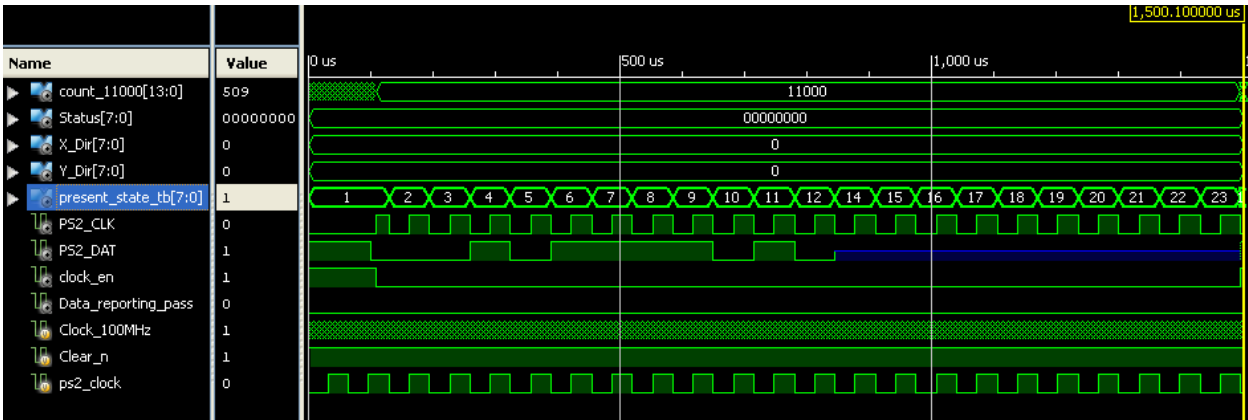
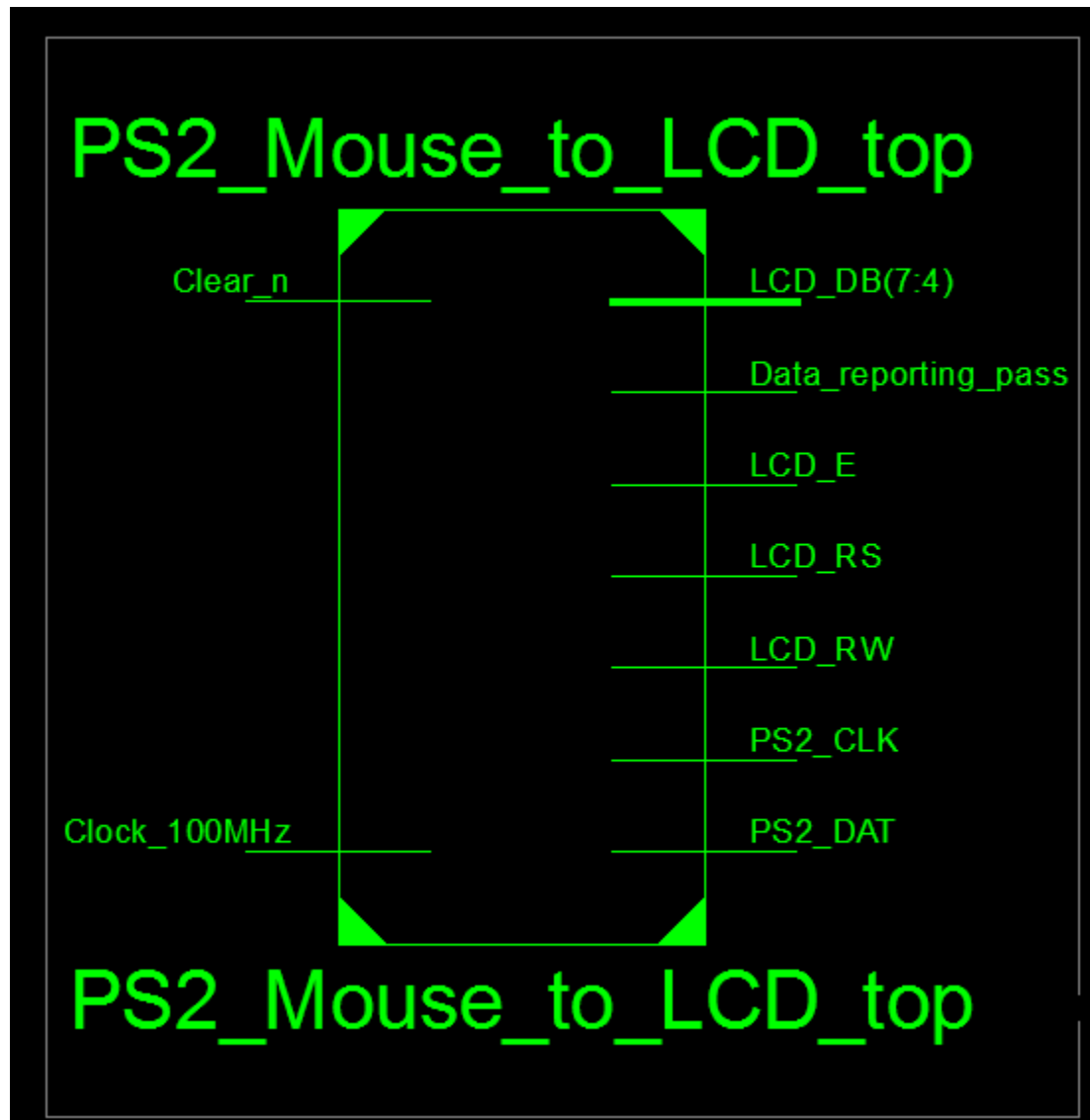
