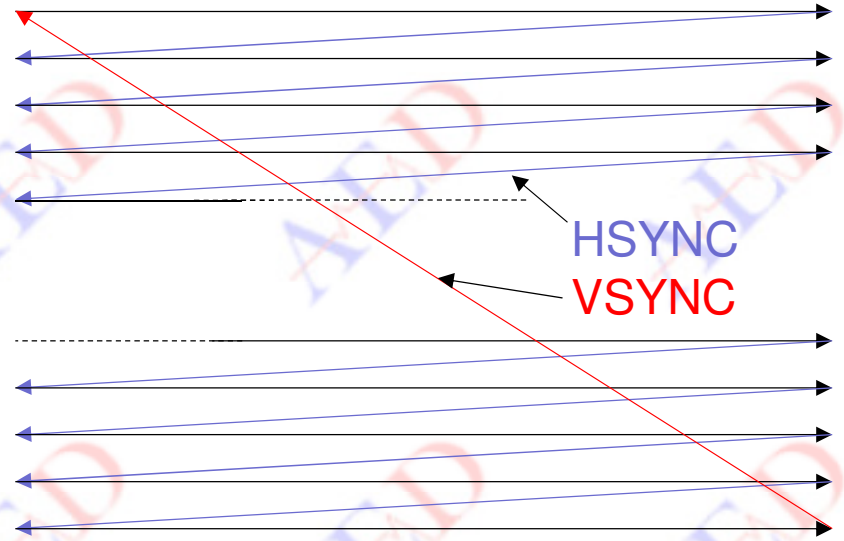
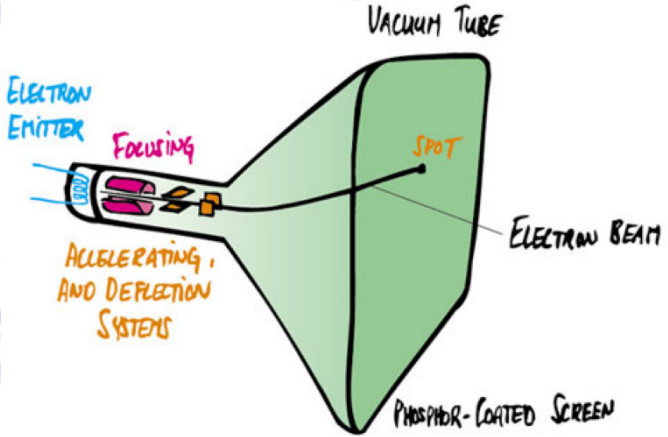


# VGA Driver

# Image Scan



2 synchronisation signals:  
**HSYNC** : Horizontal Synchro  
**VSYNC** : Vertical Synchro

