the number the faster the rate. 0xf corresponds to 2Hz and this rate doubles for each decrement.