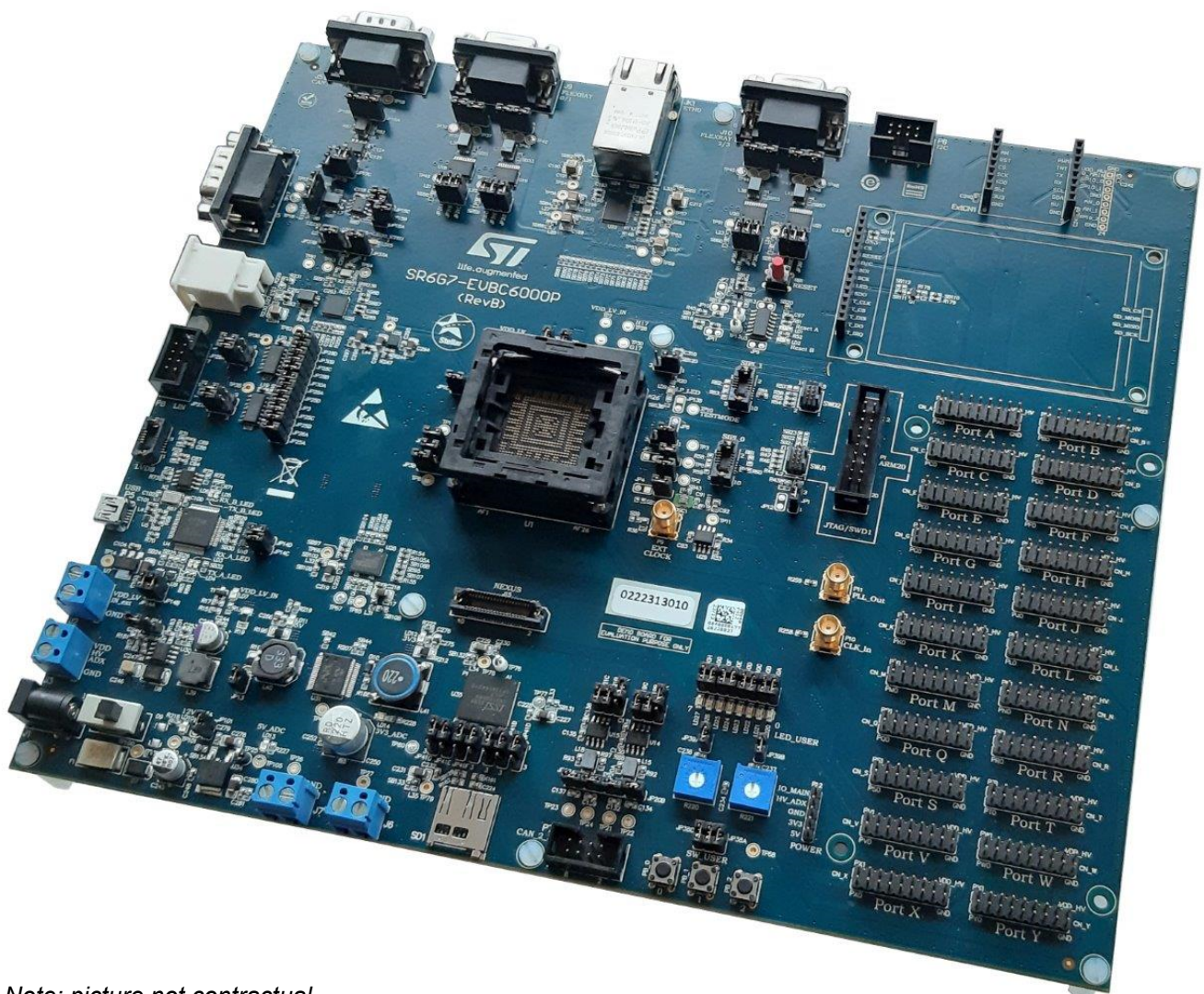


## SR6G7-EVBC6000P rev. B evaluation board

### Introduction

The SR6G7-EVBC6000P rev. B standalone evaluation board supports the STMicroelectronics SR6G7C6 microcontroller in FPBGA 476.

Figure 1. SR6G7-EVBC6000P rev. B



Note: picture not contractual.



## 1 Overview

The SR6G7-EVBC6000P rev. B standalone evaluation board supports the STMicroelectronics SR6G7C6 microcontroller with the package FPBGA 21.3x21.3x1.8 476 PITCH 0.8 ball 0.55.

The evaluation board is a standalone unit allowing access to the CPU plus full access to the I/O pins of each on-board peripheral.

The evaluation board is intended for bench/laboratory use and has been designed using normal temperature specified components.

**Figure 2. Overview of SR6G7-EVBC6000P rev. B - top**

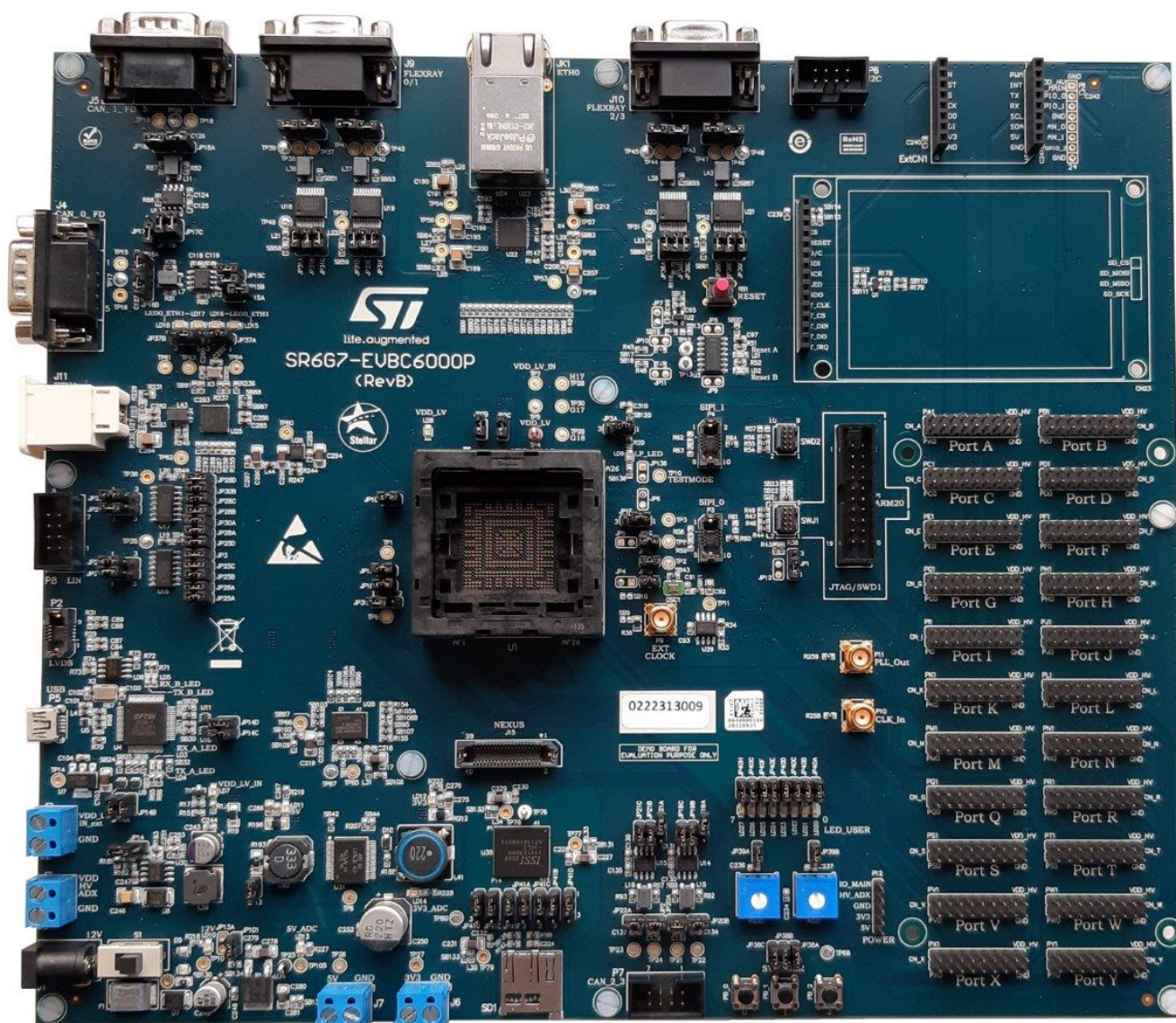
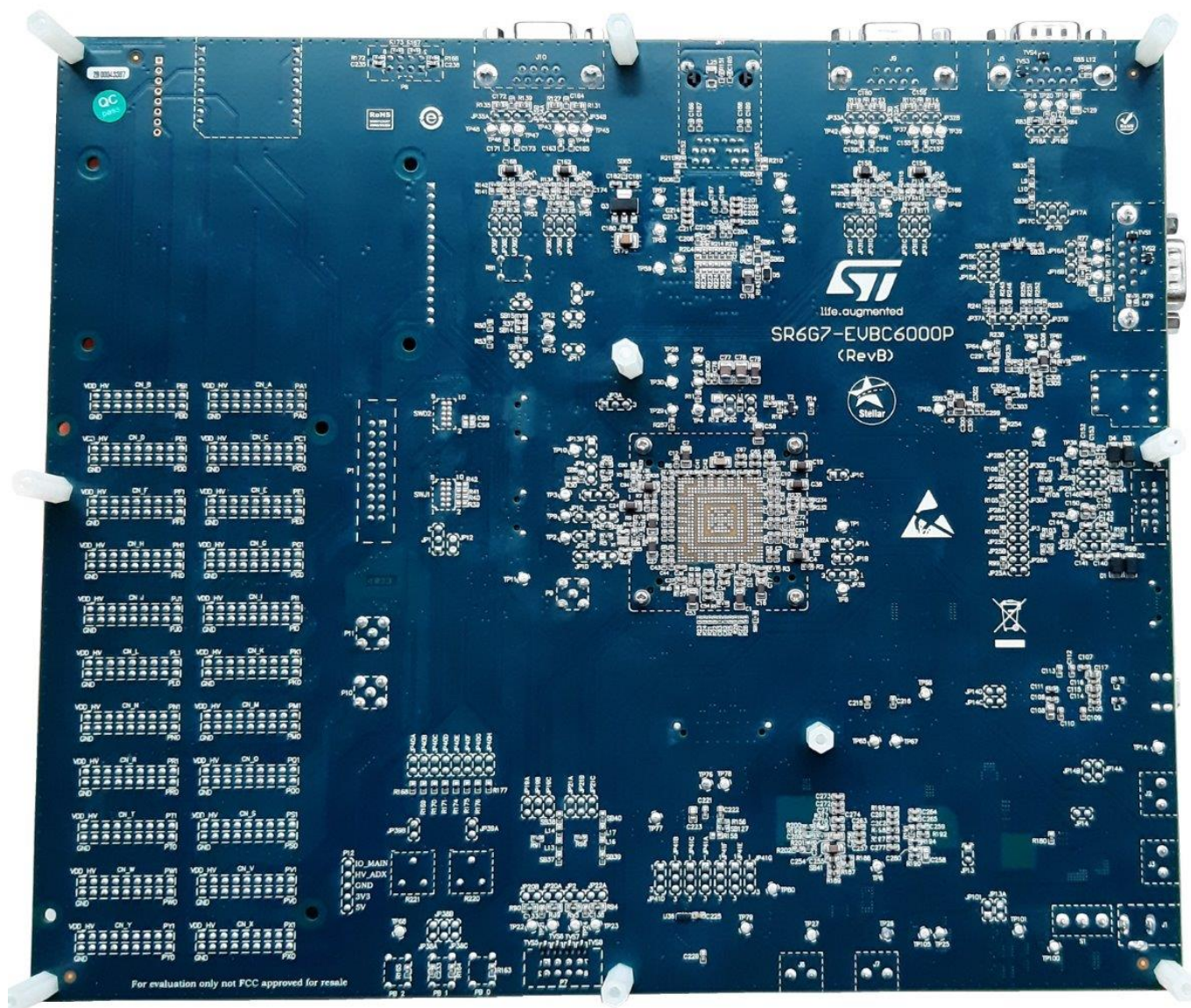


Figure 3. Overview of SR6G7-EVBC6000P rev. B - bottom



## 1.1 Package contents

An SR6G7-EVBC6000P rev. B adapter package includes the following items:

- SR6G7-EVBC6000P rev. B evaluation board
- Power supply
- EULA

## 1.2 Supported devices

The SR6G7-EVBC6000P rev. B evaluation board supports the following STMicroelectronics family of microcontrollers in FPBGA 476:

- SR6G7C6

## 2 License agreement

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The packaging of this evaluation board was sealed with a seal stating, by breaking this seal, you agree to the terms and conditions of the evaluation board license agreement, the terms and conditions of which are available at [https://www.st.com/resource/en/evaluation\\_board\\_terms\\_of\\_use/evaluationproductlicenseagreement.pdf](https://www.st.com/resource/en/evaluation_board_terms_of_use/evaluationproductlicenseagreement.pdf).

Upon breaking the seal, you and STMicroelectronics entered into the evaluation board license agreement, a copy of which is also enclosed with the evaluation board for convenience.

**Attention:** *This evaluation board only offers limited features for evaluating ST products. It has not been tested for use with other products and is not suitable for any safety or other commercial or consumer application. This evaluation board is otherwise provided "AS IS" and STMicroelectronics disclaims all warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose.*

### 3 Handling precautions

---

**Caution:** *Handle the package content carefully to prevent electrostatic discharge.*

Before using the EVB or applying power, read the following sections to correctly configure the board. Incorrect configuration may cause irreparable damage to components, the MCU, or the EVB.

## 4 Hardware features

The SR6G7-EVBC6000P rev. B evaluation board has the following features:

- Socket for device in FPBGA 476 package
- Selectable clock source:
  - 40 MHz crystal main oscillator
  - 8 MHz oscillator
  - 32 kHz oscillator
  - Clock input through SMA connector
- Debug interfaces:
  - MIPI10 connector for JTAG main DAP interface
  - ARM® JTAG 20 connector for main DAP interface
  - MIPI10 header connector for secondary DAP interface
  - Mictor40 connector for AURORA Trace interface
- Two 2x6 pins header connectors for SIPI interface
- All MCU signals readily accessible at a port-ordered group of 0.1" pitch headers
- USB to UART (P/N: FT2232H): 2xUART channels (USB Mini-B)
- 4x CAN-FD interfaces (P/N: MCP2542WFD): 2 channels with DB9 + 2 channels with a 2x4 header connector
- 4x LINFlexD interfaces (P/N: TJA1022T) with a 2x4 header connector
- 4x FlexRay interfaces (P/N: TJA1080ATS): 2 DB9 connectors
- 2x Ethernet ports:
  - Ethernet 0: 1xRGMII 1Gb/s with RJ45 connector (P/N: KSZ9031RNXIA)
  - Ethernet 1: 1xSGMII 1Gb/s with automotive headers, wire-to-board, 2 position, 1.8 mm [0.071 in] (P/N: DP83TG720S-Q1)
- OctalSPI: 256 Mb HyperFlash™ and 64 Mbit HyperRAM™ in multi-chip package (MCP) (P/N: S71KL256SC0BHB000)
- eMMC: 8 gigabyte NAND flash memory with eMMC 5.0 interface (P/N: IS21ES08GA)
- I²C interface: 2 channels
- User section: 3 push buttons; 8 LEDs; 2 potentiometers
- Extension module port (option)
  - 1x external module connector (DSPI, I²C, UART, GPIO, ANx)
  - 1x LCD display port
- 12 V external power supply

### 4.1 Hardware dimensions

The evaluation board has the following dimensions:

- PCB area: 270 mm x 230 mm
- Top components height: 20 mm
- Bottom components height: 3.0 mm
- PCB thickness 2.0 mm

## 5 Power and system configuration

### 5.1 Power supplies

The SR6G7-EVBC6000P rev. B evaluation board requires an external power supply voltage of 12 V DC and 2 A minimum. The single input voltage is regulated on-board using an L5963 switching regulator providing the supply voltages of 5.0 V and 3.3 V, and an A7986A switching regulator providing the supply voltage of 0.97 V.

### 5.2 Power supply connector

2.1 mm barrel connector:

**Figure 4. 2.1 mm power connector**



### 5.3 Power switch, status LEDs and fuse

The main power switch (slide switch S1) can be used to isolate the power supply input from the EVB voltage regulators if required.

When power is applied to the evaluation board, the power LEDs adjacent to the voltage regulators show the presence of the supply voltages as follows:

- LED LD1 – reset A
- LED LD2 – reset B
- LED LD7 – VDD\_LV\_IN
- LED LD8 – VDD\_LV
- LED LD9 – VDD\_HV\_LP
- LED LD10 – 12 V
- LED LD11 – 5 V
- LED LD12 – 3V3
- LED LD13 – 5V\_ADC
- LED LD14 – 3V3\_ADC

If no LED is illuminated when power is applied to the evaluation board and the regulators are correctly enabled using the appropriate jumpers, it is possible that either power switch SW1 is in the “OFF” position or that the fuse F1 has blown. The fuse blows also if the power is applied to the evaluation board in reverse-bias.

The following jumpers are used to configure the power supply (common for all supported devices):

**Table 1. Power configuration jumpers**

| Jumper | Description                                                                                                                                                                            | Default | Position          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP1A   | VDD_HV_ADx voltage configuration:<br><ul style="list-style-type: none"> <li>Open: VDD_HV_ADx not connected</li> <li>Closed: VDD_HV_ADx connected to 3V3_ADC</li> </ul>                 | Closed  | B3 <sup>(1)</sup> |
| JP1B   | VDD_HV_ADR_D0 voltage configuration:<br><ul style="list-style-type: none"> <li>Open: VDD_HV_ADR_D0 not connected</li> <li>Closed: VDD_HV_ADR_D0 connected to VDD_HV_IO_MAIN</li> </ul> | Closed  | B3 <sup>(1)</sup> |
| JP1C   | VDD_HV_IO_EXT0 voltage configuration:<br><ul style="list-style-type: none"> <li>Open: VDD_HV_IO_EXT0 not connected</li> <li>Closed: VDD_HV_IO_EXT0 connected to 3V3</li> </ul>         | Closed  | B2 <sup>(1)</sup> |
| JP1D   | VDD_HV_IO_EXT1 voltage configuration:<br><ul style="list-style-type: none"> <li>Open: VDD_HV_IO_EXT1 not connected</li> <li>Closed: VDD_HV_IO_EXT1 connected to 3V3</li> </ul>         | Closed  | C3 <sup>(1)</sup> |
| JP1E   | VDD_HV_IO_MAIN voltage configuration:<br><ul style="list-style-type: none"> <li>Open: VDD_HV_IO_MAIN not connected</li> <li>Closed: VDD_HV_IO_MAIN connected to 3V3</li> </ul>         | Closed  | C3 <sup>(1)</sup> |
| JP1F   | VDD_HV_NVM_PRG voltage configuration:<br><ul style="list-style-type: none"> <li>1-2: Connected to 3V3</li> <li>2-3: Connected to 5V</li> </ul>                                         | 1-2     | C2 <sup>(1)</sup> |
| JP1G   | VDD_HV_LP voltage configuration:<br><ul style="list-style-type: none"> <li>1-2: VDD_HV_LP connected to 3V3</li> <li>2-3: VDD_HV_LP connected to 5V</li> </ul>                          | Closed  | C3 <sup>(1)</sup> |
| JP2B   | VDD_LV_TRACE voltage configuration<br><ul style="list-style-type: none"> <li>Closed: VDD_LV_TRACE connected to VDD_LV</li> <li>Open: VDD_LV_TRACE not connected</li> </ul>             | Closed  | B2 <sup>(1)</sup> |
| JP2C   | VDD_LV voltage configuration<br><ul style="list-style-type: none"> <li>Closed: VDD_LV connected to VDD_LV_IN</li> <li>Open: VDD_LV not connected</li> </ul>                            | Closed  | B2 <sup>(1)</sup> |
| SB1    | VDD_HV_ADR voltage connection<br><ul style="list-style-type: none"> <li>Open: VDD_HV_ADR not connected</li> <li>Closed: VDD_HV_ADR connected to JP1A</li> </ul>                        | Closed  | C3 <sup>(2)</sup> |
| SB2    | VDD_HV_ADV voltage connection<br><ul style="list-style-type: none"> <li>Open: VDD_HV_ADV not connected</li> <li>Closed: VDD_HV_ADV connected to JP1A</li> </ul>                        | Closed  | C3 <sup>(2)</sup> |
| SB2A   | VDD_HV_ADR_D0 voltage connection<br><ul style="list-style-type: none"> <li>Open: VDD_HV_ADR_D0 not connected to JP1A</li> <li>Closed: VDD_HV_ADR_D0 connected to JP1A</li> </ul>       | Open    | C3 <sup>(2)</sup> |

1. Refer to the Figure 22. SR6G7-EVBC6000P rev. B - top.

2. Refer to the Figure 23. SR6G7-EVBC6000P rev. B - bottom.

## 5.4 System clock configuration

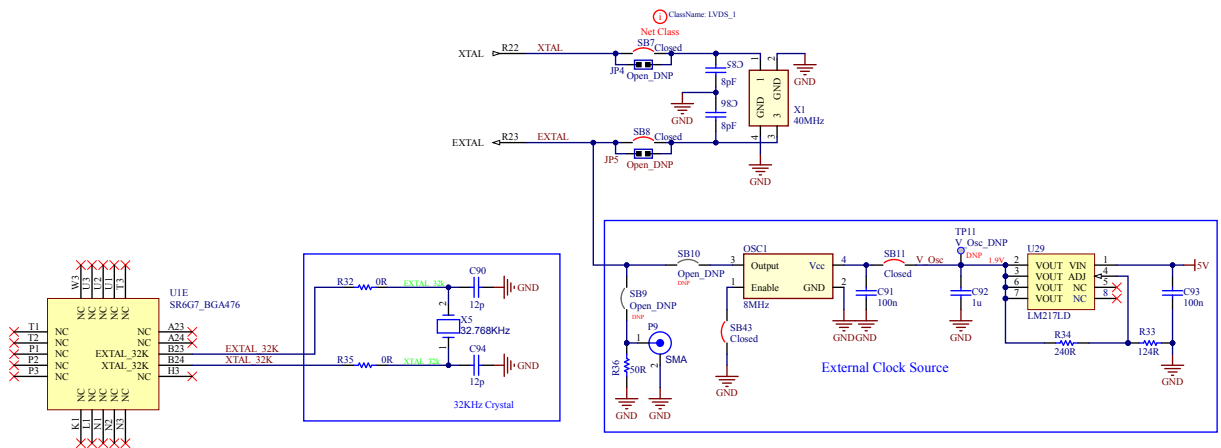
The evaluation board supports the usage of crystal clock sources as well as external clock source.