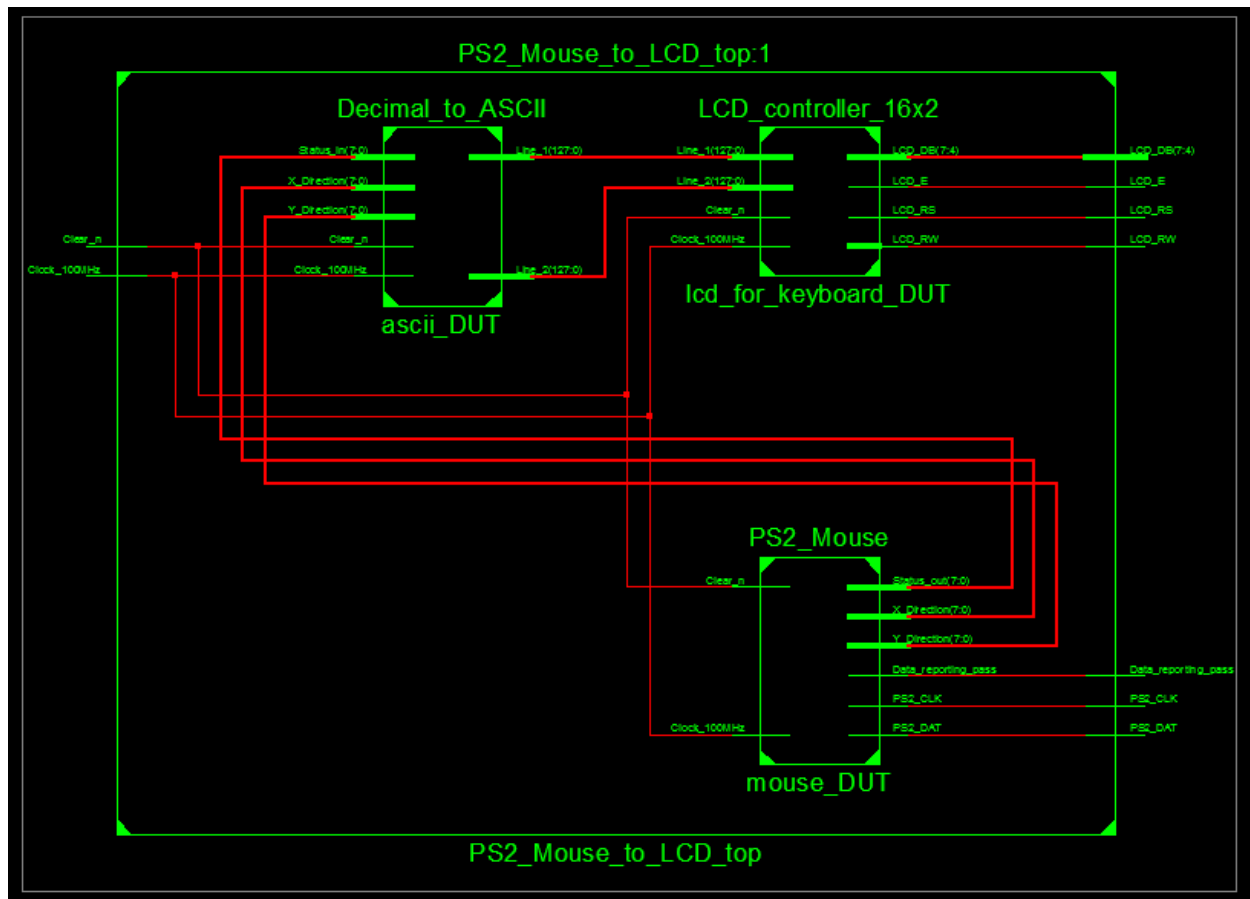


