

NUCLEO64 ext-SMPS

MB1319

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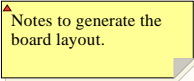
Sheet 8: ST-Link/V2-1

U_mb1319_Top
mb1319_Top.SchDoc



Legend

- General comment such as function title, configuration, ...
- Text to be added to silkscreen.
- Warning text.



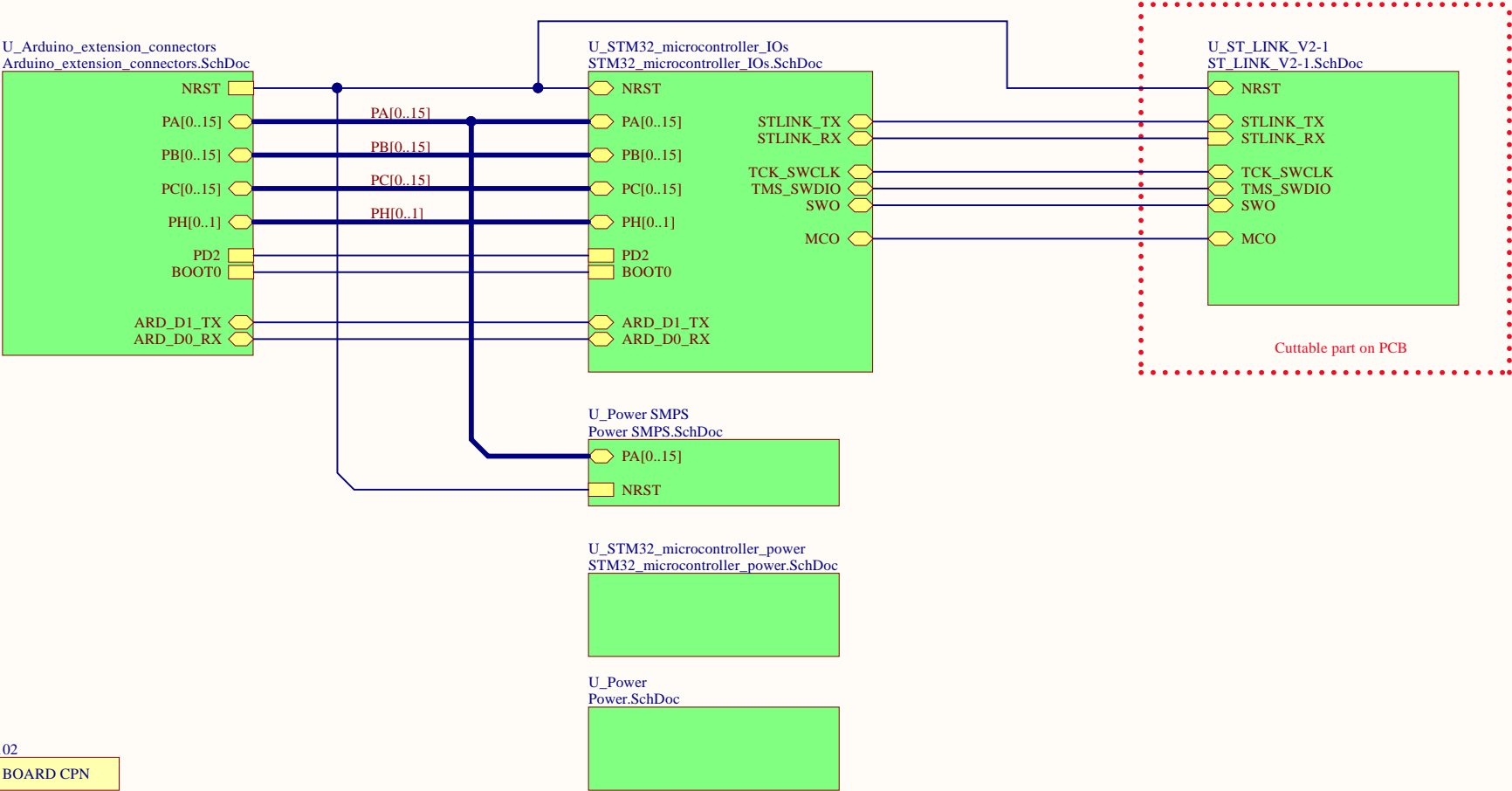
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HW101

