

RTC clock crystal

Package: 3215 2P

RTC clock crystal oscillator 32.768KHz

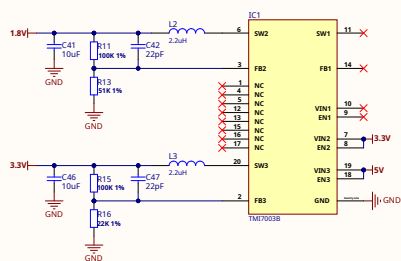


### BOOT circuit

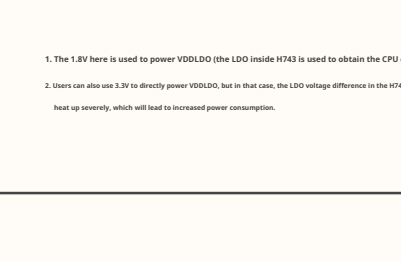
Pressing the BOOT button once, without having to press the reset and BOOT buttons separately, simplifying the operation.

ates the reset. Due to the effect of C14, T2 will be delayed to turn off. At this time, BOOT0 is still high level, and the MCU will start from the

### 1.8V power supply circuit

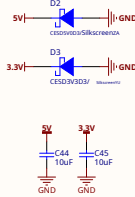


### 3.3V power supply circuit



1. The 1.8V here is used to power VDDLO (the LDO inside H743 is used to obtain the CPU core voltage of 1.03~1.38V)
2. Users can also use 3.3V to directly power VDDLO, but in that case, the LDO voltage difference in the H743 chip will be too large, causing the chip to heat up severely, which will lead to increased power consumption.

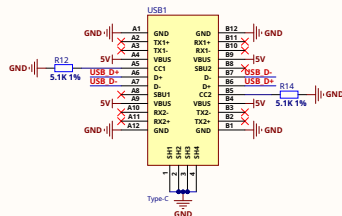
ESD diodes provide overvoltage and reverse connection protection



### USB interface

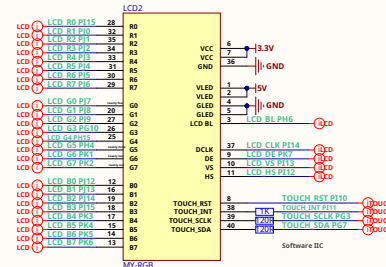
1. Use 16 pin Type C socket, support forward and reverse insertion
2. Type C is directly connected to PA11 and PA12 of STM32, and USB applications can be developed (Not serial port communication)
3. Use Type C data cable to connect to the computer and download the user program via USB (Not serial port download)

Note: The core board does not have a hardware USB to serial port circuit!

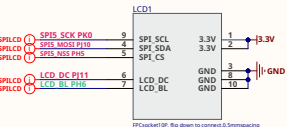
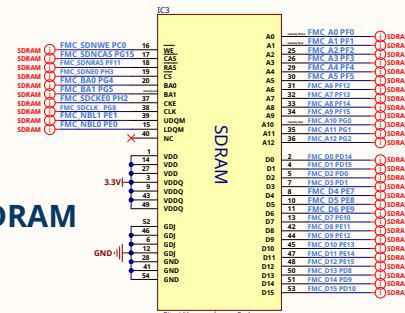


### RGB LCD interface

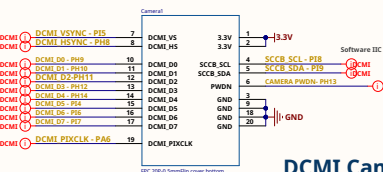
1. When using this interface to connect the screen, be sure to use 5V power supply!
2. LCD\_BL is the screen backlight PWM control line, high level lights up
3. The interface is compatible with Imagination's AT070TN83
4. When you need to connect to other screens, you can use it with an adapter board



### SDRAM



### SPI LCD interface



### DCMI Camera Interface

### IO port lead

1. Lead out through 2.54 pitch pin header, pin header specification is 2\*20P
2. VBAT-EXT This is the backup power pin. When the user does not need to use the backup power, just leave it unconnected.
3. VBAT-EXT This is the backup power pin. When the user does not need to use the backup power, just leave it unconnected.
4. The pins occupied by the RGB interface, SPI LCD interface, and QSPI flash are not brought out
5. The I/O pins occupied by the SDRAM interface and the crystal oscillator are not brought out PA15, PA16, PA17, PA18, PA19, PA20, PA21, PA22, PA23, PA24, PA25, PA26, PA27, PA28, PA29, PA30, PA31, PA32, PA33, PA34, PA35, PA36, PA37, PA38, PA39, PA40, PA41, PA42, PA43, PA44, PA45, PA46, PA47, PA48, PA49, PA50, PA51, PA52, PA53, PA54, PA55, PA56, PA57, PA58, PA59, PA60, PA61, PA62, PA63, PA64, PA65, PA66, PA67, PA68, PA69, PA70, PA71, PA72, PA73, PA74, PA75, PA76, PA77, PA78, PA79, PA80, PA81, PA82, PA83, PA84, PA85, PA86, PA87, PA88, PA89, PA90, PA91, PA92, PA93, PA94, PA95, PA96, PA97, PA98, PA99, PA100.
6. This interface is not brought out
7. When using the RGB LCD interface, a 5V power supply is required!
8. For the pin multiplexing of I/O ports, you can refer to the STM32 data sheet, which has a complete and detailed table for users to refer to.

When using the core board to drive motors, high voltage or high interference equipment, be sure to add optocoupler isolation, otherwise it is easy to damage the microcontroller!!!