VSRC & VSNK BLOCK DIAGRAM
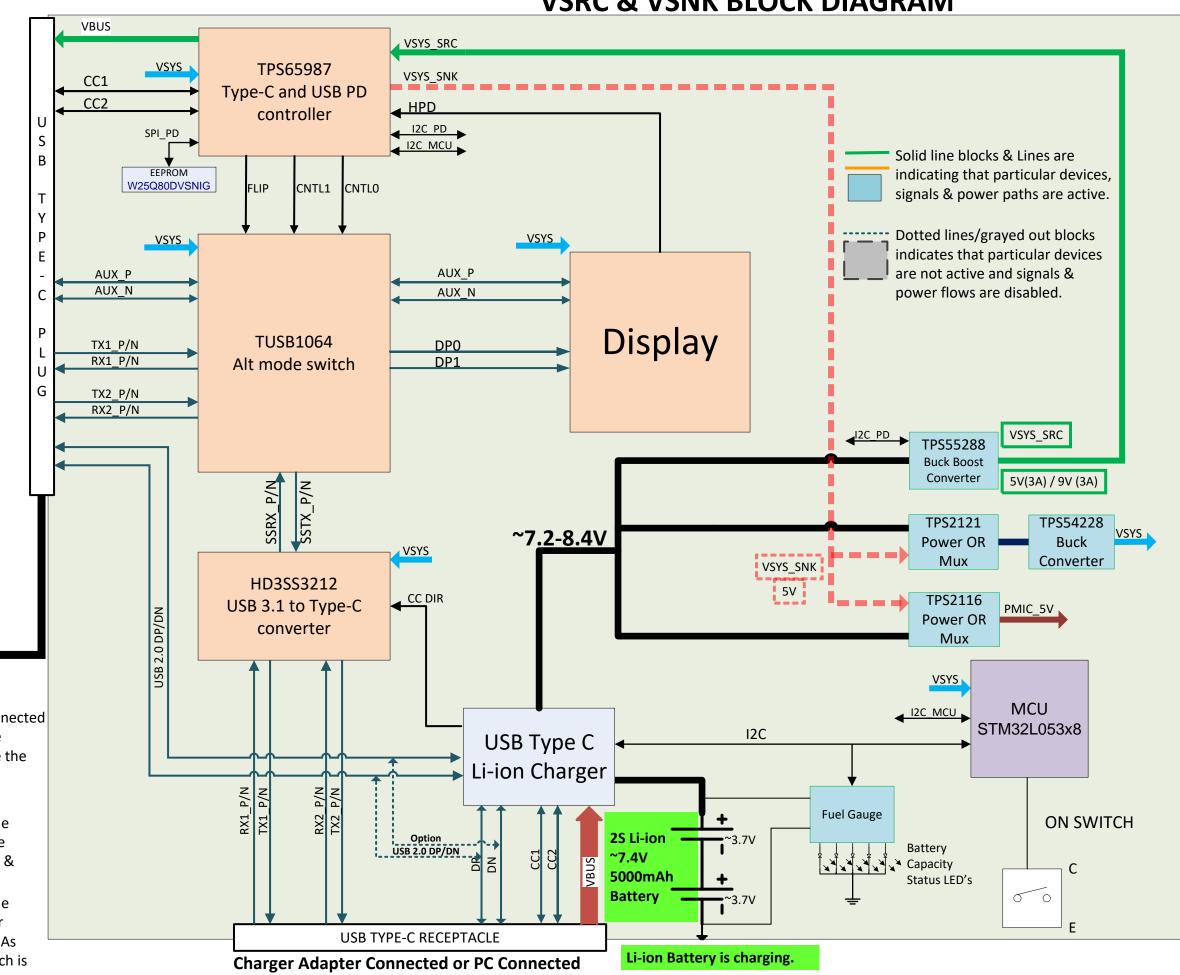

Case 1: Whenever the USB TYPE C Receptacle, connected to a WALL WART ADAPTER, we need to charge the external 2S Li-ion Battery, also we need to provide the power system (which is including Display & Phone connected to TYPE C Plug).

Case 2: When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery in discharge mode(provide the power system which is Display & Phone connected to TYPE C Plug)

Case 3: When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery removed or discharged to dead condition mode. Phone (Acts As Source) shall start provide the power system which is Display & other IC's in the device through PD Controller.

TO PHONE
USB
C to C
cable

Solid line blocks & Lines are indicating that particular devices, signals & power paths are active.

Dotted lines/grayed out blocks indicates that particular devices are not active and signals & power flows are disabled.

Charger Adapter Connected or PC Connected

Li-ion Battery is charging.