The following clock sources are supported:

- 40 MHz local crystal oscillator for PLL.
- 32 kHz
- 8 MHz
- A SMA connector is provided for the external clock input

The following figure shows the system oscillator schema.

**Figure 5. System clock sources schema**



The following table shows the system clock sources configuration setting:

**Table 2. System clock configuration**

| Jumper | Description                                                                                                                                                                                                                         | Default | Position          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB7    | XTAL configuration <ul style="list-style-type: none"> <li>• Closed: connect pin 1 of the 40 MHz crystal (X1) to XTAL</li> <li>• Open: disconnect the 40 MHz crystal (X1).</li> </ul>                                                | Closed  | C3 <sup>(1)</sup> |
| SB8    | EXTAL configuration <ul style="list-style-type: none"> <li>• Closed: connect pin 3 of the 40 MHz crystal (X1) to EXTAL</li> <li>• Open: disconnect the 40 MHz crystal (X1).</li> </ul>                                              | Closed  | C3 <sup>(1)</sup> |
| SB9    | System clock external source <ul style="list-style-type: none"> <li>• Open: disconnect SMA connector (P2) from EXTAL</li> <li>• Closed: connect SMA connector (P2) to EXTAL</li> </ul>                                              | Open    | C3 <sup>(1)</sup> |
| SB10   | EXTAL configuration <ul style="list-style-type: none"> <li>• Open: disconnect the 8 MHz crystal (OSC1) from EXTAL.</li> <li>• Closed: connect pin 3 of the 8 MHz crystal (OSC1) to EXTAL</li> </ul>                                 | Closed  | C3 <sup>(2)</sup> |
| SB11   | Enable 8 MHz oscillator <ul style="list-style-type: none"> <li>• Open: Disabled</li> <li>• Closed: Enabled</li> </ul>                                                                                                               | Closed  | C3 <sup>(2)</sup> |
| R32    | EXTAL_32k configuration <ul style="list-style-type: none"> <li>• Mounted: connect pin 1 of the 32.768 kHz crystal (X2) to EXTAL_32k</li> <li>• Not mounted: disconnect pin 1 of the 32.768 kHz crystal (X2) to EXTAL_32k</li> </ul> | Mounted | C2 <sup>(1)</sup> |
| R35    | XTAL_32k configuration <ul style="list-style-type: none"> <li>• Mounted: connect pin 1 of the 32.768 kHz crystal (X2) to XTAL_32k</li> <li>• Not mounted: disconnect pin 1 of the 32.768 kHz crystal (X2) to XTAL_32k</li> </ul>    | Mounted | C2 <sup>(1)</sup> |

1. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom.](#)

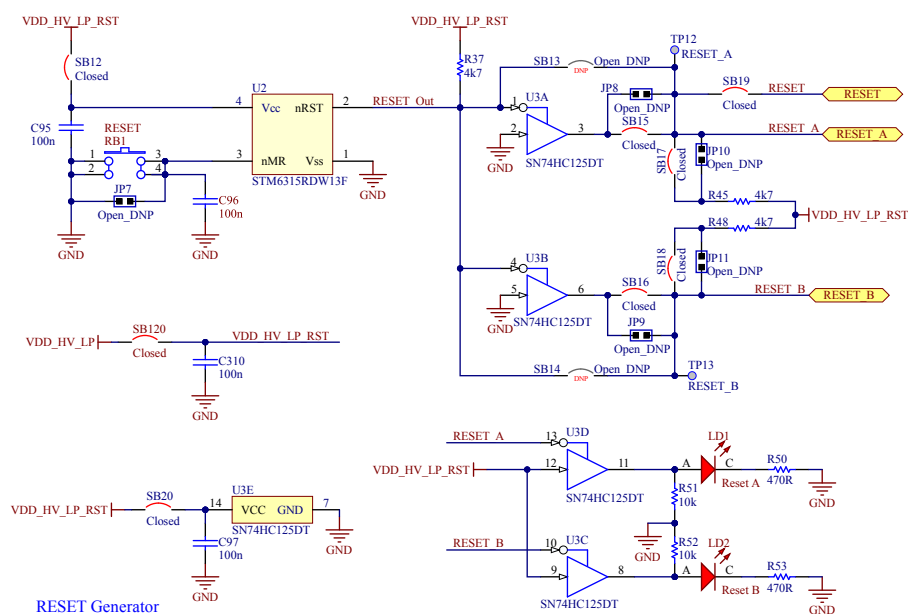
2. Refer to the Figure 22. SR6G7-EVBC6000P rev. B - top.

## 5.5 Reset circuit

The reset circuit is performed using the STM6315 device.

The following picture shows the schema of the evaluation board reset circuit.

**Figure 6. Reset circuit schema**



To use and perform the reset driving there are different solder bridges:

**Table 3. Reset configuration jumpers**

| Jumper | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 | Default | Position          |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| RB1    | Reset push button                                                                                                                                                                                                                                                                                                                                                                                                                           | Open    | C2 <sup>(1)</sup> |
| SB13   | <ul style="list-style-type: none"> <li>Open: disconnect the RESET_A and the RESET signals from the reset out of the STM6315 device</li> <li>Closed: directly connect the RESET_A and the RESET signals to the reset out of the STM6315 device</li> </ul>                                                                                                                                                                                    | Open    | C2 <sup>(1)</sup> |
| SB19   | <ul style="list-style-type: none"> <li>Open: disconnect the external reset circuitry to the reset signal connected to the following devices: <ul style="list-style-type: none"> <li>– Ethernet 0</li> <li>– Ethernet 1</li> <li>– eMMC-SD</li> <li>– Hyperbus OctalSPI <ul style="list-style-type: none"> <li>◦ Closed: connect the external reset circuitry to the reset driver for ESR0 and PORST pins</li> </ul> </li> </ul> </li> </ul> | Closed  | C2 <sup>(1)</sup> |
| SB15   | <ul style="list-style-type: none"> <li>Open: disconnect the external reset to RESET_A pin</li> <li>Closed: connect the external reset to RESET_A pin</li> </ul>                                                                                                                                                                                                                                                                             | Closed  | C2 <sup>(1)</sup> |
| SB16   | <ul style="list-style-type: none"> <li>Open: the external reset to RESET_B pin is disconnected</li> <li>Closed: the external reset to RESET_B pin is disconnected</li> </ul>                                                                                                                                                                                                                                                                | Closed  | B2 <sup>(2)</sup> |
| SB20   | <ul style="list-style-type: none"> <li>Open: disconnect the RESET_B signal from the reset out of the STM6315 device</li> <li>Closed: directly connect the RESET_B signal to the reset out of the STM6315 device</li> </ul>                                                                                                                                                                                                                  | Open    | B2 <sup>(2)</sup> |
| JP7    | Reset push button bypass                                                                                                                                                                                                                                                                                                                                                                                                                    | Open    | C2 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

2. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom.](#)

## 5.6 Test mode configuration

The following picture shows the TESTMODE configuration schema.

Figure 7. Test mode configuration schema

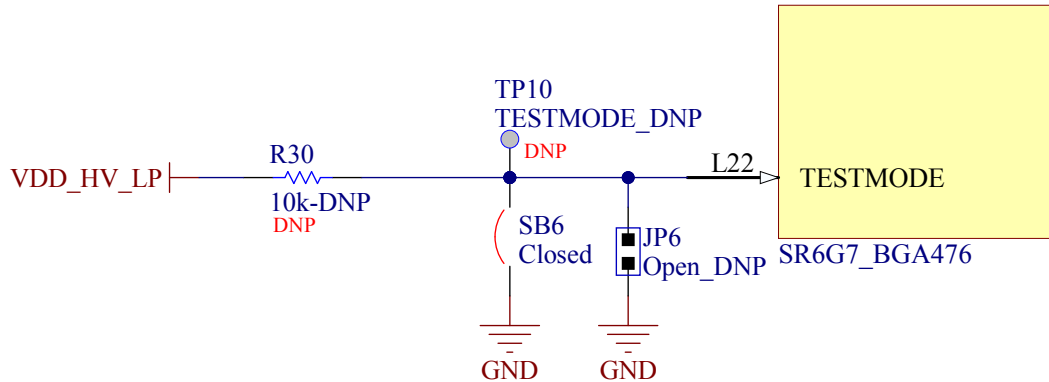


Table 4. Test mode

| Jumper | Description                                                                                                                                              | Default | Position          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB6    | TESTMODE settings: <ul style="list-style-type: none"> <li>Open: TESTMODE pin is unconnected</li> <li>Closed: TESTMODE pin is connected to GND</li> </ul> | Closed  | B2 <sup>(1)</sup> |

1. Refer to the Figure 23. SR6G7-EVBC6000P rev. B - bottom.

## 5.7 External regulator configuration

This paragraph describes how to configure the board to allow the device to operate in the different configurations.

The configurations available are internal or external regulator mode by controlling the EXTREG\_SEL pin. If EXTREG\_SEL is connected to VDD\_HV\_LP, the external mode is selected. If EXTREG\_SEL is connected to VSS, the internal mode is selected. This functionality is not available on all Stellar G family products. For the details of this product, refer to the datasheet document of the device used.

The following image shows the EXTREG\_SEL configuration schema.

Figure 8. EXTREG\_SEL configuration schema

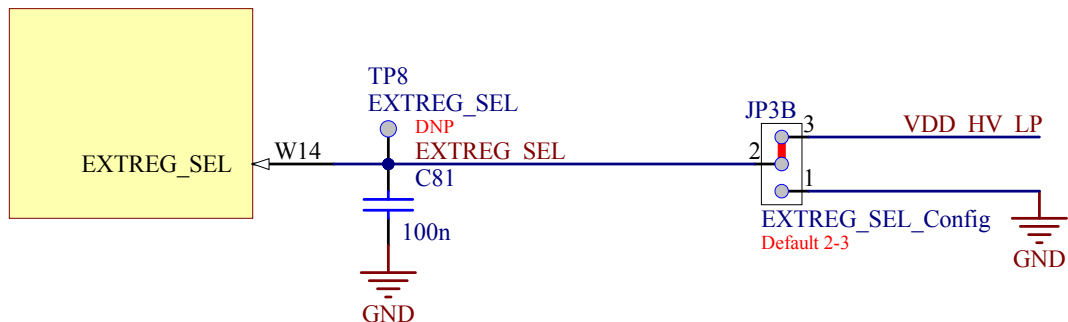


Table 5. EXTREG\_SEL

| Jumper | Description                                                                                                                                                                                                                   | Default | Position          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP3B   | EXTREG_SEL settings: <ul style="list-style-type: none"> <li>1-2: EXTREG_SEL connected to GND (internal regulator mode selected)</li> <li>2-3: EXTREG_SEL connected to VDD_HV_LP (external regulator mode selected)</li> </ul> | 2-3     | B3 <sup>(1)</sup> |

1. Refer to the Figure 22. SR6G7-EVBC6000P rev. B - top.

## 6 Hardware description

### 6.1 1 Gb/s Ethernet 0 interface

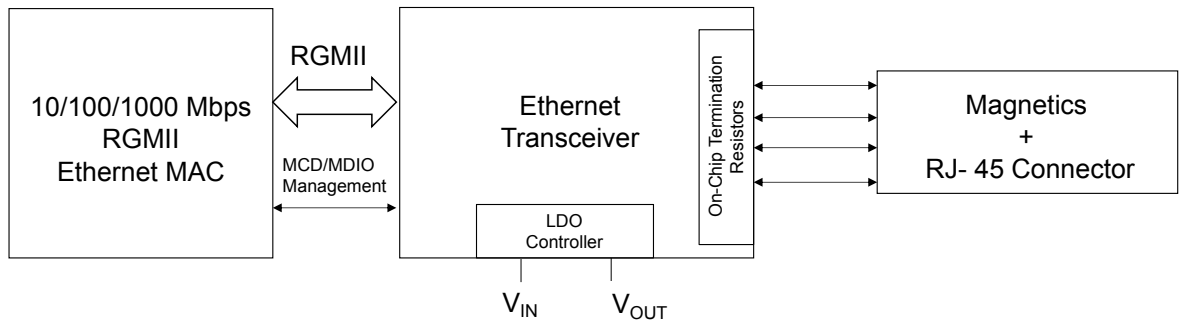
This paragraph describes the 1 Gb/s Ethernet 0 interface present on the board.

The Ethernet transceiver is KSZ9031RNXIA.

The Ethernet connector is RJ-45 with integrated magnetics.

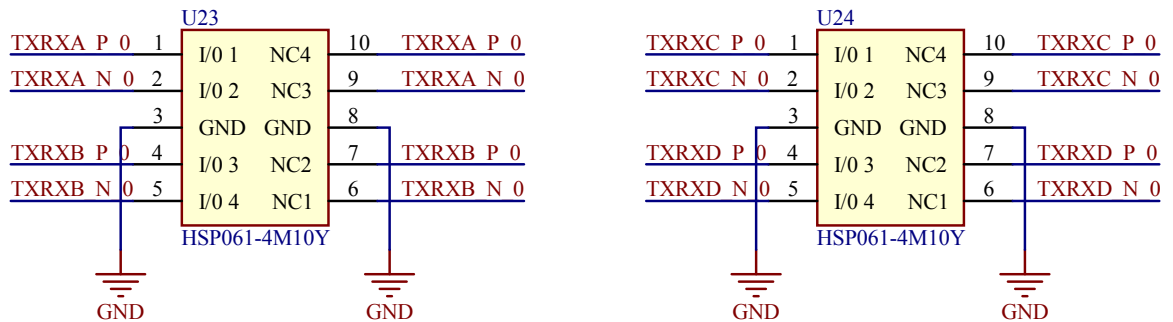
The following figure shows the functional diagram of the Ethernet interface.

Figure 9. 1 Gb/s Ethernet 0 functional diagram



The following figure shows the Ethernet ESD protection schema.

Figure 10. 1 Gb/s Ethernet 0 ESD protection schema



The following table describes all hardware of the 1 Gb/s Ethernet interface of the evaluation board, their position on PCB:

Table 6. 1 Gb/s Ethernet interface

| Symbol | Description                  | Position          |
|--------|------------------------------|-------------------|
| U23    | ESD protection: HSP061-4M10Y | B1 <sup>(1)</sup> |
| U24    | ESD protection: HSP061-4M10Y | B1 <sup>(1)</sup> |

1. Refer to the Figure 22. SR6G7-EVBC6000P rev. B - top.

The solder bridges detailed in the following table are used to configure the Ethernet 0 interfaces.

**Table 7. Ethernet 0 configuration solder bridges**

| Jumper       | Description                                                                                                                                                                                                                                                                                                                 | Default | Position          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB62<br>SB63 | Ethernet 0 transceiver RESET_N filter configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the resistor-capacitor-diode (RCD) filter circuit</li> <li>Closed: connect the resistor-capacitor-diode (RCD) filter circuit</li> </ul>                                                                     | Open    | C1 <sup>(1)</sup> |
| SB64         | Ethernet 0 transceiver RESET_N configuration:<br><ul style="list-style-type: none"> <li>Open: use the resistor-capacitor-diode (RCD) filter</li> <li>Closed: bypass the resistor-capacitor-diode (RCD) filter</li> </ul>                                                                                                    | Closed  | C1 <sup>(1)</sup> |
| SB65         | Ethernet 0 transceiver LDO configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the 1V2_ETH_0 from the drain of the LDO MOSFET</li> <li>Closed: connect the 1V2_ETH_0 from the drain of the LDO MOSFET</li> </ul>                                                                                      | Closed  | C1 <sup>(1)</sup> |
| SB66         | Ethernet 0 transceiver interrupt configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver Interrupt output</li> <li>Closed: connect the transceiver Interrupt output to the ETH_0_PHY_INTR (PC11) of the device</li> </ul>                                                                 | Closed  | B2 <sup>(2)</sup> |
| SB67         | Ethernet 0 transceiver clock 125 MHz configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver 125 MHz clock output</li> <li>Closed: connect the transceiver 125 MHz clock output to the ETH_0_CLK_125 (PM2) of the device</li> </ul>                                                       | Closed  | B2 <sup>(2)</sup> |
| SB68         | Ethernet 0 transceiver MDIO configuration:<br><ul style="list-style-type: none"> <li>Closed: disconnect the transceiver MDIO</li> <li>Closed: connect the transceiver MDIO to the ETH_0_MDIO (PM7) of the device</li> </ul>                                                                                                 | Closed  | B2 <sup>(2)</sup> |
| SB69         | Ethernet 0 transceiver MDC configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver MDC</li> <li>Closed: connect the transceiver MDC to the ETH_0_MDC (PM8) of the device</li> </ul>                                                                                                       | Closed  | B2 <sup>(2)</sup> |
| SB70         | Ethernet 0 transceiver RGMII RXC (receive reference clock) configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the RGMII RXC (receive reference clock) output</li> <li>Closed: connect the transceiver RGMII RXC (receive reference clock) output to the ETH_0_RX_CLK (PC10) of the device</li> </ul> | Closed  | B2 <sup>(2)</sup> |
| SB71         | Ethernet 0 transceiver RGMII RX_CTL configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver Interrupt output RGMII RX_CTL (receive control) output</li> <li>Closed: connect the transceiver RGMII RX_CTL (receive control) output to the ETH_0_RX_DV (PM0) of the device</li> </ul>       | Closed  | B2 <sup>(2)</sup> |
| SB72         | Ethernet 0 transceiver RGMII RD0 configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII RD0 (receive data 0) output</li> <li>Closed: connect the transceiver RGMII RD0 (receive data 0) output to the ETH_0_RDATA0 (PC12) of the device</li> </ul>                                 | Closed  | B2 <sup>(2)</sup> |
| SB73         | Ethernet 0 transceiver RGMII RD1 configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII RD1 (receive data 1) output</li> <li>Closed: connect the transceiver RGMII RD1 (receive data 1) output to the ETH_0_RDATA1 (PC13) of the device</li> </ul>                                 | Closed  | B2 <sup>(2)</sup> |
| SB74         | Ethernet 0 transceiver RGMII RD2 configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII RD2 (receive data 2) output</li> <li>Closed: connect the transceiver RGMII RD2 (receive data 2) output to the ETH_0_RDATA2 (PM1) of the device</li> </ul>                                  | Closed  | B2 <sup>(2)</sup> |
| SB75         | Ethernet 0 transceiver RGMII RD3 configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII RD3 (receive data 3) output</li> <li>Closed: connect the transceiver RGMII RD3 (receive data 3) output to the ETH_0_RDATA3 (PK15) of the device</li> </ul>                                 | Closed  | B2 <sup>(2)</sup> |

| Jumper | Description                                                                                                                                                                                                                                                                                                                          | Default | Position          |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB76   | Ethernet 0 transceiver RGMII TX_CTL (transmit control) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TX_CTL (transmit control) input</li> <li>Closed: connect the transceiver RGMII TX_CTL (transmit control) input to the ETH_0_TX_EN (PC14) of the device</li> </ul>                | Closed  | B2 <sup>(2)</sup> |
| SB77   | Ethernet 0 transceiver RGMII TXC (transmit reference clock) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TXC (transmit reference clock) input</li> <li>Closed: connect the transceiver RGMII TXC (transmit reference clock) input to the ETH_0_TX_CLK (PM6) of the device</li> </ul> | Closed  | B2 <sup>(2)</sup> |
| SB78   | Ethernet 0 transceiver RGMII TD0 (transmit data 0) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TD0 (transmit data 0)</li> <li>Closed: connect the transceiver RGMII TD0 (transmit data 0) input to the ETH_0_TDATA0 (PC15) of the device</li> </ul>                                 | Closed  | B2 <sup>(2)</sup> |
| SB79   | Ethernet 0 transceiver RGMII TD1 (transmit data 1) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TD1 (transmit data 1)</li> <li>Closed: connect the transceiver RGMII TD1 (transmit data 1) to the ETH_0_TDATA1 (PE12) of the device</li> </ul>                                       | Closed  | B2 <sup>(2)</sup> |
| SB80   | Ethernet 0 transceiver RGMII TD2 (transmit data 2) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TD2 (transmit data 2)</li> <li>Closed: connect the transceiver RGMII TD2 (transmit data 2) to the ETH_0_TDATA2 (PM4) of the device</li> </ul>                                        | Closed  | B2 <sup>(2)</sup> |
| SB81   | Ethernet 0 transceiver RGMII TD3 (transmit data 3) configuration: <ul style="list-style-type: none"> <li>Open: disconnect the transceiver RGMII TD3 (transmit data 3)</li> <li>Closed: connect the transceiver RGMII TD3 (transmit data 3) to the ETH_0_TDATA3 (PM5) of the device</li> </ul>                                        | Closed  | B2 <sup>(2)</sup> |

1. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom.](#)
2. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

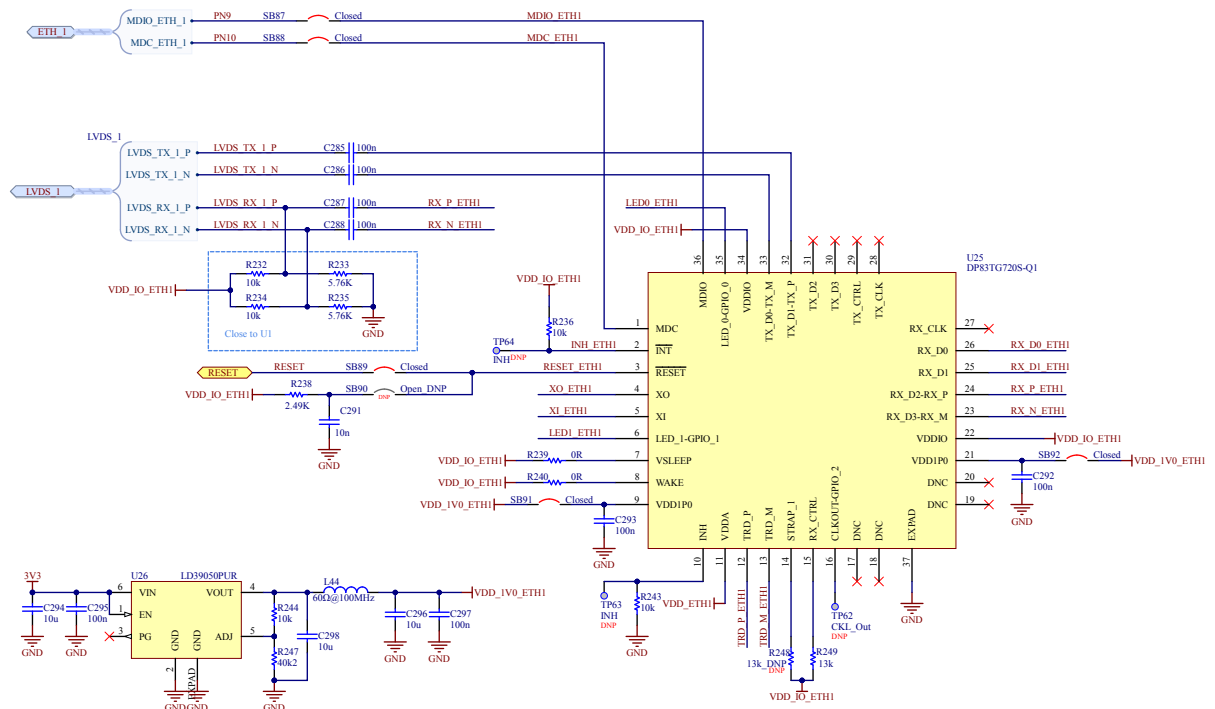
## 6.2 Ethernet 1 interface

This paragraph describes the Ethernet 1 interface present on the board.

The Ethernet transceiver is DP83TC811S-Q1.

The following image shows the Ethernet 1 schema.

Figure 11. Ethernet 1 schema



The jumpers and the solder bridges detailed in the following table are used to configure the Ethernet 1 interfaces.

Table 8. Ethernet 1 configuration jumpers and solder bridges

| Jumper | Description                                                                                                                                                                                                                  | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB87   | <ul style="list-style-type: none"> <li>Open: disconnect the MDIO_ETH_1 (PN9)</li> <li>Closed: connect the MDIO_ETH_1 (PN9)</li> </ul>                                                                                        | Closed  | A2 <sup>(1)</sup> |
| SB88   | <ul style="list-style-type: none"> <li>Open: disconnect the MDC_ETH_1 (PN10)</li> <li>Closed: connect the MDC_ETH_1 (PN10)</li> </ul>                                                                                        | Closed  | A2 <sup>(1)</sup> |
| SB89   | <ul style="list-style-type: none"> <li>Open: disconnect the Ethernet 1 transceiver RESET from the board reset.</li> <li>Closed: connect the Ethernet 1 transceiver RESET to the board reset</li> </ul>                       | Closed  | A2 <sup>(1)</sup> |
| SB90   | <ul style="list-style-type: none"> <li>Open: disconnect the Ethernet 1 transceiver RESET from a 2.49 kΩ pullup resistor.</li> <li>Closed: connect the Ethernet 1 transceiver RESET to a 2.49 kΩ pullup resistor.</li> </ul>  | Open    | A2 <sup>(1)</sup> |
| SB91   | <ul style="list-style-type: none"> <li>Open: disconnect the core supply from VDD_1V0_ETH1</li> </ul>                                                                                                                         | Closed  | A2 <sup>(1)</sup> |
| SB92   | <ul style="list-style-type: none"> <li>Closed: connect the core supply to VDD_1V0_ETH1</li> </ul>                                                                                                                            |         |                   |
| SB93   | <ul style="list-style-type: none"> <li>Open: disconnect the VDD_IO_ETH1 from the 3.3 V power supply domain.</li> <li>Closed: connect the VDD_IO_ETH1 to the 3.3 V power supply domain.</li> </ul>                            | Closed  | A2 <sup>(1)</sup> |
| SB94   | <ul style="list-style-type: none"> <li>Open: disconnect the VDD_ETH1 from the 3.3 V power supply domain.</li> <li>Closed: connect the VDD_ETH1 to the 3.3 V power supply domain.</li> </ul>                                  | Closed  | A2 <sup>(1)</sup> |
| JP37A  | Ethernet 1 LED_0 configuration: <ul style="list-style-type: none"> <li>1-2: connect the Ethernet 1 LED_0 to a 2.49 kΩ pullup resistor.</li> <li>2-3: connect the Ethernet 1 LED_0 to a 2.49 kΩ pulldown resistor.</li> </ul> | 1-2     | A2 <sup>(1)</sup> |

| Jumper | Description                                                                                                                                                                                                                  | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP37B  | Ethernet 1 LED_1 configuration: <ul style="list-style-type: none"> <li>1-2: connect the Ethernet 1 LED_1 to a 2.49 kΩ pullup resistor.</li> <li>2-3: connect the Ethernet 1 LED_1 to a 2.49 kΩ pulldown resistor.</li> </ul> | 1-2     | A2 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

The following table shows the Ethernet 1 interface LEDs.

**Table 9. Ethernet 1 interface LEDs**

| LED   | Description                | Position          |
|-------|----------------------------|-------------------|
| LED15 | LED0_ETH1 connected to VDD | A2 <sup>(1)</sup> |
| LED16 | LED0_ETH1 connected to GND |                   |
| LED17 | LED1_ETH1 connected to VDD |                   |
| LED18 | LED1_ETH1 connected to GND |                   |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.3

### CAN interface

The SR6G7-EVBC6000P rev. B evaluation board has four MCP2542WFD high-speed CAN transceivers, two male standard DB9 connectors and one 4x2 header connector to provide physical CAN interfaces for the MCU.

The following table shows the CAN\_0 DB9 connector pinout.

**Table 10. CAN\_0 DB9 connector pinout**

| Pin number (DB9) | Signal  |
|------------------|---------|
| 1                | N.C.    |
| 2                | CAN_0_L |
| 3                | GND     |
| 4                | N.C.    |
| 5                | N.C.    |
| 6                | GND     |
| 7                | CAN_0_H |
| 8                | N.C.    |
| 9                | N.C.    |

The following table shows the CAN\_1 DB9 connector pinout (J5).

**Table 11. CAN\_1 DB9 connector pinout**

| Pin number (DB9) | Signal  |
|------------------|---------|
| 1                | N.C.    |
| 2                | CAN_1_L |
| 3                | GND     |
| 4                | N.C.    |
| 5                | N.C.    |
| 6                | GND     |
| 7                | CAN_1_H |

| Pin number (DB9) | Signal |
|------------------|--------|
| 8                | N.C.   |
| 9                | N.C.   |

The following table shows the 4x2 header connector pinout (P5).

**Table 12. 4x2 header CAN2 and CAN3 connector pinout**

| Pin number (DB9) | Signal  |
|------------------|---------|
| 1                | CAN_2_H |
| 2                | GND     |
| 3                | CAN_2_L |
| 4                | GND     |
| 5                | CAN_3_H |
| 6                | GND     |
| 7                | CAN_3_L |
| 8                | GND     |

The jumpers and the solder bridges detailed in the following table are used to configure the CAN interfaces.

**Table 13. CAN configuration jumpers and solder bridges**

| Jumper | Description                                                                                                                                                                                                                                                | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB33   | CAN 0 transceiver VIO supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD_HV_IO_MAIN from the VIO of the CAN 0 transceiver</li> <li>Closed: connect the VDD_HV_IO_MAIN to the VIO of the CAN 0 transceiver</li> </ul> | Closed  | D1 <sup>(1)</sup> |
| SB34   | CAN 0 transceiver VDD supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD of the CAN 0 transceiver from the 5 V domain.</li> <li>Closed: connect the VDD of the CAN 0 transceiver to the 5 V domain.</li> </ul>       | Closed  | D1 <sup>(1)</sup> |
| JP15A  | CAN_0_STB configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PE7 from CAN_0_STB</li> <li>Closed: connect PE7 to CAN_0_STB</li> </ul>                                                                                                | Closed  | A2 <sup>(2)</sup> |
| JP15B  | CAN_0_TX configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PE5 from CAN_0_TX</li> <li>Closed: connect PE5 to CAN_0_TX</li> </ul>                                                                                                   | Closed  | A1 <sup>(2)</sup> |
| JP15C  | CAN_0_RX configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PG14 from CAN_0_RX</li> <li>Closed: connect PG14 to CAN_0_RX</li> </ul>                                                                                                 | Closed  | A1 <sup>(2)</sup> |
| JP16A  | CAN_0_L termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: connect CAN_0_L to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | A1 <sup>(2)</sup> |
| JP16B  | CAN_0_H termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: connect CAN_0_H to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | A1 <sup>(2)</sup> |
| SB35   | CAN 1 transceiver VIO supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD_HV_IO_MAIN from the VIO of the CAN 1 transceiver</li> <li>Closed: connect the VDD_HV_IO_MAIN to the VIO of the CAN1 transceiver</li> </ul>  | Closed  | D1 <sup>(1)</sup> |

| Jumper | Description                                                                                                                                                                                                                                                | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB36   | CAN 1 transceiver VDD supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD of the CAN 1 transceiver from the 5 V domain.</li> <li>Closed: connect the VDD of the CAN 1 transceiver to the 5 V domain.</li> </ul>       | Closed  | D1 <sup>(1)</sup> |
| JP17A  | CAN_1_STB configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PD9 from CAN_1_STB</li> <li>Closed: connect PD9 to CAN_1_STB</li> </ul>                                                                                                | Closed  | A1 <sup>(2)</sup> |
| JP17B  | CAN_1_TX configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PD3 from CAN_1_TX</li> <li>Closed: connect PD3 to CAN_1_TX</li> </ul>                                                                                                   | Closed  | A1 <sup>(2)</sup> |
| JP17C  | CAN_1_RX configuration:<br><ul style="list-style-type: none"> <li>Open: connect PD2 to CAN_1_RX</li> <li>Closed: disconnect PD2 to CAN_1_RX</li> </ul>                                                                                                     | Closed  | A1 <sup>(2)</sup> |
| JP18A  | CAN_1_L termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: connect CAN_1_L to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | A1 <sup>(2)</sup> |
| JP18B  | CAN_1_H termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: connect CAN_1_H to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | A1 <sup>(2)</sup> |
| SB37   | CAN 2 transceiver VIO supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD_HV_IO_MAIN from the VIO of the CAN transceiver</li> <li>Closed: connect the VDD_HV_IO_MAIN to the VIO of the CAN transceiver</li> </ul>     | Closed  | C4 <sup>(1)</sup> |
| SB38   | CAN 2 transceiver VDD supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD of the U7 CAN 2 transceiver from the 5 V domain.</li> <li>Closed: connect the VDD of the U7 CAN 2 transceiver to the 5 V domain.</li> </ul> | Closed  | C4 <sup>(1)</sup> |
| JP19A  | CAN_2_STB configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PL10 from CAN_2_STB</li> <li>Closed: connect PL10 to CAN_2_STB</li> </ul>                                                                                              | Closed  | C4 <sup>(2)</sup> |
| JP19B  | CAN_2_TX configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PF0 from CAN_2_TX</li> <li>Closed: connect PF0 to CAN_2_TX</li> </ul>                                                                                                   | Closed  | C4 <sup>(2)</sup> |
| JP19C  | CAN_2_RX configuration:<br><ul style="list-style-type: none"> <li>Open: connect PF1 to CAN_2_RX</li> <li>Closed: disconnect PF1 to CAN_2_RX</li> </ul>                                                                                                     | Closed  | C4 <sup>(2)</sup> |
| JP20A  | CAN_2_L termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: Connect CAN_2_L to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | C4 <sup>(2)</sup> |
| JP20B  | CAN_2_H termination resistor configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: Connect CAN_2_H to a 60.4 <math>\Omega</math> termination resistor</li> </ul>                             | Closed  | C4 <sup>(2)</sup> |
| SB39   | CAN 3 transceiver VIO supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD_HV_IO_MAIN from the VIO of the AN transceiver</li> <li>Closed: connect the VDD_HV_IO_MAIN to the VIO of the CAN transceiver</li> </ul>      | Closed  | C4 <sup>(1)</sup> |
| SB40   | CAN 3 transceiver VDD supply configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect the VDD of the CAN 3 transceiver from the 5 V domain.</li> <li>Closed: connect the VDD of the CAN 3 transceiver to the 5 V domain.</li> </ul>       | Closed  | C4 <sup>(1)</sup> |
| JP21A  | CAN_3_STB configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PA15 from CAN_3_STB</li> <li>Closed: connect PA15 to CAN_3_STB</li> </ul>                                                                                              | Closed  | C4 <sup>(2)</sup> |
| JP21B  | CAN_3_TX configuration:<br><ul style="list-style-type: none"> <li>Open: disconnect PB9 from CAN_3_TX</li> </ul>                                                                                                                                            | Closed  | C4 <sup>(2)</sup> |

| Jumper | Description                                                                                                                                                                                                                 | Default | Position          |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
|        | <ul style="list-style-type: none"> <li>Closed: connect PB9 to CAN_3_TX</li> </ul>                                                                                                                                           |         |                   |
| JP21C  | CAN_3_RX configuration: <ul style="list-style-type: none"> <li>Open: disconnect PA3 from CAN_3_RX</li> <li>Closed: connect PA3 to CAN_3_RX</li> </ul>                                                                       | Closed  | C4 <sup>(2)</sup> |
| JP22A  | CAN_3_L termination resistor configuration: <ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: Connect CAN_3_L to a 60.4 <math>\Omega</math> termination resistor</li> </ul> | Closed  | C4 <sup>(2)</sup> |
| JP22B  | CAN_3_H termination resistor configuration: <ul style="list-style-type: none"> <li>Open: disconnect the termination resistor</li> <li>Closed: Connect CAN_3_H to a 60.4 <math>\Omega</math> termination resistor</li> </ul> | Closed  | C4 <sup>(2)</sup> |

1. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom](#).

2. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top](#).

## 6.4 FlexRay interface

The SR6G7-EVBC6000P rev. B evaluation board is fitted with four FlexRAY transceivers (P/N: TJA1080ATS), two female DB9 connectors and some jumpers used to route the respective MCU signals to the physical interfaces.

The following picture shows the FlexRAY DB9 connector.

**Figure 12. FlexRAY 0 and 1 DB9 female connector**



The following table describes the pinout of the FlexRay 0 and 1 DB9 connector.

**Table 14. FlexRay 0 and 1 DB9 connector pinout**

| Pin number | Signal                 |
|------------|------------------------|
| 1          | N.C.                   |
| 2          | BM0 (bus line minus 0) |
| 3          | GND                    |
| 4          | BM1 (bus line minus 1) |
| 5          | GND                    |
| 6          | N.C.                   |
| 7          | BP0 (bus line plus 0)  |
| 8          | BP1 (bus line plus 1)  |
| 9          | N.C.                   |

The following table describes the pinout of the FlexRay 2 and 3 DB9 connector.

**Table 15. FlexRay 2 and 3 DB9 connector pinout**

| Pin number | Signal                 |
|------------|------------------------|
| 1          | N.C.                   |
| 2          | BM2 (bus line minus 2) |
| 3          | GND                    |
| 4          | BM3 (bus line minus 3) |
| 5          | GND                    |
| 6          | N.C.                   |
| 7          | BP2 (bus line plus 2)  |
| 8          | BP3 (bus line plus 3)  |
| 9          | N.C.                   |

The jumpers and the solder bridges detailed in the following table are used to configure the FlexRay interfaces.

**Table 16. FlexRAY control jumpers and solder bridges**

| Jumper | Description                                                                                                                                                                                                                           | Default | Position          |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB50   | FlexRay 0 transceiver VCC and VBUF connection:<br><ul style="list-style-type: none"> <li>Open: FlexRay 0 transceiver VCC and VBUF not connected</li> <li>Closed: FlexRay 0 transceiver VCC and VBUF connected to 5 V</li> </ul>       | Closed  | C1 <sup>(1)</sup> |
| SB51   | FlexRay 0 transceiver VBAT connection:<br><ul style="list-style-type: none"> <li>Open: FlexRay 0 transceiver VBAT not connected</li> <li>Closed: FlexRay 0 transceiver VBAT connected to 12 V</li> </ul>                              | Closed  | A1 <sup>(2)</sup> |
| SB58   | FlexRay 0 transceiver supply voltage:<br><ul style="list-style-type: none"> <li>Open: FlexRay 0 supply voltage transceiver not connected</li> <li>Closed: FlexRay 0 supply voltage transceiver connected to VDD_HV_IO_MAIN</li> </ul> | Closed  | A1 <sup>(2)</sup> |
| JP31A  | Flex_TXD_0 connection:<br><ul style="list-style-type: none"> <li>Open: Flex_TXD_0 not connected</li> <li>Closed: Flex_TXD_0 connected to PH7</li> </ul>                                                                               | Closed  | A1 <sup>(2)</sup> |
| JP31B  | Flex_TXEN_0 connection:<br><ul style="list-style-type: none"> <li>Open: Flex_TXEN_0 not connected</li> <li>Closed: Flex_TXEN_0 connected to PH8</li> </ul>                                                                            | Closed  | A1 <sup>(2)</sup> |
| JP31C  | Flex_RXD_0 connection:<br><ul style="list-style-type: none"> <li>Open: Flex_RXD_0 not connected</li> <li>Closed: Flex_RXD_0 connected to PH9</li> </ul>                                                                               | Closed  | A1 <sup>(2)</sup> |
| JP32A  | FlexRay 0 BM input resistance:<br><ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | A1 <sup>(2)</sup> |
| JP32B  | FlexRay 0 BP input resistance:<br><ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | A1 <sup>(2)</sup> |
| SB52   | FlexRay 1 transceiver VCC and VBUF connection:<br><ul style="list-style-type: none"> <li>Open: FlexRay 1 transceiver VCC and VBUF not connected</li> <li>Closed: FlexRay 1 transceiver VCC and VBUF connected to 5 V</li> </ul>       | Closed  | D1 <sup>(1)</sup> |
| SB53   | FlexRay 1 transceiver VBAT connection:<br><ul style="list-style-type: none"> <li>Open: FlexRay 1 transceiver VBAT not connected</li> <li>Closed: FlexRay 1 transceiver VBAT connected to 12 V</li> </ul>                              | Closed  | B1 <sup>(2)</sup> |
| SB59   | FlexRay 1 transceiver supply voltage:                                                                                                                                                                                                 | Closed  | A1 <sup>(2)</sup> |