# 1. Simulation



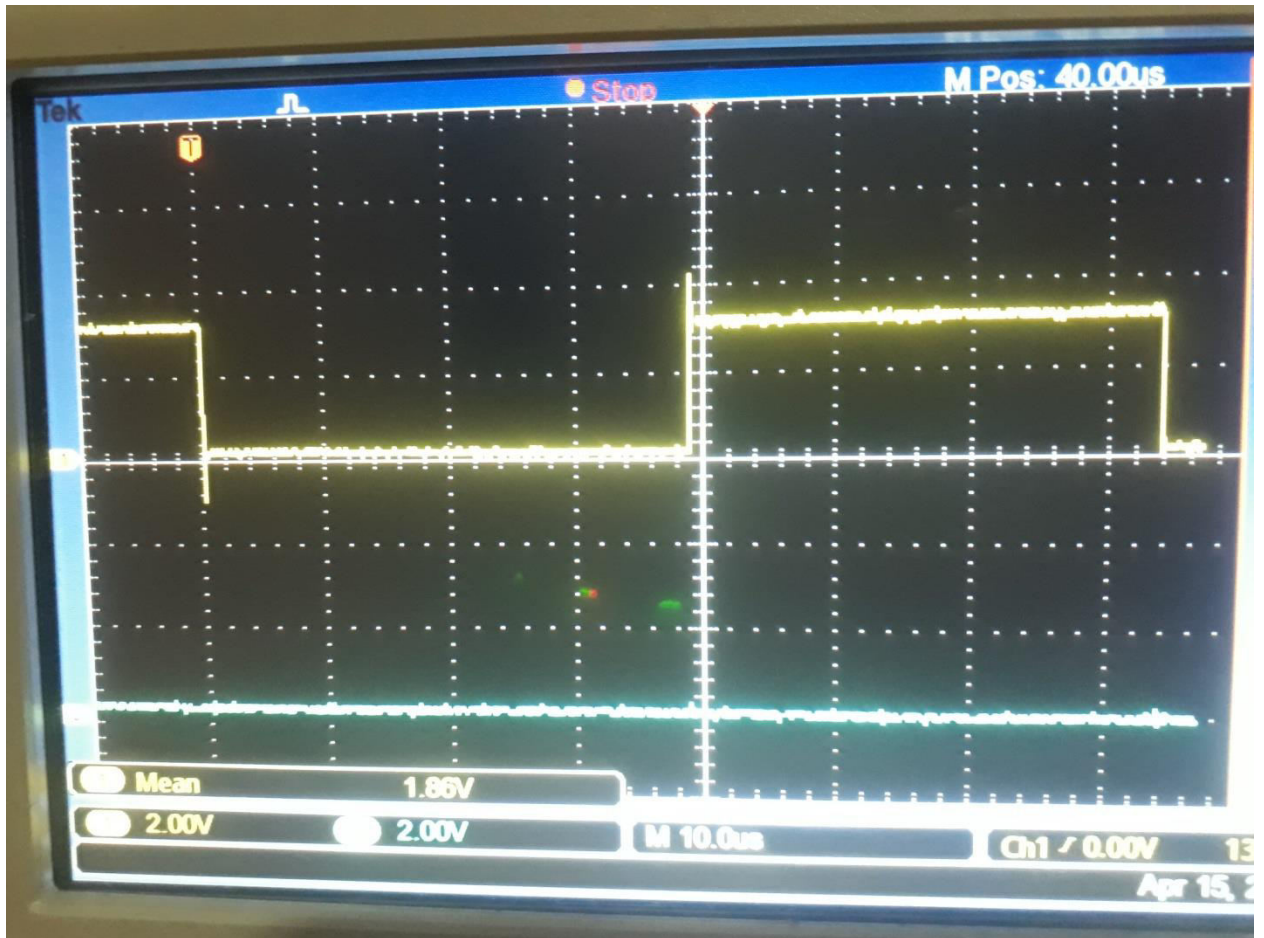
## 2. Synthesis



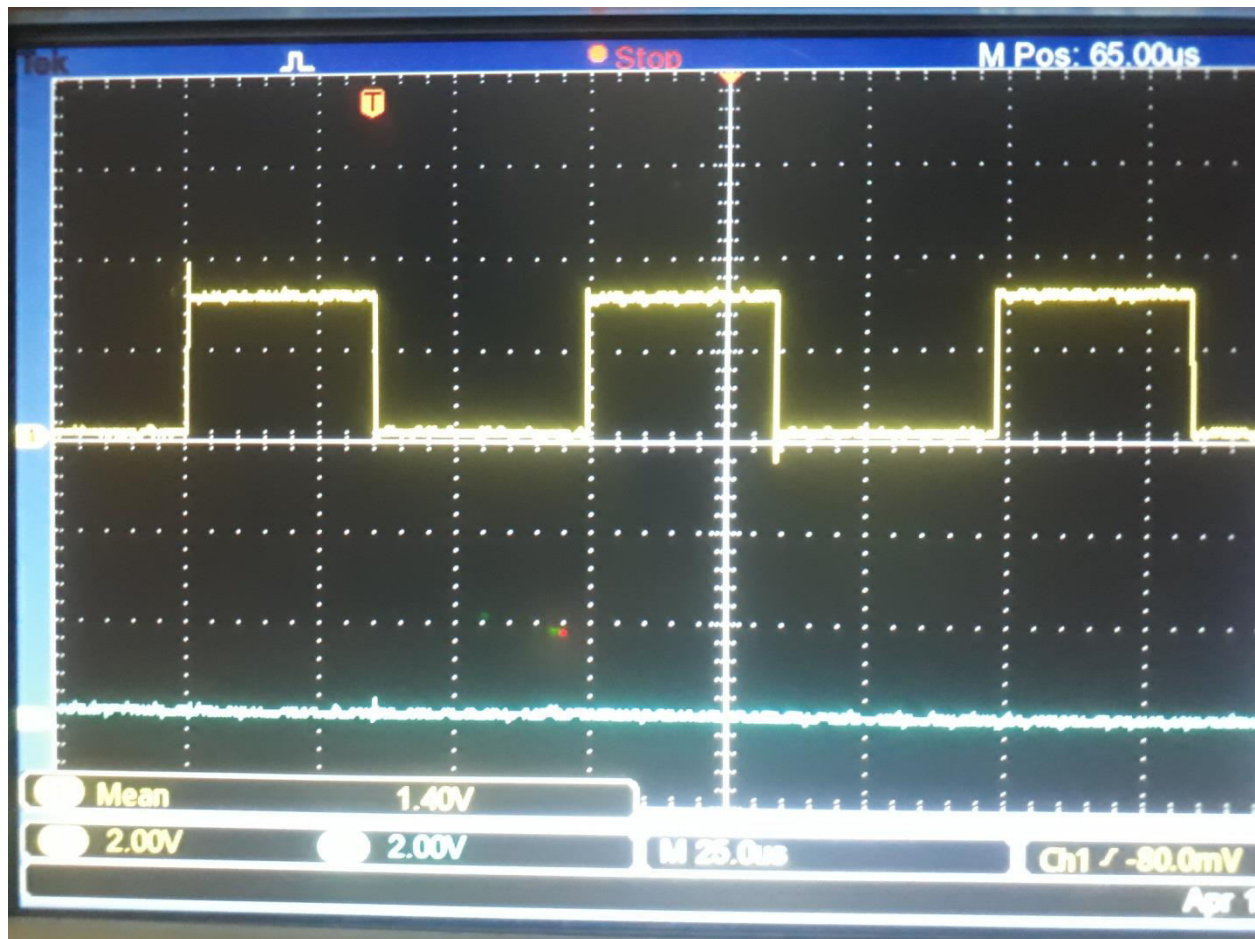


### 3. Implementation

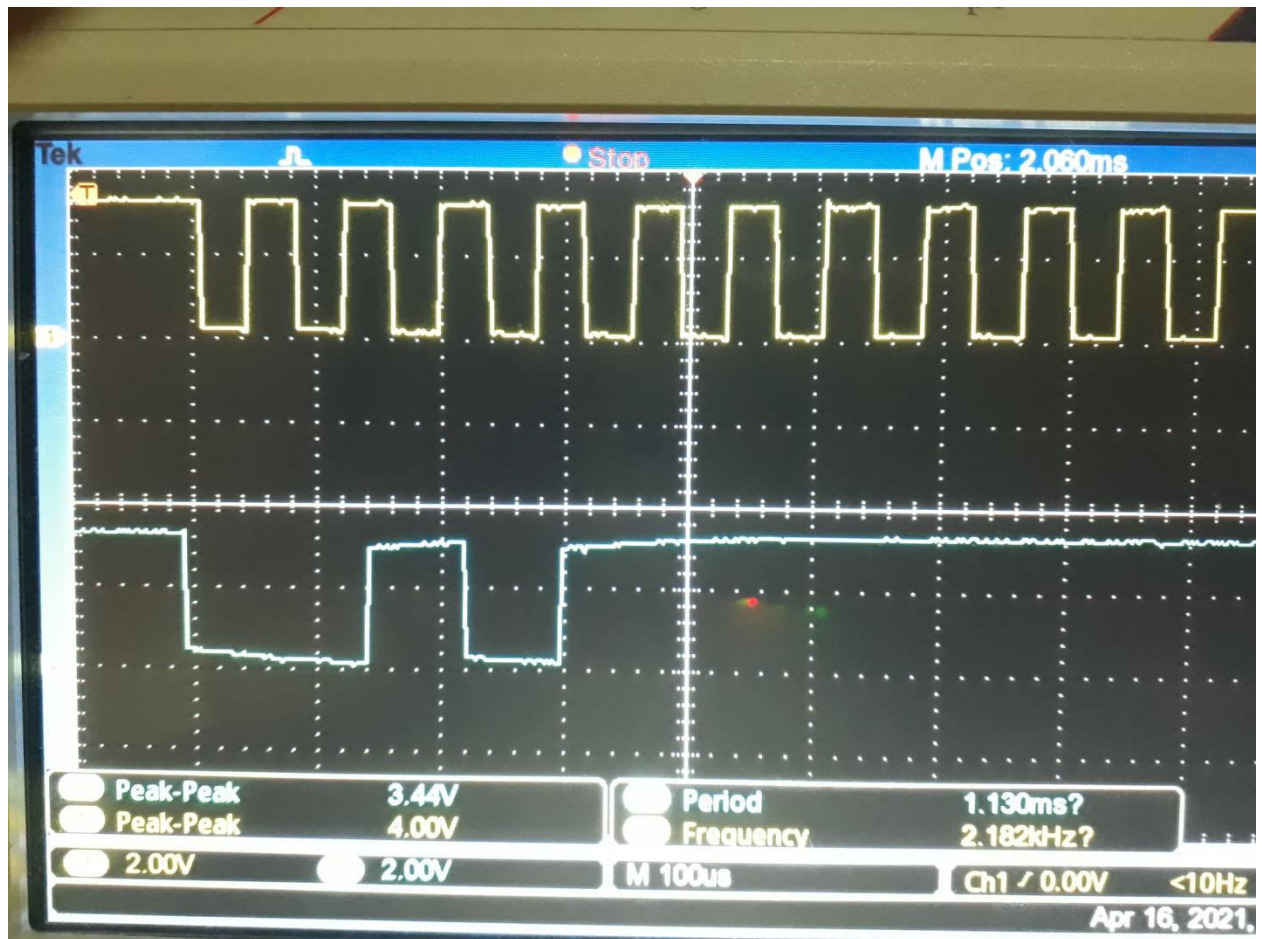
#### 3.1. PS2\_Mouse Clock One