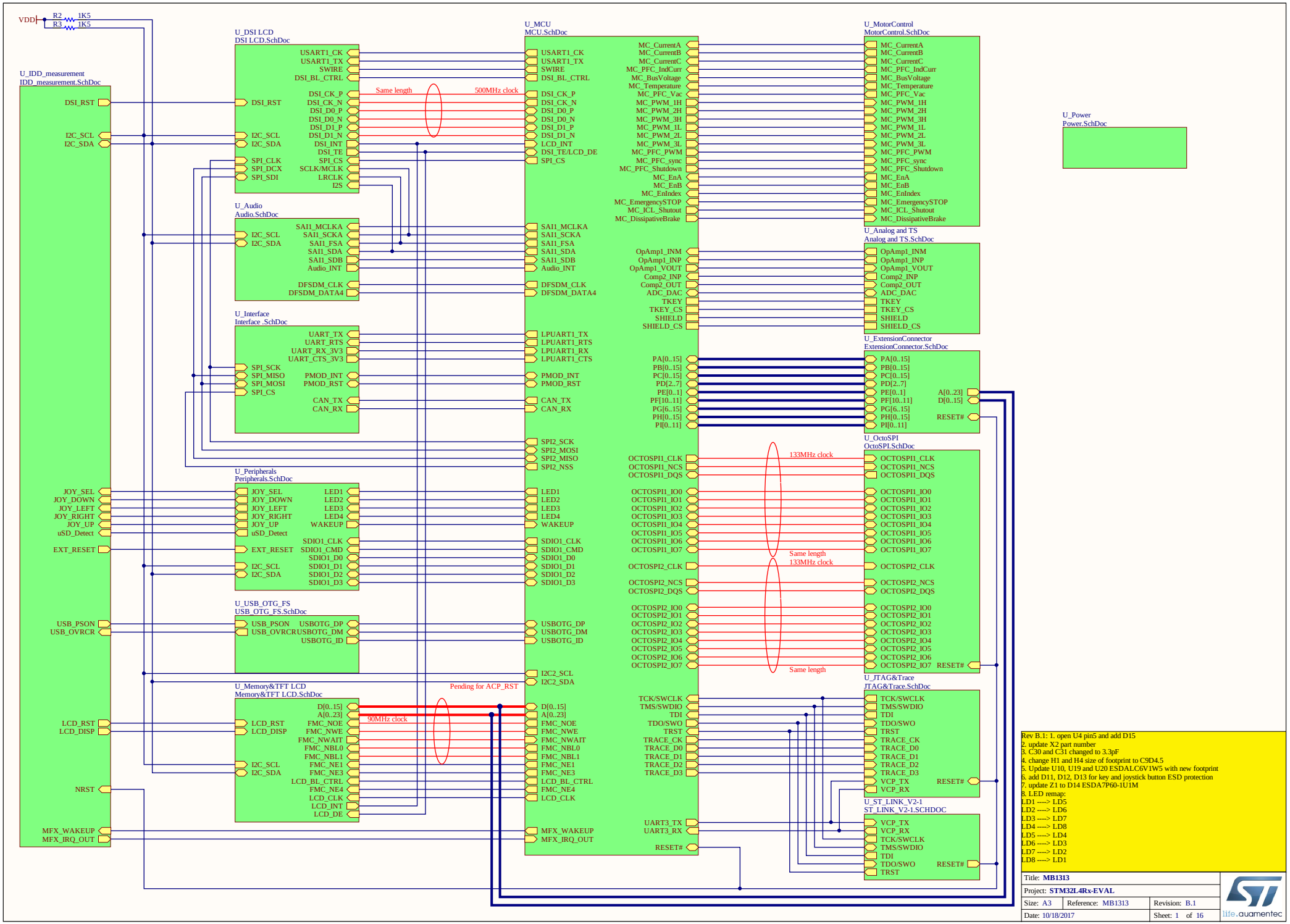
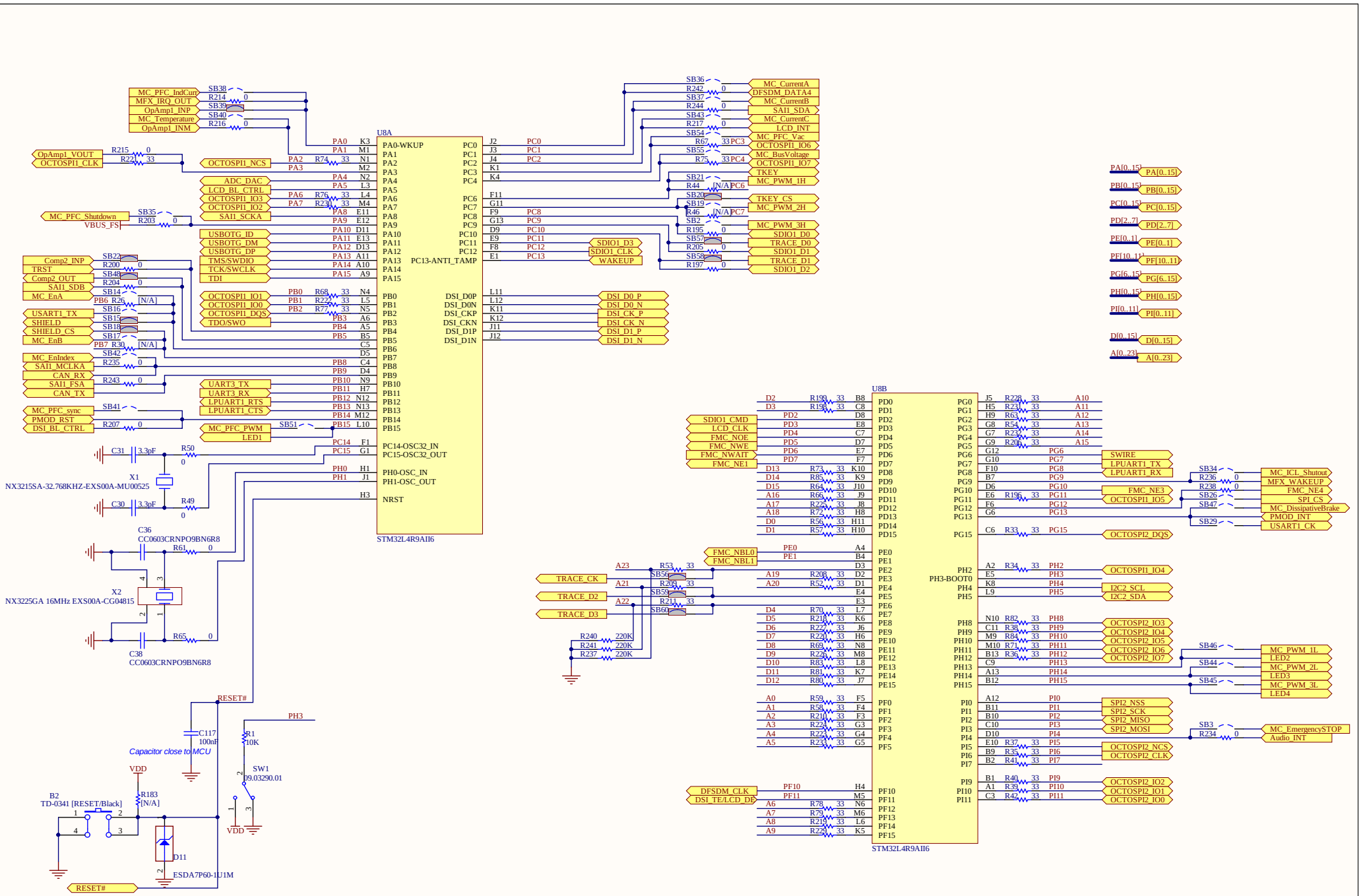
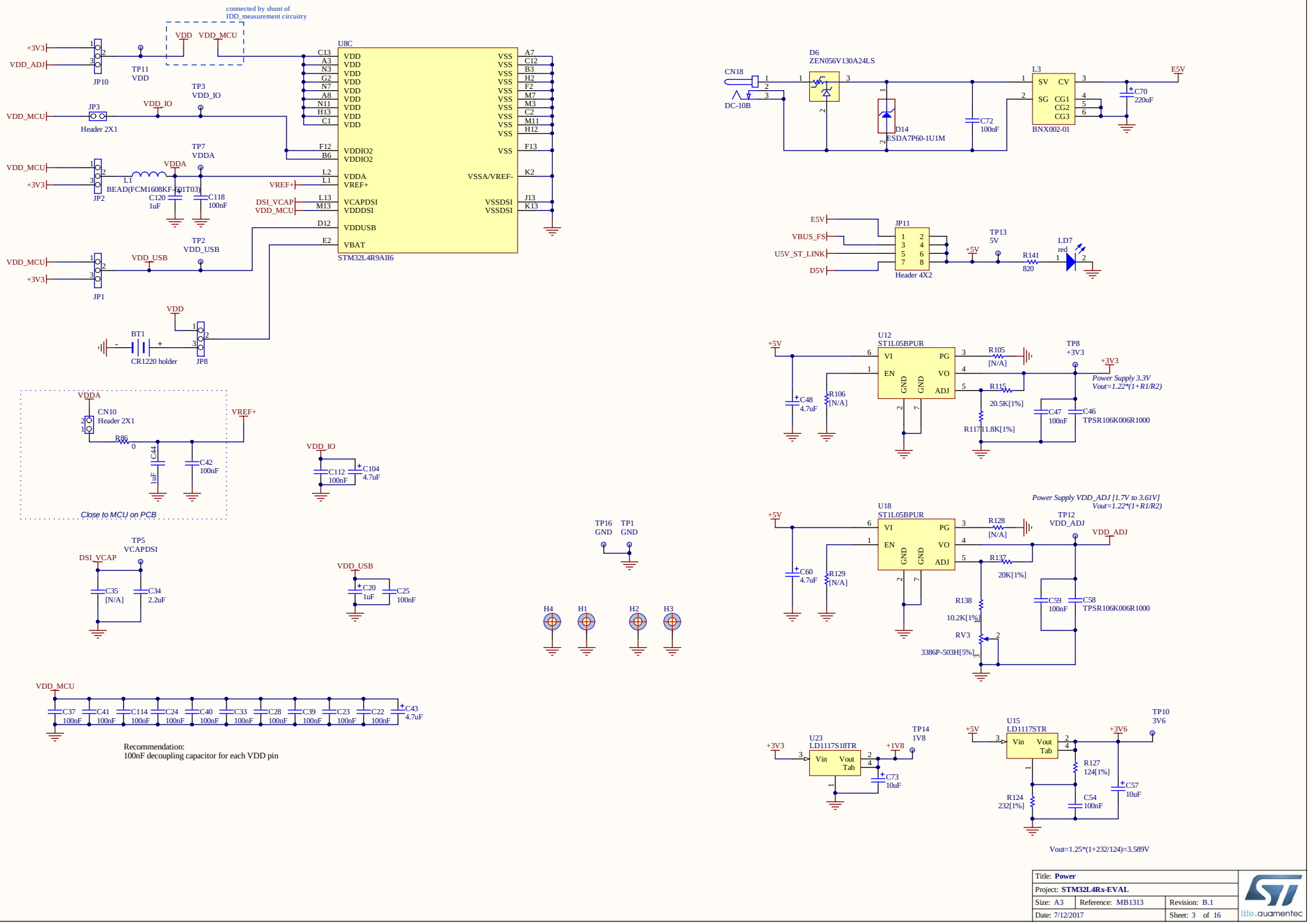