| Jumper | Description                                                                                                                                                                                                                        | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
|        | <ul style="list-style-type: none"> <li>Open: FlexRay 1 supply voltage transceiver not connected</li> <li>Closed: FlexRay 1 supply voltage transceiver connected to VDD_HV_IO_MAIN</li> </ul>                                       |         |                   |
| JP31D  | Flex_TXD_1 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXD_1 not connected</li> <li>Closed: Flex_TXD_1 connected to PH3</li> </ul>                                                                               | Closed  | B1 <sup>(2)</sup> |
| JP31E  | Flex_TXEN_1 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXEN_1 not connected</li> <li>Closed: Flex_TXEN_1 connected to PH4</li> </ul>                                                                            | Closed  | B1 <sup>(2)</sup> |
| JP31F  | Flex_RXD_1 connection: <ul style="list-style-type: none"> <li>Open: Flex_RXD_1 not connected</li> <li>Closed: Flex_RXD_1 connected to PH10</li> </ul>                                                                              | Closed  | B1 <sup>(2)</sup> |
| JP33A  | FlexRay 1 BM input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | B1 <sup>(2)</sup> |
| JP33B  | FlexRay 1 BP input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | B1 <sup>(2)</sup> |
| SB54   | FlexRay 2 transceiver VCC and VBUF connection: <ul style="list-style-type: none"> <li>Open: FlexRay 2 transceiver VCC and VBUF not connected</li> <li>Closed: FlexRay 2 transceiver VCC and VBUF connected to 5 V</li> </ul>       | Closed  | B1 <sup>(1)</sup> |
| SB55   | FlexRay 2 transceiver VBAT connection: <ul style="list-style-type: none"> <li>Open: FlexRay 2 transceiver VBAT not connected</li> <li>Closed: FlexRay 2 transceiver VBAT connected to 12 V</li> </ul>                              | Closed  | C1 <sup>(2)</sup> |
| SB60   | FlexRay 2 transceiver supply voltage: <ul style="list-style-type: none"> <li>Open: FlexRay 2 supply voltage transceiver not connected</li> <li>Closed: FlexRay 2 supply voltage transceiver connected to VDD_HV_IO_MAIN</li> </ul> | Closed  | C1 <sup>(2)</sup> |
| JP36A  | Flex_TXD_2 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXD_2 not connected</li> <li>Closed: Flex_TXD_2 connected to PN12</li> </ul>                                                                              | Closed  | C1 <sup>(2)</sup> |
| JP36B  | Flex_TXEN_2 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXEN_2 not connected</li> <li>Closed: Flex_TXEN_2 connected to PN14</li> </ul>                                                                           | Closed  | C1 <sup>(2)</sup> |
| JP36C  | Flex_RXD_2 connection: <ul style="list-style-type: none"> <li>Open: Flex_RXD_2 not connected</li> <li>Closed: Flex_RXD_2 connected to PE10</li> </ul>                                                                              | Closed  | C1 <sup>(2)</sup> |
| JP34A  | FlexRay 2 BM input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | C1 <sup>(2)</sup> |
| JP34B  | FlexRay 2 BP input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul>                      | Closed  | C1 <sup>(2)</sup> |
| SB56   | FlexRay 3 transceiver VCC and VBUF connection: <ul style="list-style-type: none"> <li>Open: FlexRay 3 transceiver VCC and VBUF not connected</li> <li>Closed: FlexRay 3 transceiver VCC and VBUF connected to 5 V</li> </ul>       | Closed  | B1 <sup>(1)</sup> |
| SB57   | FlexRay 3 transceiver VBAT connection: <ul style="list-style-type: none"> <li>Open: FlexRay 3 transceiver VBAT not connected</li> <li>Closed: FlexRay 3 transceiver VBAT connected to 12 V</li> </ul>                              | Closed  | C1 <sup>(2)</sup> |
| SB61   | FlexRay 3 transceiver supply voltage: <ul style="list-style-type: none"> <li>Open: FlexRay 3 supply voltage transceiver not connected</li> </ul>                                                                                   | Closed  | C1 <sup>(2)</sup> |

| Jumper | Description                                                                                                                                                                                                   | Default | Position          |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
|        | <ul style="list-style-type: none"> <li>Closed: FlexRay 3 supply voltage transceiver connected to VDD_HV_IO_MAIN</li> </ul>                                                                                    |         |                   |
| JP36D  | Flex_TXD_3 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXD_3 not connected</li> <li>Closed: Flex_TXD_3 connected to PN13</li> </ul>                                                         | Closed  | C1 <sup>(2)</sup> |
| JP36E  | Flex_TXEN_3 connection: <ul style="list-style-type: none"> <li>Open: Flex_TXEN_3 not connected</li> <li>Closed: Flex_TXEN_3 connected to PN4</li> </ul>                                                       | Closed  | C1 <sup>(2)</sup> |
| JP36F  | Flex_RXD_3 connection: <ul style="list-style-type: none"> <li>Open: Flex_RXD_3 not connected</li> <li>Closed: Flex_RXD_3 connected to PN8</li> </ul>                                                          | Closed  | C1 <sup>(2)</sup> |
| JP34A  | FlexRay 3 BM input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul> | Closed  | C1 <sup>(2)</sup> |
| JP34B  | FlexRay 3 BP input resistance: <ul style="list-style-type: none"> <li>Open: 47 <math>\Omega</math> R<sub>BUS</sub> not connected</li> <li>Closed: 47 <math>\Omega</math> R<sub>BUS</sub> connected</li> </ul> | Closed  | C1 <sup>(2)</sup> |

1. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom.](#)

2. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.5 UART interface

The board contains an FT2232HL with two receivers and two drivers.

The connector is a MOLEX connector, SMT, right angle, USB MINI-B, 5 pins.

Each TX and RX pin has a jumper allowing the possibility to disconnect the default pin and connect another pin.

The following table shows the UART interface jumpers configuration.

**Table 17. UART interface pin configuration**

| Jumper | Description                                                                                                                                                                  | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP14A  | UART_A_RX connection:<br><ul style="list-style-type: none"> <li>Open: UART_A_RX not connected</li> <li>Closed: UART_A_RX connected to PD12</li> </ul>                        | Closed  | A4 <sup>(1)</sup> |
| JP17B  | UART_A_TX connection:<br><ul style="list-style-type: none"> <li>Open: UART_A_TX not connected</li> <li>Closed: UART_A_TX connected to PD13</li> </ul>                        | Closed  | A4 <sup>(1)</sup> |
| JP14C  | UART_B_RX connection:<br><ul style="list-style-type: none"> <li>Open: UART_B_RX not connected</li> <li>Closed: UART_B_RX connected to PJ4</li> </ul>                         | Closed  | A3 <sup>(1)</sup> |
| JP14D  | UART_B_TX connection:<br><ul style="list-style-type: none"> <li>Open: UART_B_TX not connected</li> <li>Closed: UART_B_TX connected to PH6</li> </ul>                         | Closed  | A3 <sup>(1)</sup> |
| SB24   | TX_A_USB connection<br><ul style="list-style-type: none"> <li>Open: TX_A_USB not connected</li> <li>Closed: TX_A_USB connected to UART_A_TX using a level shifter</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| SB25   | RX_A_USB connection<br><ul style="list-style-type: none"> <li>Open: RX_A_USB not connected</li> <li>Closed: RX_A_USB connected to UART_A_RX using a level shifter</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| SB26   | USB A DTR and DSR connection<br><ul style="list-style-type: none"> <li>Open: DTR and DSR not connected</li> <li>Closed: DTR and DSR connected</li> </ul>                     | Closed  | A3 <sup>(1)</sup> |
| SB27   | USB A DCD and RI connection<br><ul style="list-style-type: none"> <li>Open: DCD and RI not connected</li> <li>Closed: DCD and RI connected</li> </ul>                        | Closed  | A3 <sup>(1)</sup> |
| SB30   | TX_B_USB connection<br><ul style="list-style-type: none"> <li>Open: TX_B_USB not connected</li> <li>Closed: TX_B_USB connected to UART_B_TX using a level shifter</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| SB31   | RX_B_USB connection<br><ul style="list-style-type: none"> <li>Open: RX_B_USB not connected</li> <li>Closed: RX_B_USB connected to UART_B_RX using a level shifter</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| SB28   | USB B DTR and DSR connection<br><ul style="list-style-type: none"> <li>Open: DTR and DSR not connected</li> <li>Closed: DTR and DSR connected</li> </ul>                     | Closed  | A3 <sup>(1)</sup> |
| SB29   | USB B DCD and RI connection<br><ul style="list-style-type: none"> <li>Open: DCD and RI not connected</li> <li>Closed: DCD and RI connected</li> </ul>                        | Closed  | A3 <sup>(1)</sup> |
| SB32   | USB GND connection<br><ul style="list-style-type: none"> <li>Open: USB_GND not connected</li> <li>Closed: USB_GND connected to GND</li> </ul>                                | Closed  | A3 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

The following table shows the UART interface LEDs.

**Table 18. UART interface LEDs**

| LED  | Description | Position          |
|------|-------------|-------------------|
| LED3 | RX_A_LED    | A3 <sup>(1)</sup> |
| LED4 | TX_A_LED    |                   |
| LED5 | RX_B_LED    |                   |
| LED6 | TX_B_LED    |                   |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.6 LINFlexD interface

The SR6G7-EVBC6000P rev. B evaluation board is fitted with two dual channels LIN transceiver (P/N: TJA1022T by NXP) and one 2x4 header connector.

The following table shows the 2x4 header connector pinout (P8).

**Table 19. LINFlexD header 2x4 pins connector pinout**

| Pin number | Signal     |
|------------|------------|
| 1          | LIN_0      |
| 2          | VBat_LIN_A |
| 3          | LIN_1      |
| 4          | GND        |
| 5          | LIN_2      |
| 6          | VBat_LIN_B |
| 7          | LIN_3      |
| 8          | GND        |

The jumpers detailed in the following table are used to configure the LINFlex interfaces.

**Table 20. LINFlexD interface configuration jumpers and solder bridges**

| Jumper | Description                                                                                                                                                                                                                   | Default | Position          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP26A  | LINFlex 0 sleep control input connection:<br><ul style="list-style-type: none"> <li>Open: LINFlex 0 sleep control input not connected.</li> <li>Closed: LINFlex 0 sleep control input connected to VDD_HV_IO_MAIN.</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| JP3    | LINFlex 1 sleep control input connection:<br><ul style="list-style-type: none"> <li>Open: LINFlex 1 sleep control input not connected.</li> <li>Closed: LINFlex 1 sleep control input connected to VDD_HV_IO_MAIN.</li> </ul> | Closed  | A3 <sup>(1)</sup> |
| JP30A  | LINFlex 2 sleep control input connection:<br><ul style="list-style-type: none"> <li>Open: LINFlex 2 sleep control input not connected.</li> <li>Closed: LINFlex 2 sleep control input connected to VDD_HV_IO_MAIN.</li> </ul> | Closed  | A2 <sup>(1)</sup> |
| JP30B  | LINFlex 3 sleep control input connection:<br><ul style="list-style-type: none"> <li>Open: LINFlex 3 sleep control input not connected.</li> <li>Closed: LINFlex 3 sleep control input connected to VDD_HV_IO_MAIN.</li> </ul> | Closed  | A2 <sup>(1)</sup> |
| JP25A  | LIN_0_RX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_0_RX not connected</li> <li>Closed: LIN_0_RX connected to PD0</li> </ul>                                                                             | Closed  | A3 <sup>(1)</sup> |

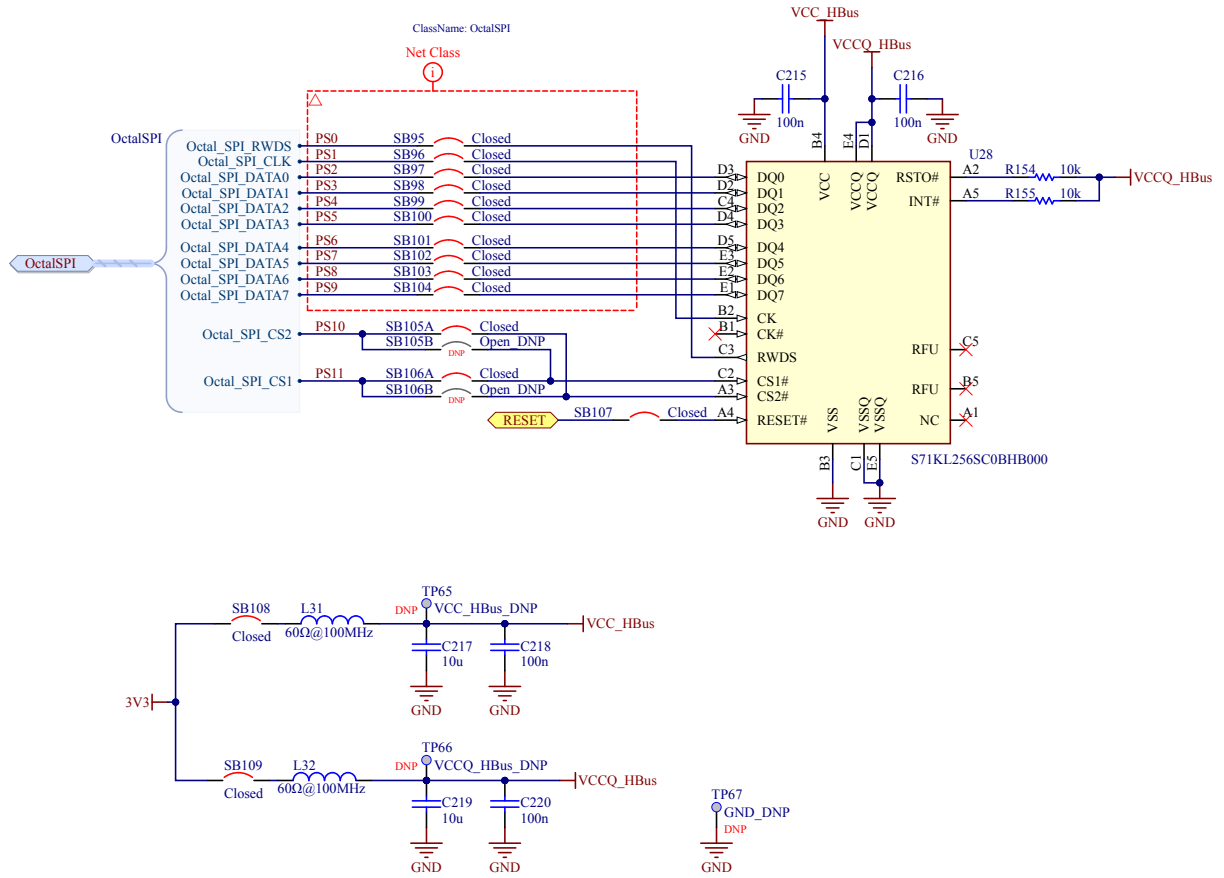
| Jumper | Description                                                                                                                                                     | Default           | Position          |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|
| JP25B  | LIN_0_TX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_0_TX not connected</li> <li>Closed: LIN_0_TX connected to PD1</li> </ul>               | Closed            | A3 <sup>(1)</sup> |
| JP25C  | LIN_1_RX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_1_RX not connected</li> <li>Closed: LIN_1_RX connected to PA1</li> </ul>               | Closed            | A3 <sup>(1)</sup> |
| JP25D  | LIN_1_TX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_1_TX not connected</li> <li>Closed: LIN_1_TX connected to PA0</li> </ul>               | Closed            | A3 <sup>(1)</sup> |
| JP28A  | LIN_2_RX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_2_RX not connected</li> <li>Closed: LIN_2_RX connected to PA11</li> </ul>              | Closed            | A3 <sup>(1)</sup> |
| JP28B  | LIN_2_TX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_2_TX not connected</li> <li>Closed: LIN_2_TX connected to PA10</li> </ul>              | Closed            | A2 <sup>(1)</sup> |
| JP28C  | LIN_3_RX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_3_RX not connected</li> <li>Closed: LIN_3_RX connected to PC1</li> </ul>               | Closed            | A2 <sup>(1)</sup> |
| JP28D  | LIN_3_TX connection:<br><ul style="list-style-type: none"> <li>Open: LIN_3_TX not connected</li> <li>Closed: LIN_3_TX connected to PC2</li> </ul>               | Closed            | A2 <sup>(1)</sup> |
| JP27A  | LIN_0_Config (master/slave):<br><ul style="list-style-type: none"> <li>1-2: Master mode</li> <li>2-3: Slave mode</li> </ul>                                     | 1-2 (Master mode) | A3 <sup>(1)</sup> |
| JP27B  | LIN_1_Config (master/slave):<br><ul style="list-style-type: none"> <li>1-2: Master mode</li> <li>2-3: Slave mode</li> </ul>                                     | 1-2 (Master mode) | A3 <sup>(1)</sup> |
| JP27C  | LIN_2_Config (master/slave):<br><ul style="list-style-type: none"> <li>1-2: Master mode</li> <li>2-3: Slave mode</li> </ul>                                     | 1-2 (Master mode) | A2 <sup>(1)</sup> |
| JP27D  | LIN_3_Config (master/slave):<br><ul style="list-style-type: none"> <li>1-2: Master mode</li> <li>2-3: Slave mode</li> </ul>                                     | 1-2 (Master mode) | A2 <sup>(1)</sup> |
| SB48   | VBat_LIN_A connection:<br><ul style="list-style-type: none"> <li>Open: VBat_LIN_A not connected</li> <li>Closed: VBat_LIN_A connected to 12 V domain</li> </ul> | Closed            | A3 <sup>(1)</sup> |
| SB49   | VBat_LIN_B connection:<br><ul style="list-style-type: none"> <li>Open: VBat_LIN_B not connected</li> <li>Closed: VBat_LIN_B connected to 12 V domain</li> </ul> | Closed            | A2 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top](#).

## 6.7 Hyperbus interface

This paragraph describes the Hyperbus interface present on the board (256 Mb HyperFlash™ and 64 Mbit HyperRAM™ in multi-chip package (MCP) - P/N: S71KL256SC0BHB000) .

The following figure shows the Hyperbus schema.

**Figure 13. Hyperbus schema**


The solder bridges detailed in the following table are used to configure the Hyperbus interfaces.

**Table 21. Hyperbus interface configuration**

| Jumper | Description                                                                                                                                                                                                                | Default | Position          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB95   | RWDS (Read-Write data strobe) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_RWDS (PS0) not connected.</li> <li>Closed: Octal_SPI_RWDS (PS0) connected to RWDS (Read-Write data strobe).</li> </ul> | Closed  | B3 <sup>(1)</sup> |
| SB96   | CK (single-ended clock) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_CLK (PS1) not connected.</li> <li>Closed: Octal_SPI_CLK (PS1) connected to CK (single-ended clock).</li> </ul>               | Closed  | B3 <sup>(1)</sup> |
| SB97   | DQ0 (data Input/Output 0) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA0 (PS2) not connected.</li> <li>Closed: Octal_SPI_DATA0 (PS2) connected to DQ0 (data Input/Output 0).</li> </ul>       | Closed  | A3 <sup>(1)</sup> |
| SB98   | DQ1 (data Input/Output 1) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA1 (PS3) not connected.</li> <li>Closed: Octal_SPI_DATA1 (PS3) connected to DQ1 (data Input/Output 1).</li> </ul>       | Closed  | A3 <sup>(1)</sup> |
| SB99   | DQ2 (data Input/Output 2) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA2 (PS4) not connected.</li> <li>Closed: Octal_SPI_DATA2 (PS4) connected to DQ2 (data Input/Output 2).</li> </ul>       | Closed  | B3 <sup>(1)</sup> |
| SB100  | DQ3 (data Input/Output 3) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA3 (PS5) not connected.</li> </ul>                                                                                      | Closed  | B3 <sup>(1)</sup> |

| Jumper | Description                                                                                                                                                                                                                                           | Default | Position          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
|        | <ul style="list-style-type: none"> <li>Closed: Octal_SPI_DATA3 (PS5) connected to DQ3 (data Input/Output 3).</li> </ul>                                                                                                                               |         |                   |
| SB101  | DQ4 (data Input/Output 4) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA4 (PS6) not connected.</li> <li>Closed: Octal_SPI_DATA4 (PS6) connected to DQ4 (data Input/Output 4).</li> </ul>                                  | Closed  | B3 <sup>(1)</sup> |
| SB102  | DQ5 (data Input/Output 5) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA5 (PS7) not connected.</li> <li>Closed: Octal_SPI_DATA5 (PS7) connected to DQ5 (data Input/Output 5).</li> </ul>                                  | Closed  | A3 <sup>(1)</sup> |
| SB103  | DQ6 (data Input/Output 6) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA6 (PS8) not connected.</li> <li>Closed: Octal_SPI_DATA6 (PS8) connected to DQ6 (data Input/Output 6).</li> </ul>                                  | Closed  | A3 <sup>(1)</sup> |
| SB104  | DQ7 (data Input/Output 7) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_DATA7 (PS9) not connected.</li> <li>Closed: Octal_SPI_DATA7 (PS9) connected to DQ7 (data Input/Output 7).</li> </ul>                                  | Closed  | A3 <sup>(1)</sup> |
| SB105A | Octal_SPI_CS2 (PS10) vs CS2 (Chip Select 2) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_CS2 (PS10) not connected to CS2 (Chip Select 2).</li> <li>Closed: Octal_SPI_CS2 (PS10) connected to CS2 (Chip Select 2).</li> </ul> | Closed  | B3 <sup>(1)</sup> |
| SB105B | Octal_SPI_CS2 (PS10) vs CS1 (Chip Select 1) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_CS2 (PS10) not connected to CS1 (Chip Select 1).</li> <li>Closed: Octal_SPI_CS2 (PS10) connected to CS1 (Chip Select 1).</li> </ul> | Closed  | B3 <sup>(1)</sup> |
| SB106A | Octal_SPI_CS1 (PS11) vs CS1 (Chip Select 1) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_CS1 (PS11) not connected to CS1 (Chip Select 1).</li> <li>Closed: Octal_SPI_CS1 (PS11) connected to CS1 (Chip Select 1).</li> </ul> | Closed  | B3 <sup>(1)</sup> |
| SB106B | Octal_SPI_CS1 (PS11) vs CS2 (Chip Select 2) configuration: <ul style="list-style-type: none"> <li>Open: Octal_SPI_CS1 (PS11) not connected CS2 (Chip Select 2).</li> <li>Closed: Octal_SPI_CS1 (PS11) connected to CS2 (Chip Select 2).</li> </ul>    | Closed  | B3 <sup>(1)</sup> |
| SB107  | Hardware RESET configuration: <ul style="list-style-type: none"> <li>Open: Hardware RESET not connected.</li> <li>Closed: Hardware RESET connected to RESET.</li> </ul>                                                                               | Closed  | B3 <sup>(1)</sup> |
| SB108  | VCC (Core power) configuration: <ul style="list-style-type: none"> <li>Open: VCC (Core power) not connected.</li> <li>Closed: VCC (Core power) connected to 3V3 domain.</li> </ul>                                                                    | Closed  | B4 <sup>(1)</sup> |
| SB109  | VCCQ (Input/Output power) configuration: <ul style="list-style-type: none"> <li>Open: VCCQ (Input/Output power) not connected.</li> <li>Closed: VCCQ (Input/Output power) connected to 3V3 domain.</li> </ul>                                         | Closed  | A3 <sup>(1)</sup> |