## HSYNC

Go to the beginning of the next line

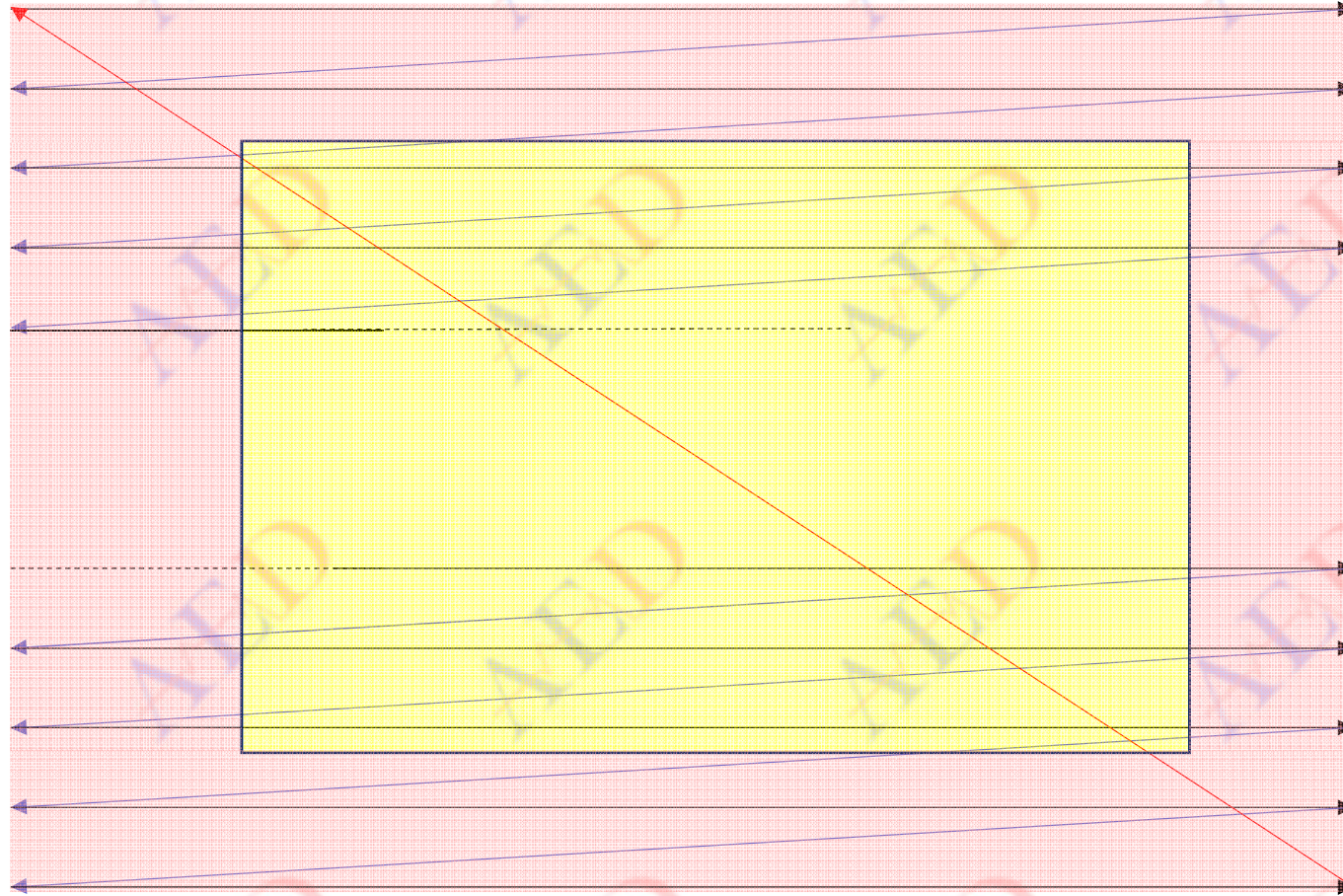



## VSYNC


Go to the beginning of the screen



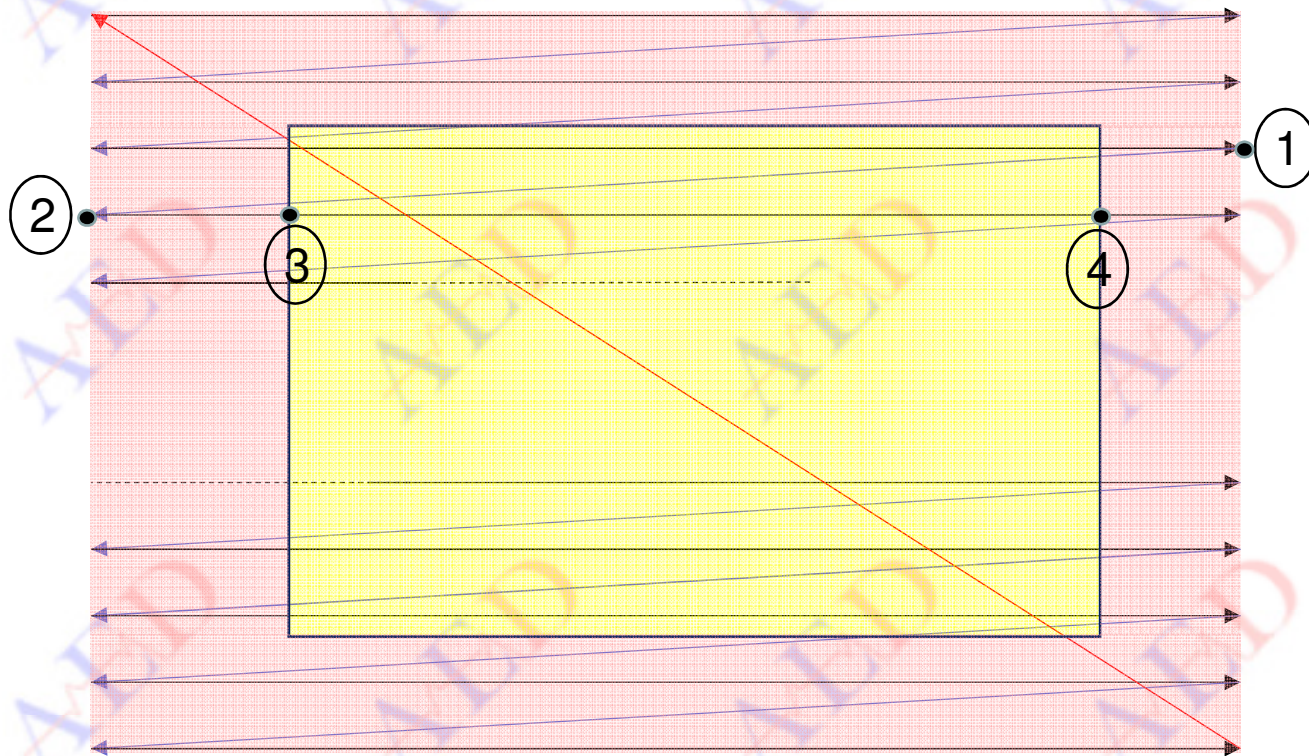
# Blank



 Unstable electron beam area :  
Don't display ( $r=g=b=0$  or  $\text{blank}=1$ )

 stable electron beam area : display  
area ( $\text{blank}=0$ )