VDD
R2 1K5
R3 1K5
U_IDD_measurement
IDD_measurement.SchDoc
DSI_RST
I2C_SCL
I2C_SDA
JOY_SEL
JOY_DOWN
JOY_LEFT
JOY_RIGHT
JOY_UP
uSD_Detect
EXT_RESET
USB_PSON
USB_OVRCR
LCD_RST
LCD_DISP
NRST
MFX_WAKEUP
MFX_IRQ_OUT
U_DSI LCD
DSI LCD.SchDoc
USART1_CK
USART1_TX
SWIRE
DSI_BL_CTRL
DSI_CK_P
DSI_CK_N
DSI_D0_P
DSI_D0_N
DSI_D1_P
DSI_D1_N
DSI_INT
DSI_TE
SPI_CS
SPI_CLK
SPI_DCX
SPI_SDI
SCLK/MCLK
LRCLK
I2S
Same length
500MHz clock
U_Audio
Audio.SchDoc
SAI1_MCLKA
SAI1_SCKA
SAI1_FSA
SAI1_SDA
SAI1_SDB
Audio_INT
DFSDM_CLK
DFSDM_DATA4
U_Interface
Interface .SchDoc
UART_TX
UART_RTS
UART_RX_3V3
UART_CTS_3V3
SPI_SCK
SPI_MISO
SPI_MOSI
PMOD_INT
PMOD_RST
CAN_TX
CAN_RX
U_Peripherals
Peripherals.SchDoc
LED1
LED2
LED3
LED4
WAKEUP
SDIO1_CLK
SDIO1_CMD
SDIO1_D0
SDIO1_D1
SDIO1_D2
SDIO1_D3
U_USB_OTG_FS
USB_OTG_FS.SchDoc
USBOTG_DP
USBOTG_DM
USBOTG_ID
U_Memory&TFT LCD
Memory&TFT LCD.SchDoc
D[0..15]
A[0..23]
FMC_NOE
FMC_NWE
FMC_NWAIT
FMC_NBL0
FMC_NBL1
FMC_NE1
FMC_NE3
LCD_BL_CTRL
FMC_NE4
LCD_CLK
LCD_INT
LCD_DE
90MHz clock
Pending for ACP_RST
U_MCU
MCU.SchDoc
LPUART1_TX
LPUART1_RTS
LPUART1_RX
LPUART1_CTS
SPI2_SCK
SPI2_MOSI
SPI2_MISO
SPI2_NSS
I2C2_SCL
I2C2_SDA
LCD_INT
RESET#
U_MotorControl
MotorControl.SchDoc
MC_CurrentA
MC_CurrentB
MC_CurrentC
MC_PFC_IndCurr
MC_BusVoltage
MC_Temperature
MC_PFC_Vac
MC_PWM_1H
MC_PWM_2H
MC_PWM_3H
MC_PWM_1L
MC_PWM_2L
MC_PWM_3L
MC_PFC_PWM
MC_PFC_sync
MC_PFC_Shutdown
MC_EnA
MC_EnB
MC_EnIndex
MC_EmergencySTOP
MC_ICL_Shutout
MC_DissipativeBrake
U_Analog and TS
Analog and TS.SchDoc
OpAmp1_INM
OpAmp1_INP
OpAmp1_VOUT
Comp2_INP
Comp2_OUT
ADC_DAC
TKEY
TKEY_CS
SHIELD
SHIELD_CS
U_ExtensionConnector
ExtensionConnector.SchDoc
PA[0..15]
PB[0..15]
PC[0..15]
PD[2..7]
PE[0..1]
PF[10..11]
PG[6..15]
PH[0..15]
PI[0..11]
A[0..23]
D[0..15]
RESET#
U_OctoSPI
OctoSPI.SchDoc
OCTOSPI1_CLK
OCTOSPI1_NCS
OCTOSPI1_DQS
OCTOSPI1_IO0
OCTOSPI1_IO1
OCTOSPI1_IO2
OCTOSPI1_IO3
OCTOSPI1_IO4
OCTOSPI1_IO5
OCTOSPI1_IO6
OCTOSPI1_IO7
133MHz clock
OCTOSPI2_CLK
OCTOSPI2_NCS
OCTOSPI2_DQS
OCTOSPI2_IO0
OCTOSPI2_IO1
OCTOSPI2_IO2
OCTOSPI2_IO3
OCTOSPI2_IO4
OCTOSPI2_IO5
OCTOSPI2_IO6
OCTOSPI2_IO7
Same length
133MHz clock
Same length
U_JTAG&Trace
JTAG&Trace.SchDoc
TCK/SWCLK
TMS/SWDIO
TDI
TDO/SWO
TRST
TRACE_CK
TRACE_D0
TRACE_D1
TRACE_D2
TRACE_D3
VCP_TX
VCP_RX
U_ST_LINK_V2-1
ST_LINK_V2-1.SCHDOC
U_Power
Power.SchDoc
Rev B.1: 1. open U4 pin5 and add D15
2. update X2 part number
3. C30 and C31 changed to 3.3pF
4. change H1 and H4 size of footprint to C9D4.5
5. Update U10, U19 and U20 ESDALC6V1W5 with new footprint
6. add D11, D12, D13 for key and joystick button ESD protection
7. update Z1 to D14 ESDA7P60-1U1M
8. LED remap:
LD1 ----> LD5
LD2 ----> LD6
LD3 ----> LD7
LD4 ----> LD8
LD5 ----> LD4
LD6 ----> LD3
LD7 ----> LD2
LD8 ----> LD1
Title: MB1313
Project: STM32L4Rx-EVAL
Size: A3
Reference: MB1313
Revision: B.1
Date: 10/18/2017
Sheet: 1 of 16
life.augmented