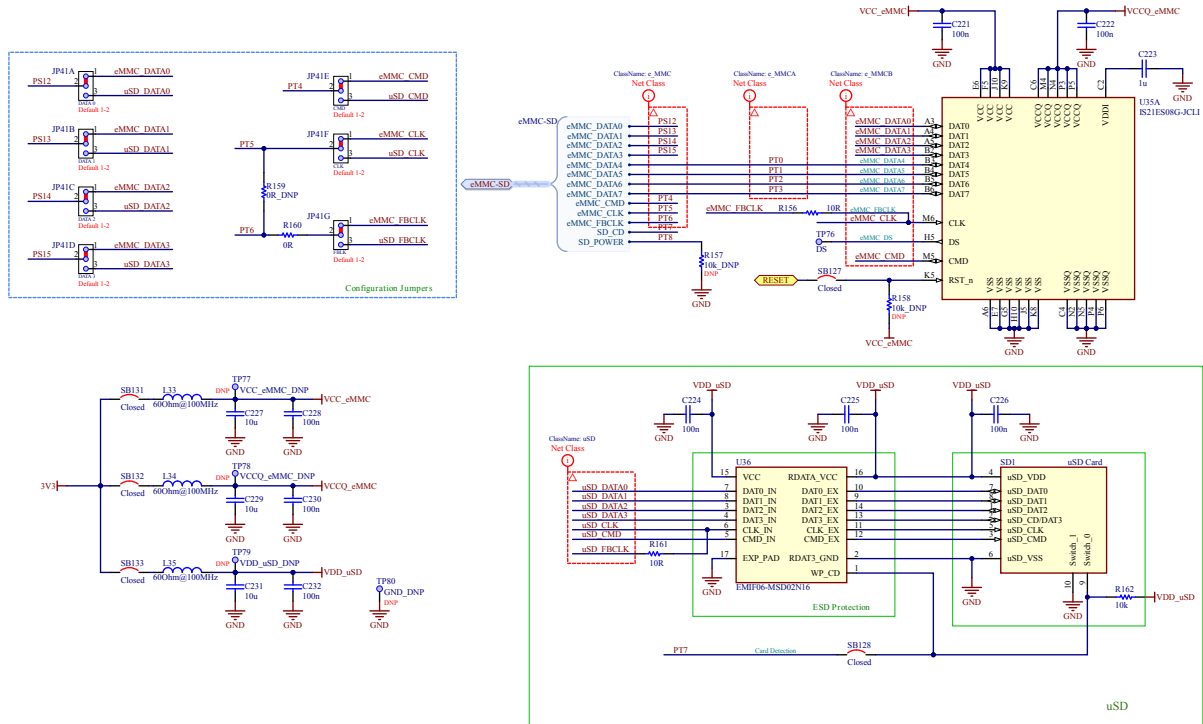
1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.8 eMMC/SD interface

This paragraph describes the embedded eMMC device (8 gigabyte NAND flash memory with eMMC 5.0 interface - P/N: IS21ES08GA) and the  $\mu$ SD card reader present on the board.

The following figure shows the eMMC/ $\mu$ SD schema.

**Figure 14. eMMC/SD schema**



The following table describes all jumpers and all solder bridges used to configure the eMMC/SD interface of the board and their position on the PCB.

**Table 22. eMMC/SD interface configuration**

| Jumper | Description                                                                                                                                                                                                           | Default | Position          |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB127  | Hardware RESET configuration: <ul style="list-style-type: none"> <li>Open: RESET not connected.</li> <li>Closed: RESET connected to hardware RESET.</li> </ul>                                                        | Closed  | C4 <sup>(1)</sup> |
| SB131  | eMMC core power supply (VCC) configuration: <ul style="list-style-type: none"> <li>Open: eMMC core power supply (VCC) not connected</li> <li>Closed: eMMC core power supply (VCCQ) connected to 3V3 domain</li> </ul> | Closed  | B4 <sup>(2)</sup> |
| SB132  | eMMC I/O power supply (VCCQ) configuration: <ul style="list-style-type: none"> <li>Open: eMMC I/O power supply (VCCQ) not connected</li> <li>Closed: eMMC I/O power supply (VCCQ) connected to 3V3 domain</li> </ul>  | Closed  | B4 <sup>(2)</sup> |
| SB133  | VDD uSD configuration: <ul style="list-style-type: none"> <li>Open: VDD uSD not connected</li> <li>Closed: VDD uSD connected to 3V3 domain</li> </ul>                                                                 | Closed  | B4 <sup>(2)</sup> |
| JP41A  | SDMMC 0 data 0 (PS12) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC 0 data 0 (PS12) connected to eMMC_DATA0</li> <li>2-3: SDMMC 0 data 0 (PS12) connected to uSD_DATA0.</li> </ul>                 | 1-2     | B4 <sup>(2)</sup> |
| JP41B  | SDMMC 1 data 0 (PS13) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC 0 data 1 (PS13) connected to eMMC_DATA1</li> </ul>                                                                             | 1-2     | B4 <sup>(2)</sup> |

| Jumper | Description                                                                                                                                                                                           | Default | Position          |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
|        | <ul style="list-style-type: none"> <li>2-3: SDMMC 0 data 1 (PS13) connected to uSD_DATA1.</li> </ul>                                                                                                  |         |                   |
| JB41C  | SDMMC 0 data 2 (PS14) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC 0 data 2 (PS14) connected to eMMC_DATA2</li> <li>2-3: SDMMC 0 data 2 (PS14) connected to uSD_DATA2.</li> </ul> | 1-2     | B4 <sup>(2)</sup> |
| JB41D  | SDMMC 0 data 3 (PS15) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC 0 data 3 (PS15) connected to eMMC_DATA3</li> <li>2-3: SDMMC 0 data 3 (PS15) connected to uSD_DATA3.</li> </ul> | 1-2     | B4 <sup>(2)</sup> |
| JB41E  | SDMMC CMD (PT4) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC CMD (PT4) connected to eMMC_CMD</li> <li>2-3: SDMMC CMD (PT4) connected to uSD_CMD.</li> </ul>                       | 1-2     | B4 <sup>(2)</sup> |
| JB41F  | SDMMC CLK (PT5) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC CLK (PT5) connected to eMMC_CLK</li> <li>2-3: SDMMC CLK (PT5) connected to uSD_CLK.</li> </ul>                       | 1-2     | B4 <sup>(2)</sup> |
| JB41G  | SDMMC FBCLK (PT6) configuration: <ul style="list-style-type: none"> <li>1-2: SDMMC FBCLK (PT6) connected to eMMC_FBCLK</li> <li>2-3: SDMMC FBCLK (PT6) connected to uSD_FBCLK.</li> </ul>             | 1-2     | B4 <sup>(2)</sup> |
| SB128  | SD card detection configuration: <ul style="list-style-type: none"> <li>Open: SD card detection (PT7) not connected.</li> <li>Closed: SD card detection (PT7) connected to SD Switch_0.</li> </ul>    | Closed  | B4 <sup>(2)</sup> |

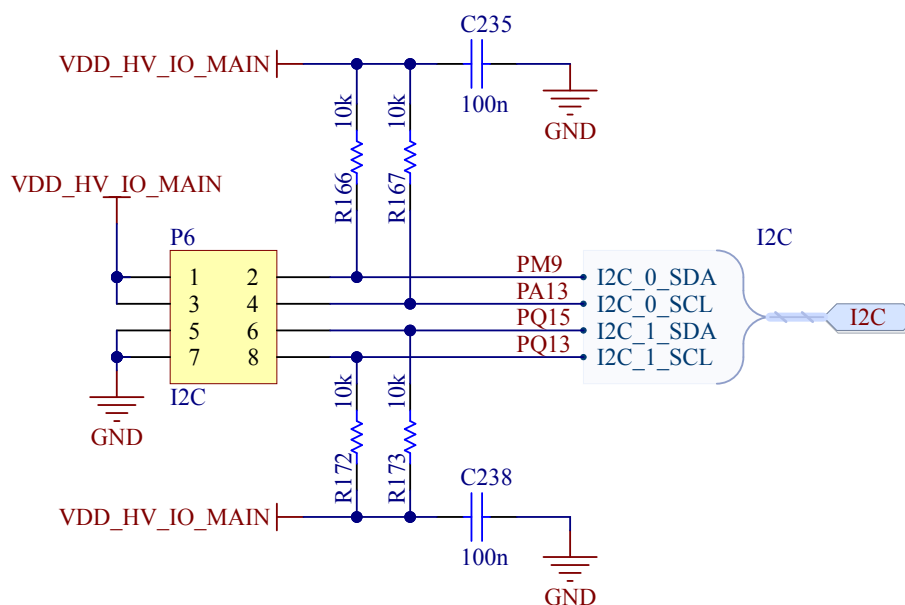
1. Refer to the [Figure 23. SR6G7-EVBC6000P rev. B - bottom.](#)

2. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.9 I<sup>2</sup>C interface

This paragraph describes the embedded I<sup>2</sup>C interface present on the board. The following figure shows the I<sup>2</sup>C schema.

### Figure 15. I<sup>2</sup>C schema



The following table shows the 2x4 header connector pinout (P7).

### Table 23. I<sup>2</sup>C header 2x4 pins connector pinout

| Pin number | Signal         |
|------------|----------------|
| 1          | VDD_HV_IO_MAIN |
| 2          | I2C_0_SDA      |
| 3          | VDD_HV_IO_MAIN |
| 4          | I2C_0_SCL      |
| 5          | GND            |
| 6          | I2C_1_SDA      |
| 7          | GND            |
| 8          | I2C_1_SCL      |

## 6.10 Debug connectors

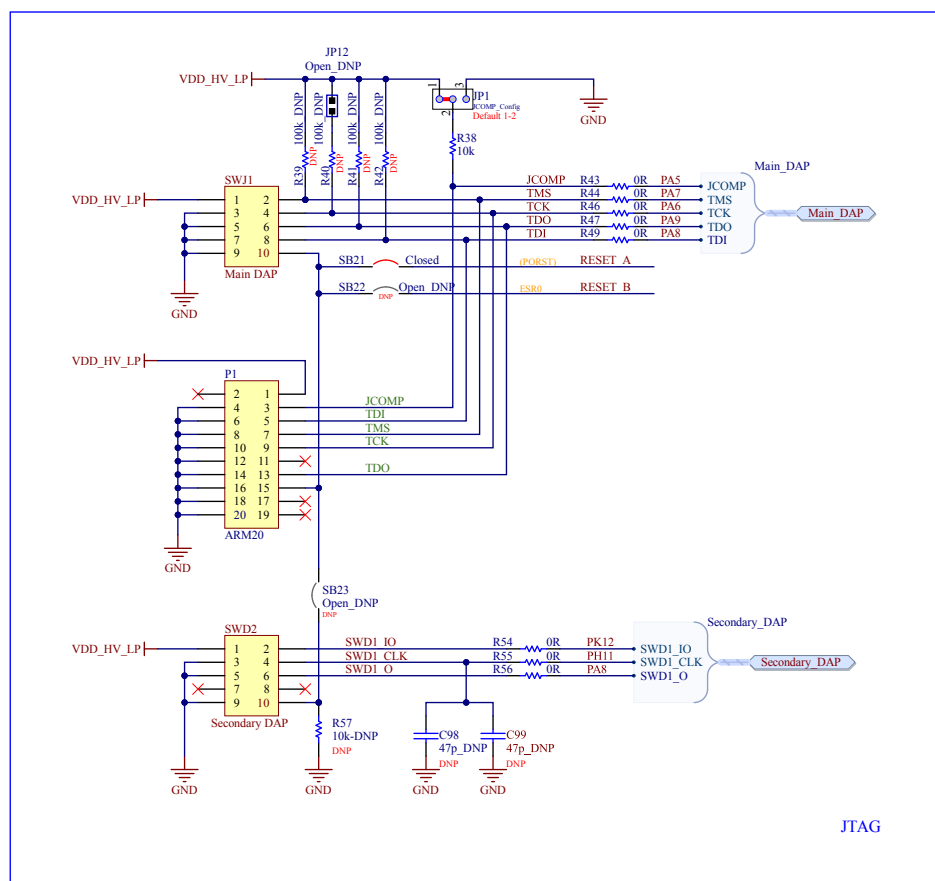
The SR6G7-EVBC6000P rev. B evaluation board has the following debug connectors:

**Table 24. Debug connectors**

| Connectors | Description                                         |
|------------|-----------------------------------------------------|
| SWJ1       | 10-pin header connector for JTAG/Main DAP interface |
| P1         | 20-pin ARM Connector for JTAG/Main DAP interface    |
| SWD2       | 10-pin header connector for Secondary DAP interface |
| P3         | 12-pin header connector for SIPI 0 interface        |
| P4         | 12-pin header connector for SIPI 1 interface        |
| J15        | NEXUS 2x20-pin connector for AURORA interface       |

The following figure shows the main DAP connectors and the secondary DAP connector schema.

**Figure 16. Debug connectors schema**



The following tables show the 2x5 and 2x10 header connectors pinout:

**Table 25. SWJ1 main DAP header 2x5 pins connector pinout**

| Pin number | Signal                                                                                               |
|------------|------------------------------------------------------------------------------------------------------|
| 1          | VDD_HV_IO_MAIN                                                                                       |
| 2          | TMS                                                                                                  |
| 3          | GND                                                                                                  |
| 4          | TCK                                                                                                  |
| 5          | GND                                                                                                  |
| 6          | TDO                                                                                                  |
| 7          | GND                                                                                                  |
| 8          | TDI                                                                                                  |
| 9          | GND                                                                                                  |
| 10         | Configurable pin between: <ul style="list-style-type: none"> <li>RESET_A</li> <li>RESET_B</li> </ul> |

**Table 26. P1 main DAP header 2x10 pins connector pinout**

| Pin number | Signal                                                                                               |
|------------|------------------------------------------------------------------------------------------------------|
| 1          | VDD_HV_IO_MAIN                                                                                       |
| 2          | N.C.                                                                                                 |
| 3          | JCOMP                                                                                                |
| 4          | GND                                                                                                  |
| 5          | TDI                                                                                                  |
| 6          | GND                                                                                                  |
| 7          | TMS                                                                                                  |
| 8          | GND                                                                                                  |
| 9          | TCK                                                                                                  |
| 10         | GND                                                                                                  |
| 11         | N.C.                                                                                                 |
| 12         | GND                                                                                                  |
| 13         | TDO                                                                                                  |
| 14         | GND                                                                                                  |
| 15         | Configurable pin between: <ul style="list-style-type: none"> <li>RESET_A</li> <li>RESET_B</li> </ul> |
| 16         | GND                                                                                                  |
| 17         | N.C.                                                                                                 |
| 18         | GND                                                                                                  |
| 19         | N.C.                                                                                                 |
| 20         | GND                                                                                                  |

**Table 27. SWD2 secondary DAP header 2x5 pins connector pinout**

| Pin number | Signal                                                                                                                  |
|------------|-------------------------------------------------------------------------------------------------------------------------|
| 1          | VDD_HV_IO_MAIN                                                                                                          |
| 2          | SWD1_IO                                                                                                                 |
| 3          | GND                                                                                                                     |
| 4          | SWD1_CLK                                                                                                                |
| 5          | GND                                                                                                                     |
| 6          | SWD1_O                                                                                                                  |
| 7          | N.C.                                                                                                                    |
| 8          | N.C.                                                                                                                    |
| 9          | GND                                                                                                                     |
| 10         | Configurable pin between: <ul style="list-style-type: none"> <li>RESET_A</li> <li>RESET_B</li> <li>Pull down</li> </ul> |

The following table describes all jumpers, all 0R resistors and all solder bridges used to configure the JTAG/Main DAP and the secondary DAP ports of the board and their position on the PCB.

**Table 28. JTAG/Main DAP and secondary DAP configuration**

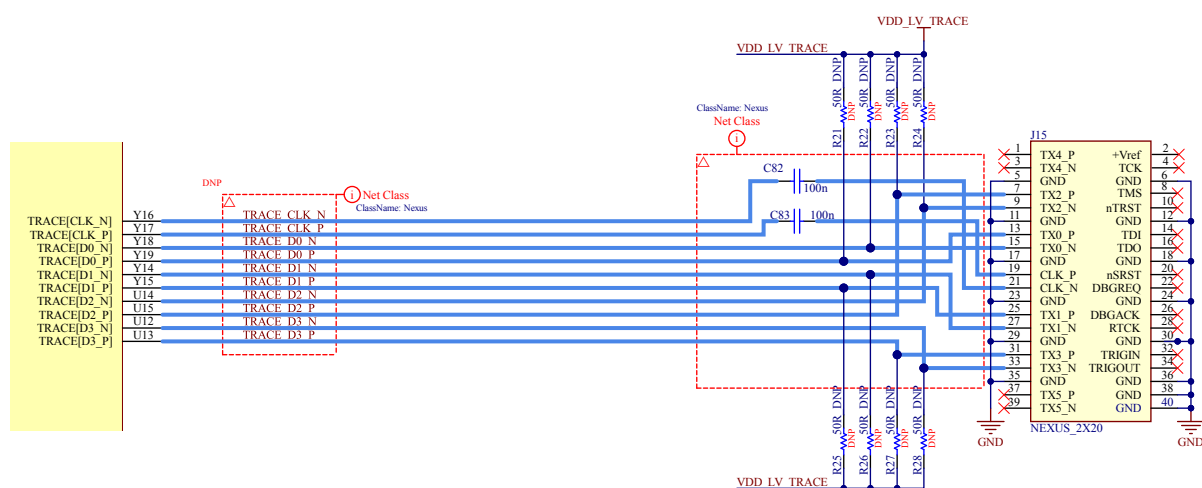
| Reference | Description                                                                                                                                                                                           | Default | Position          |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP1       | JCOMP configuration: <ul style="list-style-type: none"> <li>1-2: JCOMP connected to 10 kΩ pull-up resistor to VDD_HV_IO_MAIN</li> <li>Closed: JCOMP connected to 10 kΩ pull-down resistor.</li> </ul> | 1-2     | C3 <sup>(1)</sup> |
| R43       | JCOMP connection configuration: <ul style="list-style-type: none"> <li>Mounted: PA5 connected to JCOMP</li> <li>Not mounted: PA5 not connected to JCOMP</li> </ul>                                    | Mounted | C3 <sup>(1)</sup> |
| R44       | TMS configuration: <ul style="list-style-type: none"> <li>Mounted: PA7 connected to TMS</li> <li>Not mounted: PA7 not connected to TMS</li> </ul>                                                     | Mounted | C3 <sup>(1)</sup> |
| R46       | TCK configuration: <ul style="list-style-type: none"> <li>Mounted: PA6 connected to TCK</li> <li>Not mounted: PA6 not connected to TCK</li> </ul>                                                     | Mounted | C2 <sup>(1)</sup> |
| R47       | TDO configuration: <ul style="list-style-type: none"> <li>Mounted: PA9 connected to TDO</li> <li>Not mounted: PA9 not connected to TDO</li> </ul>                                                     | Mounted | C2 <sup>(1)</sup> |
| R49       | TDI configuration: <ul style="list-style-type: none"> <li>Mounted: PA8 connected to TDI</li> <li>Not mounted: PA8 not connected to TDI</li> </ul>                                                     | Mounted | C2 <sup>(1)</sup> |
| R54       | SWD1_IO configuration: <ul style="list-style-type: none"> <li>Mounted: PK12 connected to SWD1_IO</li> <li>Not mounted: PK12 not connected to SWD1_IO</li> </ul>                                       | Mounted | C2 <sup>(1)</sup> |
| R55       | SWD1_CLK configuration: <ul style="list-style-type: none"> <li>Mounted: PK11 connected to SWD1_CLK</li> <li>Not mounted: PK11 not connected to SWD1_CLK</li> </ul>                                    | Mounted | C2 <sup>(1)</sup> |
| R56       | SWD1_O configuration: <ul style="list-style-type: none"> <li>Mounted: PA8 connected to SWD1_O</li> <li>Not mounted: PA8 not connected to SWD1_O</li> </ul>                                            | Mounted | C2 <sup>(1)</sup> |

| Reference | Description                                                                                                                                                                                                                                   | Default | Position          |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| SB21      | JTAG/Main DAP reset pin configuration: <ul style="list-style-type: none"> <li>Open: JTAG/Main DAP reset pin not connected to RESET_A</li> <li>Closed: JTAG/Main DAP reset pin connected to RESET_A</li> </ul>                                 | Closed  | C2 <sup>(1)</sup> |
| SB22      | JTAG/Main DAP reset pin configuration: <ul style="list-style-type: none"> <li>Open: JTAG/Main DAP reset pin not connected to RESET_B</li> <li>Closed: JTAG/Main DAP reset pin connected to RESET_B</li> </ul>                                 | Open    | C2 <sup>(1)</sup> |
| SB23      | Secondary DAP reset pin configuration: <ul style="list-style-type: none"> <li>Open: Secondary DAP reset pin not connected to JTAG/Main DAP reset pin</li> <li>Closed: Secondary DAP reset pin connected to JTAG/Main DAP reset pin</li> </ul> | Open    | C2 <sup>(1)</sup> |

1. Refer to the Figure 22. SR6G7-EVBC6000P rev. B - top.

The following figure shows the AURORA schema.

