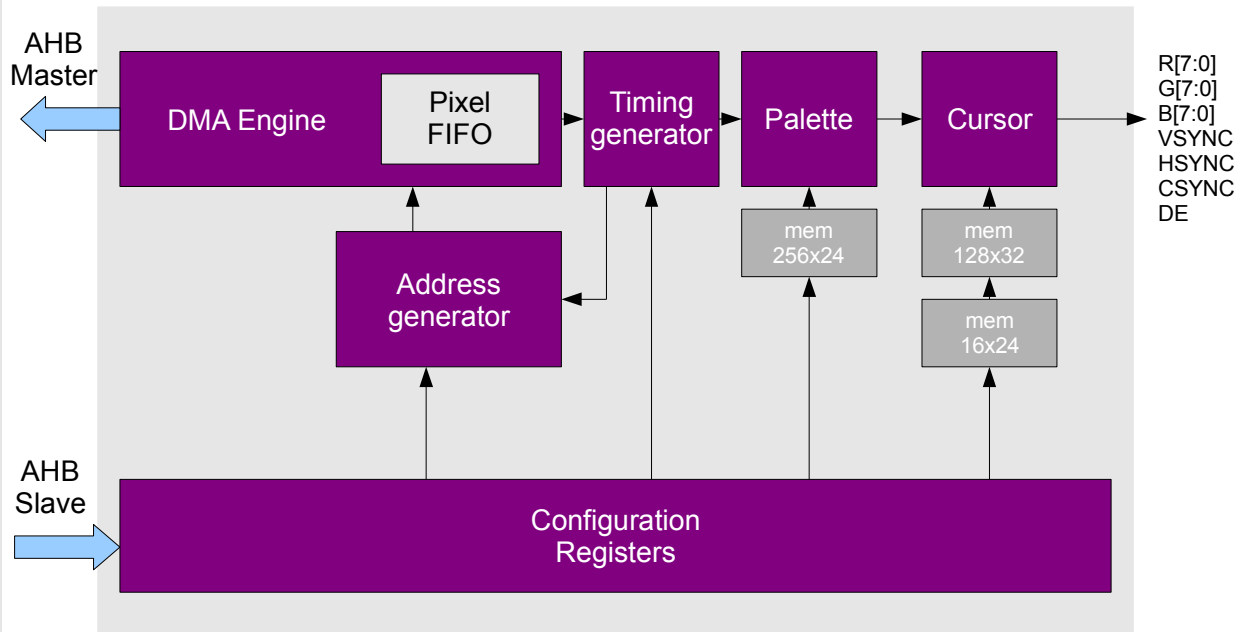


VGA LCD Controller

The VGA LCD controller is an AMBA AHB module that can drive a VGA or LCD screen. It can be easily programmed with X11 Modeline timing to support any resolution as long as timing can be met in target technology. 24, 16 and 8 bit colour modes are supported as well as arbitrary number of hardware overlay cursors/sprites



- AMBA AHB Master 32-bit DMA for pixel fetching
- AMBA AHB Slave Register File
- Configurable Pixel FIFO (128x32/256x32/512x32)
- Supports any resolution up to 32768x32768 (including 640x480, 800x600, 1024x768)
- 24-bit colour (8R, 8G, 8B)
- 16-bit colour (5R, 6G, 5B)
- 8-bit grayscale
- 8-bit palette (optional, requires a 256x24 memory)
- Optional fixed cursor
- Optional Programmable Cursors (Sprites 32x32) (requires a 128x32 and 16x24 memories)
- Supports Alternating Base Addresses for each frame.
- Programmable HSYNC, VSYNC, DE Polarity
- Generates HSYNC, VSYNC, CSYNC, DE, 8-bit Red, Green and Blue
- Customizable to user requirements if desired