

PRODUCT BRIEF



GPL32702B

Advanced Multimedia Processor Solution

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Version 1.0

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ADVANCED MULTIMEDIA PROCESSOR SOC SOLUTION

1. GENERAL DESCRIPTION

The Generalplus GPL32702B, a highly integrated SoC (System-On a Chip), offers a great cost-effective and high performance ratio solution for multimedia processor applications. It is embedded the ARM7TDMI with 4K-byte unified ID-cache and many tremendous features such as JPEG CODEC engine, TFT-LCD interface, CMOS sensor interface, scalar engine, SDRAM controller, UART interface, 4-channel DMA controller, 6-channel 16-bit timers, RTC, SD/MMC card interface, USB 2.0 mini-host/device, interrupt controller, SPI (master/slave) controller, programmable I/O ports, stereo 16-bit DAC for audio playback, 2-channel 12-bit ADC, MIC, PLL, and 1K-byte embedded SRAM.

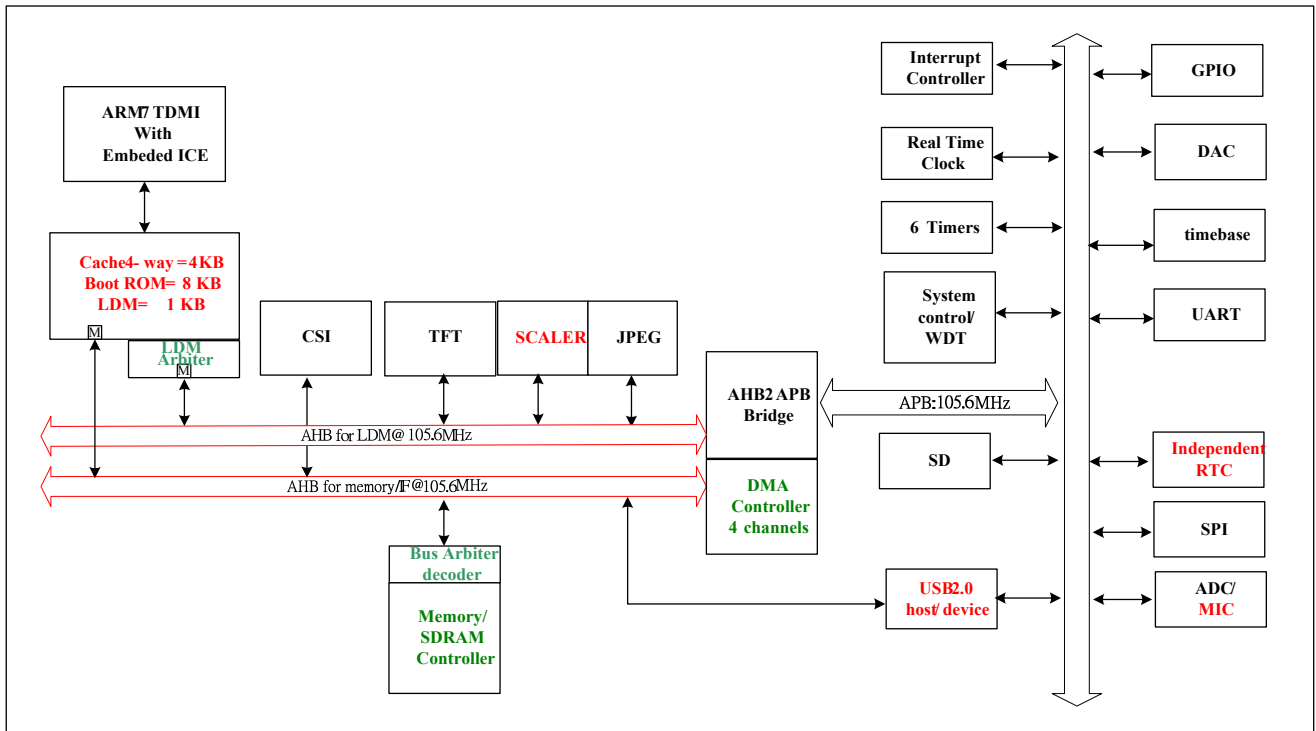
With a complete set of common system peripherals, the GPL32702B chip minimizes overall system cost and no additional component needs to be added. Not only does GPL32702B feature the high-speed performance, but it is also a cost-effective system and the most importantly - compatible with all ARM based programs.

2. FEATURES

- ARM7TDMI CPU with 4KB unified ID-cache, write buffer, embedded JTAG ICE, and working frequency up to 105.6MHz.
- 1KB SRAM for local data buffer.
- JPEG CODEC.
 - ISO/IEC 10918-1 baseline JPEG.
 - High-speed Decoding and Encoding with resolution up to 8000x8000 64MPixel.
 - Hardware Motion JPEG Decoding and Encoding (up to D1@30fps*1) for real-time video record and playback application.
- Video-in & CMOS sensor interface and CCIR601/CCIR656 standard supported.
- 105.6 MHz SDRAM with maximum addressable memory size 256Mbit for single chip option.
- Four-channel DMA controller.
- TFT-LCD controller.
 - UPS051. (serial RGB)
 - UPS052. (serial RGB dummy)
 - I80 (8-bit/16-bit/18-bit system bus) I/F type.
 - CCIR601/CCIR656.
 - Scalar engine inside with programmable up-scaling and down-scaling factor.
- Interrupt Controller.
- Universal Serial Bus (USB) 2.0 high/full speed compliance device and USB mini-host with built-in transceiver.
- Watchdog timer.
- Six 16-bit timers/counters.
- SD/SDHC/SDIO/MMC card interface.
- SPI (master/slave) interface with data rate up to 24Mbps.
UART (asynchronous serial I/O) interface with baud rate up to 1.8432Mbps and 115.2Kbps.
- 47 Programmable general I/O ports (GPIO) with pull-high/low control.
- Power manager.
- Built-in 3.0V to 1.8V Regulator.
- Low voltage reset.
- Real-time clock (RTC) with independent power supply.
- 105.6MHz PLL.
- 16-bit stereo DAC (2-channel) for audio playback.
- 12-bit ADC with 2 line-in channels.
- MIC with PGA. (Programmable Gain Amplifier)

Note1: Can scale up to 1280x720

3. BLOCK DIAGRAM



4. DISCLAIMER

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5. REVISION HISTORY

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