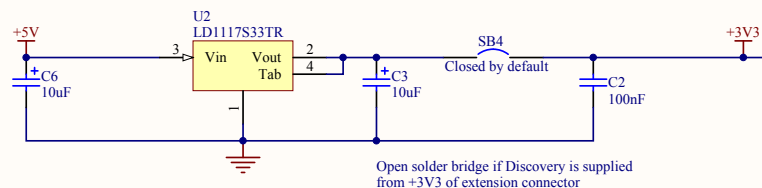
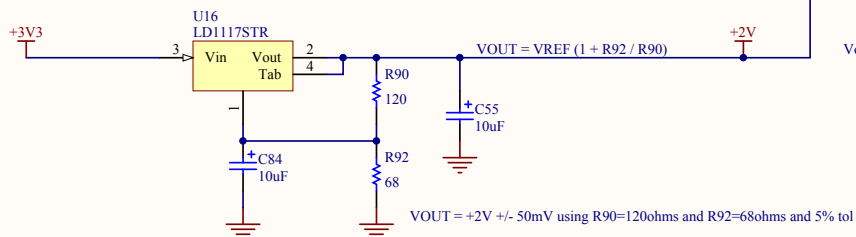
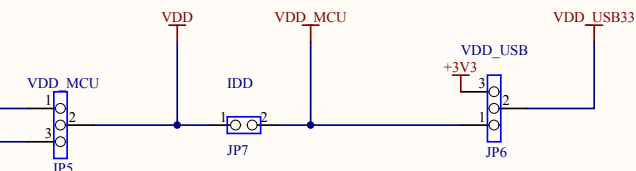


VDD= supply of peripherals
VDD_MCU= supply of MCU pins VDD only



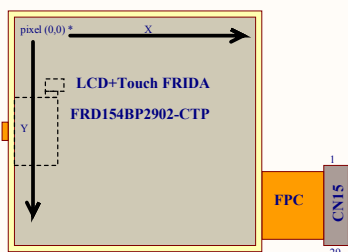
Open solder bridge if Discovery is supplied from +3V3 of extension connector



Voltage selection

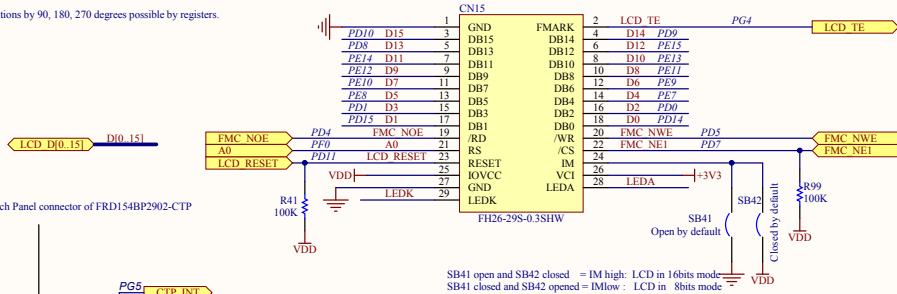
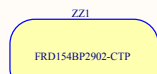
VDD_USB source selection

Top side: layout of CN15

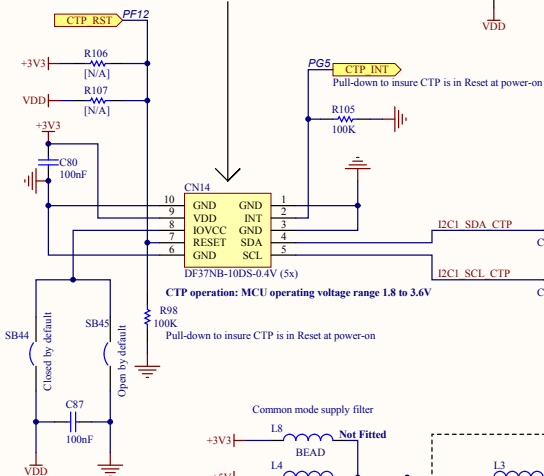


*. standard orientation. Rotations by 90, 180, 270 degrees possible by registers.