BOARD REF

MB1319C-01 xxxx

HW102

BOARD CPN

NUCLEO-L433RC-P

HW100

PCB

MB1319C

HW103

BLISTER

NUCLEO64_BLISTER

HW104

DNF

LOGO NUCLEO

HW105

DNF

LOGO ST

HW106

DNF

LOGO CE

HW107

DNF

LOGO ESD

HW108

DNF

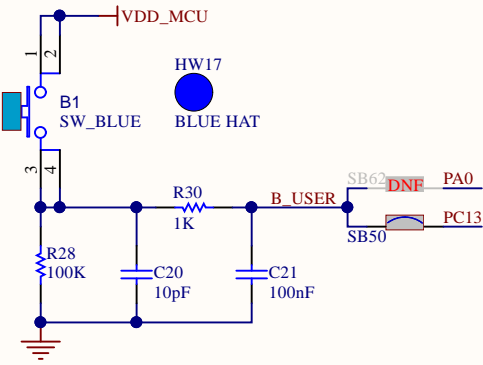
LOGO ROHS

HW109

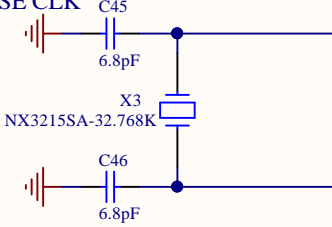
DNF

LOGO STM32

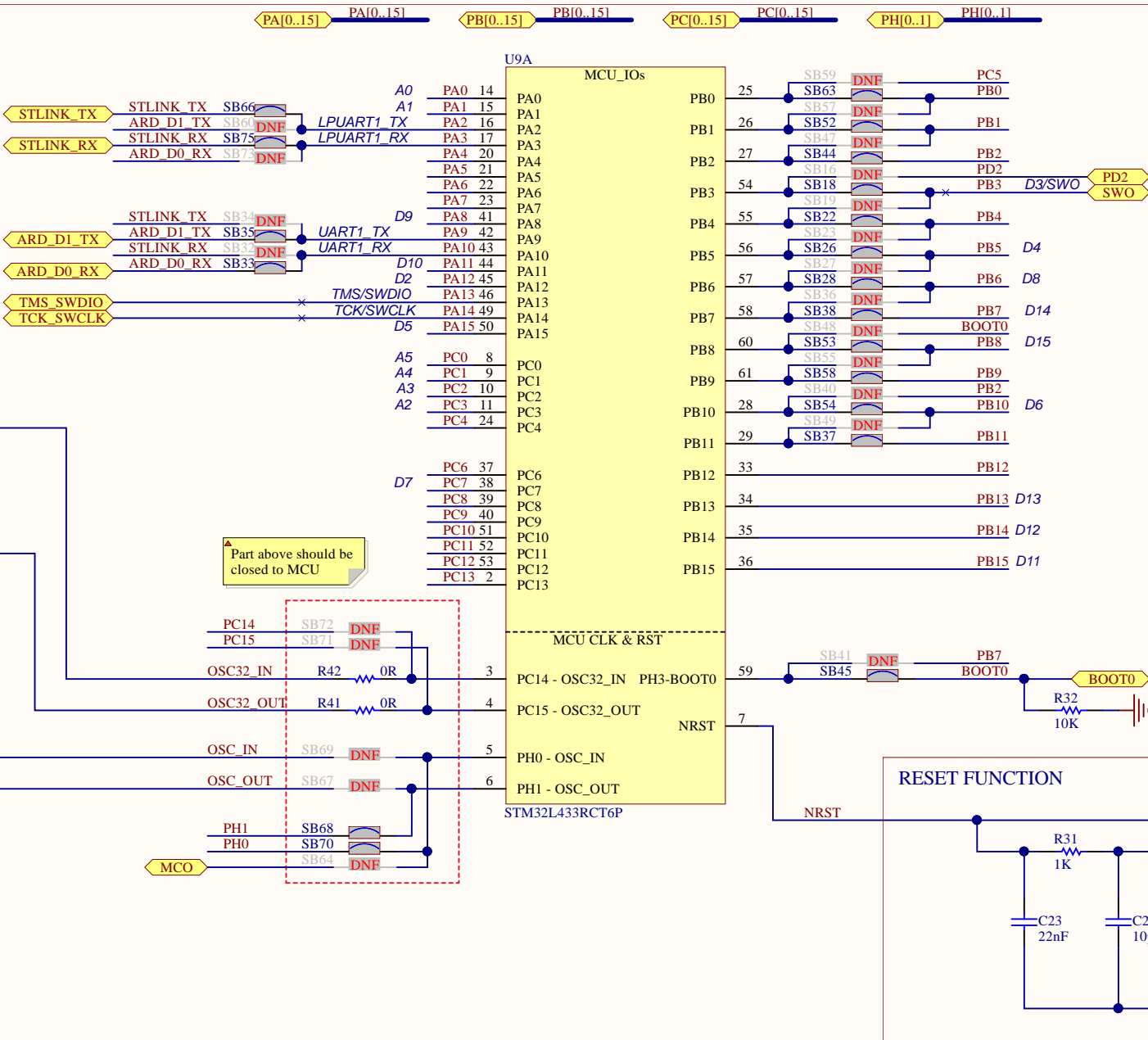
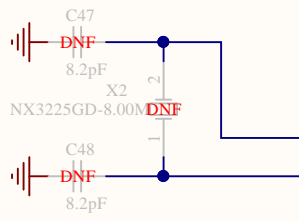
USER BUTTON



