

# VGA State Machine

Wednesday, October 30, 2024 1:25 PM

<u>Current State</u>	<u>Input</u>	<u>Next State</u>	<u>Output</u>
A	Pixel Count != 0	A	Pixel Count--
A	Pixel Count == 0	B	16 pixels, Pixel Count = 96
B	Pixel Count != 0	B	Pixel Count--
B	Pixel Count == 0	C	96 Pixels, Pixel Count = 48
C	Pixel Count != 0	C	Pixel Count --
C	Pixel Count == 0	D	48 Pixels, Pixel Count = 640
D	Pixel Count != 0	D	Pixel Count--
D	Pixel Count == 0 && Line Count != 0	A	640 Pixels, Line count++, Pixel Count = 16
D	Pixel Count == 0 && Line Count == 0	A	640 Pixels, Line count--, Pixel Count = 16 Line Count = 525
Any State	Key(0) == '0'	Clear	Reset
Clear	Key(0) == '0'	Clear	No Output
Clear	No input	A	Flag Count = 0
Any State	Key(1) == '0'	Next	Flag Count++
Next	Key(1) == '0'	Next	No output
Next	No input	A	No output