240x240 pixels TFT LCD with Capacitive Touch Panel



Capacitive Touch Panel connector of FRD154BP2902-CTP

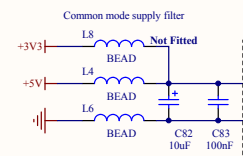


SB41 open and SB42 closed = IM high: LCD in 16bits mode
SB41 closed and SB42 opened = IMlow : LCD in 8bits mode

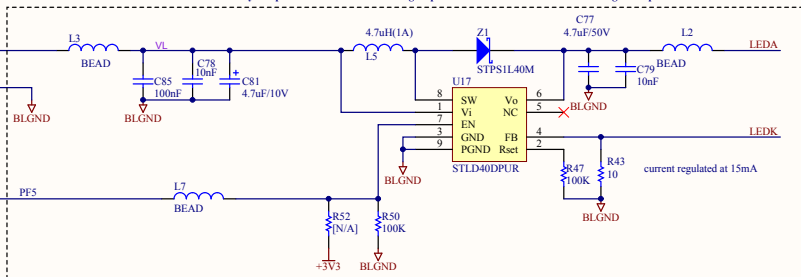
LCD Operation: MCU operating voltage range 1.65 to 3.6V

CTP operation: MCU operating voltage range 1.8 to 3.6V

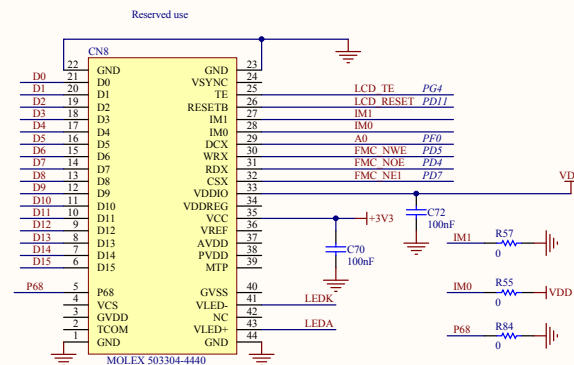
SB44 Closed by default
SB45 Open by default
Pull-down to insure CTP is in Reset at power-on



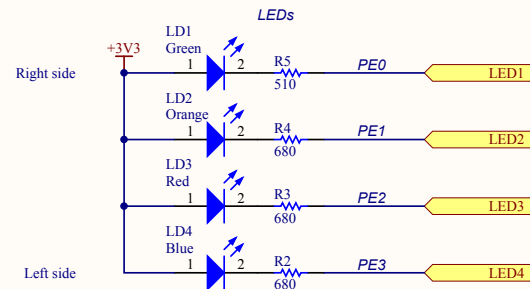
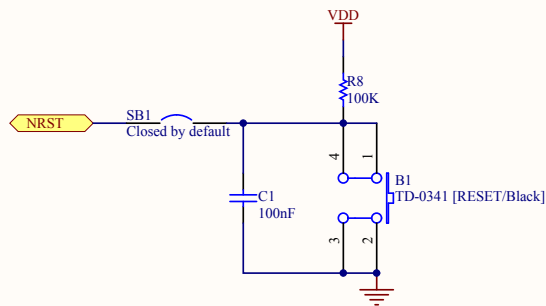
Layout: parts close to STLD40D and grouped in same area with BLGND as local ground plane