EXTERNAL LSE CLK



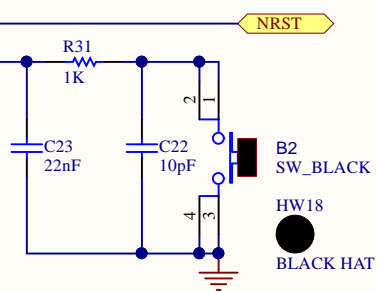
EXTERNAL HSE CLK



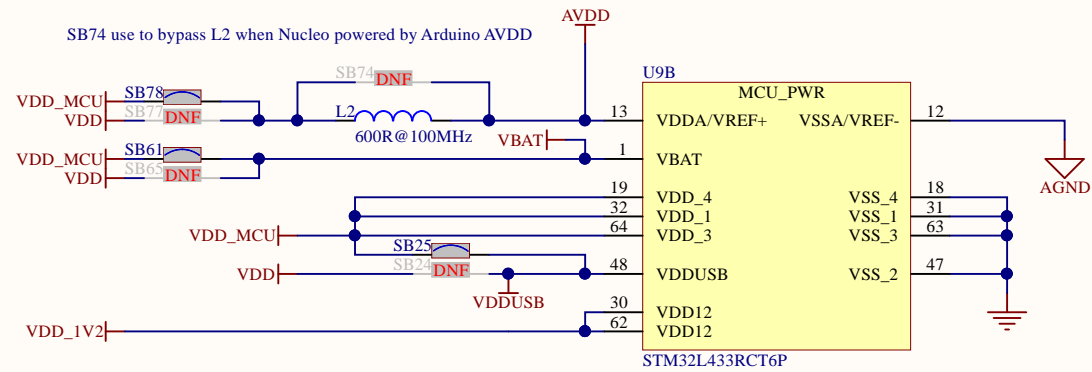
For IC compatible config 1:
Pin25: PB0: SB63
Pin26: PB1: SB52
Pin27: PB2: SB44
Pin54: PB3: SB18
Pin55: PB4: SB22
Pin56: PB5: SB26
Pin57: PB6: SB28
Pin58: PB7: SB38
Pin60: PB8: SB53
Pin61: PB9: SB58
Pin28: PB10: SB54
Pin29: PB11: SB37
Pin59: PH3-BOOT0: SB45

