

High Performance LCD Graphics Controller

LT7381 is a competitive TFT-LCD graphic display controller. Its main function is to assist the MCU to transfer the content to be displayed to the TFT screen to the TFT driver, and provide graphics processing, PI, geometric drawing and multiple display modes. The LT7381 supports panel resolution from 320*240 (QVGA) to 1024*768 (XGA), and 16/18/24bits RGB interface.

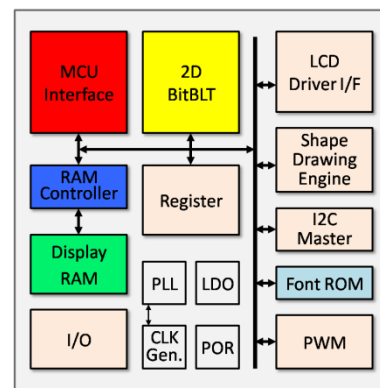


The LT7381 supports a variety of MCU interfaces, including SPI, I2C and 8/16-bit MCU parallel. In order to achieve multi-level high-resolution display, the LT7381 has built-in 32Mb display memory, which can support 2 gray levels from 1 bit per pixel to 16M color display up to 24 bits per pixel, and reduce the burden of MCU to display animation. With built-in geometric drawing engine, LT7381 support drawing points, lines, curves, ellipse, triangle, rectangle, rounded rectangle and other functions, With embedded hardware graphics acceleration engine (BTE), it provides command-type graphics operations such as screen rotation, flipping, mirroring, PIP and graphics blending, and transparent display, which greatly enhances the display performance of the product, and relieves the MCU's software operation burden. If the SPI interface is used, the MCU I/O port requirements can be reduced, and the MCU does not have to be upgraded for the TFT screen. The powerful display performance of LT7381 is ideal for embedded systems with TFT-LCD displays such as home appliances, industrial controls, electronic instruments, medical devices, human-machine interfaces, industrial equipment, inspection equipment, charging stations, multi-function machines, elevator, check-in gate, etc.

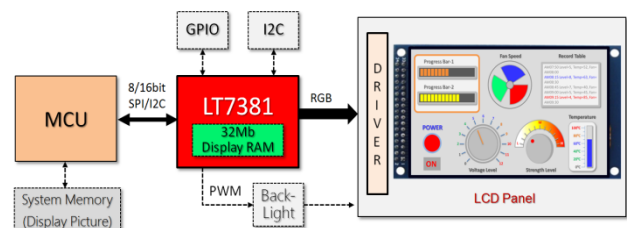
Features

- Support SPI I2C, 8/16 Bit MCU Parallel Interface
- Built-in Geometric drawing engine, Support Draw Point, Line, Curve, Ellipse, Triangle, Rectangle, Rounded Rectangle
- Built-in 2D Graphic Accelerator Engine, support Rotation, Picture Mirror, PIP and Transparent Display
- Built-in 32Mb Display Memory
- Support from 320*240 to 1024*768 Panel with 16/18/24bits RGB Interface
- Built-in Standard ISO/IEC 8859 Font
- Built-in 2 16bit PWM Timer
- Support I2C Master
- Support Standby, Suspend, Sleep Mode
- Built-in Programmable PLL, LCD Scan, SDRAM, internal System Clock
- Voltage: 3.0V~3.6V
- Package: 128pin LQFP

Block Diagram



Application



Integrity • Professional • Efficiency