Backlight driver & PFC connector for LCD panel

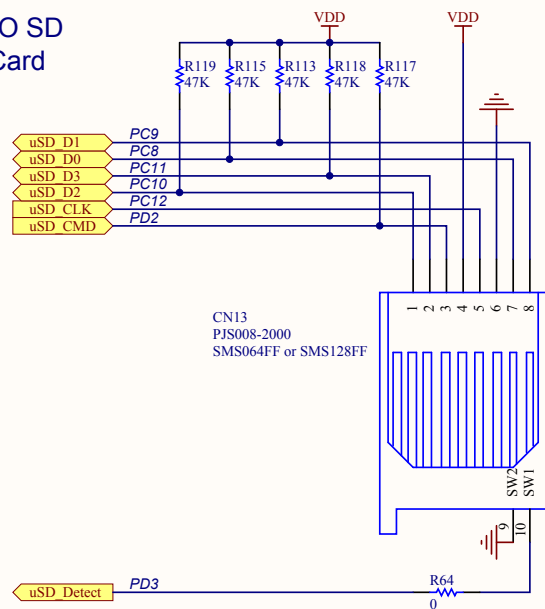


Reset Button

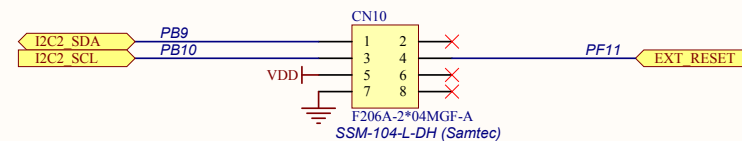


The 4 LEDs are top side

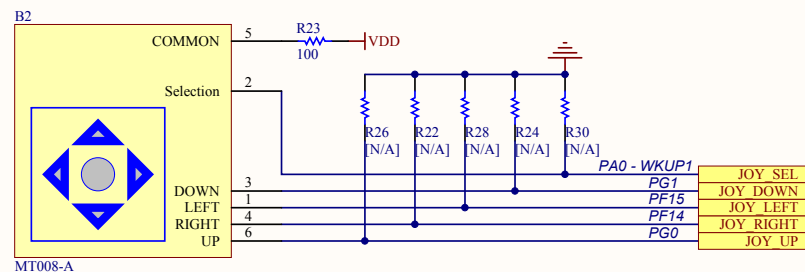
MICRO SD (TF) Card

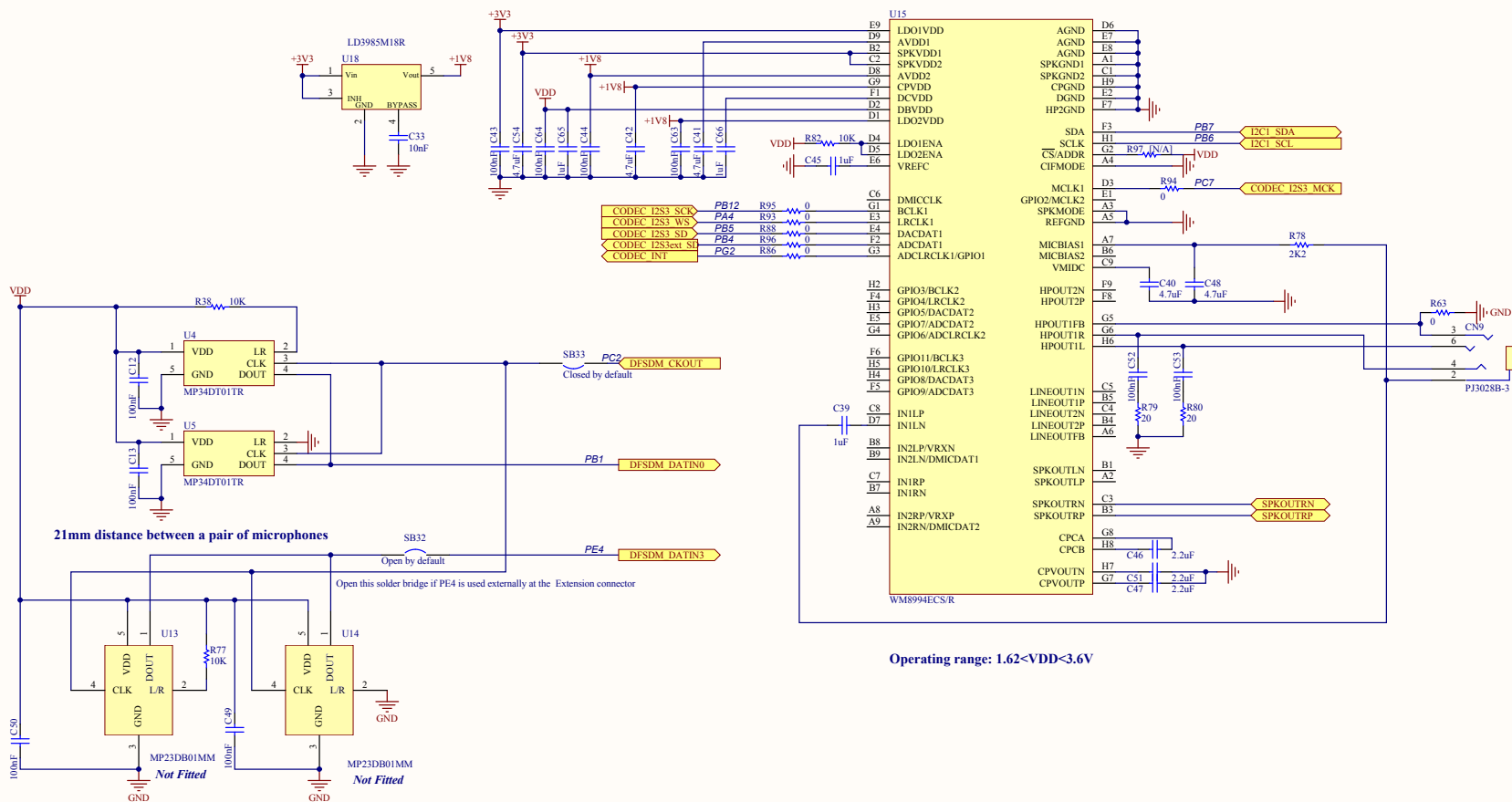


I2C Extension Connector

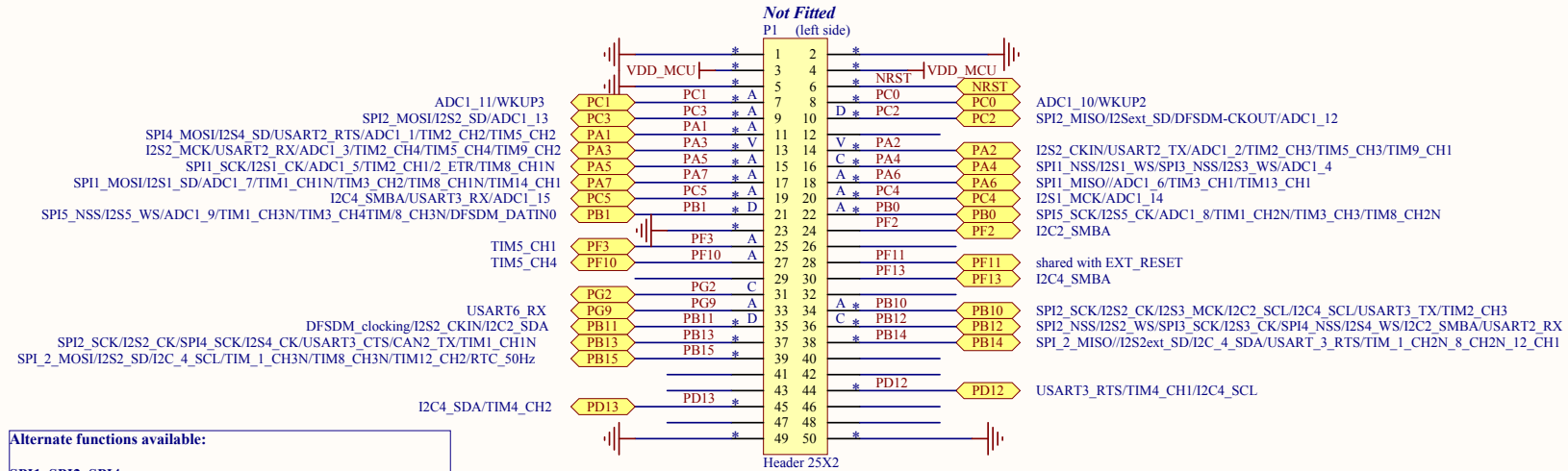


JOYSTICK