# Hsync & Blank



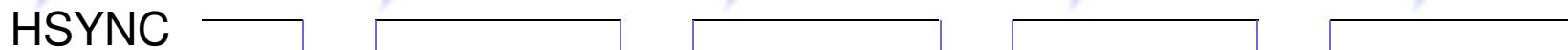
Number of clock cycles at 25MHz:

1→2 : 96

2→3 : 48

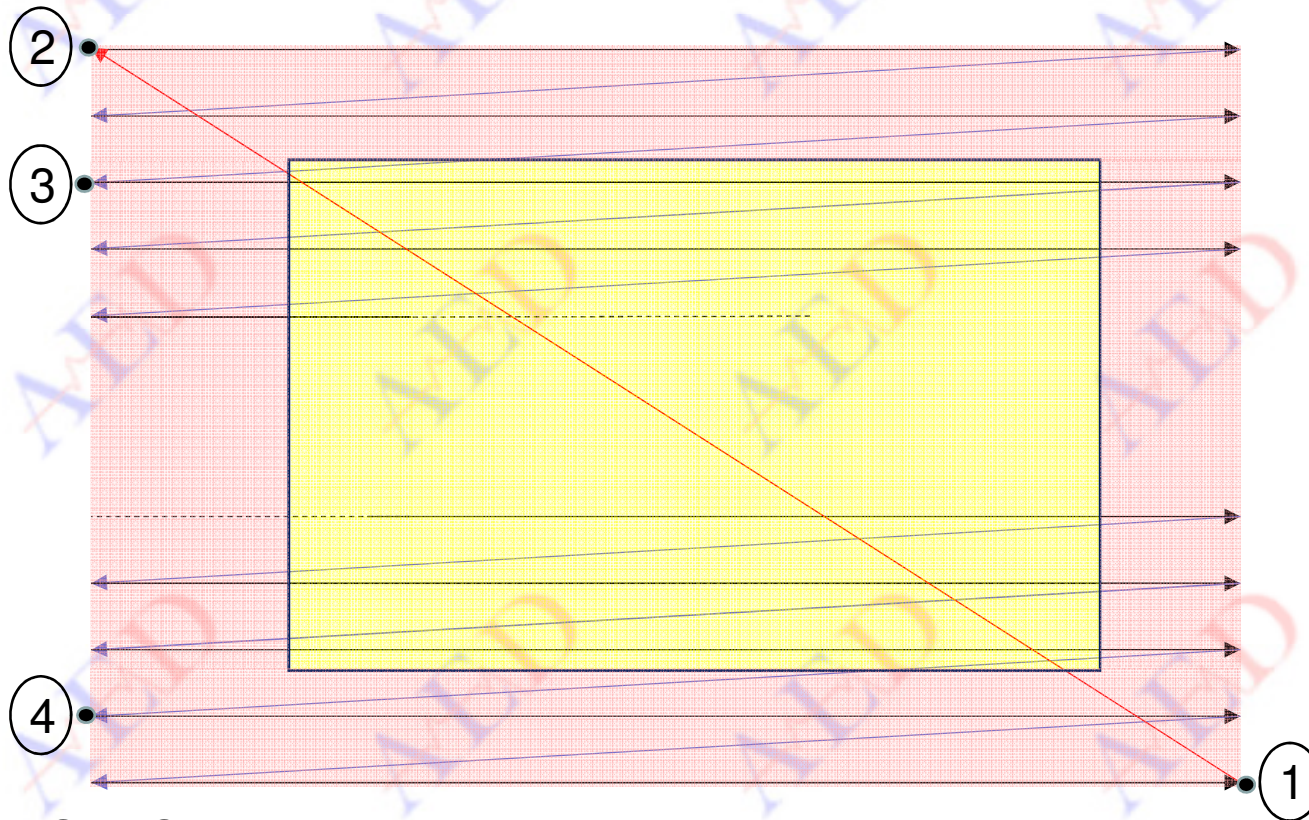
3→4 : 640

4→1 : 16



Blank=1 or  
r=g=b=0

# Vsync & Blank



Number of line:

1→2 : 2

2→3 : 29

3→4 : 480

4→1 : 10

VSYNC

Blank

1

2

3

4

1

Blank=1 or  
r=g=b=0

# VGA Frame features

Clock 25MHz

