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MCU POWER, CLOCK, RESET & BOOT

32kHz Clock

From STLINK V3E MCO (5MHz) for interposer

24MHz Clock

RESET

BOOT0

default: 1-3

MCU POWER
Power Delivery management

USB PD

Voltage: 5V_EXT
Current: 3A

Components:
- Q3, Q2: STP9P3LLH6
- R246, R250, R254, R259: 1K
- R248, R249: 21K, 100K
- T9: 3
- S1: 8
- C185: 10pF
- STPS2L40UF
- 5V_EXT
- VBUS

Source port CC management:
- PD_CC1
- PD_CC2
- PD_DBCC1
- PD_DBCC2
- SOURCE_EN
- VSENSE

USB-TYPEC

TYPE-C

Components:
- PD_DBCC1
- PD_DBCC2
- PD_CC1
- PD_CC2
- VSENSE
- SOURCE_EN

Diagram shows various components and connections for USB PD and Source port CC management.
Operating range:
512Kx16: IS61WV51216BLL-10MLI  VDD: 2.4V to 3.6V
512x16: IS66WV51216EBLL-55BLI   VDD: 2.5V to 3.6V
Place close to SRAM
Operating range: 2.7V < VDD < 3.6V

Twin Quad SPI Flash solutions:

One Twin Quad SPI Flash: U12 MT25TL01GHBBS8F-0STT U54-NA
R167/R168/R169/R170, SB120, SB36 ON
R319/R320/R321/R322, SH119, SB35, C184 OFF

Two Quad SPI Flash (Default): U12 MT25QL512ABB8ESF-0STT U54 MT25QL512ABB8ESF-0STT
R167/R168/R169/R170, SB120, SB35, C184 ON
R319/R320/R321/R322, SH119, C184 OFF
Operating range: 1.62<VDD<3.6V
I2C address: 0x34
Jack out Green
Jack in blue
Operating range: \( VDD > 1.8V \)
Operating range: VDD > 2.7V
MCU EXTENSION CONNECTORS

SB82 and SB88 close to PF0/PF1 for HSE accuracy
SB88 and SB87 close to PC14/PC15 for LSE accuracy

FTR-130-03-L-D-0C (Samtec) or FTR-130-03-L-D-0C (Samtec) ?

TSW-130-07-L-D-0C (Samtec) or TSW-130-07-L-D-0C (Samtec) ?
HW Mechanical parts

- PCB
- LOGO ST
- LOGO CE
- LOGO ESD
- LOGO ROHS
- H6
- H2
- H5
- H3