樂升半導體 LEVETOP

LT268C/D

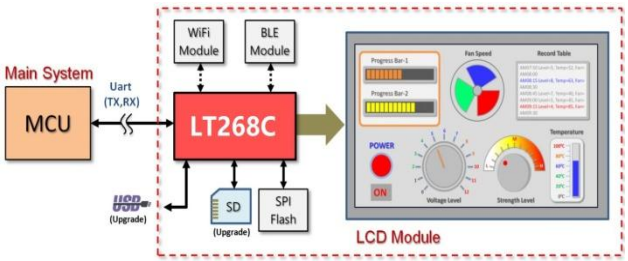
Serial Uart I/F Controller for MCU Type TFT Panel

LT268C/D are Serial Uart Interface TFT Controllers for 8080 MCU type's TFT panel. It integrates a Cortex M4 32bit MCU core with serial Uart communication protocol. The host MCU could follow the protocol and transfer simple command to LT268C/D, then LT268C/D will base on the definition of command to get display information from external Flash, and transfer display content to TFT panel through parallel 8bit/16bit 8080 interface. The LT268C/D is equivalent to a Graphics Processing Unit(GPU), which can reduce the loading of host to process the color display function, meanwhile improving the efficiency of TFT display. LT268C/D supported maximum resolution of the TFT panel in the form of the 8080 MCU interface is 800*480. Usually this type of TFT panel size is 3.5" or less.

LT268C/D embedded 508Kbytes Flash, 256Kbytes SRAM, and the maximum system clock frequency of built-in M4 is 150MHz. In addition to providing Uart serial communication, it also provides an SPI Flash interface. The external SPI Flash can be used to store pictures, animations, font libraries and other information. The LT268C/D can use the UI Editor and Emulator software which developed by Levetop Semiconductor for UI display development directly on the personal computer. Therefore, the user can reduce the repeat programming time of SPI Flash, and the development schedule of TFT display can be greatly shortened. LT268C/D's built-in serial port command functions include picture display, GIF animation display, loop picture display, boot screen display, progress bar display, text string display, QR code generation, audio playback, and geometry display such as drawing lines, drawing circles, drawing triangles, drawing rectangles and other functions. In addition, the LT268C/D provides multiple sets of SCI (Uart) interfaces that can be connected to such as Bluetooth modules and WiFi modules. In addition, it includes USB interface, SD card (SPI mode), analog input AIN, PWM and INT interrupt interface. These can also be set up as normal IO interfaces. The LT268C/D also embedded a Real Time Clock(RTC). The rich functions increase the practicality and scope of application of the serial interface TFT panel.

Due to the embedded powerful M4 Core and high capacity Flash and SRAM, many IO interfaces, LT268C/D can share the work loading of the host MCU. Even the host MCU and TFT display functions are completed by an LT268C/D. The LT268C/D is ideal for use in electronics with small TFT-LCD panels. It can also be used to replace the original monochrome display products, or to increase the texture of the product. Meanwhile it will not cause big loading for the host MCU of the product. LT268C/D can be applied to such as a variety of small household appliances, smart appliances, kitchen appliances, handheld control equipment, industrial control boards, electronic instruments, medical equipment, small testing equipment, 3D printers, electric motorcycles, personal medical beauty, small testing equipment, charging equipment, gate display, water and electricity meters, smart speakers with screens, smart water dispensers, air purifiers and other products.

Features

- Built-in 32Bit M4 MCU, 512KB Flash, 256KB SRAM
- Built-in Multiple Serial Commands
- Support 3 SCI/UART, 1 QSPI, USB2.0, SD Card I/F
- Provide SPI Interface and 8/16bit MCU Interface for 8080 MCU Type TFT Panel
- Support External SPI NOR Flash
- Built-in Serial Command Function: Display Picture, Display GIF, Display in loop, Boot Image display, Progress Bar Display, Text Display
- Built-in Draw Line, Circle, Triangle, Rectangle Function
- Support QR-Code Generator, RTC and Audio Play
- Support MCU Panel Resolution: within 800*480
- Support Resistive/ Capacity Type Touch Panel
- Support Levetop's UI_Editor Software
- Voltage/Package: 3.0V~3.6V, QFN68/LQFP100

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