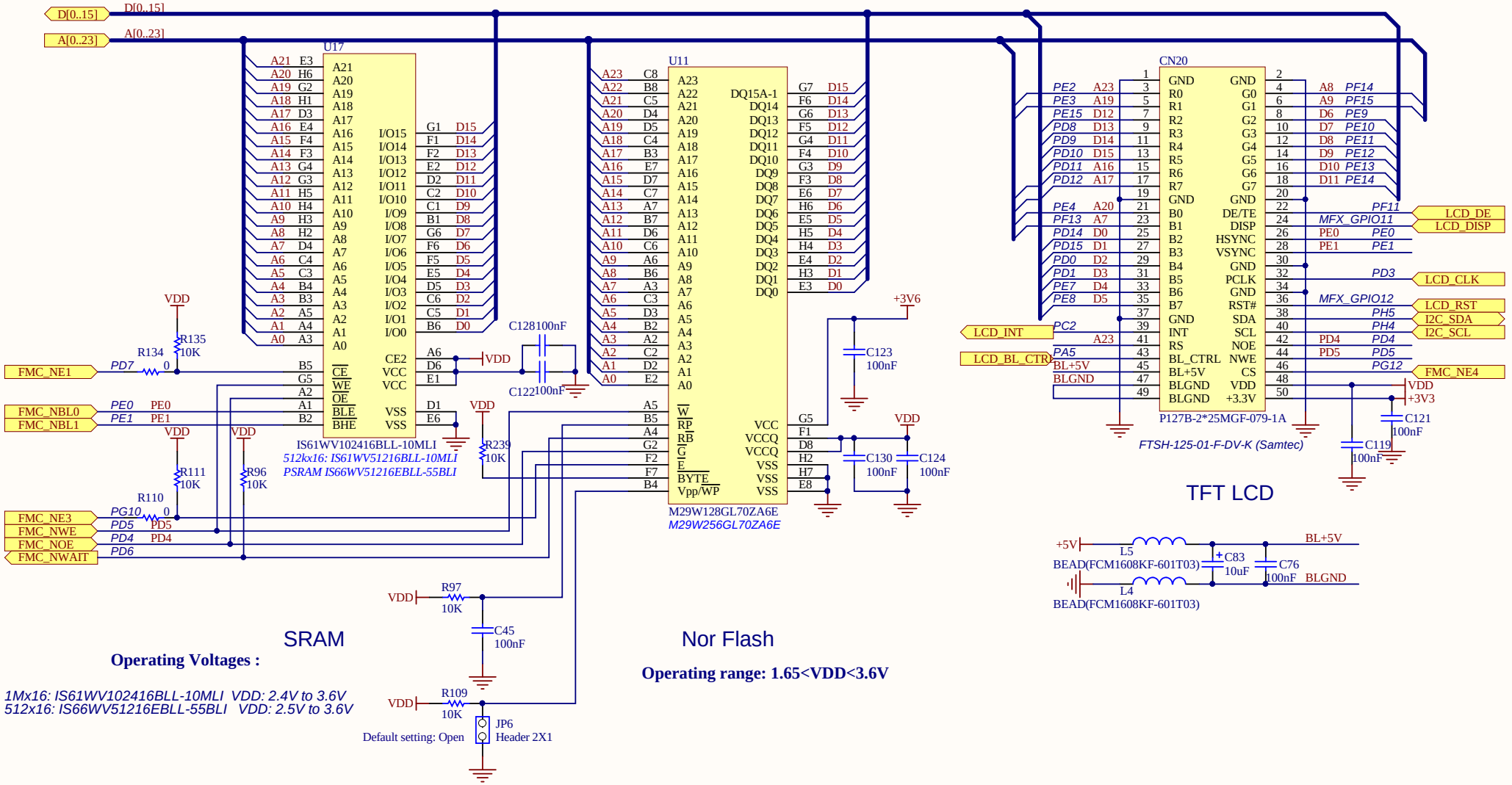
Title: **MCU**		
Project: **STM32L4Rx-EVAL**		
Size: A3	Reference: MB1313	Revision: B.1
Date: 10/18/2017		Sheet: 2 of 16

life.augmentec



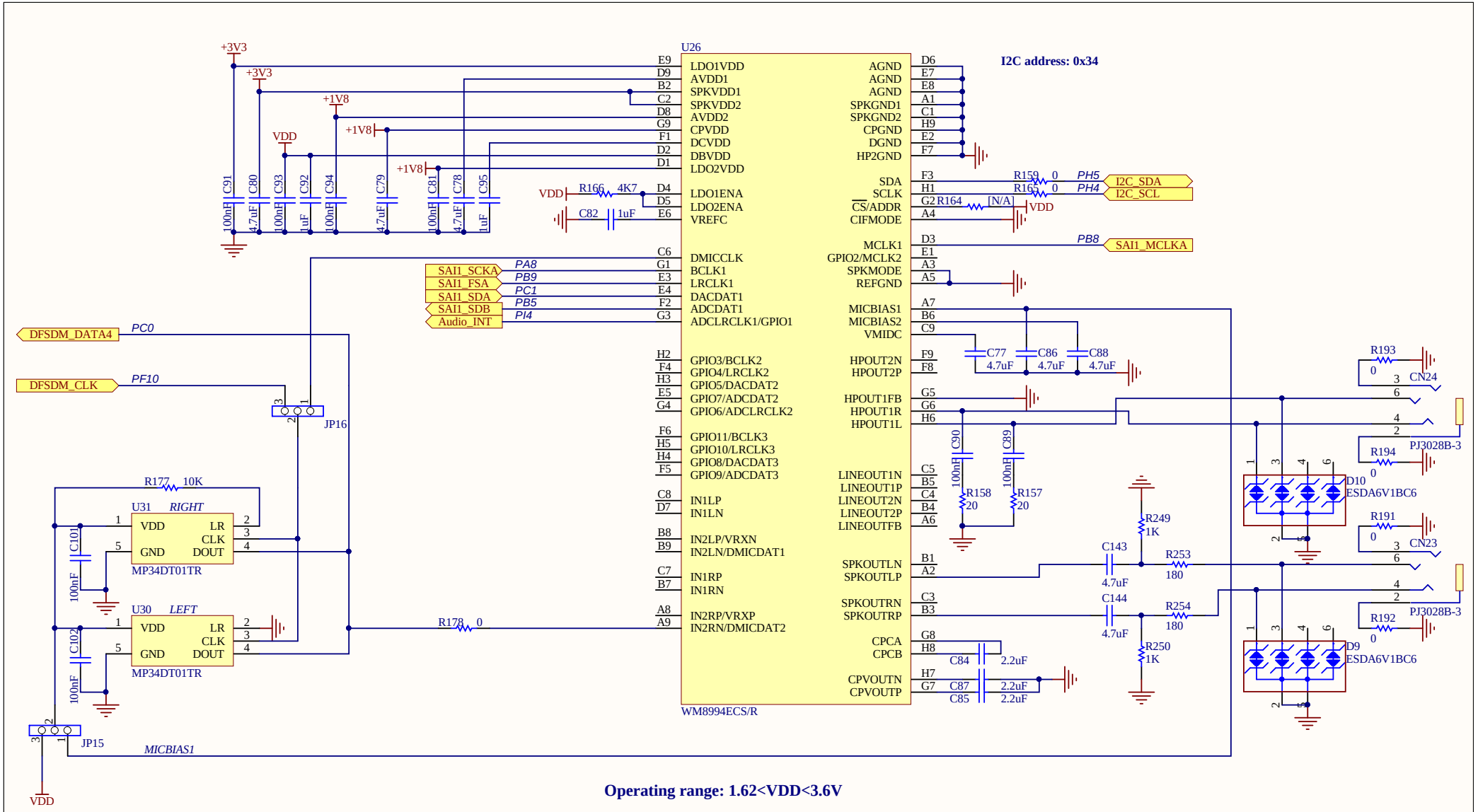
Title: **Power**		
Project: **STM32L4Rx-EVAL**		
Size: A3	Reference: MB1313	Revision: B.1
Date: 7/12/2017		Sheet: 3 of 16

life.augmented



Title: **Memory & TFT LCD**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 3/31/2017		Sheet: 4 of 16

