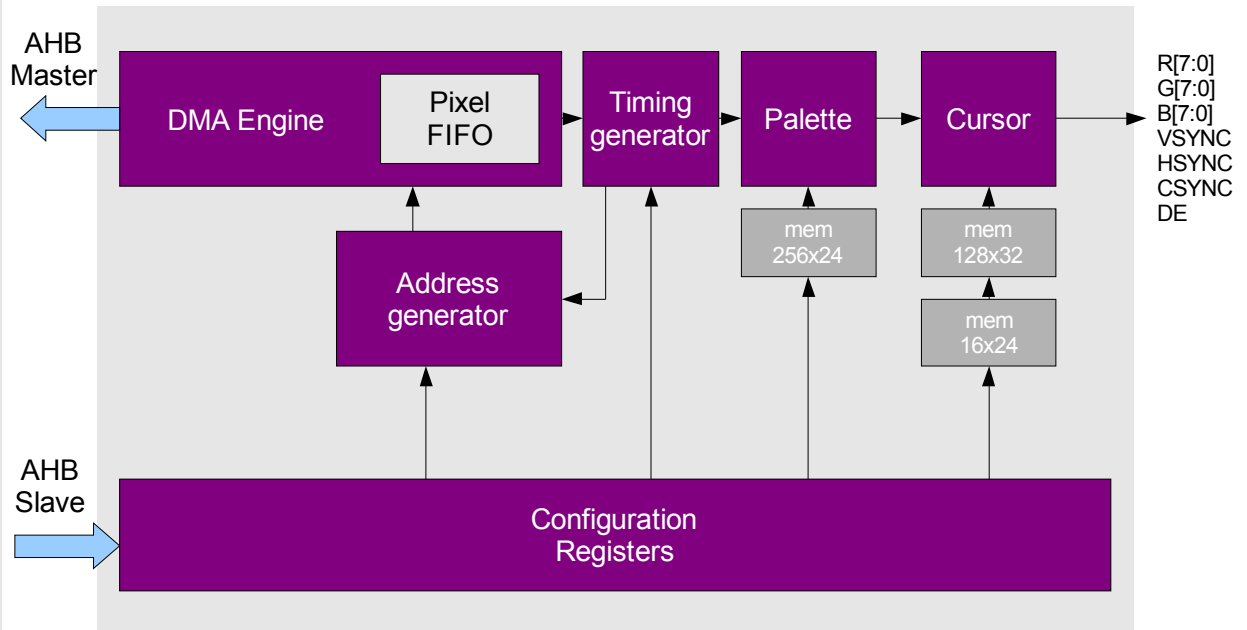


ThinkLCD Display Controller

The ThinkLCD Display controller is an AMBA AHB module that can drive a VGA or LCD screen in a SoC. It can be easily programmed with X11 Modeline timing to support any required resolution in any step. 32,16 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 support with burst support
- AMBA AHB Slave Register File
- Configurable Pixel FIFO size (64x32/128x32/256x32/512x32)
- Supports any resolution from 1x1 up to 32768x32768 (including 640x480, 800x600, 1024x768, 1280x1042, 1600x1200 etc) in any step
- Configurable Stride/Pitch that allows panning
- RGBX8888, XRGB8888 (32-bit)
- RGBX5551, RGB565 (16-bit)
- RGB232, LUT8, Grayscale (8-bit)
- Optional 8-bit palette (requires a 256x24 memory)
- Optional Fixed Cursor
- Optional Programmable Cursors (32x32) (requires a 128x32 and a 16x24 CLUT memory)
- Supports Alternating Base Addresses for each frame
- Programmable HSYNC, VSYNC, DE Polarity
- Generates HSYNC, VSYNC, CSYNC, DE, 8-bit Red, Green and Blue
- Programmable event Interrupt Request (IRQ)
- Linux Framebuffer Kernel Drivers
- Can be customized to user requirements