cycle



### 3.2. PS2\_Mouse Clock

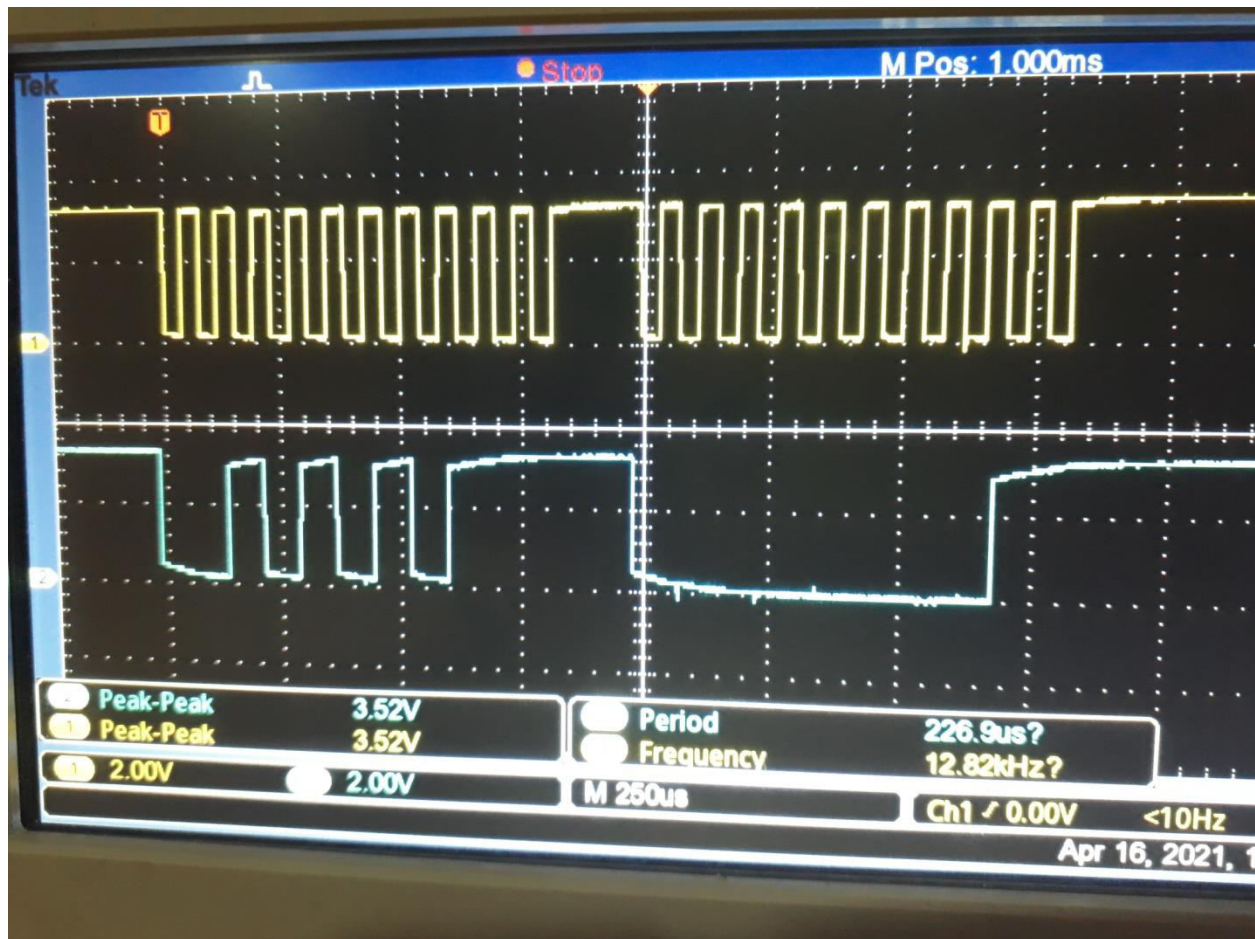


### 3.3. 1. Reset's Acknowledge

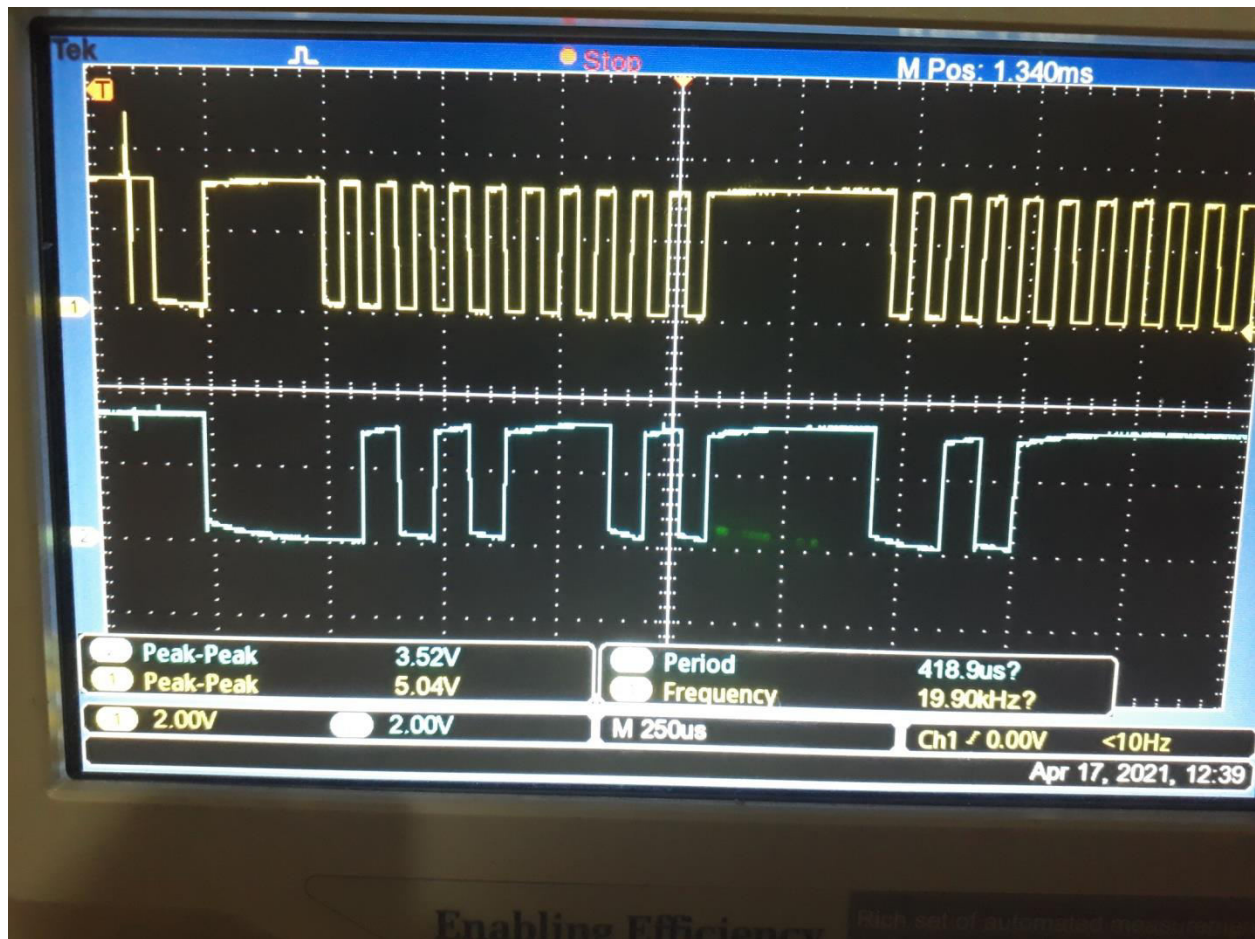




### 3.3.2. Reset's BAT and Device ID

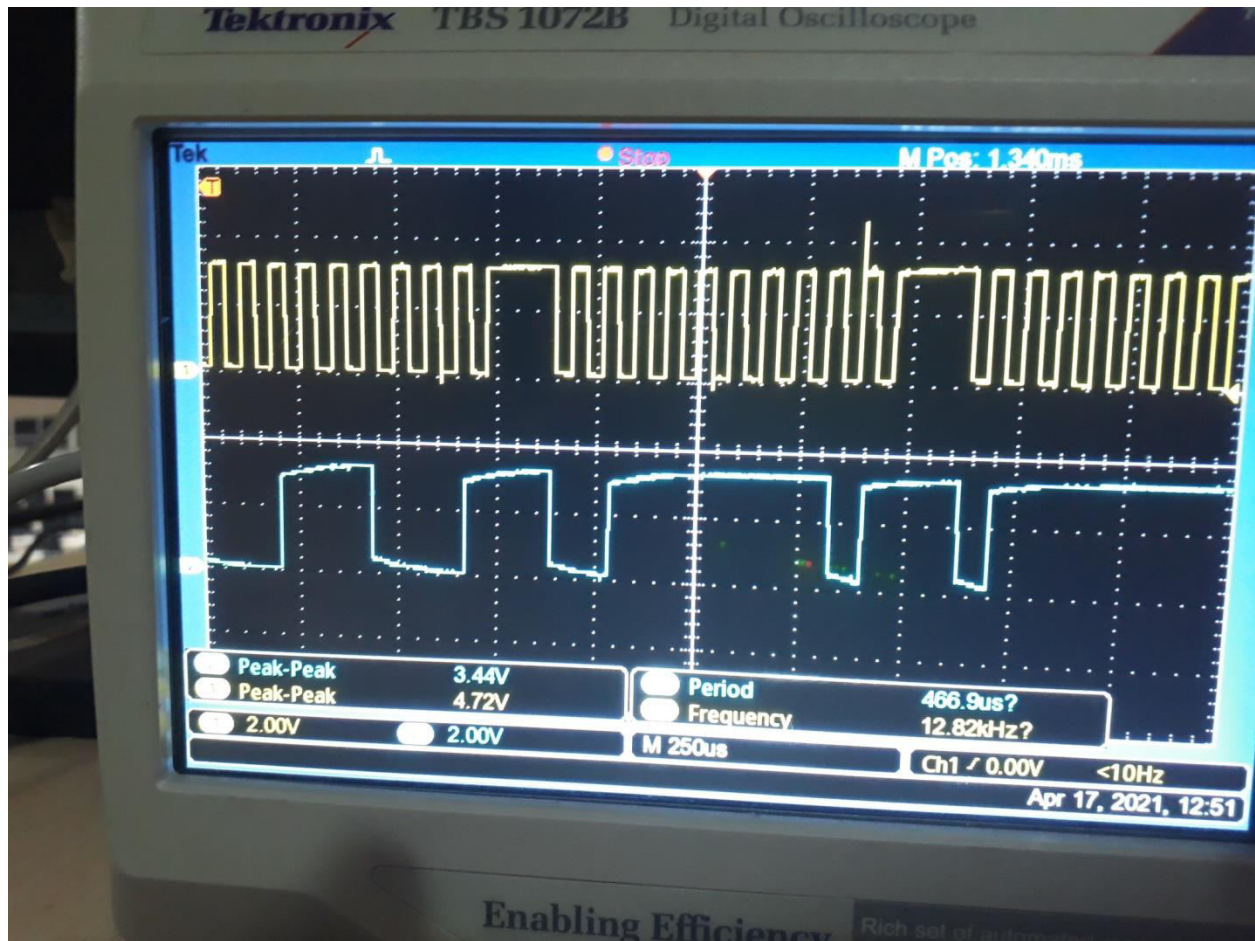


