

# VGAmouse Application

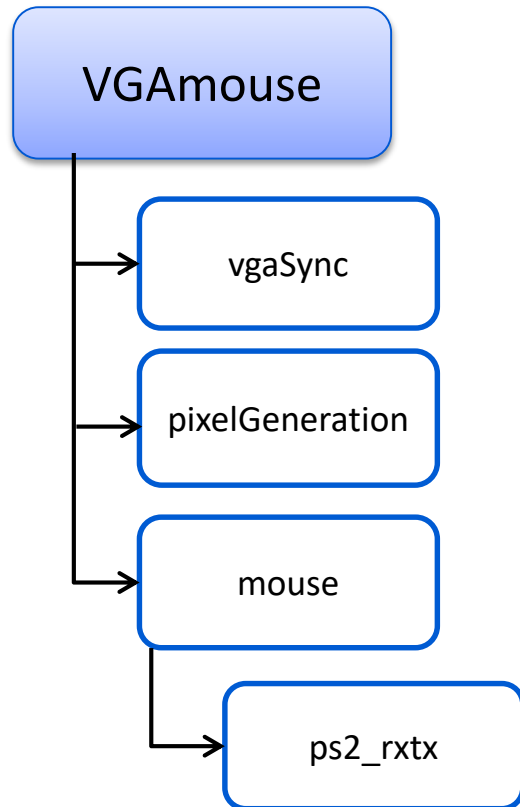
# VGAmouse

## Design Description

- It is an example of PS2 mouse application.
- Modify the previous code so that the pointer doesn't move outside of the screen.

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## Hierarchy of VGAmouse



Top module of the design and it only contains instantiation of the other modules. **You will use existing code for this module.**

This module is synchronization circuit from the course book.

This module is for specifying pixels' color. **You will use existing code for this module.**

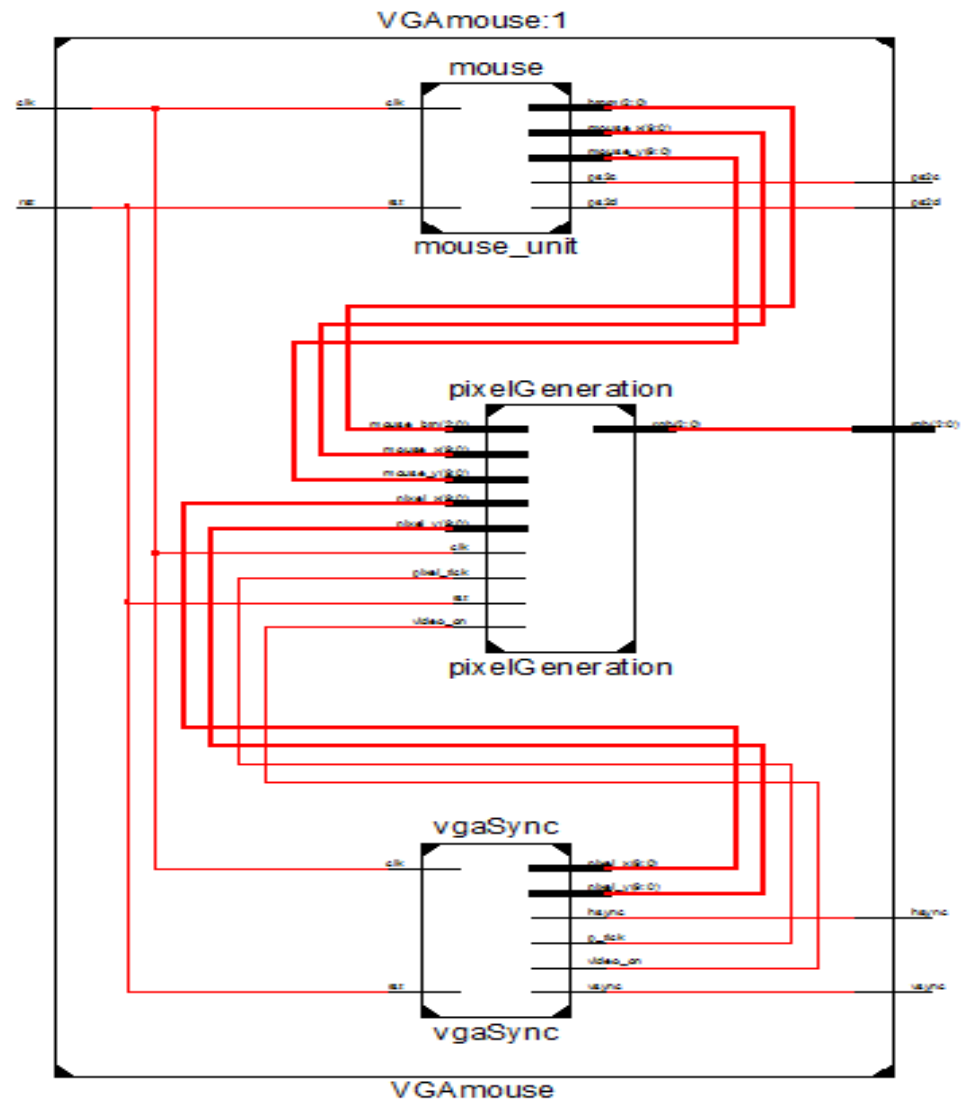
**You will modify this module to limit mouse pointer horizontally and vertically on the screen.**

