Open Platform License Agreement

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The complete Open Platform License Agreement can be found on www.st.com/opla.
SDRAM

- DQML: VDDQ, VSSQ
- DQMH: VDDQ, VSSQ
- WE: NC
- E2: NC
- E1: NC
- E0: NC
- CE: NC
- CL: NC
- CS: NC
- DQ15: D0
- DQ14: D1
- DQ13: D2
- DQ12: D3
- DQ11: D4
- DQ10: D5
- DQ9: D6
- DQ8: D7
- DQ7: D8
- DQ6: D9
- DQ5: D10
- DQ4: D11
- DQ3: D12
- DQ2: D13
- DQ1: D14
- DQ0: D15

- VDD: 3V3
- VSS: 0V

- C4: 100nF
- C6: 100nF
- C9: 100nF
- C12: 100nF
- C19: 100nF
- C11: 100nF
- C7: 100nF
- C1: 100nF
- C3: 100nF
- C5: 100nF
- C10: 100nF
- C15: 100nF

- PE1: F1
- PE0: E8
- PG15: F7
- PH11: F8
- PG14: F9
- PH10: F10
- PG13: F11
- PH9: F12
- PG12: F13
- PH8: F14
- PG11: F15
- PH7: F16
- PG10: F17
- PH6: F18
- PG9: F19
- PH5: F20

Place close SDRAM
LIMITATION:
Some SD Card signals are multiplexed with CAMERA signals.
In case SD Card is plugged, the CAMERA module must be disconnected.

SDIO1_D1 : DCMI_D3
SDIO1_D3 : DCMI_D4
I2C address of CS42L51 is 0x94 (AD0=0) must be C0G.
LIMITATION:
DCMI signals are multiplexed with several functions (SD Card, STM0D+ and Arduino).
In case CAMERA module is plugged, SD Card, STM0D+ and Arduino must be disconnected.
Videos are stored in USB.

DCMI_D0 : PMOD#11-INT
DCMI_D1 : PMOD#17-DF-D3
DCMI_D2 : PMOD#19-DF-D7
DCMI_D3 : PMOD#18-DF-CKOUT
DCMI_D4 : PMOD#20-DF-CK7
DCMI_D5 : PMOD#19-DF-D7
DCMI_HSYNC : PMOD#13-ADC and ARD_A0

Camera connector for STM32F4DIS-CAM

Camera clock: 24MHz
Compatible with MB1315 (4.3 inch LCD board)
LIMITATION
FD-CAN signals are multiplexed with STMOD+ function
In case FD-CAN module is connected, STMOD+ must be disconnected.

FD_CAN_RX : PMOD1-NSS
FD_CAN_TX : PMOD4-SCK
FD_CAN_STBY : PMOD12-RST
LIMITATION:
ARDUINO signals are multiplexed with STMOD+ signals.
In case ARDUINO SHIELD is plugged, STMOD+ and Camera must be disconnected.
**USER BUTTON**

USER_WAKEUP_BUTTON

WAKEUP

PC13

C90 100nF

R11 100K

100nF should be place close to the MCU

10pF and 1K should be place close to the button

**USER LED**

LD2 BLUE

LD3 RED

R4 680R

R10 680R

**STMOD+**

LIMITATION:

STMOD+ signals are multiplexed with AUDIO, CAMERA and Arduino signals

In case STMOD+ is used, Digital Microphones, Camera and Arduino must be disconnected.

**WIFI MODULE (ISM43340-M4G-L44-10CF)**

LIMITATION:

Wifi signals are multiplexed with STMOD+

In case WiFi-BT is activated, STMOD+ must be disconnected.

**AUDIO DFSDM**

LIMITATION:

DFSDM signals are multiplexed with STMOD+ signals

In case microphones are activated, nothing must be connected on STMOD+.

**I2C Connector**

MB1486 - WIFI MODULE WITH INVENTEK ISM43340-M4G-L44-10CF

Socket 10x2 STMod+
Internal SMPS Supply Config

For further details, please see TINY_SHARK_PWR.pdf

Supply Config 1: LDO only (SMPS OFF, LDO ON)

Disconnect 3V3_SMPS_IN from 3V3_MCU
Connect 3V3_SMPS_IN to GND
Connect VDD_SMPS_IND_OUT to GND
Connect VDD_LDO to 3V3_MCU
2 x 2.2μF near VCAP pins/pads

Supply Config 2: SMPS only (SMPS ON, LDO OFF)

Connecting 3V3_SMPS_IN to 3V3_MCU
Connect VDD_SMPS_IND_OUT to VDD_LDO
Add 2x100nF near VDDLDO pins/plans
Add 2x2.2μF near VCAP pins/plans (see config 1)

Supply Config 3: SMPS & LDO cascaded (SMPS & LDO ON)

Compared to config 1:
- Connect VDD_SMPS_IND_OUT from VCAP1/2/3
- Connect VDD_SMPS_IND_OUT to VDD_LDO
- Add 2x100μF near VDDLDO pins/plans
- Add 2x2.2μF near VCAP pins/plans (see config 1)
Board power

5V Power Supply options

5V External Supply

3V3 and VDD_MCU Supplies

1V8 / 150mA (Audio codec and USB HS)
4.3 inch LCD BOARD

BOARD MB1046B

Project: STM32H7B3I-DK
Layer: M14-Top Assembly
Variant: H7B3I
Date: 13-NOV-2020