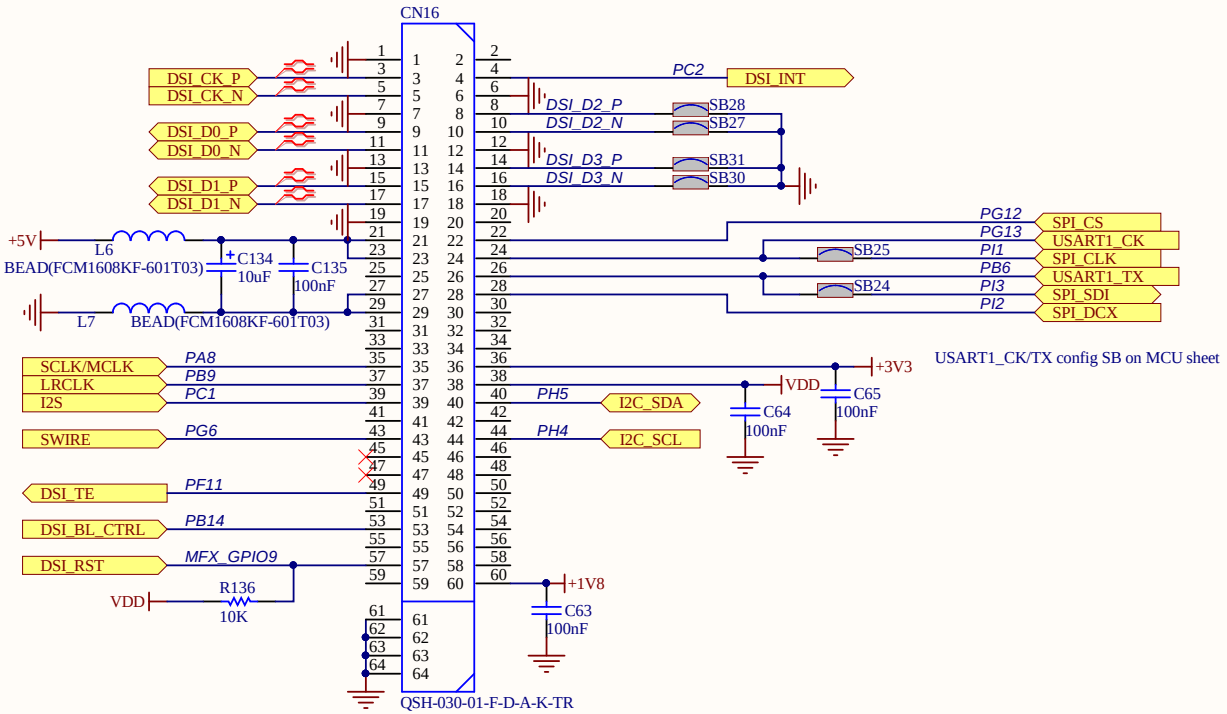
life.augmented



Title: **Audio**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 4/19/2017		Sheet: 5 of 16

life.augmented

DSI LCD

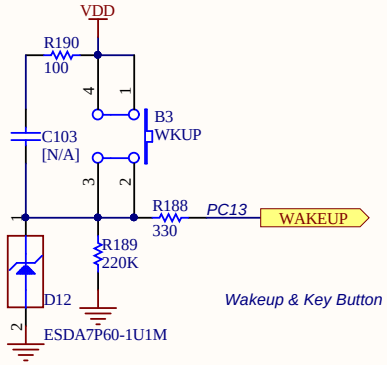


Operating range:
1. GVO LCD IEG1120TB103GF-001 works at 1.65V<VDD<3.3V
2. MB1166 board works at VDD=3.3V only

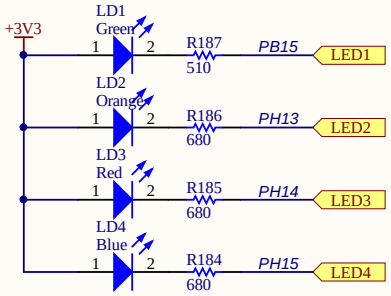
Title: **DSI LCD connector**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 7/12/2017		Sheet: 6 of 16

life.augmented

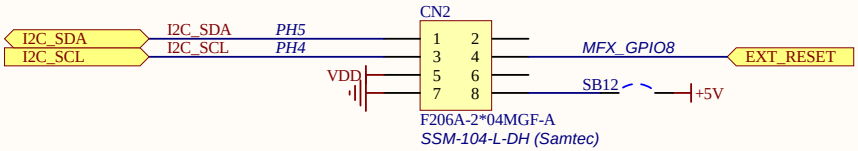
Buttons

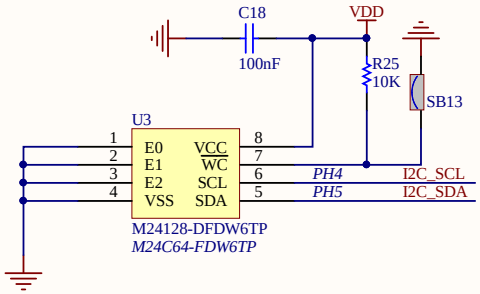


LEDs



EXT_I2C Connector



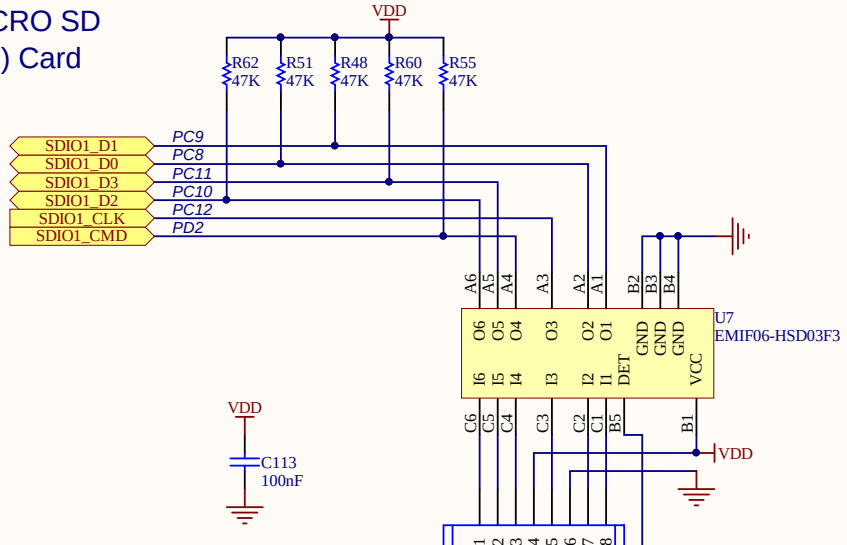


I2C EEPROM

I2C address: 0xA0

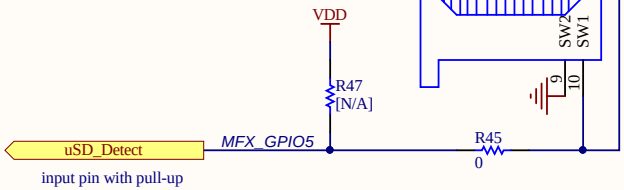
operating voltage ranges:
1MHz 64Kbit I2C memory M24C64-FDW6TP: 1.7 to 5.5V
1MHz 128Kbit I2C memory M24128-FDW6TP: 1.7 to 5.5V

MICRO SD (TF) Card

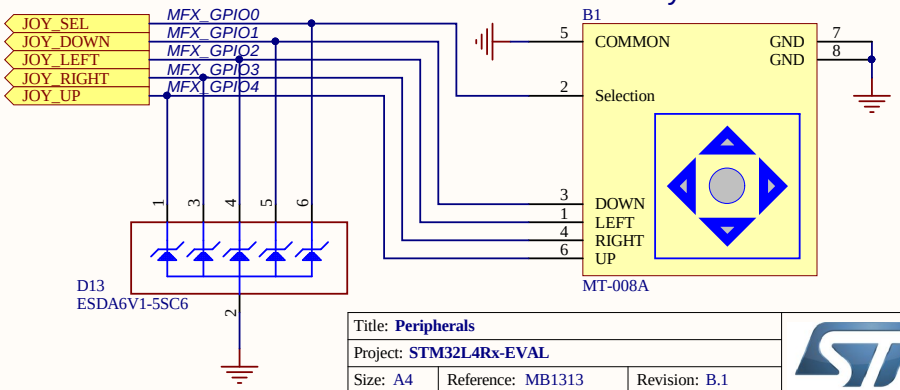


MicroSD card

Operating Voltage: VDD no Lower than 2.7V

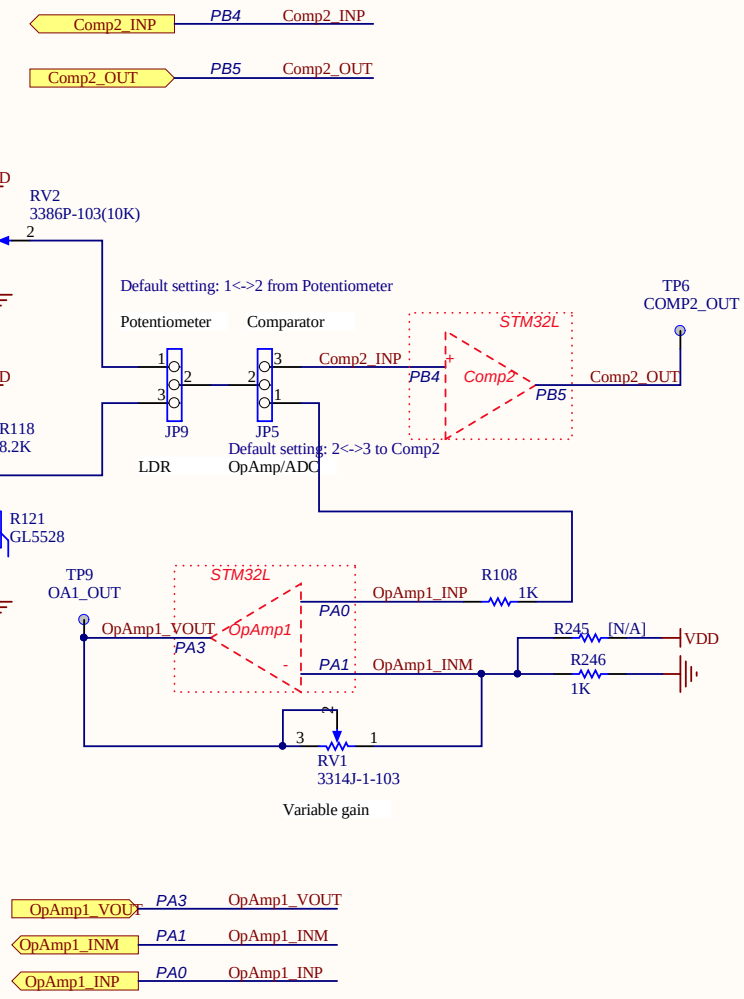


Joystick

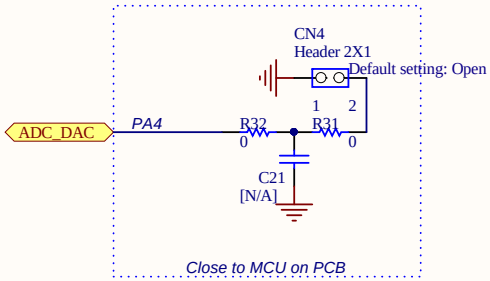


Title: **Peripherals**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 4/10/2017		Sheet: 7 of 16