For IC compatible config 2:
Pin25: PC5: SB59
Pin26: PB0: SB57
Pin27: PB1: SB47
Pin54: PD2: SB16
Pin55: PB3: SB19
Pin56: PB4: SB23
Pin57: PB5: SB27
Pin58: PB6: SB36
Pin60: PH3-BOOT0: SB48
Pin61: PB8: SB55
Pin28: PB2: SB40
Pin29: PB10: SB49
Pin59: PB7: SB41

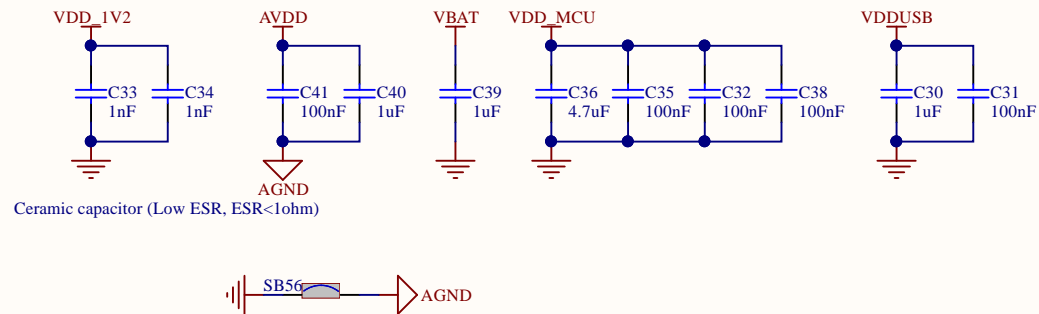
RESET FUNCTION



MCU PWR SUPPLIES



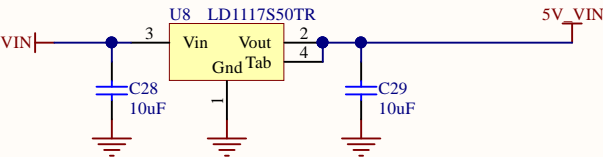
DECAPS



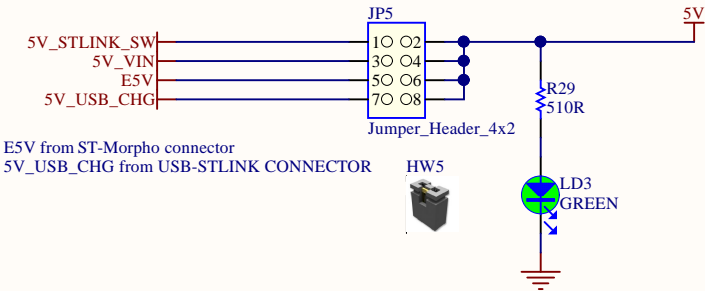
Default



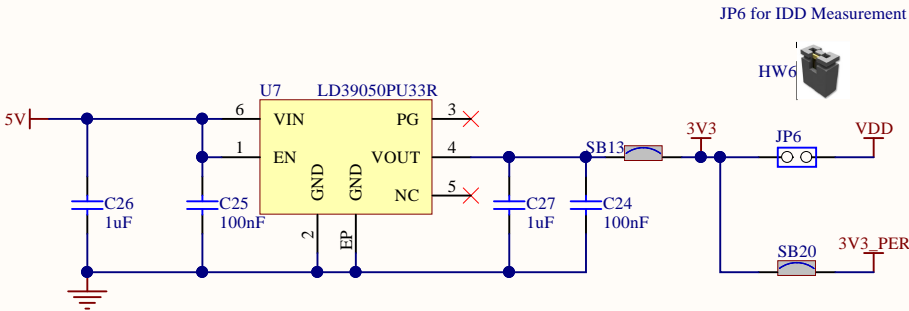
VIN / 5V PWR



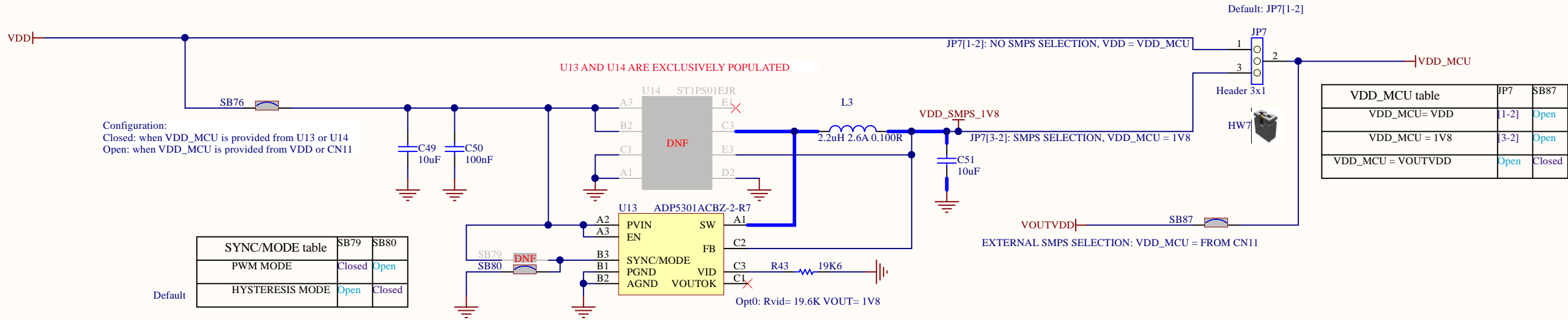
5V PWR SELECTION



3V3 PWR

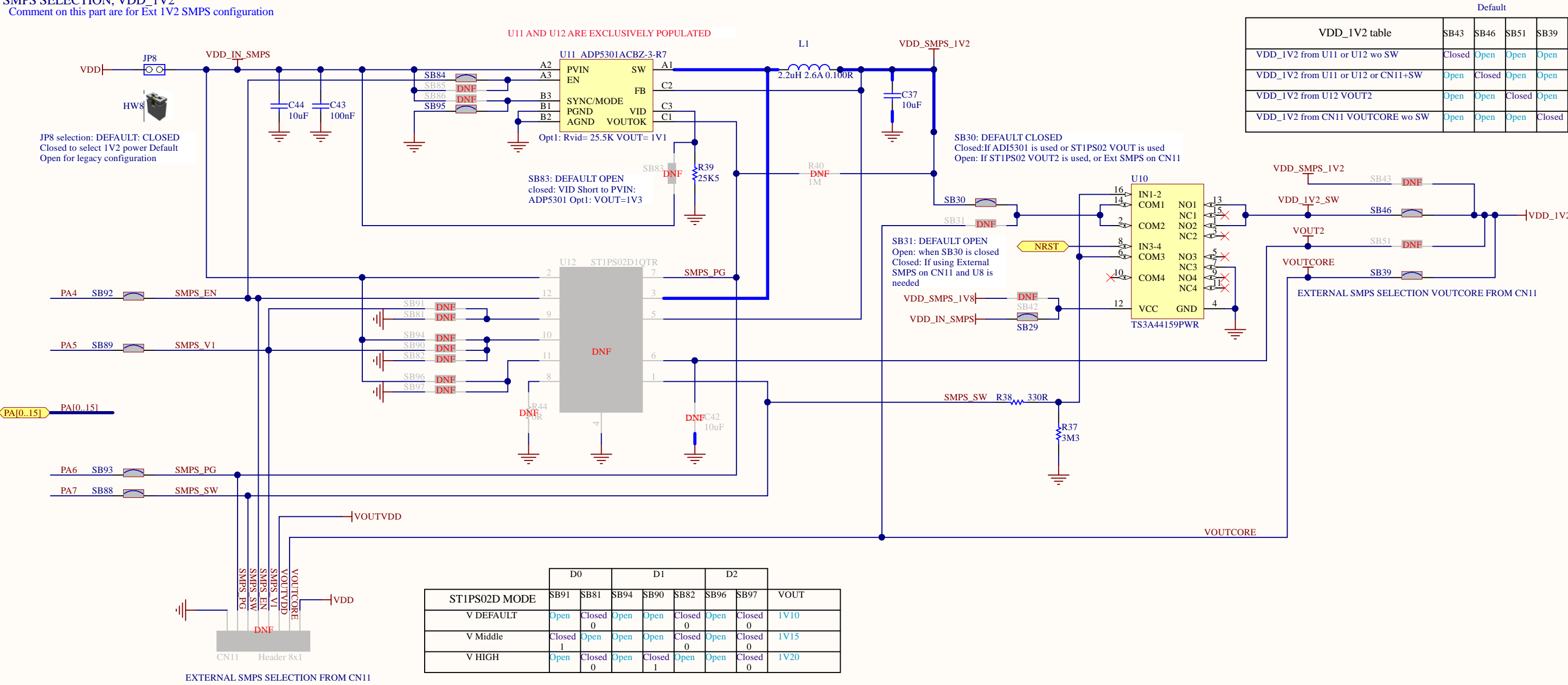


VDD_MCU_SELECTION



SMPS SELECTION, VDD_1V2

Comment on this part are for Ext 1V2 SMPS configuration



[illegible]

SWD INTERFACE

HW4

T_NRST

SWO_MCU

TCK/SWCLK