### 3.4. Stream mode's Acknowledge

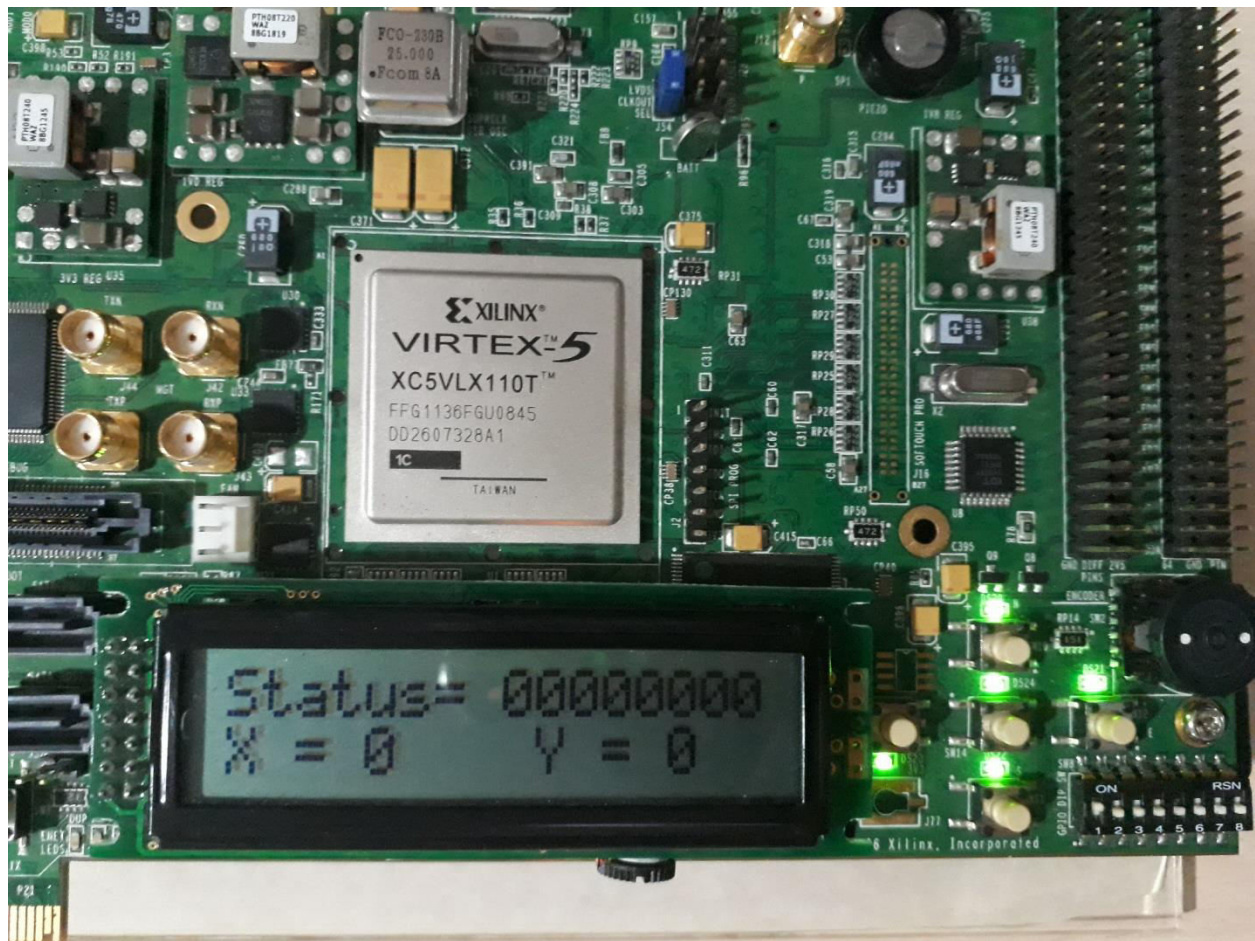




### 3.5. Data reporting



## 4.1. Mouse not moving and No button pressed



## 4.2. Left click

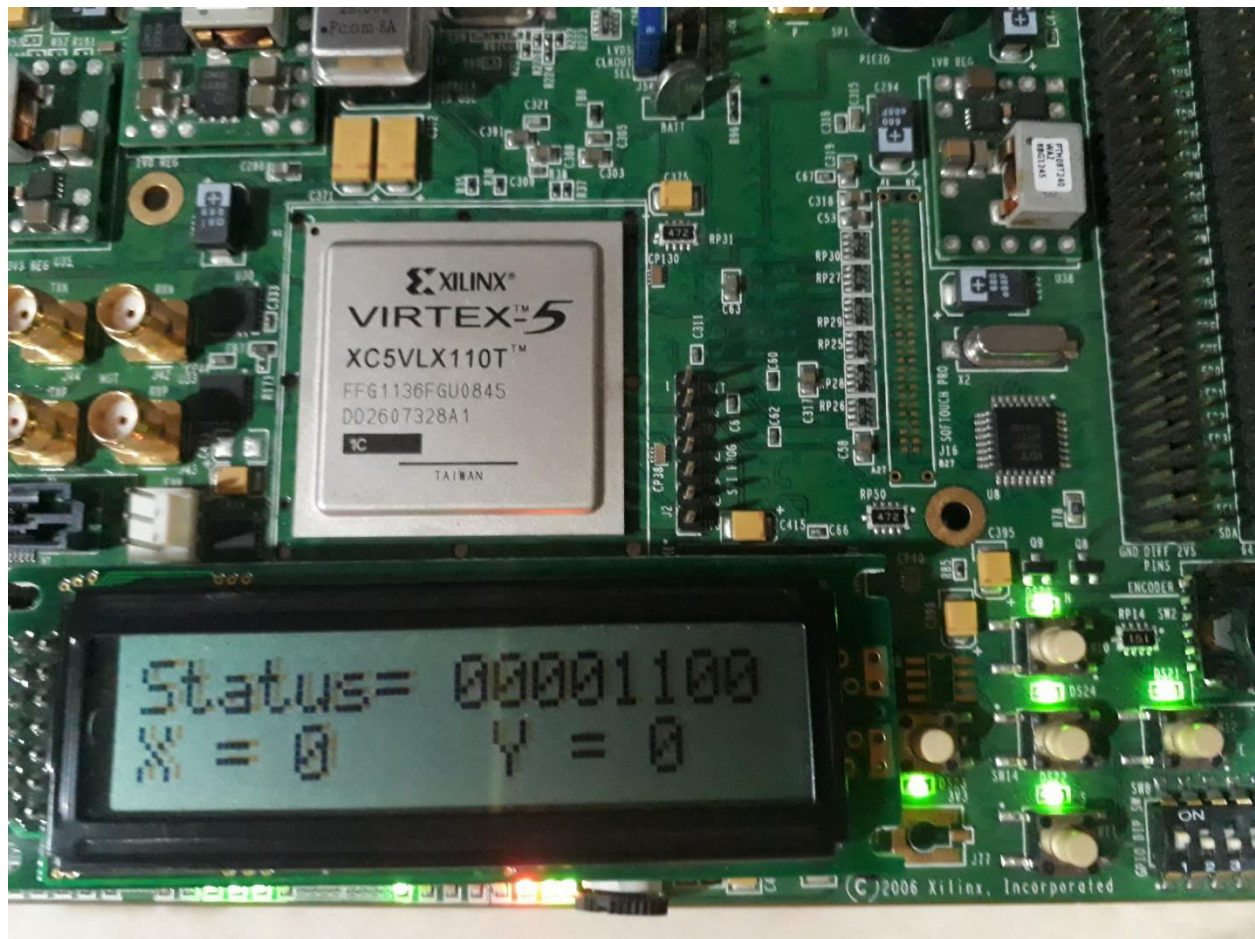