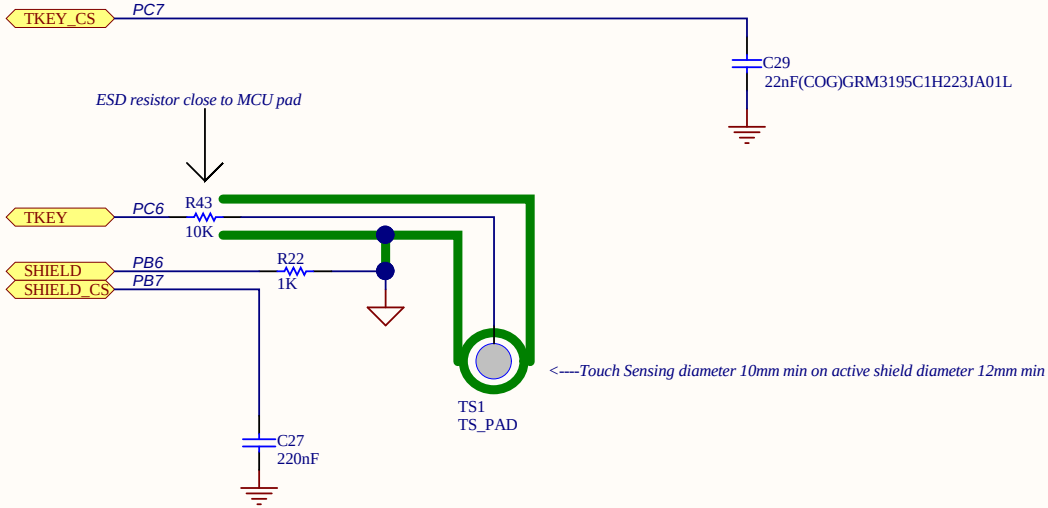
life.augmented



Potentiometer/LDR

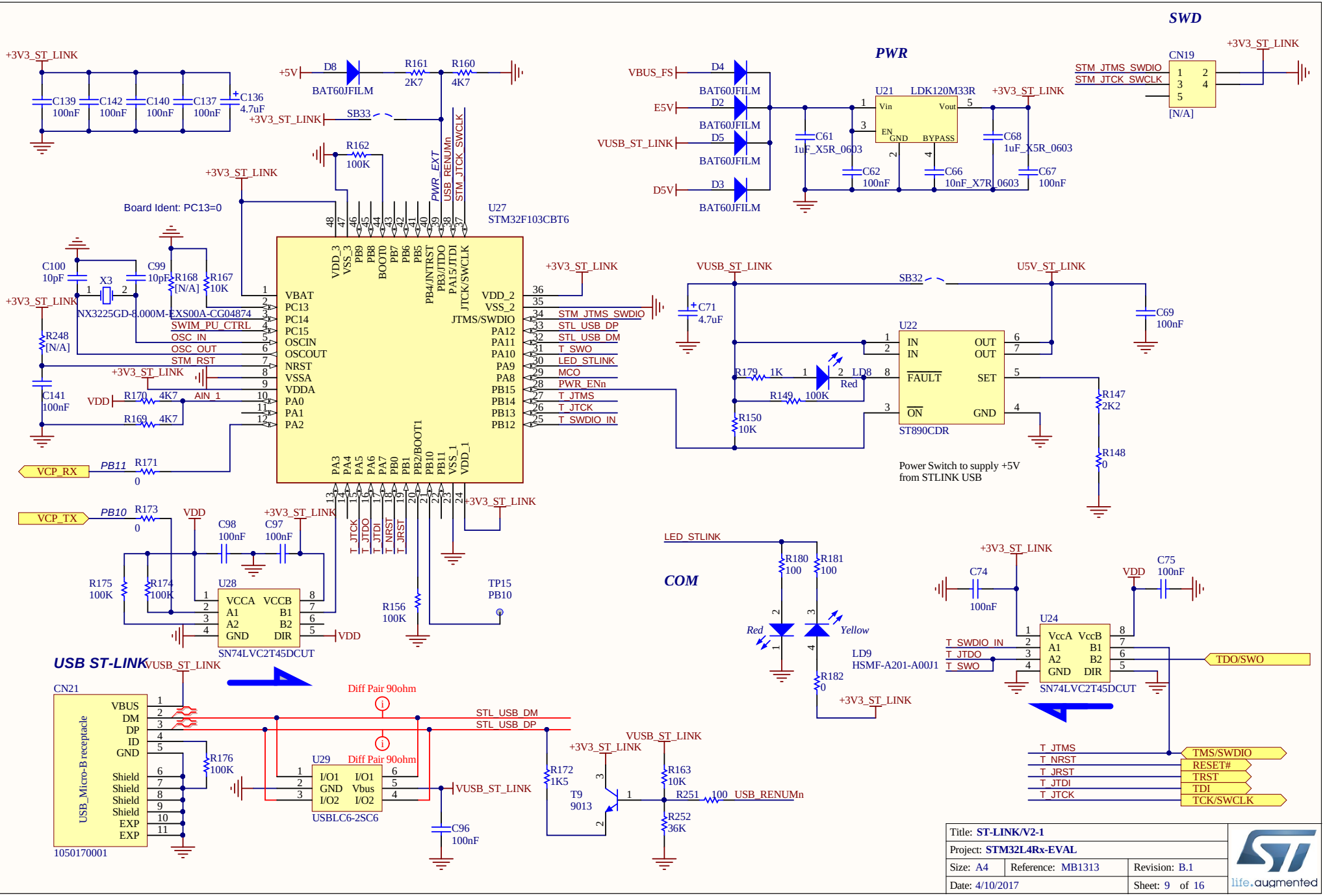


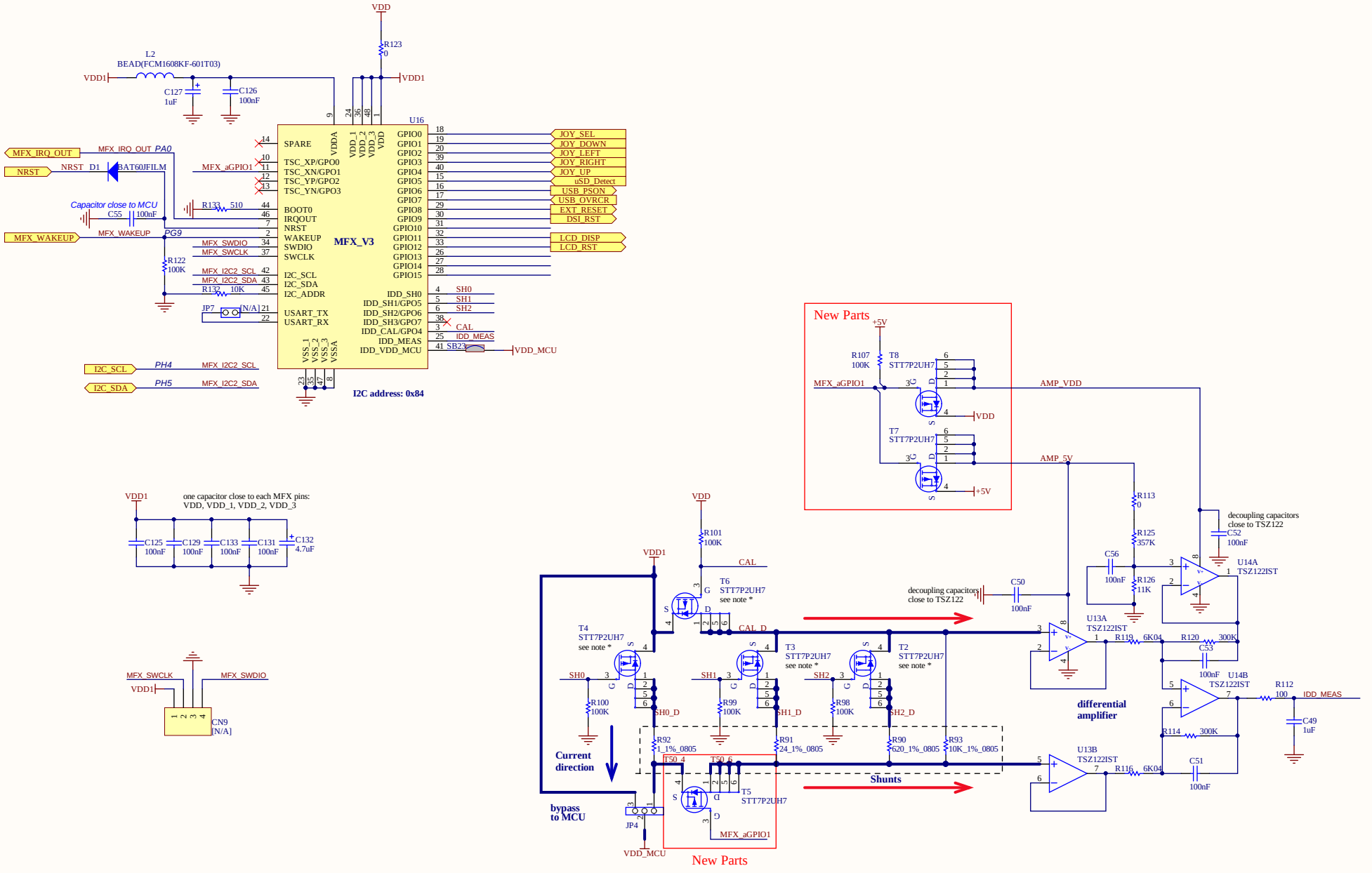
ADC&DAC connector



Title: **Analog and TS**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 6/5/2017		Sheet: 8 of 16

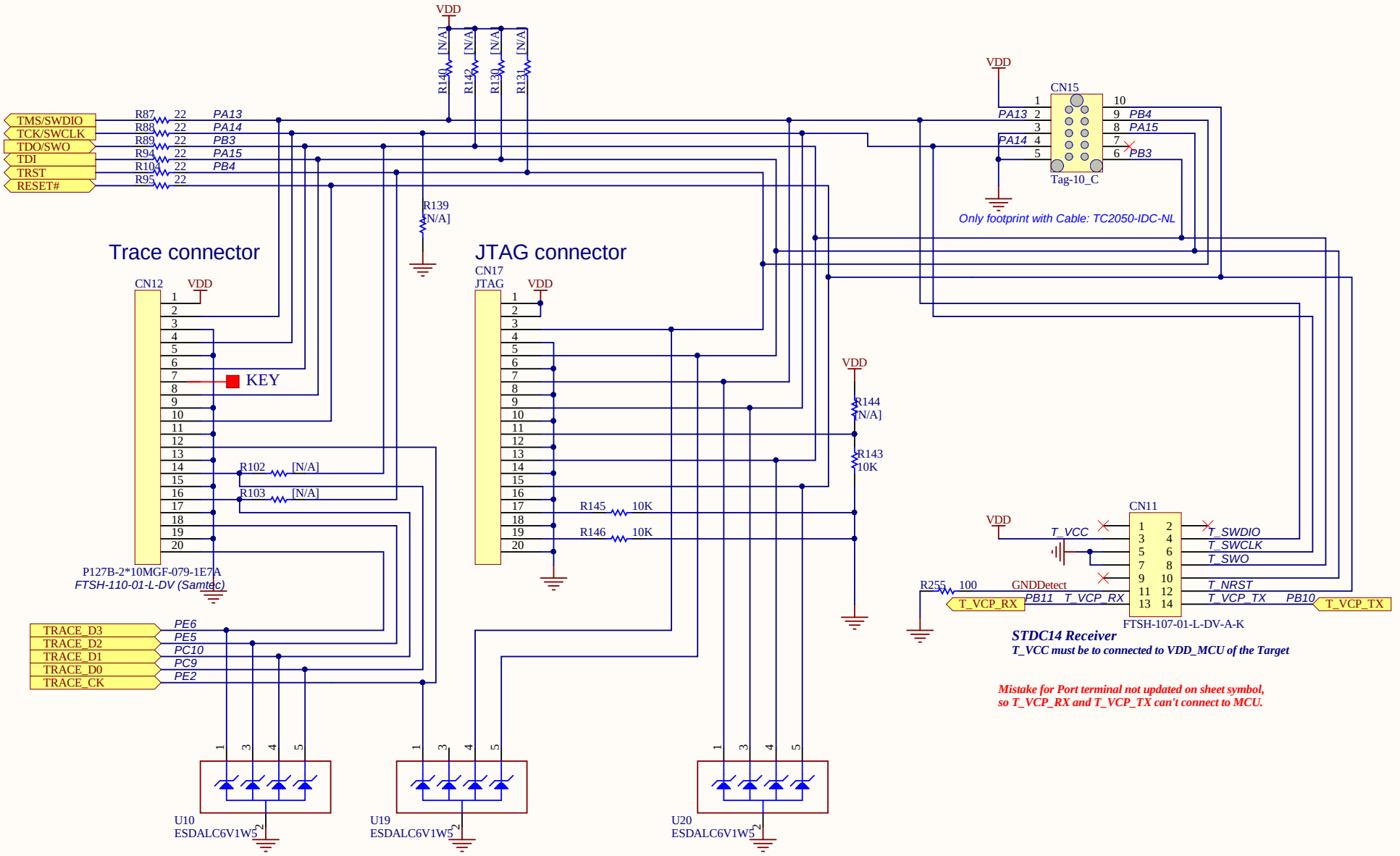
life.augmented


SWD
PWR
USB ST-LINK
COM
Board Ident: PC13=0
U27
STM32F103CBT6
VBAT
PC13
PC14
PC15
OSCIN
OSCOUT
NRST
VSSA
VDDA
PA0
PA1
PA2
VDD_2
VSS_2
JTMS/SWDIO
PA12
PA11
PA10
PA9
PA8
PB15
PB14
PB13
PB12
NX3225GD-8.000M-EXS00A-CG04874
SWIM_PU_CTRL
OSC_IN
OSC_OUT
STM_RST
AIN_1
PB11
PB10
T_JTCK
T_JTDO
T_JTDI
T_NRST
T_JRST
STM_JTMS_SWDIO
STL_USB_DP
STL_USB_DM
T_SWO
LED_STLINK
MCO
PWR_ENn
T_JTMS
T_JTCK
T_SWDIO_IN
PWR_EXT
USB_RENUMn
STM_JTCK_SWCLK
VCP_RX
VCP_TX
U28
SN74LVC2T45DCUT
U21
LDK120M33R
ST890CDR
U22
Power Switch to supply +5V
from STLINK USB
LD8
Red
LD9
HSMF-A201-A00J1
Yellow
U24
TDO/SWO
TMS/SWDIO
RESET#
TRST
TDI
TCK/SWCLK
CN21
USB_Micro-B receptacle
1050170001
U29
USBLC6-2SC6
Diff Pair 90ohm
T9
9013
CN19
[N/A]
Title: ST-LINK/V2-1
Project: STM32L4Rx-EVAL
Size: A4
Reference: MB1313
Revision: B.1
Date: 4/10/2017
Sheet: 9 of 16
life.augmented