This module is receiver and transmitter circuit of PS2 protocol from the course book. **You will use existing code for this module.**

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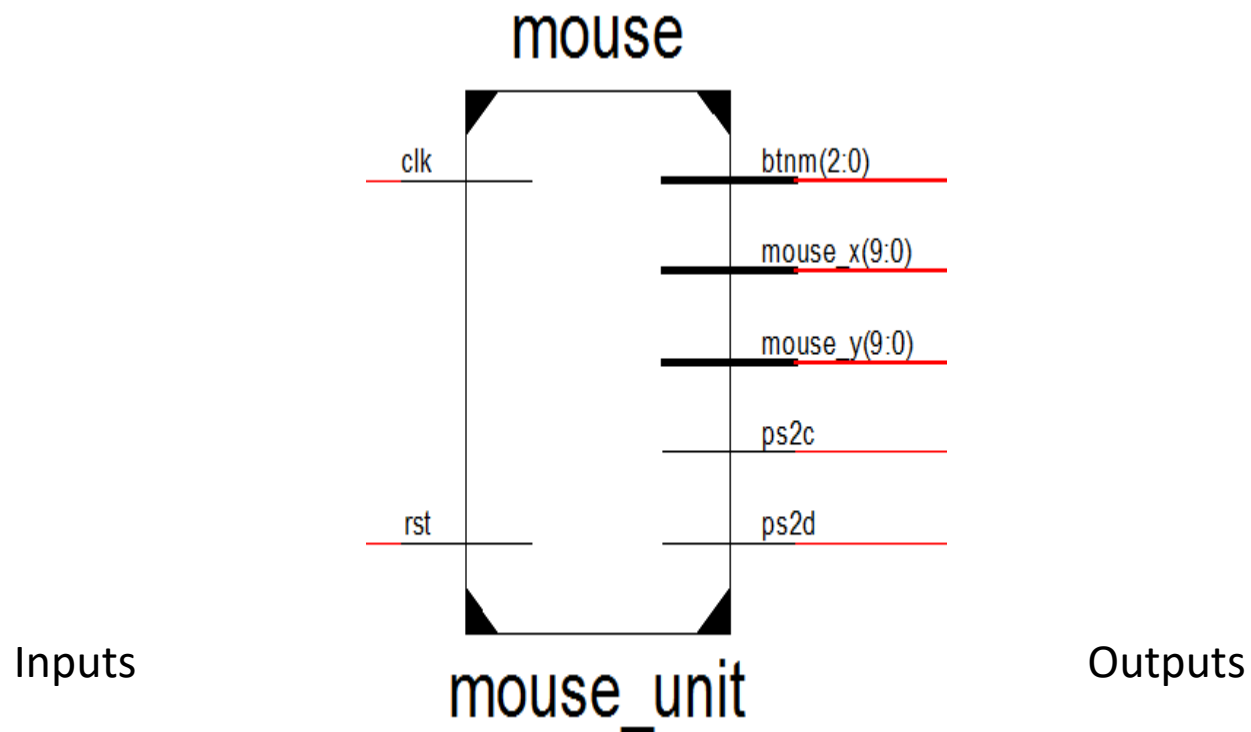
## Block Diagram

- Inside of the top module



# VGAmouse

## Inputs and Outputs of mouse



# VGAmouse

## Design behavior

- Inside of the mouse module there are *xm* and *ym* signals that show us the variation of the mouse position on x and y axis respectively.
- You need to modify update circuits of *mouse\_x* and *mouse\_y* signals while using *xm* and *ym* signals.
- This signals (*mouse\_x* and *mouse\_y*) are the counters for mouse position.