TMS/SWDIO

JP4

SB11

NRST

SWO

TCK_SWCLK

TMS_SWDIO

DEFAULT

RESERVED

SB2

SB4

SB6

SB8

SB1

SB3

SB5

SB7

3V3_ST_LINK

STM_JTCK

STM_JTMS

SWCLK

SWDIO

CN3

1

2

3

4

5

6

Header 6x1

R8 10K

D2 BAT60JFILM

R16 100R

AIN_1

R11 22R

T_JTCK

R14 22R

T_JTMS

R17 22R

T_NRST

R20 22R

T_SWO

CN2

Header 4x1

1

2

3

4

HW9

HW10

Jumpers ON --> NUCLEO Selected
Jumpers OFF --> ST-LINK Selected

UART_TX LEVEL SHIFTER for MCU_1V8

MCU_1V8/3V3

ST_LINK_3V3

VDD_MCU

C17 100nF

C16 100nF

3V3_ST_LINK

U5

8 VccB

7 B1

6 B2

5 DIR

1 VccA

2 A1

3 A2

4 GND

R26 0R

STLINK_TX

STLK_RX

SN74LVC2T45DCUT

DNE

SB12

MCU_I/V8

ST_LINK_3V3

VDD_MCU

3V3_ST_LINK

T_JTMS

SWO_MCU

T_SWDIO_IN

T_SWO

U6

SN74LVC2T45DCUT


DNE

SB10

[illegible]

ST-LINK POWER 3V3 / 150mA

The diagram illustrates the power regulation circuit for the ST-LINK. It features three input lines: 5V_VIN, 5V, and 5V_STLINK. Each line is connected to a BAT60JFILM diode (D5, D4, and D3 respectively). The cathodes of these diodes are connected to a common ground. The anodes are connected to a network of capacitors (C5, C6, C8, C4, C3) and a voltage regulator U3 (LD3985M33R). The regulator's Vin is connected to the output of the diode network, its INH is connected to ground, and its Vout is connected to the 3V3_STLINK output. The bypass capacitor C8 is connected between the regulator's Vout and ground.

Title: ST-LINK/V2-1			 life.augment
Project: NUCLEO64 ext-SMPS			
Variant: L433RC_P			
Revision: C-01		Reference: MB1319	
Size: A3	Date: 05-January-2018	Sheet: 8 of 8	

