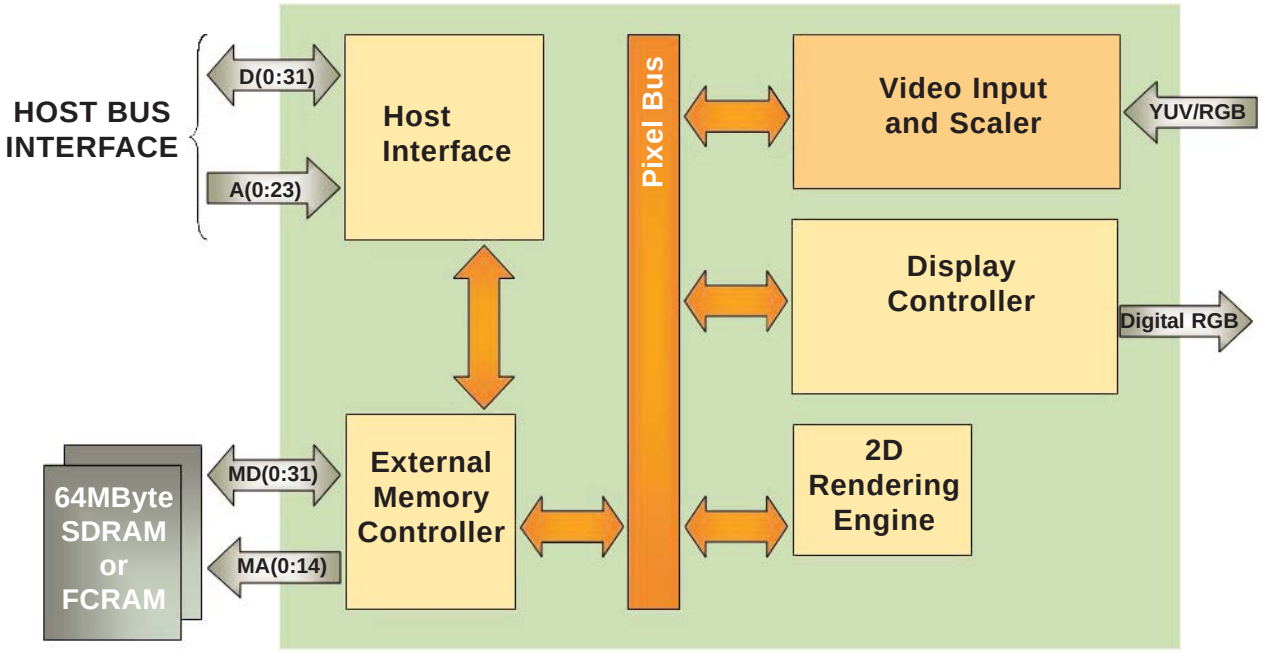
Graphic Display Controller

MB86276



Description

The Fujitsu MB86276 Graphic Display Controller (GDC) is a low-end extension to the Fujitsu Graphic Controller family for 2D applications. This chip is based on the MB86296 3D GDC family core functions, and optimized for 2D rendering.

The display controller, rendering engine and video input unit are taken from the successful MB86296 3D GDC but the floating point co-processor and all 3D-functions have been taken out. Also, the CPU interface is optimized for more CPU connections and the device has some functions to support small footprint graphic applications. The Fujitsu MB86276 2D GDC is 100% binary-compatible to both the 2D/3D MB86290A and 3D MB86296 GDC families.

Applications

Automotive:
- In-dash navigation
- Infotainment systems
- Configurable instrument panel
- Heads up display

Marine:
- Fish finder
- Navigation

Other:
- Medical Instrumentation
- Industrial automation

Graphic Display Controller

Features

- CMOS 0.18µm technology
- Display resolutions up to 1280 x 768
- 6 layers of overlay display (Windows)
- Alpha Plane
- Digital Video input (various formats)
- Video Scaler (up/down scaling)
- I2C Master/Slave interface
- RGB digital output (8 bit x 3)
- Dual-Display support (2xRGB666 output)
- Includes various kinds of 2D graphic acceleration functions
- Built-in alpha blending, anti-aliasing and chroma-keying
- External SDRAM or FCRAMTM interface at 133MHz for up to 64MBytes graphic memory
- Standard host interface forembedded CPUs/MCUs (32-bit/16-bit)
- GPIO inputs/outputs
- Serial interface
- Supply voltage 3.3V (I/O), 1.8V (Internal)
- BGA-256 package
- Temperature range -40 to +85°C

Lime Host IF multiplexing modes

Mode 1	HST 32-bit	D(31:16)	RGB out 8/8/8			RGB in 6/6/6		
Mode 2	HST 32-bit	D(31:16)	RGB out 8/8/8			GPIO (4:0)	N/A	VI (7.0)
Mode 3	HST 16-bit	RGB out 8/8/8		RGB out 6/6/6		GPIO (3)	N/A	VI (7.0)
Mode 4	HST 16-bit	RGB out 6/6/6		RGB out 6/6/6	N/A	RGB in 6/6/6		

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