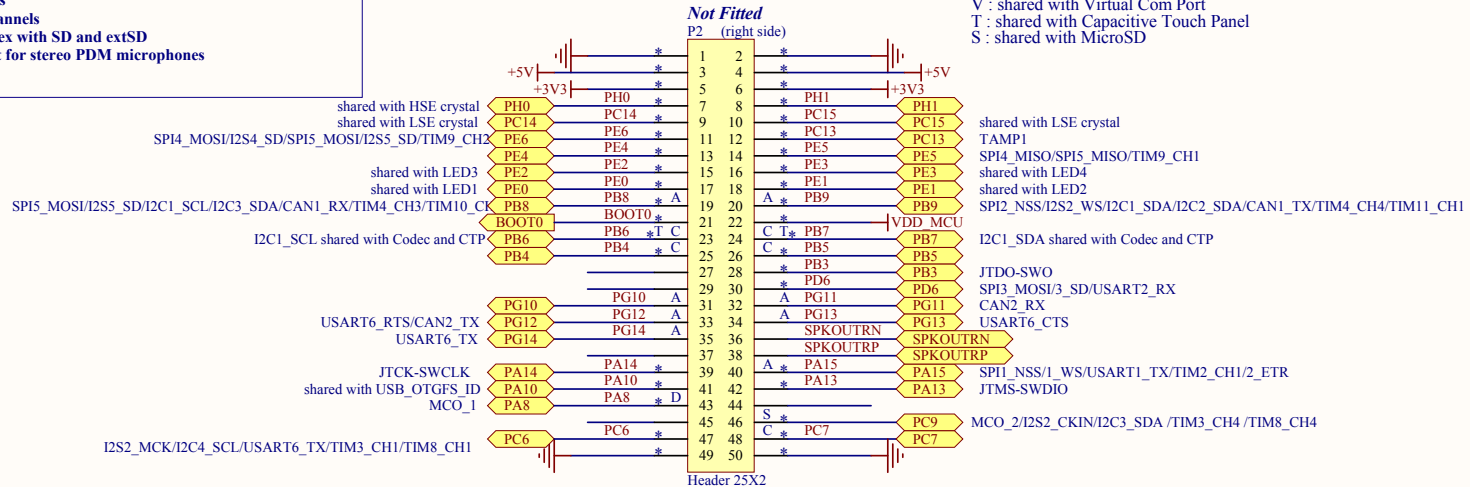




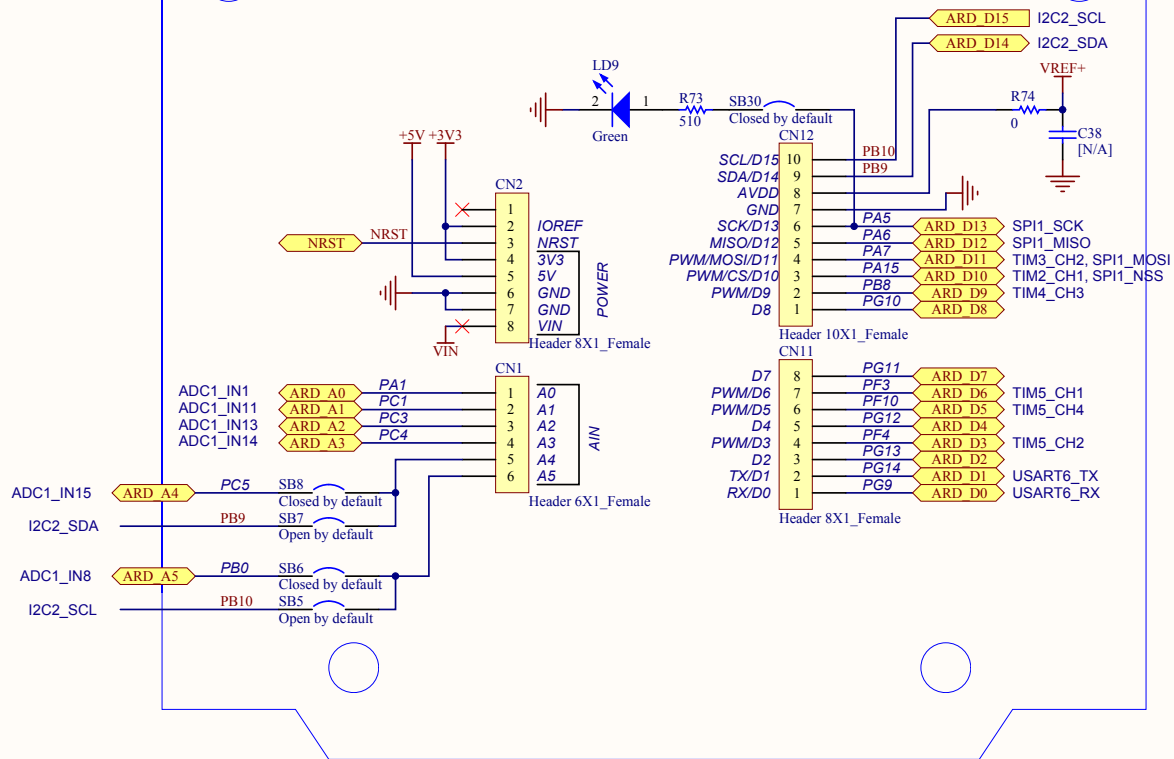
Alternate functions available:

SPI1, SPI2, SPI4
I2C1, I2C2 with SMBA , I2C4 FM+ 1MHz with SMBA
USART3 Rx,Tx,Cts,Rts, USART6 Rx,Tx,Cts,Rts
CAN1, CAN2
14 ADC inputs
>15 Timer channels
I2S2 full duplex with SD and extSD
DFSDM input for stereo PDM microphones

* : pin compatible with STM32F401-DISCO and STM32F411-DISCO
A : shared with Arduino connectors
C : shared with CODEC
D : shared with Digital microphones
V : shared with Virtual Com Port
T : shared with Capacitive Touch Panel
S : shared with MicroSD



Arduino uno connector



Title: **Arduino Uno connector**

Project: **STM32F412G-DISCO**

Size: A4 Reference: MB1209

Revision: D-02

Date: 6/29/2016

Sheet: 10 of 11

