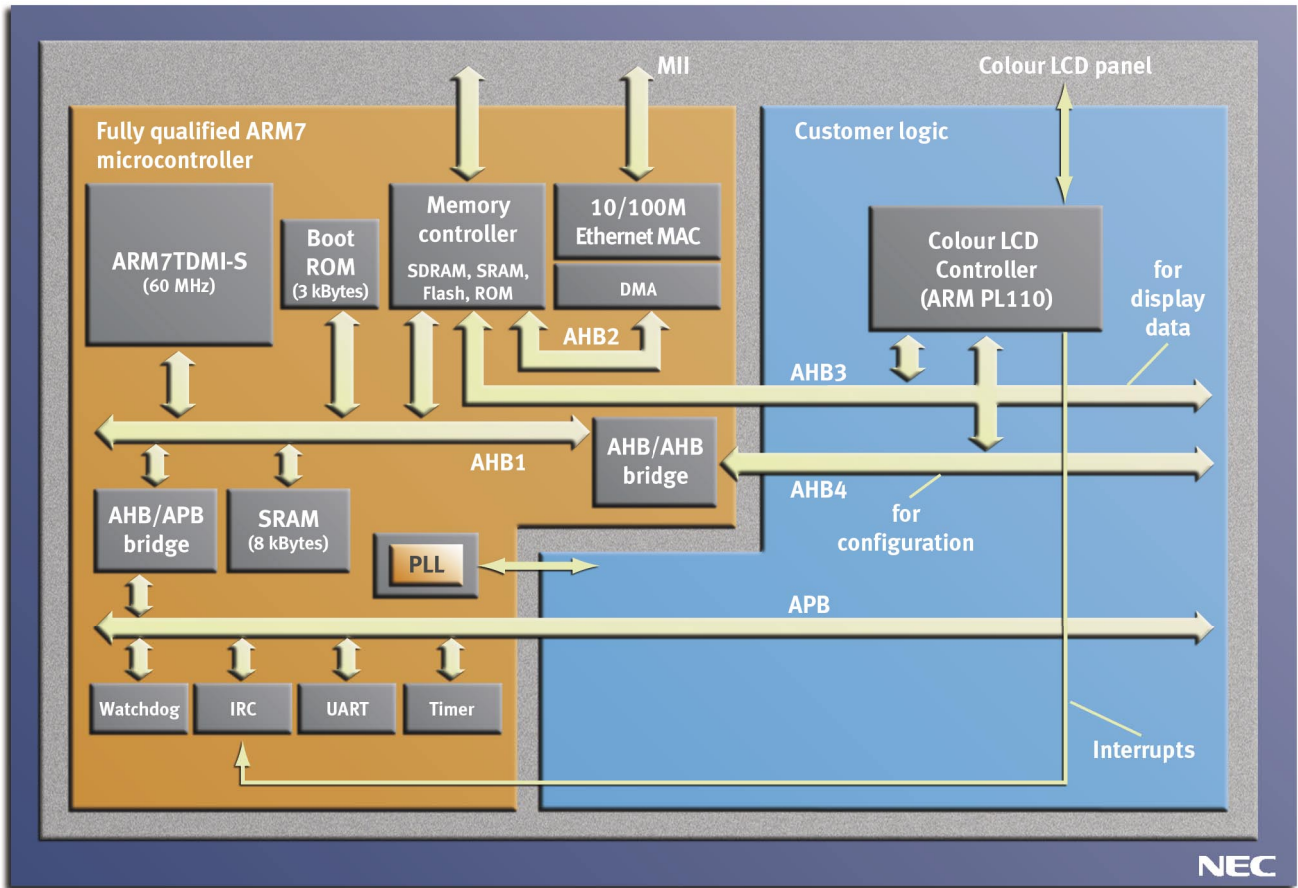


Colour LCD Controller for System-on-Chip Lite+



General description

The Colour LCD Controller (ARM® PrimeCell PL110) can be used to drive colour LCD panels of up to 1024 x 768 pixels. It uses external memory for the storage of the picture data. To ensure the required throughput it is connected to the external memory by a port of the System-on-Chip Lite+ internal memory controller.

For configuration it has an additional APB port. To generate a picture the ARM7TDMI-S core writes the picture data into a reserved area in the external memory from where the CLCD controller fetches the data and displays it on the screen.

Colour LCD Controller Features

- Dual 16-deep programmable 32-bit wide FIFOs for buffering incoming display data
- Supports single and dual panel mono Super Twisted Nematic (STN) displays with 4 or 8-bit interfaces
- Supports single and dual-panel color and monochrome STN displays
- Supports Thin Film Transistor (TFT) color displays
- Resolution programmable up to 1024 x 768
- 15 gray-level mono, 3375 color STN, and 32K color TFT support
- 1,2,4 or 8 bpp palettized display for mono STN
- 1,2,4 or 8 bpp palettized color displays for color STN and TFT
- 16 bpp true-color non palettized, for color STN and TFT
- 24 bpp true-color non palettized, for color TFT
- Programmable timing for different display panels
- 256 entry, 16-bit palette RAM, arranged as a 128 x 32bit RAM physically
- Frame, line and pixel clock signals
- AC bias signal for STN, data enable signal for TFT panels
- Gray scale algorithm
- Supports little and big endian