### 4.3. Right click



#### 4.4. Mouse wheel pressed



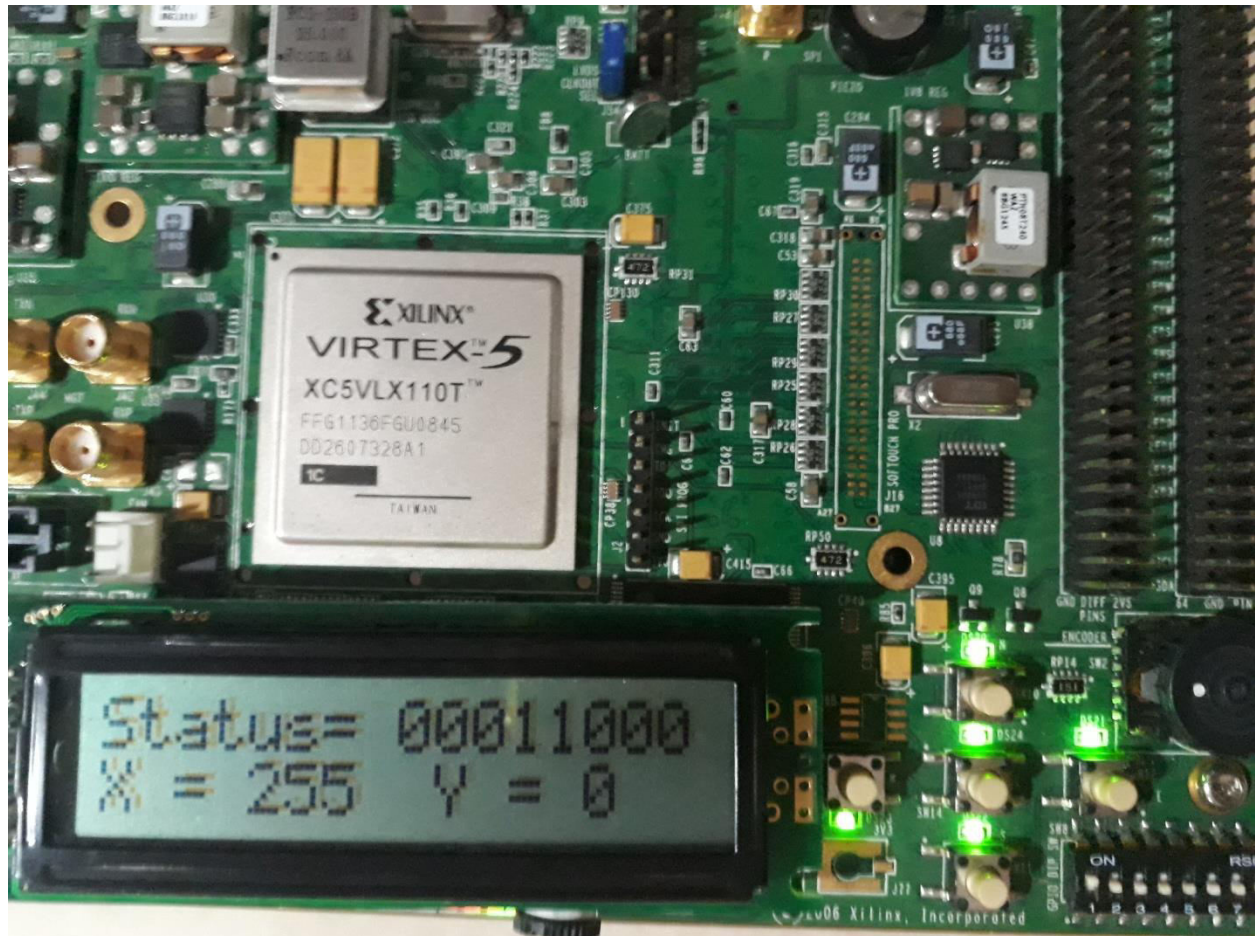


#### 4.5. Mouse moving from Left to Right (Positive X-direction) = XS Low

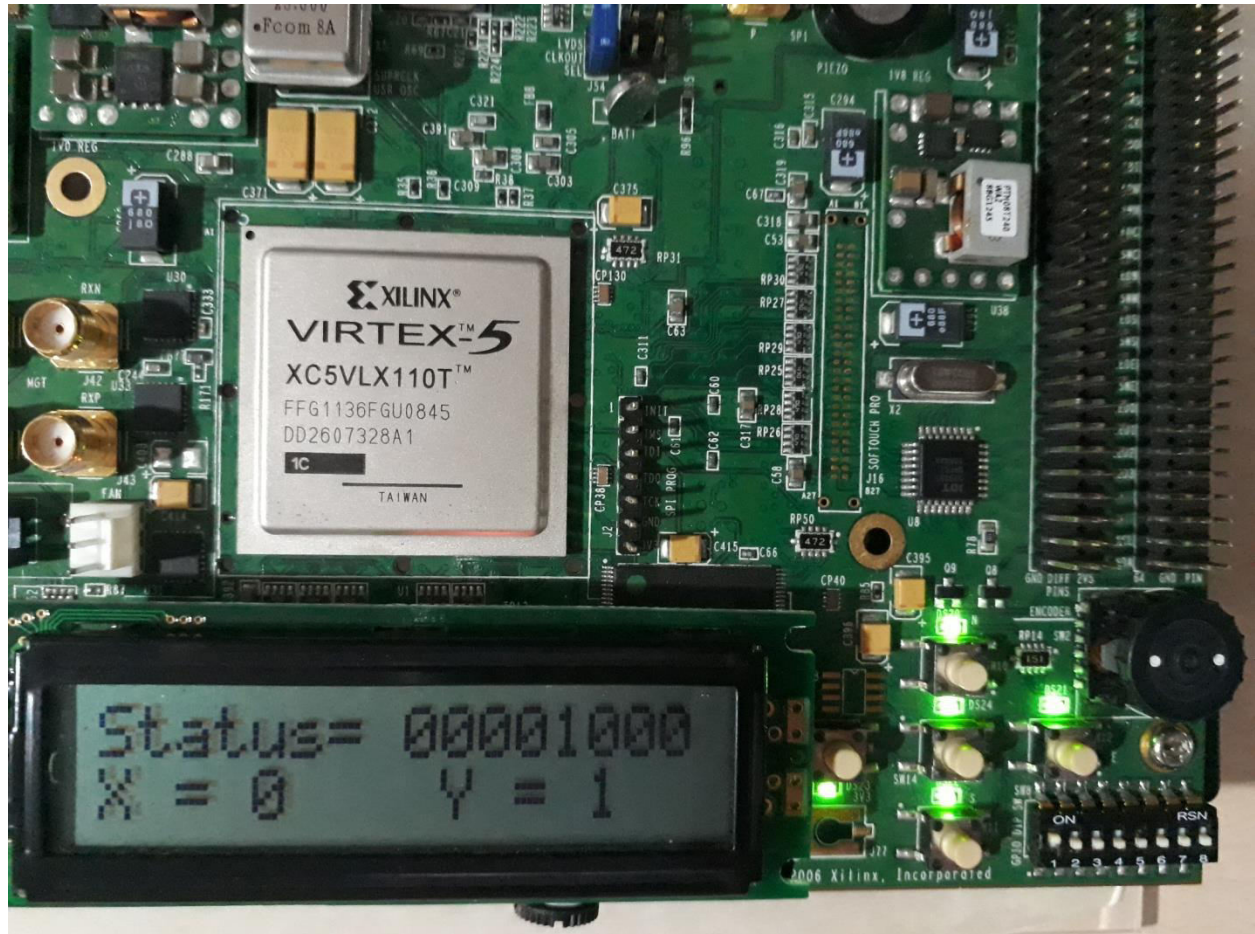




#### 4.6. Mouse moving from Right to Left (Negative X-direction) = XS High



## 4.7. Mouse moving from Bottom to Top (Positive Y-direction) = YS Low





#### 4.8. Mouse moving from Top to Bottom (Negative Y-direction) = YS High



#### 4.9. Mouse moving in positive X and Y direction (North East direction) = XS and YS low





#### 4.10. Mouse moving in negative X and Y direction (South West direction) = XS and YS high