**Figure 17. J15 AURORA schema**



The following table shows the 2x4 header connector pinout.

**Table 29. J15 AURORA 2x20 pins connector pinout**

| Pin number | Signal     |
|------------|------------|
| 1          | N.C.       |
| 2          | N.C.       |
| 3          | N.C.       |
| 4          | N.C.       |
| 5          | N.C.       |
| 6          | GND        |
| 7          | TRACE_D2_P |
| 8          | N.C.       |
| 9          | TRACE_D2_N |
| 10         | N.C.       |
| 11         | GND        |
| 12         | GND        |

| Pin number | Signal      |
|------------|-------------|
| 13         | TRACE_D0_P  |
| 14         | N.C.        |
| 15         | TRACE_D0_N  |
| 16         | N.C.        |
| 17         | GND         |
| 18         | GND         |
| 19         | TRACE_CLK_P |
| 20         | N.C.        |
| 21         | TRACE_CLK_N |
| 22         | N.C.        |
| 23         | GND         |
| 24         | GND         |
| 25         | TRACE_D1_P  |
| 26         | N.C.        |
| 27         | TRACE_D1_N  |
| 28         | N.C.        |
| 29         | GND         |
| 30         | GND         |
| 31         | TRACE_D3_P  |
| 32         | N.C.        |
| 33         | TRACE_D3_N  |
| 34         | N.C.        |
| 35         | GND         |
| 36         | GND         |
| 37         | N.C.        |
| 38         | GND         |
| 39         | N.C.        |
| 40         | GND         |

## 6.11 I/O port connectors

On the SR6G7-EVBC6000P rev. B evaluation board, all the MCU IO pins are available through 2x9 pins header connectors connected to each device I/O port.

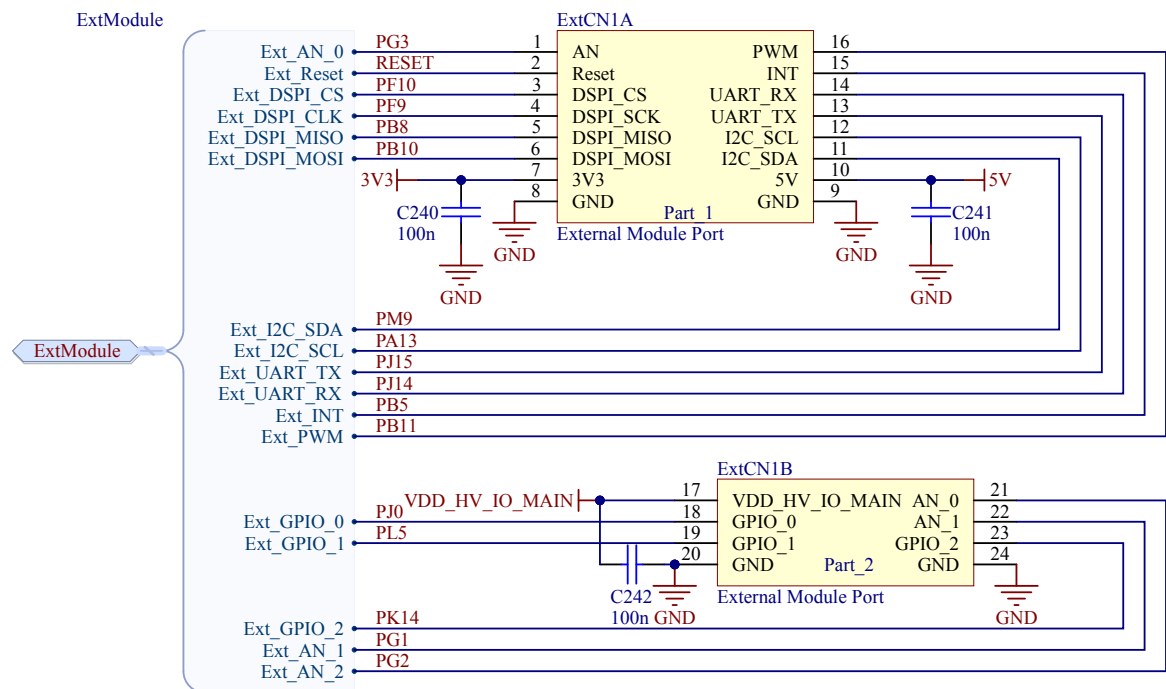
There are n.22 header connectors from port “A” to port “Y”.

## 6.12 Extension module port

The SR6G7-EVBC6000P rev. B evaluation board is fitted with a 12x2 header connector.

The following figure shows the pinout of the connector.

Figure 18. eMMC/SD schema



The following table shows the connector pin mapping.

Table 30. External module connector pins mapping

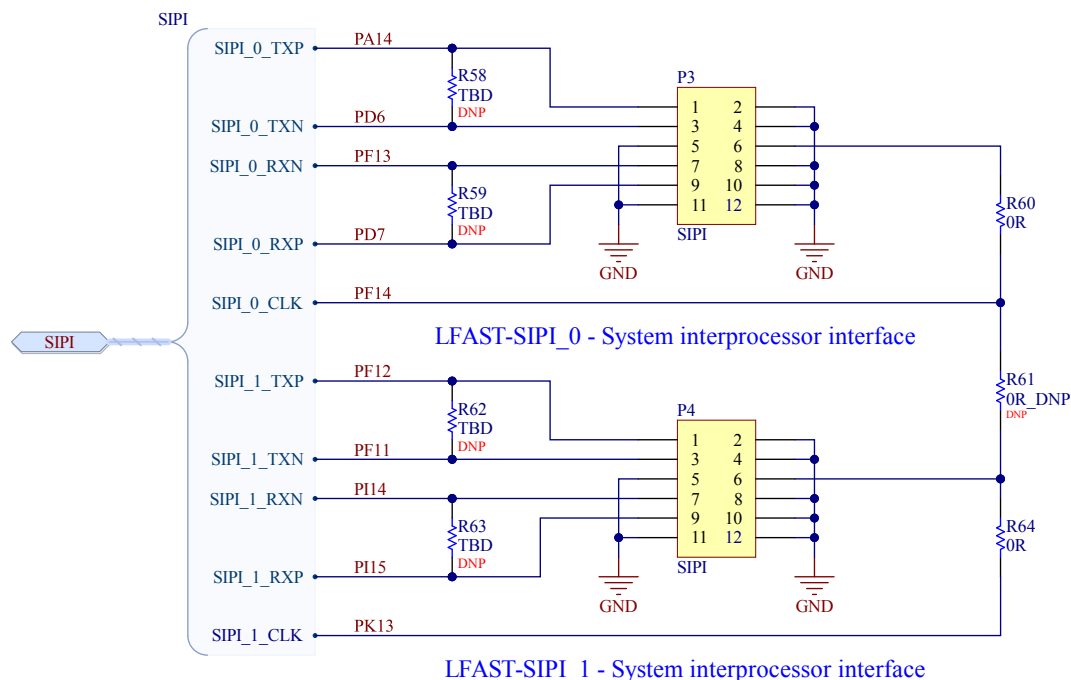
| Pin number | Pin name      | Port   |
|------------|---------------|--------|
| 1          | Ext_AN_0      | PG[03] |
| 2          | Ext_Reset     | -      |
| 3          | Ext_DSPI_CS   | PF[10] |
| 4          | Ext_DSPI_CLK  | PF[9]  |
| 5          | Ext_DSPI_MISO | PB[8]  |
| 6          | Ext_DSPI_MOSI | PB[10] |
| 7          | 3V3           | -      |
| 8          | GND           | -      |
| 9          | GND           | -      |
| 10         | 5V            | -      |
| 11         | Ext_I2C_SDA   | PM[09] |

| Pin number | Pin name       | Port   |
|------------|----------------|--------|
| 12         | Ext_I2C_SCL    | PA[13] |
| 13         | Ext_UART_TX    | PJ[15] |
| 14         | Ext_UART_RX    | PJ[14] |
| 15         | Ext_INT        | PB[05] |
| 16         | Ext_PWM        | PB[11] |
| 17         | VDD_HV_IO_MAIN | -      |
| 18         | Ext_GPIO_0     | PJ[00] |
| 19         | Ext_GPIO_1     | PL[05] |
| 20         | GND            | -      |
| 21         | Ext_GPIO_2     | PG[02] |
| 22         | Ext_AN_1       | PG[01] |
| 23         | Ext_AN_2       | PK[14] |
| 24         | GND            | -      |

### 6.13 SIPI

On the SR6G7-EVBC6000P rev. B evaluation board there are two SIPI connectors. The following figure shows the SIPI connection schema.

**Figure 19. SIPI connectors schema**



The following tables show the 2x5 header connectors pinout (P3->SIPI\_0 P4->SIPI\_1).

**Table 31. SIPI\_0 header 2x6 pins connector pinout**

| Pin number | Signal              |
|------------|---------------------|
| 1          | SIPI_0_TXP (PA[14]) |
| 2          | GND                 |
| 3          | SIPI_0_TXN (PD[6])  |
| 4          | GND                 |
| 5          | GND                 |
| 6          | SIPI_0_CLK (PF[14]) |
| 7          | SIPI_0_RXN (PF[13]) |
| 8          | GND                 |
| 9          | SIPI_0_RXP (PD[7])  |
| 10         | GND                 |
| 11         | GND                 |
| 12         | GND                 |

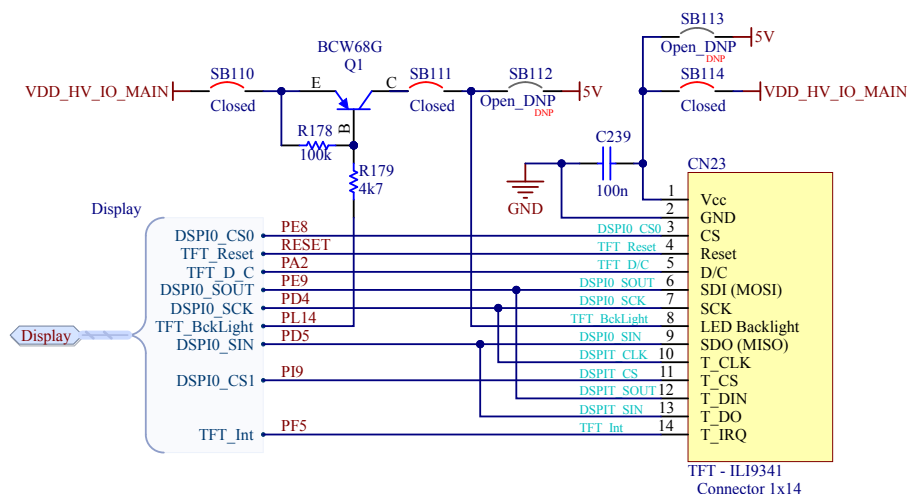
**Table 32. SIPI\_1 header 2x6 pins connector pinout**

| Pin number | Signal              |
|------------|---------------------|
| 1          | SIPI_1_TXP (PF[12]) |
| 2          | GND                 |
| 3          | SIPI_1_TXN (PF[11]) |
| 4          | GND                 |
| 5          | GND                 |
| 6          | SIPI_1_CLK (PK[13]) |
| 7          | SIPI_1_RXN (PI[14]) |
| 8          | GND                 |
| 9          | SIPI_1_RXP (PI[15]) |
| 10         | GND                 |
| 11         | GND                 |
| 12         | GND                 |

## 6.14 Display port

The SR6G7-EVBC6000P rev. B evaluation board is fitted with a 14-pin TFT ILI9341 connector. The following figure shows the pinout of the connector.

**Figure 20. Display port schema**



The following table shows the connector pin mapping.

**Table 33. External module connector pins mapping**

| Pin number | Pin name        | Port   |
|------------|-----------------|--------|
| 1          | V <sub>CC</sub> | -      |
| 2          | GND             | -      |
| 3          | DSP10_CS0       | PE[08] |
| 4          | Reset           | -      |
| 5          | TFT_D_C         | PA[02] |
| 6          | DSP10_SOUT      | PE[09] |
| 7          | DSP10_SCK       | PD[04] |
| 8          | TFT_BckLight    | PL[14] |
| 9          | DSP10_SIN       | PD[05] |
| 10         | DSP11_CLK       | PD[04] |
| 11         | DSP11_CS0       | PI[09] |
| 12         | DSP11_SOUT      | PE[09] |
| 13         | DSP11_SIN       | PD[05] |
| 14         | TFT_Int         | PF[05] |

## 6.15 User area

There is a user area on the SR6G7-EVBC6000P rev. B evaluation board, consisting of the following features:

- 8 LEDs
- 3 pushbuttons
- 2 potentiometers

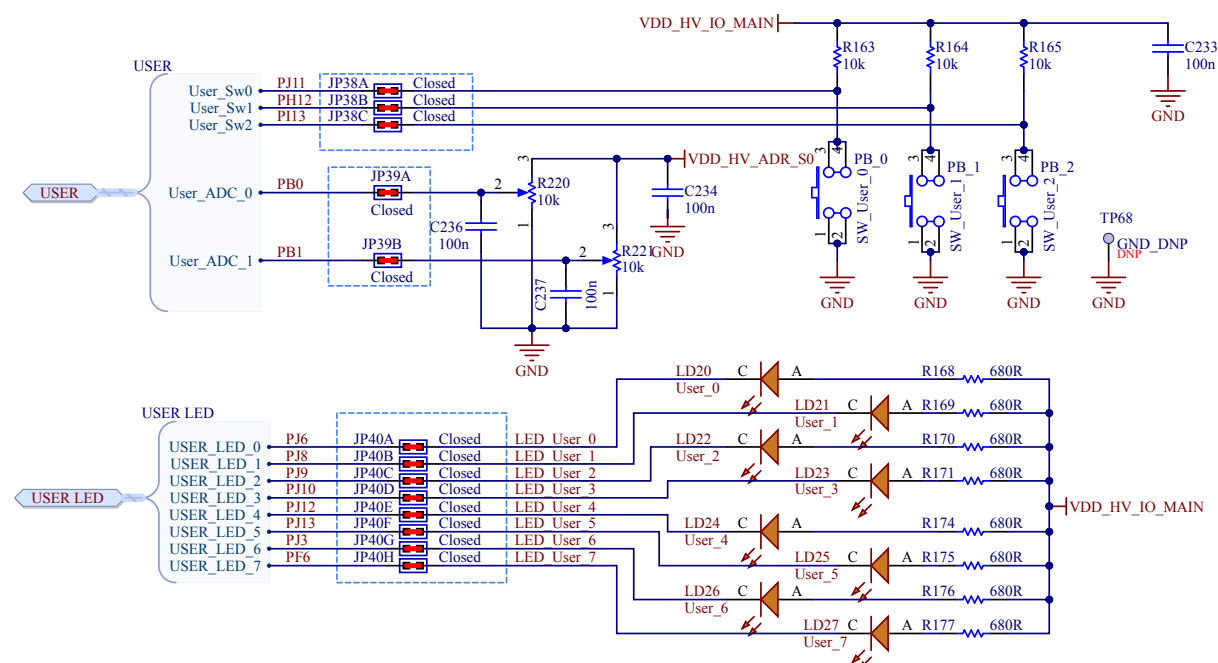
There are eight active low user LEDs LD20, LD21, LD22, LD23, LD24, LD25, LD26 and LD27. The LED inputs are pulled to VDD\_HV\_IO\_MAIN through 680  $\Omega$  resistors.

There are three active high pushbuttons: PB\_0, PB\_1 and PB\_2 which will drive VDD\_HV\_IO\_MAIN onto the respective pins on the 0.1" connector P36 when pushed. The switch outputs are pulled to GND via 10 k $\Omega$ .

There are two potentiometers: R220 and R221 connected to JP39A and JP39B and they are adjustable between VDD\_HV\_ADR and GND.

The following figure shows the user area schema.

**Figure 21. User area schema**



The following table describes all jumpers used to configure the user area of the board and their position on PCB.

**Table 34. User area interface configuration**

| Jumper | Description                                                                                                                                                                                    | Default | Position          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP38A  | User_Sw0 (PJ11) configuration: <ul style="list-style-type: none"> <li>• Open: User_Sw0 (PJ11) not connected</li> <li>• Closed: User_Sw0 (PJ11) connected to push button 1 (PB_0)</li> </ul>    | Closed  | C4 <sup>(1)</sup> |
| JP38B  | User_Sw1 (PH12) configuration: <ul style="list-style-type: none"> <li>• Open: User_Sw1 (PH12) not connected</li> <li>• Closed: User_Sw1 (PH12) connected to push button 2 (PB_1)</li> </ul>    | Closed  | C4 <sup>(1)</sup> |
| JP38C  | User_Sw2 (PI13) configuration: <ul style="list-style-type: none"> <li>• Open: User_Sw3 (PI13) not connected</li> <li>• Closed: User_Sw3 (PI13) connected to push button 3 (PB_2)</li> </ul>    | Closed  | C4 <sup>(1)</sup> |
| JP39A  | User_ADC_0 (PB0) configuration: <ul style="list-style-type: none"> <li>• Open: User_ADC_0 (PB0) not connected</li> <li>• Closed: User_ADC_0 (PB0) connected to potentiometer (R220)</li> </ul> | Closed  | C4 <sup>(1)</sup> |

| Jumper | Description                                                                                                                                                                                   | Default | Position          |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| JP39B  | User_ADC_1 (PB1) configuration:<br><ul style="list-style-type: none"> <li>Open: User_ADC_1 (PB1) not connected</li> <li>Closed: User_ADC_1 (PB1) connected to potentiometer (R221)</li> </ul> | Closed  | C4 <sup>(1)</sup> |
| JP40A  | User_LED_0 (PJ6) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_0 (PJ6) not connected</li> <li>Closed: User_LED_0 (PJ6) connected to LED (LD20)</li> </ul>           | Closed  | C4 <sup>(1)</sup> |
| JP40B  | User_LED_1 (PJ8) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_1 (PJ8) not connected</li> <li>Closed: User_LED_1 (PJ8) connected to LED (LD21)</li> </ul>           | Closed  | C4 <sup>(1)</sup> |
| JP40C  | User_LED_2 (PJ9) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_2 (PJ9) not connected</li> <li>Closed: User_LED_2 (PJ9) connected to LED (LD22)</li> </ul>           | Closed  | C4 <sup>(1)</sup> |
| JP40D  | User_LED_3 (PJ10) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_3 (PJ10) not connected</li> <li>Closed: User_LED_3 (PJ10) connected to LED (LD23)</li> </ul>        | Closed  | C4 <sup>(1)</sup> |
| JP40E  | User_LED_4 (PJ12) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_4 (PJ12) not connected</li> <li>Closed: User_LED_4 (PJ12) connected to LED (LD24)</li> </ul>        | Closed  | C4 <sup>(1)</sup> |
| JP40F  | User_LED_5 (PJ13) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_5 (PJ13) not connected</li> <li>Closed: User_LED_5 (PJ13) connected to LED (LD25)</li> </ul>        | Closed  | C4 <sup>(1)</sup> |
| JP40G  | User_LED_6 (PJ3) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_5 (PJ3) not connected</li> <li>Closed: User_LED_5 (PJ3) connected to LED (LD26)</li> </ul>           | Closed  | C4 <sup>(1)</sup> |
| JP40H  | User_LED_7 (PF6) configuration:<br><ul style="list-style-type: none"> <li>Open: User_LED_5 (PF6) not connected</li> <li>Closed: User_LED_5 (PF6) connected to LED (LD27)</li> </ul>           | Closed  | C4 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

The following table shows the user area LEDs:

**Table 35. User area LEDs**

| LED   | Description                   | Position          |
|-------|-------------------------------|-------------------|
| LED20 | User LED 0 connected to JP40A | C4 <sup>(1)</sup> |
| LED21 | User LED 1 connected to JP40B | C4 <sup>(1)</sup> |
| LED22 | User LED 2 connected to JP40C | C4 <sup>(1)</sup> |
| LED23 | User LED 3 connected to JP40D | C4 <sup>(1)</sup> |
| LED24 | User LED 4 connected to JP40E | C4 <sup>(1)</sup> |
| LED25 | User LED 5 connected to JP40F | C4 <sup>(1)</sup> |
| LED26 | User LED 6 connected to JP40G | C4 <sup>(1)</sup> |
| LED27 | User LED 7 connected to JP40H | C4 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 6.16 Test points

Several test points of different shape and functionality are scattered around the SR6G7-EVBC6000P rev. B evaluation board to allow easy access to MCU and reference signals. This chapter summarizes and describes the available test points. Test points are listed and detailed in the following table.

