Real Time Clock

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Real Time Clock

- The setup displays real time clock in 24 hour format
- Precision of clock can be extended from minutes to seconds upto milli and microseconds

How It Works

- FPGA board is connected to arduino for communication
- Second, Minute and Hour are initialized to zero
- Arduino sends real time values to FPGA
- RTC starts ticking after receiving values from arduino

How It Works

- After every 60 seconds, a minute is incremented and second is reset to zero
- Similar is done with minute and hour
- eg. If 32 sec is to be displayed,
  Values are calculated as $(32/10) = 3$ and $(32\text{mod}10) = 2$
- If system is reset, timer starts from zero.
- Output is displayed on SSD

Real Time Clock

- This can be used as digital Clock
- Precision can modified using internal clock frequency
- It can be modified to alarm clock, stopwatch and timer