

# Digital clock on DE1-SoC FPGA board

Cristinel Ababei  
Dept. of ECE, Marquette University

## 1. Overview

The objective of this project is to design a simple clock on the DE1-SoC board. The clock shows time as hours, minutes, and seconds using the seven segment LED displays on the board.

## 2. Description

The block diagram is shown in Fig. 1.

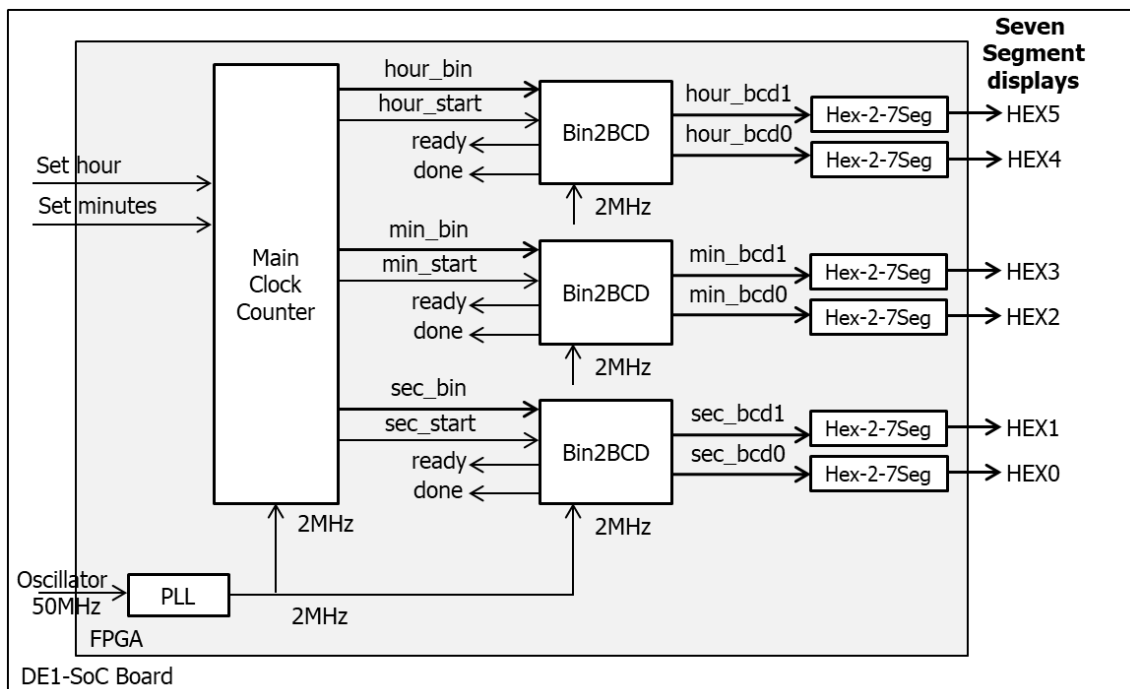


Figure 1: Block diagram of the digital clock.

The algorithmic state machine with datapath (ASMD) of the clock-counter is shown in Fig. 2.

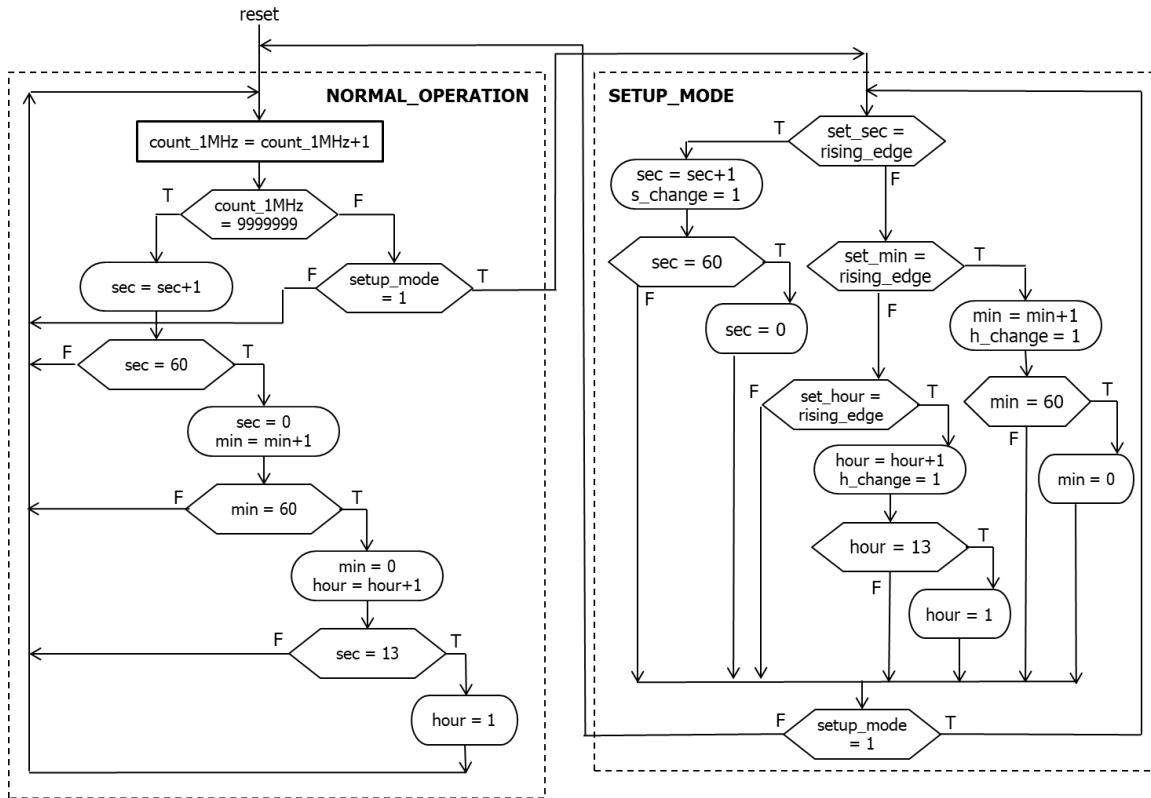


Figure 2: ASMD of the clock design.