**Table 36. Test point**

| Test point | Description    | Position          |
|------------|----------------|-------------------|
| TP1        | VDD_HV_ADx     | B3 <sup>(1)</sup> |
| TP2        | VDD_HV_IO_MAIN | C3 <sup>(1)</sup> |
| TP3        | VDD_HV_NVM_PRG | C2 <sup>(1)</sup> |
| TP4        | VDD_LV_LP      | B2 <sup>(1)</sup> |
| TP5        | VDD_LV         | B2 <sup>(1)</sup> |
| TP6        | 3.3 V          | B4 <sup>(1)</sup> |
| TP7        | VDD_LV_IN      | B3 <sup>(1)</sup> |
| TP8        | EXTREG_SEL     | C3 <sup>(1)</sup> |
| TP9        | V_CVM          | C3 <sup>(1)</sup> |
| TP10       | TESTMODE       | C2 <sup>(1)</sup> |
| TP11       | V_Osc          | C2 <sup>(1)</sup> |
| TP12       | RESET_A        | C2 <sup>(1)</sup> |
| TP13       | RESET_B        | C2 <sup>(1)</sup> |
| TP14       | 3.3 V          | A1 <sup>(1)</sup> |
| TP15       | CAN_0_L        | A1 <sup>(1)</sup> |
| TP16       | CAN_0_H        | A1 <sup>(1)</sup> |
| TP17       | GND            | A1 <sup>(1)</sup> |
| TP18       | CAN_1_L        | A1 <sup>(1)</sup> |
| TP19       | CAN_1_H        | A1 <sup>(1)</sup> |
| TP20       | GND            | C4 <sup>(1)</sup> |
| TP21       | CAN_2_L        | C4 <sup>(1)</sup> |
| TP22       | CAN_2_H        | C4 <sup>(1)</sup> |
| TP23       | CAN_3_L        | C4 <sup>(1)</sup> |
| TP24       | CAN_3_H        | C4 <sup>(1)</sup> |
| TP25       | GND            | A4 <sup>(1)</sup> |
| TP26       | 5V_Ext         | B1 <sup>(1)</sup> |
| TP27       | 3V3_Ext        | B1 <sup>(1)</sup> |
| TP28       | MCU Pin H17    | B1 <sup>(1)</sup> |
| TP29       | MCU Pin G18    | B1 <sup>(1)</sup> |
| TP30       | MCU Pin G17    | B1 <sup>(1)</sup> |
| TP35       | VBat_LIN_0     | B4 <sup>(1)</sup> |
| TP36       | V_Osc          | A4 <sup>(1)</sup> |
| TP37       | FlexRay_0_BM   | B4 <sup>(1)</sup> |
| TP38       | FlexRay_0_BP   | A4 <sup>(1)</sup> |

| Test point | Description        | Position          |
|------------|--------------------|-------------------|
| TP39       | GND                | B4 <sup>(1)</sup> |
| TP40       | FlexRay_1_BP       | A4 <sup>(1)</sup> |
| TP41       | FlexRay_1_BM       | A1 <sup>(1)</sup> |
| TP42       | GND                | A1 <sup>(1)</sup> |
| TP43       | FlexRay_2_BM       | A1 <sup>(1)</sup> |
| TP44       | FlexRay_2_BP       | B1 <sup>(1)</sup> |
| TP45       | GND                | B1 <sup>(1)</sup> |
| TP46       | FlexRay_3_BM       | B1 <sup>(1)</sup> |
| TP47       | FlexRay_3_BP       | C1 <sup>(1)</sup> |
| TP48       | GND                | C1 <sup>(1)</sup> |
| TP49       | VDD_Flex_0         | A1 <sup>(1)</sup> |
| TP50       | VDD_Flex_1         | C1 <sup>(1)</sup> |
| TP51       | VDD_Flex_2         | C1 <sup>(1)</sup> |
| TP52       | VDD_Flex_3         | B1 <sup>(1)</sup> |
| TP53       | ETH0_INT_N         | C1 <sup>(1)</sup> |
| TP54       | AVDDH_0            | C1 <sup>(1)</sup> |
| TP55       | DVDDH_0            | C1 <sup>(1)</sup> |
| TP56       | AVDDL_0            | C1 <sup>(1)</sup> |
| TP57       | AVDDL_0_PLL        | A2 <sup>(1)</sup> |
| TP58       | DVDDL_0            | B2 <sup>(1)</sup> |
| TP59       | GND                | A2 <sup>(1)</sup> |
| TP60       | VDD_IO_ETH1        | A2 <sup>(1)</sup> |
| TP61       | VDD_IO_ETH1        | A2 <sup>(1)</sup> |
| TP62       | ETH1_CLK_Out       | A2 <sup>(1)</sup> |
| TP63       | ETH1_INH           | B4 <sup>(1)</sup> |
| TP64       | INH_ETH1           | A2 <sup>(1)</sup> |
| TP65       | OctalSPI_VCC_HBus  | B3 <sup>(1)</sup> |
| TP66       | OctalSPI_VCCQ_HBus | B4 <sup>(1)</sup> |
| TP67       | GND                | B3 <sup>(1)</sup> |
| TP68       | GND                | C4 <sup>(1)</sup> |
| TP76       | eMMC_DS            | B4 <sup>(1)</sup> |
| TP77       | VCC_EMMC           | B4 <sup>(1)</sup> |
| TP78       | VCCQ_EMMC          | B4 <sup>(1)</sup> |
| TP79       | VDD_uSD            | B4 <sup>(1)</sup> |
| TP80       | GND                | B4 <sup>(1)</sup> |
| TP100      | Vbatt              | A4 <sup>(1)</sup> |
| TP101      | 12 V               | A4 <sup>(1)</sup> |
| TP105      | 5 V                | A4 <sup>(1)</sup> |

1. Refer to the [Figure 22. SR6G7-EVBC6000P rev. B - top.](#)

## 7 Layout overview

Figure 22. SR6G7-EVBC6000P rev. B - top

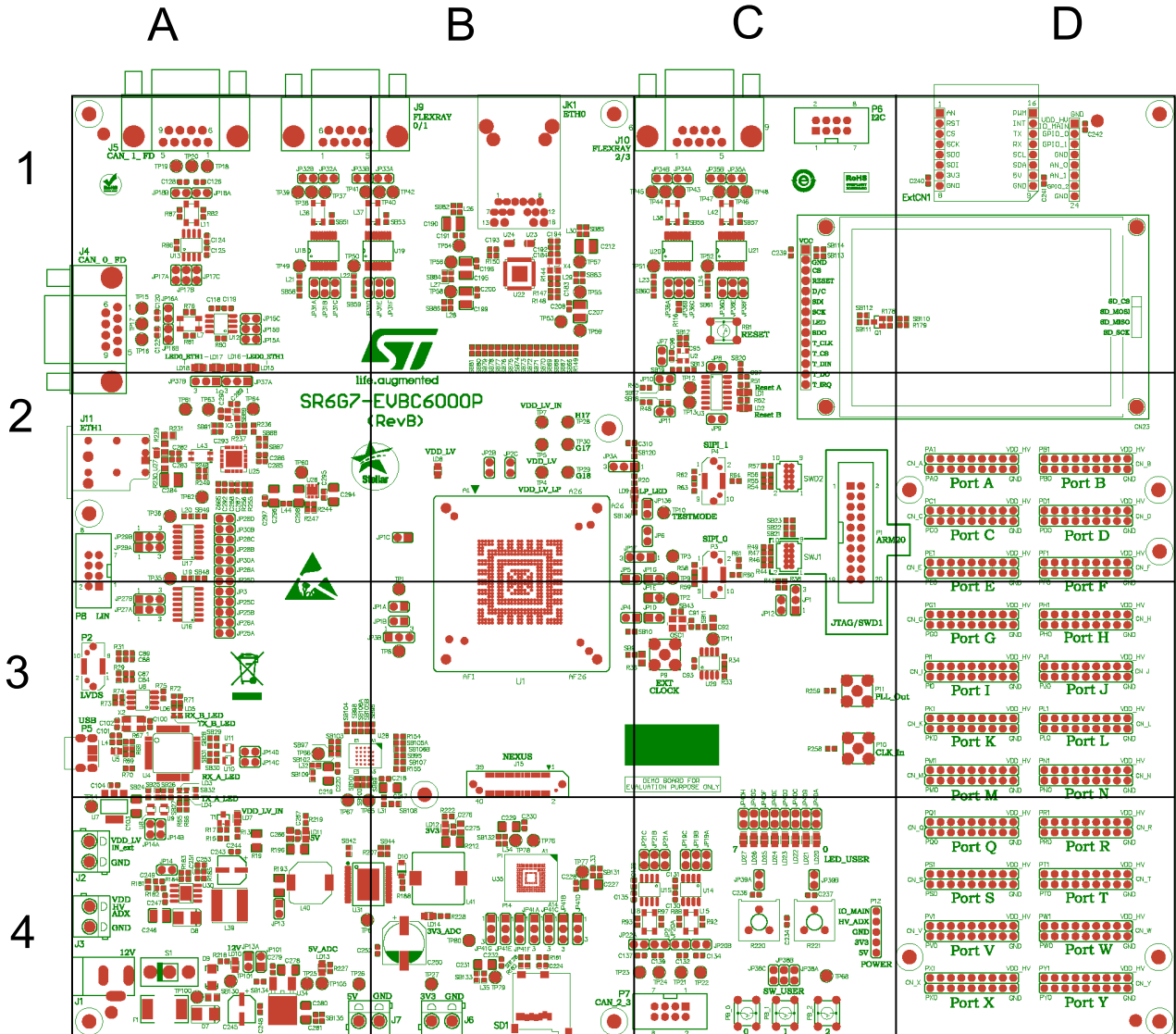
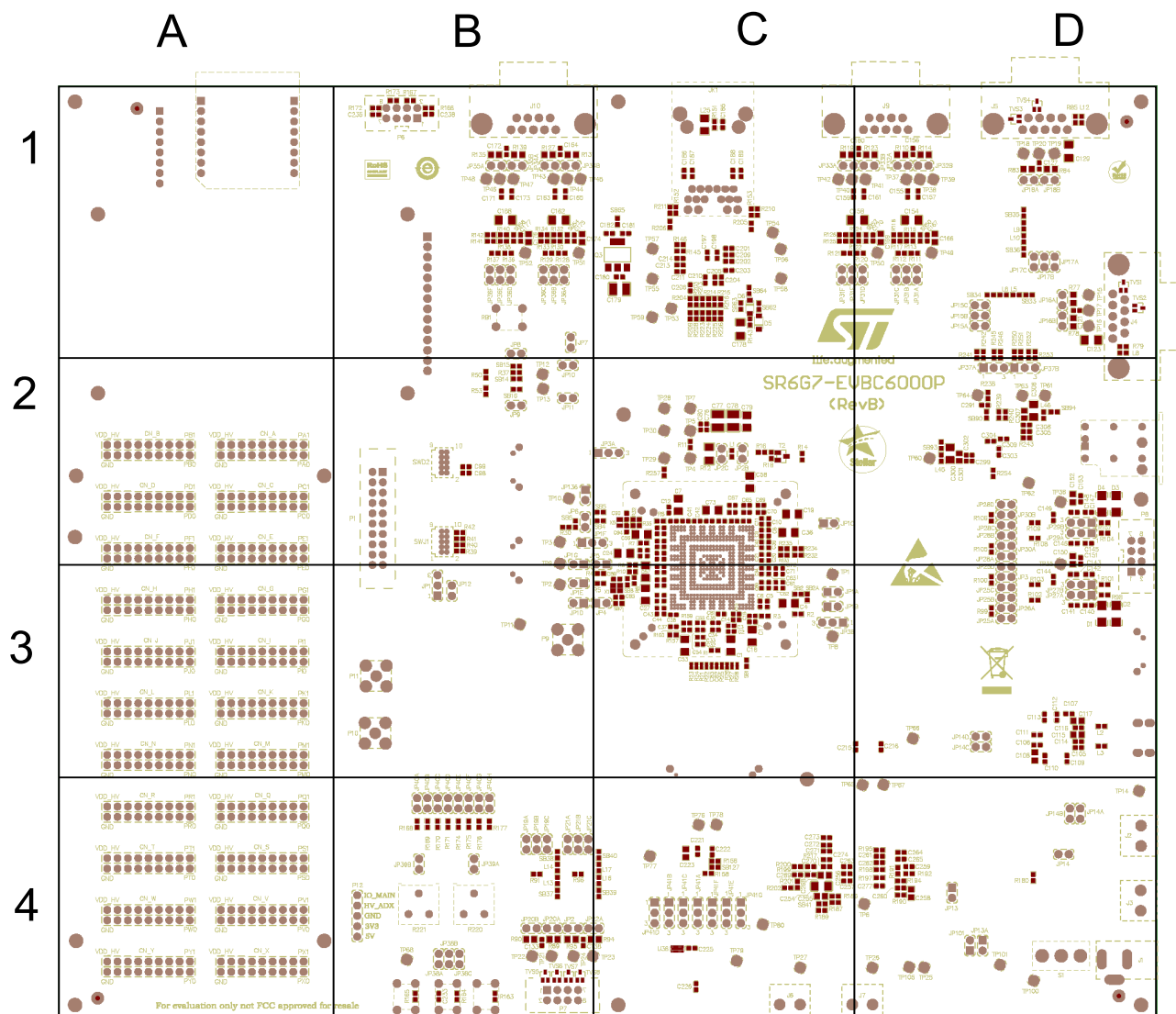


Figure 23. SR6G7-EVBC6000P rev. B - bottom



## 8 BOM

**Table 37. BOM**

| # | Item                                                                                                                                                                                                                 | Qty. | Reference   | Value       | Footprint      | Ass. Opt. | Description                                 |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|-------------|----------------|-----------|---------------------------------------------|
| 1 | C1, C4, C7, C16, C19, C24, C27, C36, C53, C56, C57, C58, C79, C300, C306                                                                                                                                             | 15   | CAP_SMD_X7R | 10 $\mu$ F  | CAP-1206-S     |           | SMD multilayer ceramic capacitor            |
| 2 | C2, C5                                                                                                                                                                                                               | 2    | CAP_SMD_X7R | 47 nF       | CAP-0603-XS    |           | SMD multilayer ceramic capacitor automotive |
| 3 | C3, C6, C9, C11, C13, C15, C18, C21, C23, C26, C29, C31, C33, C35, C38, C40, C42, C44, C46, C48, C50, C52, C55, C60, C62, C64, C66, C68, C70, C72, C75, C299                                                         | 32   | CAP_SMD_X7R | 10 nF       | CAP-0603-XS    |           | SMD multilayer ceramic capacitor automotive |
| 4 | C8, C10, C12, C14, C17, C20, C22, C25, C28, C30, C32, C34, C37, C39, C41, C43, C45, C47, C49, C51, C54, C59, C61, C63, C65, C67, C69, C71, C74, C76, C81, C302                                                       | 32   | CAP_SMD_X7R | 100 nF      | CAP-0603-XS    |           | SMD multilayer ceramic capacitor automotive |
| 5 | C73                                                                                                                                                                                                                  | 1    | CAP_SMD_X7R | 2.2 $\mu$ F | CAP-1206-S     |           | SMD multilayer ceramic capacitor            |
| 6 | C77, C78                                                                                                                                                                                                             | 2    | CAP_SMD_X7R | 22 $\mu$ F  | CAP-1210       |           | SMD multilayer ceramic capacitor            |
| 7 | C80                                                                                                                                                                                                                  | 1    | CAP_SMD_X7R | 1 nF        | CAP-0603-XS    |           | SMD multilayer ceramic capacitor automotive |
| 8 | C82, C83                                                                                                                                                                                                             | 2    | CAP_SMD_X7R | 100 nF      | CAP-0402-SMALL |           | SMD multilayer ceramic capacitor automotive |
| 9 | C84, C87, C88, C89, C91, C93, C95, C96, C97, C101, C104, C105, C106, C107, C109, C110, C111, C112, C113, C114, C116, C118, C119, C124, C125, C130, C131, C135, C136, C144, C149, C151, C153, C167, C170, C175, C177, | 113  | CAP_SMD_X7R | 100 nF      | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor automotive |

| #  | Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Qty. | Reference   | Value | Footprint      | Ass.<br>Opt. | Description                                                                               |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|-------|----------------|--------------|-------------------------------------------------------------------------------------------|
|    | C180, C181,<br>C185, C186,<br>C187, C188,<br>C189, C191,<br>C192, C193,<br>C194, C196,<br>C197, C198,<br>C200, C201,<br>C202, C203,<br>C204, C205,<br>C206, C208,<br>C209, C210,<br>C211, C213,<br>C214, C215,<br>C216, C218,<br>C220, C221,<br>C222, C224,<br>C225, C226,<br>C228, C230,<br>C232, C233,<br>C234, C235,<br>C236, C237,<br>C238, C239,<br>C240, C241,<br>C242, C244,<br>C248, C252,<br>C256, C261,<br>C262, C267,<br>C271, C272,<br>C276, C279,<br>C281, C282,<br>C283, C285,<br>C286, C287,<br>C288, C292,<br>C293, C295,<br>C297, C303,<br>C304, C308,<br>C309, C310 |      |             |       |                |              |                                                                                           |
| 10 | C85, C86                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2    | CAP_SMD_X7R | 8 pF  | CAP-0603-SMALL |              | SMD multilayer<br>ceramic capacitor                                                       |
| 11 | C90, C94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2    | CAP_SMD_X7R | 12 pF | CAP-0603-SMALL |              | SMD multilayer<br>ceramic capacitor<br>automotive                                         |
| 12 | C92, C150,<br>C152, C166,<br>C169, C174,<br>C176, C223                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8    | CAP_SMD_X7R | 1 µF  | CAP-0805-SMALL |              | SMD multilayer<br>ceramic capacitor<br>automotive                                         |
| 13 | C98, C99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2    | CAP_SMD_X7R | 47 pF | CAP-0603-SMALL | DNP          | SMD multilayer<br>ceramic capacitor                                                       |
| 14 | C100, C102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2    | CAP_SMD_X7R | 18 pF | CAP-0603-SMALL |              | SMD multilayer<br>ceramic capacitor                                                       |
| 15 | C103, C154,<br>C158, C162,<br>C168, C178,<br>C217, C219,<br>C227, C229,<br>C231, C254,<br>C278, C280,<br>C294, C296,<br>C298                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 17   | CAP_SMD_X7R | 10 µF | CAP-1206       |              | SMD multilayer<br>ceramic capacitor,<br>SMD multilayer<br>ceramic capacitor<br>automotive |

| #  | Item                                                                   | Qty. | Reference        | Value       | Footprint          | Ass. Opt. | Description                                                                   |
|----|------------------------------------------------------------------------|------|------------------|-------------|--------------------|-----------|-------------------------------------------------------------------------------|
| 16 | C108, C115, C117, C275                                                 | 4    | CAP_SMD_X7R      | 4.7 $\mu$ F | CAP-0805-SMALL     |           | SMD multilayer ceramic capacitor, SMD multilayer ceramic capacitor automotive |
| 17 | C120, C122, C126, C128, C132, C134, C137, C139                         | 8    | CAP_SMD_X7R      | 47 pF       | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 18 | C121, C127, C133, C138, C156, C160, C164, C172                         | 8    | CAP_SMD_X7R      | 4.7 nF      | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor automotive                                   |
| 19 | C123, C129                                                             | 2    | CAP_SMD_X7R      | 1 nF        | CAP-1206           | DNP       | SMD multilayer ceramic capacitor                                              |
| 20 | C140, C142, C145, C147                                                 | 4    | CAP_SMD_X7R      | 1 nF        | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor automotive                                   |
| 21 | C141, C143, C146, C148, C265, C274                                     | 6    | CAP_SMD_X7R      | 220 pF      | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 22 | C155, C157, C159, C161, C163, C165, C171, C173, C183, C184, C289, C290 | 12   | CAP_SMD_X7R      | 10 pF       | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 23 | C179, C190, C195, C199, C207, C212, C246                               | 7    | CAP_SMD_X7R      | 47 $\mu$ F  | CAP-1210           |           | SMD multilayer ceramic capacitor                                              |
| 24 | C182, C291, C305                                                       | 3    | CAP_SMD_X7R      | 10 nF       | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor automotive                                   |
| 25 | C243                                                                   | 1    | 2BCAPELECSG00060 | 330 $\mu$ F | EL-CAP-SMD-CASE-C6 |           | SMD electrolytic capacitor                                                    |
| 26 | C245                                                                   | 1    | 2BCAPELECSG00060 | 47 $\mu$ F  | EL-CAP-SMD-CASE-D  |           | SMD electrolytic capacitor                                                    |
| 27 | C247                                                                   | 1    | CAP_SMD_X7R      | 220 nF      | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor automotive                                   |
| 28 | C249                                                                   | 1    | CAP_SMD_X7R      | 15 nF       | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 29 | C250                                                                   | 1    | 2BCAPELECSF00037 | 220 $\mu$ F | EL-CAP-SMD-10X10.5 |           | SMD electrolytic capacitor                                                    |
| 30 | C251                                                                   | 1    | CAP_SMD_X7R      | 1.2 nF      | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor automotive                                   |
| 31 | C253                                                                   | 1    | CAP_SMD_X7R      | 68 nF       | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 32 | C255                                                                   | 1    | CAP_SMD_X7R      | 3.3 $\mu$ F | CAP-0805-SMALL     |           | SMD multilayer ceramic capacitor                                              |
| 33 | C257, C263, C277                                                       | 3    | CAP_SMD_X7R      | 3.9 nF      | CAP-0603-SMALL     |           | SMD multilayer ceramic capacitor                                              |