VSRC & VSNK BLOCK DIAGRAM
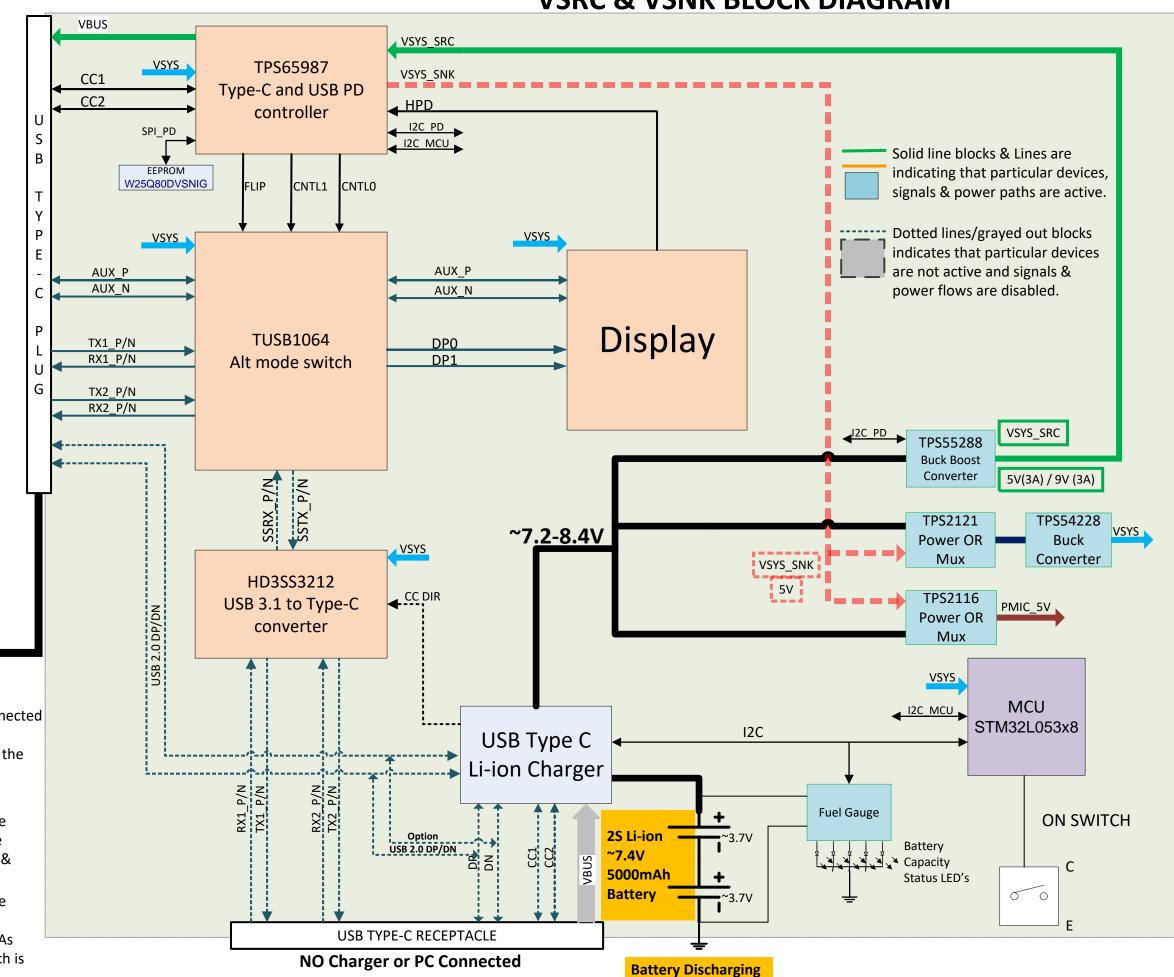

TO PHONE
USB
C to C
cable

Case 1: Whenever the USB TYPE C Receptacle, connected to a WALL WART ADAPTER, we need to charge the external 2S Li-ion Battery, also we need to provide the power system (which is including Display & Phone connected to TYPE C Plug).

Case 2:When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery in discharge mode(provide the power system which is Display & Phone connected to TYPE C Plug)

Case 3:When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery removed or discharged to dead condition mode. Phone (Acts As Source) shall start provide the power system which is Display & other IC's in the device through PD Controller.

VSRC & VSNK BLOCK DIAGRAM

TO PHONE USB C to C cable

USB TYPE-C PLUG

VBUS

VSYS

CC1
CC2

SPI_PD

EEPROM
W25Q80DVSNIG

FLIP CNTL1 CNTL0

**TPS65987
Type-C and USB PD controller**

VSYS_SRC
VSYS_SNK
HPD
I2C_PD
I2C_MCU

VSYS

AUX_P
AUX_N

TX1_P/N
RX1_P/N

TX2_P/N
RX2_P/N

**TUSB1064
Alt mode switch**

AUX_P
AUX_N

DP0
DP1

VSYS

Display

SSRX_P/N SSTX_P/N

VSYS

**HD3SS3212
USB 3.1 to Type-C converter**

CC DIR

USB 2.0 DP/DN

I2C_PD

**TPS55288
Buck Boost Converter**

VSYS_SRC
5V(3A) / 9V (3A)

~7.2-8.4V

VSYS_SNK
5V

**TPS2121
Power OR Mux**

**TPS54228
Buck Converter**

VSYS

**TPS2116
Power OR Mux**

PMIC_5V

RX1_P/N TX1_P/N RX2_P/N TX2_P/N

Option
USB 2.0 DP/DN

DP DN CC1 CC2 VBUS

USB Type C Li-ion Charger

I2C

VSYS

I2C_MCU

**MCU
STM32L053x8**

Fuel Gauge

**2S Li-ion
~7.4V
5000mAh
Battery**

+ ~3.7V
+ ~3.7V

Battery Capacity Status LED's

ON SWITCH

C

E

USB TYPE-C RECEPTACLE

No Charger Connected

Dead Battery \ NO Charge inside the battery

Solid line blocks & Lines are indicating that particular devices, signals & power paths are active.

Dotted lines/grayed out blocks indicates that particular devices are not active and signals & power flows are disabled.

Case 1: Whenever the USB TYPE C Receptacle, connected to a WALL WART ADAPTER, we need to charge the external 2S Li-ion Battery, also we need to provide the power system (which is including Display & Phone connected to TYPE C Plug).

Case 2:When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery in discharge mode(provide the power system which is Display & Phone connected to TYPE C Plug)

Case 3:When NO PC/NO Adapter connected at the Receptacle, external 2S Li-ion Battery removed or discharged to dead condition mode. Phone (Acts As Source) shall start provide the power system which is Display & other IC's in the device through PD Controller.

05:30

Sunday, 23 Feb | ☀ 20°C

Google Duo Assistant Photos My Phone

Say "Hey Google"

NOKIA