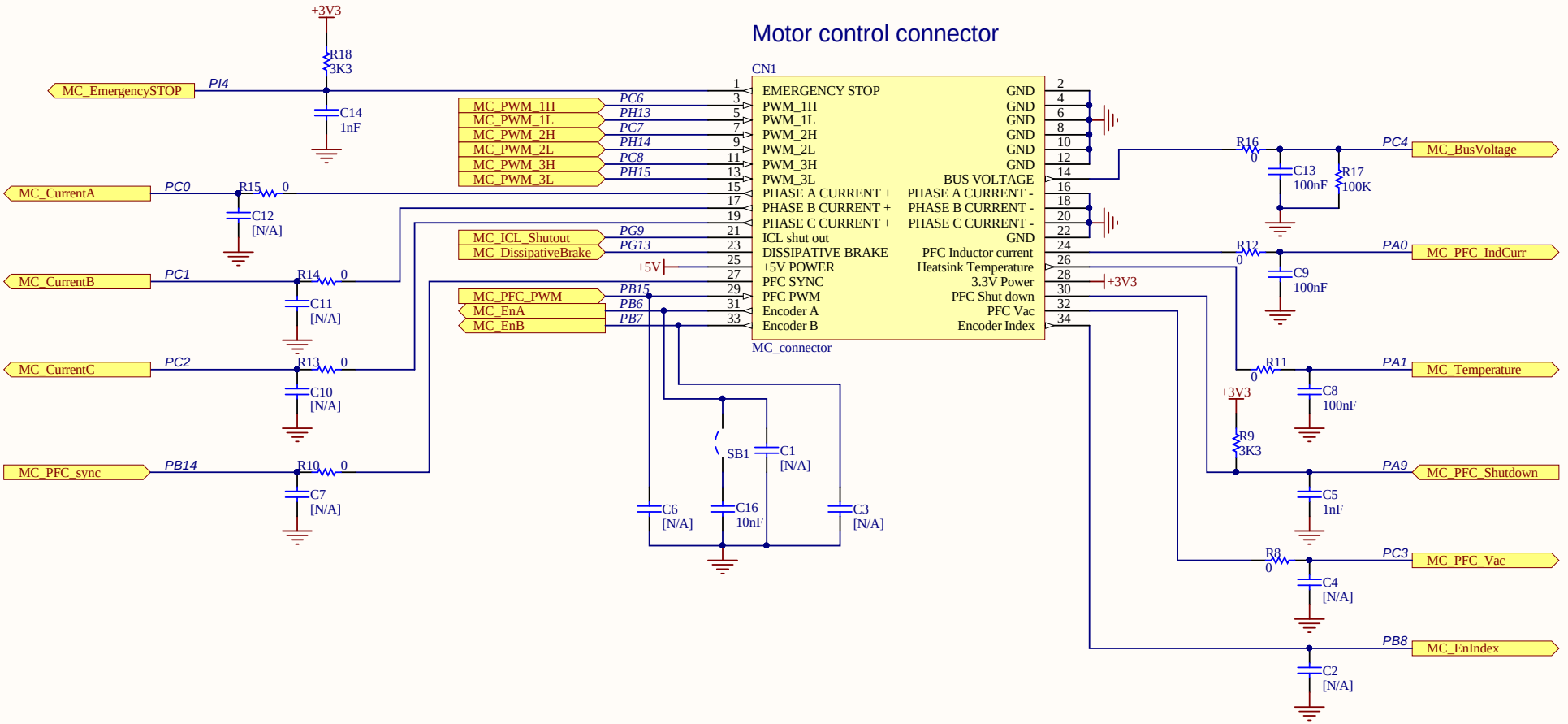
Title: **IDD measurement / MFX (Multi Function eXpander)**		
Project: **STM32L4Rx-EVAL**		
Size: A3	Reference: MB1313	Revision: B.1
Date: 3/31/2017		Sheet: 10 of 16

life.augmented



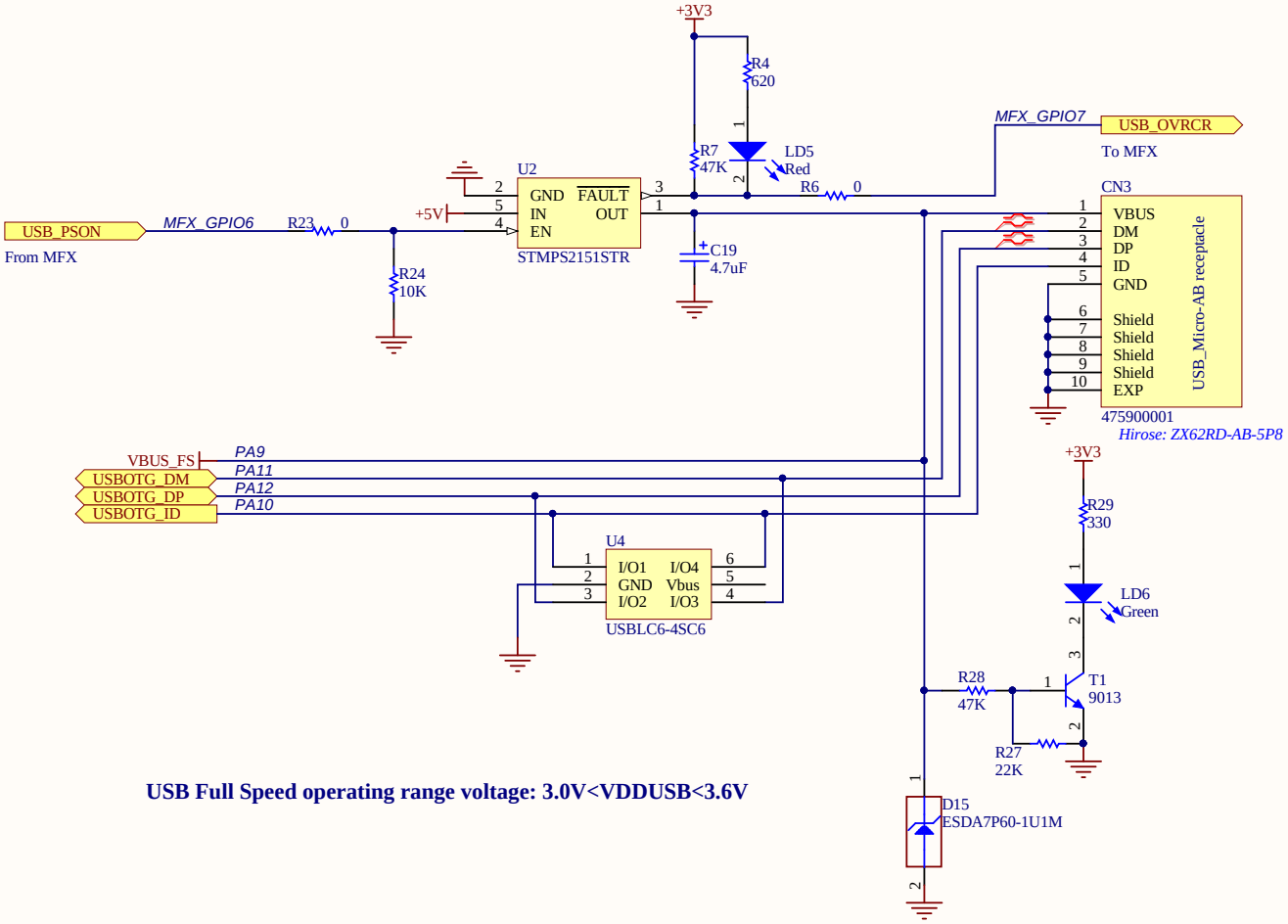
Title: **JTAG & Trace**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 7/12/2017		Sheet: 11 of 16

life.augmented



Title: **MotorControl**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 3/31/2017		Sheet: 12 of 16

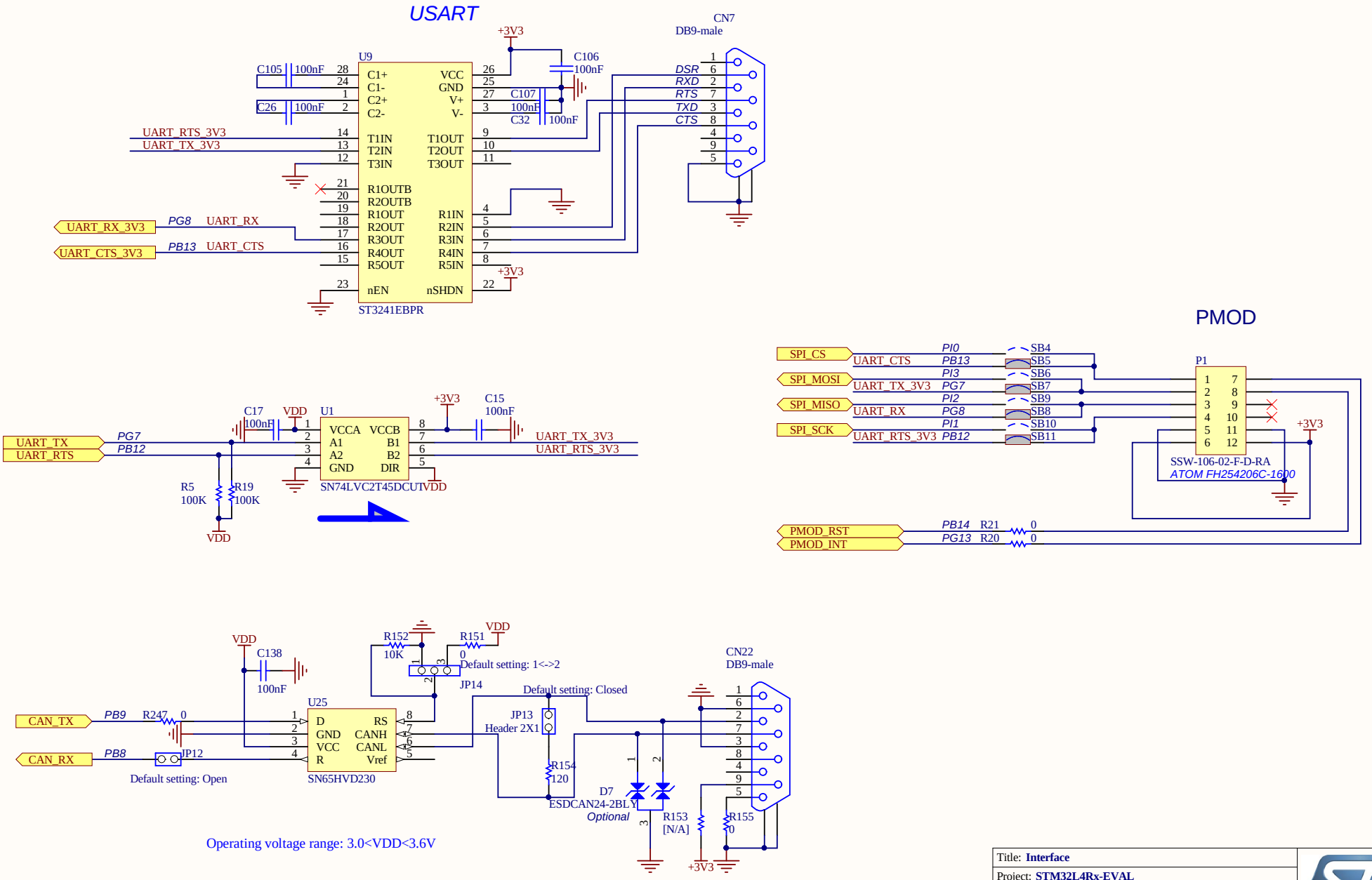
life.augmented



USB Full Speed operating range voltage: 3.0V<VDDUSB<3.6V

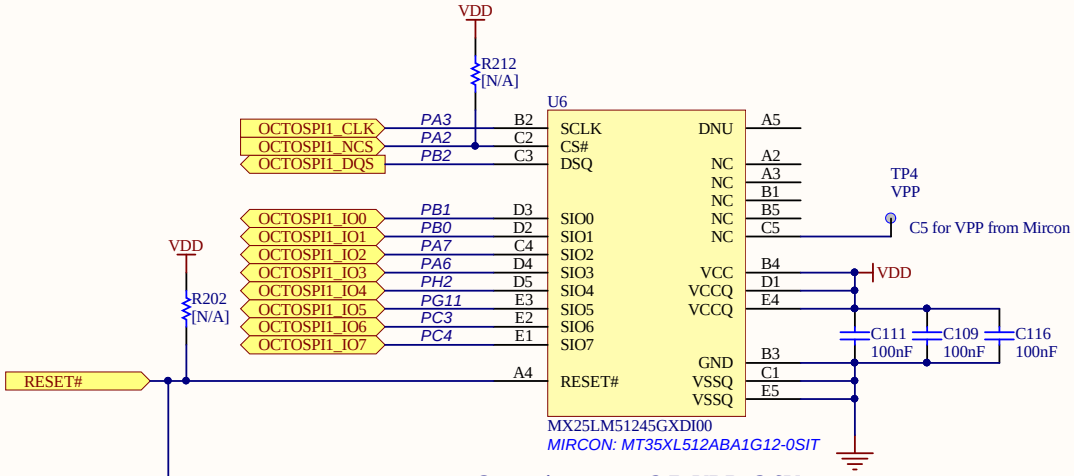
Title: **USB_OTG_FS**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 4/10/2017		Sheet: 13 of 16

life.augmented

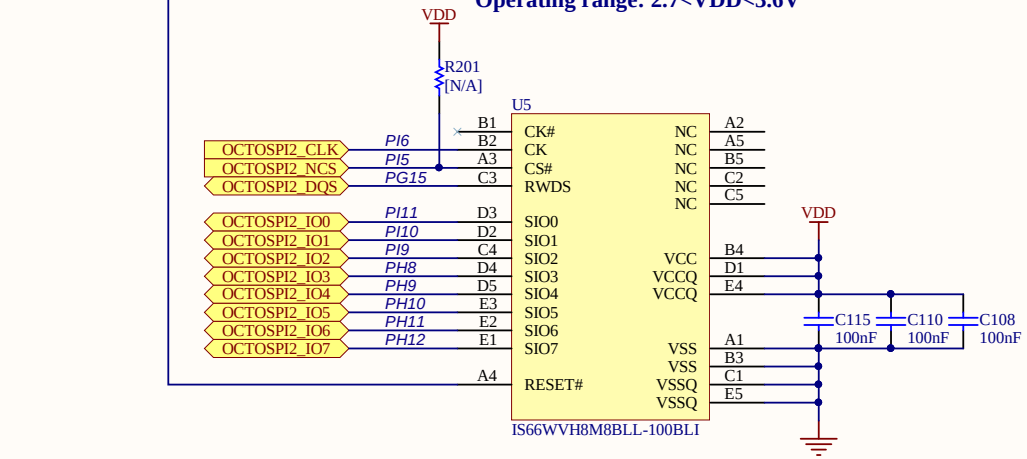


Title: **Interface**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 7/12/2017		Sheet: 14 of 16

life.augmented



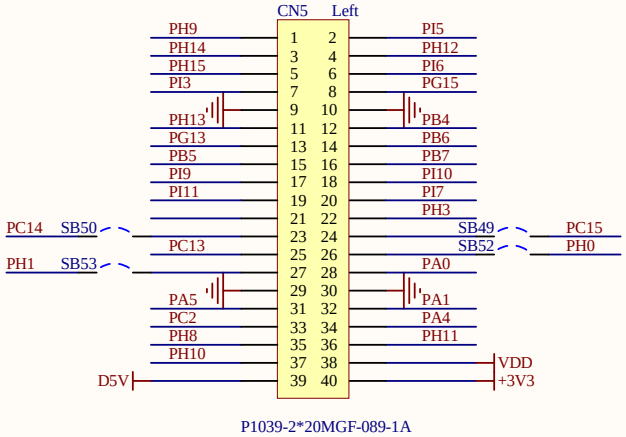
Operating range: 2.7<VDD<3.6V



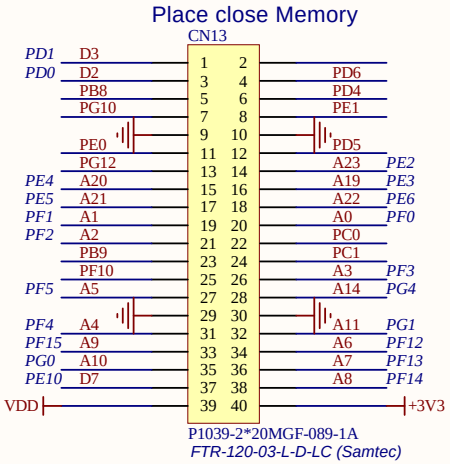
Operating range: 2.7<VDD<3.6V

Title: **OctoSPI**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 10/18/2017		Sheet: 15 of 16

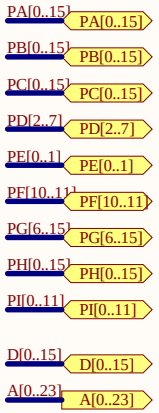
life.augmented

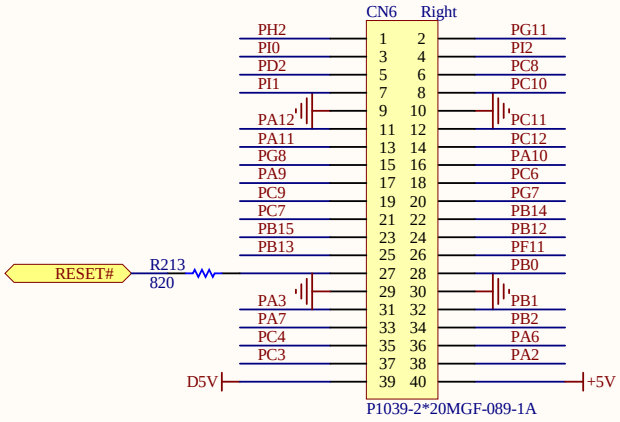


P1039-2*20MGF-089-1A

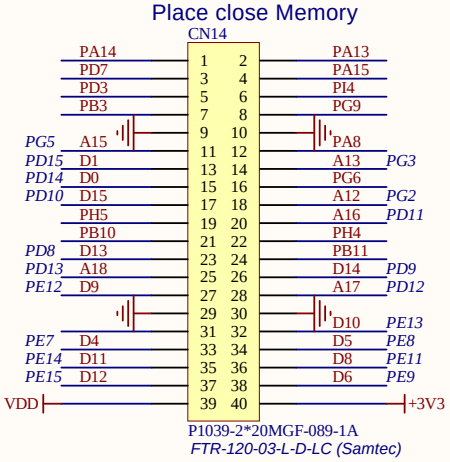


P1039-2*20MGF-089-1A
FTR-120-03-L-D-LC (Samtec)





P1039-2*20MGF-089-1A



P1039-2*20MGF-089-1A
FTR-120-03-L-D-LC (Samtec)

Title: **Extension Connectors**		
Project: **STM32L4Rx-EVAL**		
Size: A4	Reference: MB1313	Revision: B.1
Date: 3/31/2017		Sheet: 16 of 16

life.augmented