| #  | Item       | Qty. | Reference    | Value         | Footprint      | Ass. Opt. | Description                                   |
|----|------------|------|--------------|---------------|----------------|-----------|-----------------------------------------------|
| 34 | C258, C268 | 2    | CAP_SMD_X7R  | 13 nF         | CAP-0805-SMALL |           | SMD multilayer ceramic capacitor automotive   |
| 35 | C259       | 1    | CAP_SMD_X7R  | 1.3 nF        | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor automotive   |
| 36 | C260       | 1    | CAP_SMD_X7R  | 13 pF         | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor              |
| 37 | C264, C273 | 2    | CAP_SMD_X7R  | 47 nF         | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor              |
| 38 | C266       | 1    | CAP_SMD_X7R  | 2.2 $\mu$ F   | CAP-0805-SMALL |           | SMD multilayer ceramic capacitor automotive   |
| 39 | C269       | 1    | CAP_SMD_X7R  | 1.6 nF        | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor automotive   |
| 40 | C270       | 1    | CAP_SMD_X7R  | 43 pF         | CAP-0603-SMALL |           | SMD multilayer ceramic capacitor              |
| 41 | C284       | 1    | CAP_SMD_X7R  | 4.7 nF        | CAP-1210       |           | SMD multilayer ceramic capacitor high voltage |
| 42 | C301, C307 | 2    | CAP_SMD_X7R  | 1 $\mu$ F     | CAP-0805-XS    |           | SMD multilayer ceramic capacitor automotive   |
| 43 | CN23       | 1    | TFT Port     | TFT - ILI9341 | TFT-ILI9341    |           | Female strip MULTICOMP, single row, vertical  |
| 44 | CN_J       | 1    | CONN_HDR_9X2 | Port J        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 45 | CN_A       | 1    | CONN_HDR_9X2 | Port A        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 46 | CN_B       | 1    | CONN_HDR_9X2 | Port B        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 47 | CN_C       | 1    | CONN_HDR_9X2 | Port C        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 48 | CN_D       | 1    | CONN_HDR_9X2 | Port D        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 49 | CN_E       | 1    | CONN_HDR_9X2 | Port E        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 50 | CN_F       | 1    | CONN_HDR_9X2 | Port F        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 51 | CN_G       | 1    | CONN_HDR_9X2 | Port G        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 52 | CN_H       | 1    | CONN_HDR_9X2 | Port H        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 53 | CN_I       | 1    | CONN_HDR_9X2 | Port I        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 54 | CN_K       | 1    | CONN_HDR_9X2 | Port K        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |
| 55 | CN_L       | 1    | CONN_HDR_9X2 | Port L        | STRIP-9X2-M-V  |           | Male strip 9x2 poles straight gold plated     |

| #  | Item                                           | Qty. | Reference          | Value                 | Footprint                | Ass. Opt. | Description                                                                      |
|----|------------------------------------------------|------|--------------------|-----------------------|--------------------------|-----------|----------------------------------------------------------------------------------|
| 56 | CN_M                                           | 1    | CONN_HDR_9X2       | Port M                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 57 | CN_N                                           | 1    | CONN_HDR_9X2       | Port N                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 58 | CN_Q                                           | 1    | CONN_HDR_9X2       | Port Q                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 59 | CN_R                                           | 1    | CONN_HDR_9X2       | Port R                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 60 | CN_S                                           | 1    | CONN_HDR_9X2       | Port S                | STRIP-9X2-M-V            | DNP       | Male strip 9x2 poles straight gold plated                                        |
| 61 | CN_T                                           | 1    | CONN_HDR_9X2       | Port T                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 62 | CN_V                                           | 1    | CONN_HDR_9X2       | Port V                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 63 | CN_W                                           | 1    | CONN_HDR_9X2       | Port W                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 64 | CN_X                                           | 1    | CONN_HDR_9X2       | Port X                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 65 | CN_Y                                           | 1    | CONN_HDR_9X2       | Port Y                | STRIP-9X2-M-V            |           | Male strip 9x2 poles straight gold plated                                        |
| 66 | D1, D2, D3, D4                                 | 4    | CMP-02540-000008-1 | GF1A                  | SMA                      |           | SMD rectifier                                                                    |
| 67 | D5                                             | 1    | Diode              | 1N4148W               | SOD-123                  |           | SMD rectifier                                                                    |
| 68 | D6                                             | 1    | Diode              | 1N4148W               | SOD-123                  | DNP       | SMD rectifier                                                                    |
| 69 | D7                                             | 1    | D Schottky         | STPS340U              | SMB_D                    |           | Schottky diode                                                                   |
| 70 | D8                                             | 1    | D Schottky         | STPS2L25U             | SMB_D                    |           | 25 V, 2 A low drop power Schottky rectifier                                      |
| 71 | D9                                             | 1    | D Schottky         | SMAJ24A               | SMA                      | DNP       | Schottky diode                                                                   |
| 72 | D10                                            | 1    | D zener            | MMSZ4684T1G           | SOD-123                  |           | Zener diode                                                                      |
| 73 | ExtCN1                                         | 1    | ExtenalModulePort  | External module Port  | MIKROBUS-MODULE-EXTENDED |           | External module Port                                                             |
| 74 | F1                                             | 1    | Fuse 2             | 2 A                   | SMD200F                  |           | LITTELFUSE - SMD200F-2 - POLYSWITCH, SMD, 2A                                     |
| 75 | FID1, FID2, FID3, FID4, FID5, FID6, FID7, FID8 | 8    |                    | Comment               | FID-1MM-RND              |           |                                                                                  |
| 76 | J1                                             | 1    | COAX POWER         | DC female (5.5/2.1mm) | PRESA_CC_2.1_FC68148     |           | DC input                                                                         |
| 77 | J2, J3, J6, J7                                 | 4    | ARK_2              | ARK_2                 | 691101710002-WURTH       |           | Screw Conn. Term., single row, 5.00 pitch, 9 depth, 12.6 height, AWG 14-26, 16 A |
| 78 | J4                                             | 1    | 2BCONNECTPG00211   | CAN_0_TT_FD           | DB9-HM                   |           | Conn DB9 male 90°                                                                |
| 79 | J5                                             | 1    | 2BCONNECTPG00211   | DB9                   | DB9-HM                   |           | Conn DB9 male 90°                                                                |
| 80 | J9, J10                                        | 2    | 2BCONNECTPG00211   | FlexRay 0_1           | DB9-HF                   |           | Conn DB9 female 90°                                                              |

| #  | Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Qty. | Reference                     | Value                       | Footprint            | Ass. Opt. | Description                                                            |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------|-----------------------------|----------------------|-----------|------------------------------------------------------------------------|
| 81 | J11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1    | CMP-0078655-1                 | 2304372-2                   | TE_2304372-2         |           | Conn 1-Port 90° MATEnet header, code B                                 |
| 82 | J15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1    | NEXUS_2X20                    | NEXUS_2X20                  | SAMTEC_ASP-130367-01 |           | SAMTEC SMD connector ASP-130367-01                                     |
| 83 | JK1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1    | JK0-0136NL                    | JK0-0136NL                  | PULSE-JK0-0136NL     |           | CONN MAGJACK 1 PORT 1000 BASE-T                                        |
| 84 | JP1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1    | Jumper<br>3x2.54_Closed_V_1_2 | JCOMP_Config                | STRIP-3-M-V          |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                     |
| 85 | JP1A, JP1B, JP1C, JP1D, JP1E, JP1G, JP2, JP2B, JP2C, JP3, JP13, JP14A, JP14B, JP14C, JP14D, JP15B, JP15C, JP16A, JP16B, JP17B, JP17C, JP18A, JP18B, JP19B, JP19C, JP20A, JP20B, JP21B, JP21C, JP22A, JP25A, JP25B, JP25C, JP25D, JP26A, JP28A, JP28B, JP28C, JP28D, JP30A, JP30B, JP31A, JP31B, JP31C, JP31D, JP31E, JP31F, JP32A, JP32B, JP33A, JP33B, JP34A, JP34B, JP35A, JP35B, JP36A, JP36B, JP36C, JP36D, JP36E, JP36F, JP38A, JP38B, JP38C, JP39A, JP39B, JP40A, JP40B, JP40C, JP40D, JP40E, JP40F, JP40G, JP40H, JP101 | 75   | Jumper 2.54_Closed            | Closed                      | STRIP-2-M-V          |           | Male strip, single row, 2 poles, p = 2.54 mm (See mech parts) - closed |
| 86 | JP1F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1    | Jumper<br>3x2.54_Closed_V_1_2 | VDD_HV_INV_M_PR<br>G_Config | STRIP-3-M-V          |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                     |
| 87 | JP3A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1    | Jumper<br>3x2.54_Closed_V_1_2 | VDD_UV_SMPS_C<br>onfig      | STRIP-3-M-V          |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                     |
| 88 | JP3B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1    | Jumper<br>3x2.54_Closed_V_1_2 | EXTREG_SEL_Con<br>fig       | STRIP-3-M-V          |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                     |

| #   | Item                                                                                                                                | Qty. | Reference                  | Value                  | Footprint   | Ass. Opt. | Description                                                                  |
|-----|-------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------|------------------------|-------------|-----------|------------------------------------------------------------------------------|
| 89  | JP4, JP5, JP6, JP7, JP8, JP9, JP10, JP11, JP12, JP13A, JP136                                                                        | 11   | Jumper 2.54_Open           | Open                   | STRIP-2-M-V |           | Male strip, single row, 2 poles, p = 2.54 mm - NOT MOUNTED                   |
| 90  | JP14, JP15A, JP17A, JP19A, JP21A                                                                                                    | 5    | Jumper 2.54_Open           | Open                   | STRIP-2-M-V |           | Male strip, single row, 2 poles, p = 2.54 mm (See mech parts) - flag mounted |
| 91  | JP27A                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LIN0_Config            | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 92  | JP27B                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LIN1_Config            | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 93  | JP29A                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LIN2_Config            | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 94  | JP29B                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LIN3_Config            | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 95  | JP37A                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LED0_ETH1              | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 96  | JP37B                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | LED1_ETH1              | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 97  | JP41A                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | DATA 0                 | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 98  | JP41B                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | DATA 1                 | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 99  | JP41C                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | DATA 2                 | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 100 | JP41D                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | DATA 3                 | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 101 | JP41E                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | CMD                    | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 102 | JP41F                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | CLK                    | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 103 | JP41G                                                                                                                               | 1    | Jumper 3x2.54_Closed_V_1_2 | FBLK                   | STRIP-3-M-V |           | 3x male pin - 0.1" - default 1-2 (See mech parts )                           |
| 104 | L1, L2, L3, L4, L5, L6, L9, L10, L13, L14, L16, L17, L19, L20, L21, L22, L23, L24, L26, L27, L28, L29, L30, L31, L32, L44, L45, L46 | 28   | Inductor                   | 60 $\Omega$ at 100 MHz | 0603-BEAD   |           | SMD multilayer ferrite                                                       |

| #   | Item                   | Qty. | Reference        | Value                  | Footprint                       | Ass. Opt. | Description                                       |
|-----|------------------------|------|------------------|------------------------|---------------------------------|-----------|---------------------------------------------------|
| 105 | L7, L11, L15, L18      | 4    | ACT1210          | ACT45B-510-2P          | ACT45B_TDK_IND                  |           | SMD common-mode inductor                          |
| 106 | L8, L12                | 2    | Inductor         | 60 $\Omega$ at 100 MHz | 0603-BEAD                       | DNP       | SMD multilayer ferrite                            |
| 107 | L25                    | 1    | Inductor         | HI1206N101R-10         | 1206-BEAD                       |           | SMD multilayer ferrite                            |
| 108 | L33, L34, L35          | 3    | Inductor         | 60 $\Omega$ at 100 MHz | 0603-BEAD                       |           | SMD multilayer ferrite                            |
| 109 | L36, L37, L38, L42     | 4    | Trans ideal      | ComMode coil           | MURATA-DLW43SH101               |           | SMD inductor                                      |
| 110 | L39                    | 1    | 2BINDCOILSF00117 | 4.7 $\mu$ H            | WURTH_74404084047_8X8-SIZE-8040 |           | SMD automotive grade semi-shielded power inductor |
| 111 | L40                    | 1    | 2BINDCOILSF00293 | 33 $\mu$ H             | COILCRAFT-MSS1048T              |           | SMD high temperature power inductors - automotive |
| 112 | L41                    | 1    | 2BINDCOILSF00276 | 22 $\mu$ H             | TDK_SLF12555                    |           | SMD inductors for power circuitsWound ferrite     |
| 113 | L43                    | 1    | Coupled inductor | 200 $\mu$ H            | MURATA-DLW43MH201XK2L           |           | SMD inductor - automotive qualified               |
| 114 | LD1                    | 1    | LED2             | Reset A                | LED_SMD_0805_RED                |           | SMD led diode red - standard bright               |
| 115 | LD2                    | 1    | LED2             | Reset B                | LED_SMD_0805_RED                |           | SMD led diode red - standard bright               |
| 116 | LD3                    | 1    | LED2             | RX_A_LED               | LED_SMD_0603_ORANGE             |           | SMD micro LED®                                    |
| 117 | LD4                    | 1    | LED2             | TX_A_LED               | LED_SMD_0603_ORANGE             |           | SMD micro LED®                                    |
| 118 | LD5                    | 1    | LED2             | RX_B_LED               | LED_SMD_0603_ORANGE             |           | SMD micro LED®                                    |
| 119 | LD6                    | 1    | LED2             | TX_B_LED               | LED_SMD_0603_ORANGE             |           | SMD micro LED®                                    |
| 120 | LD7                    | 1    | LED2             | VDD_LV_IN              | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 121 | LD8                    | 1    | LED2             | VDD_LV                 | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 122 | LD9                    | 1    | LED2             | LP_LED                 | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 123 | LD10                   | 1    | LED2             | 12 V                   | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 124 | LD11                   | 1    | LED2             | 5 V                    | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 125 | LD12                   | 1    | LED2             | 3.3 V                  | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 126 | LD13                   | 1    | LED2             | 5 V ADC                | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 127 | LD14                   | 1    | LED2             | 3.3V ADC               | LED_SMD_0805_GREEN              |           | SMD led diode green - standard bright             |
| 128 | LD15, LD16, LD17, LD18 | 4    | LED2             | Green                  | LED_SMD_0805_GREEN              |           | SMD led diode green 570 nm 16mcd                  |
| 129 | LD20                   | 1    | LED2             | User_0                 | LED_SMD_0805_AMBER              |           | SMD led diode amber                               |
| 130 | LD21                   | 1    | LED2             | User_1                 | LED_SMD_0805_AMBER              |           | SMD led diode amber                               |
| 131 | LD22                   | 1    | LED2             | User_2                 | LED_SMD_0805_AMBER              |           | SMD led diode amber                               |
| 132 | LD23                   | 1    | LED2             | User_3                 | LED_SMD_0805_AMBER              |           | SMD led diode amber                               |

| #   | Item                                                                                       | Qty. | Reference        | Value            | Footprint                      | Ass. Opt. | Description                                          |
|-----|--------------------------------------------------------------------------------------------|------|------------------|------------------|--------------------------------|-----------|------------------------------------------------------|
| 133 | LD24                                                                                       | 1    | LED2             | User_4           | LED_SMD_0805_AMBER             |           | SMD led diode amber                                  |
| 134 | LD25                                                                                       | 1    | LED2             | User_5           | LED_SMD_0805_AMBER             |           | SMD led diode amber                                  |
| 135 | LD26                                                                                       | 1    | LED2             | User_6           | LED_SMD_0805_AMBER             |           | SMD led diode amber                                  |
| 136 | LD27                                                                                       | 1    | LED2             | User_7           | LED_SMD_0805_AMBER             |           | SMD led diode amber                                  |
| 137 | LOGO, LOGO1                                                                                | 2    |                  | Comment          | ROHS_LOGO-CHINA-COMPLIANT      |           |                                                      |
| 138 | MTH4, MTH5, MTH6, MTH7, MTH8, MTH9, MTH10, MTH11, MTH12, MTH13, MTH14, MTH15, MTH16, MTH17 | 14   |                  | MTHOLE3.2        | MTHOLE3.2-NYLON                |           |                                                      |
| 139 | OSC1                                                                                       | 1    | 50MHz            | 8 MHz            | QUARZO-SMD-KC5032K             |           | SMD CMOS quartz oscillator                           |
| 140 | P1                                                                                         | 1    | Header 10X2      | ARM20            | CN-FLAT-20-V                   |           | Conn Flat Male 20 pins, straight low profile         |
| 141 | P2                                                                                         | 1    | Header 6X2       | LVDS             | SAMTEC_ERF8-005-05.0-L-DV-L-TR |           | SAMTEC SMD connector ERF8-005-05.0-L-DV-L-TR         |
| 142 | P3, P4                                                                                     | 2    | Header 6X2       | SIPI             | SAMTEC_ERF8-005-05.0-L-DV-L-TR |           | SAMTEC SMD connector ERF8-005-05.0-L-DV-L-TR         |
| 143 | P5                                                                                         | 1    | USB_Port         | USB_Port         | CONN_MOLEX_51387-0578          |           | MOLEX connector SMT, right angle, USB MINI-B, 5 pin  |
| 144 | P6                                                                                         | 1    | Header 4X2       | I <sup>2</sup> C | CN-FLAT-8-V                    |           | Conn Flat Male 8 pins, straight                      |
| 145 | P7                                                                                         | 1    | Header 4X2       | CAN_2_3          | CN-FLAT-8-V                    |           | Conn Flat Male 8 pins, straight                      |
| 146 | P8                                                                                         | 1    | Header 4X2       | LIN              | CN-FLAT-8-V                    |           | Conn Flat Male 8 pins, straight                      |
| 147 | P9                                                                                         | 1    | 2BCONCOAXPG00008 | SMA              | CON-COAX-SMA-V                 | DNP       | Female RF SMA 180°                                   |
| 148 | P10, P11                                                                                   | 2    | 2BCONCOAXPG00008 | SMA              | CON-COAX-SMA-V                 | DNP       | Female RF SMA 180°                                   |
| 149 | P12                                                                                        | 1    | CON5             | Power            | STRIP-5-M-V                    |           | Male strip 5 pins pitch 2.54 180° - cut as necessary |
| 150 | PB_0                                                                                       | 1    | SW PUSHBUTTON    | SW_User_0        | ALPS-SKHHAJA010                |           | Pushbutton for PCB 4 pins                            |
| 151 | PB_1                                                                                       | 1    | SW PUSHBUTTON    | SW_User_1        | ALPS-SKHHAJA010                |           | Pushbutton for PCB 4 pins                            |
| 152 | PB_2                                                                                       | 1    | SW PUSHBUTTON    | SW_User_2        | ALPS-SKHHAJA010                |           | Pushbutton for PCB 4 pins                            |
| 153 | Q1                                                                                         | 1    | PNP BCX52-16     | BCW68G           | SOT23_BEC_T                    |           | SMD PNP General purpose transistor                   |
| 154 | Q3                                                                                         | 1    | MOSFET-P         | NTF6P02T3G       | SOT223_GDS_T                   |           | SMD P-Channel power MOSFET                           |

| #   | Item                                                                                                                                                                                                                                                            | Qty. | Reference    | Value         | Footprint      | Ass.<br>Opt. | Description                                      |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|---------------|----------------|--------------|--------------------------------------------------|
| 155 | R1, R2, R3, R4,<br>R5, R7, R32,<br>R35, R43, R44,<br>R46, R47, R49,<br>R54, R55, R56,<br>R60, R64, R76,<br>R79, R81, R82,<br>R85, R87, R88,<br>R92, R93, R97,<br>R116, R144,<br>R145, R150,<br>R151, R180,<br>R189, R237,<br>R239, R240,<br>R257, R258,<br>R259 | 41   | Resistor_SMD | 0 $\Omega$    | RES-0603-SMALL |              | SMD resistor                                     |
| 156 | R6, R11                                                                                                                                                                                                                                                         | 2    | Resistor_SMD | 0 $\Omega$    | RES-0603-SMALL | DNP          | SMD resistor                                     |
| 157 | R9, R10, R160                                                                                                                                                                                                                                                   | 3    | Resistor_SMD | 0 $\Omega$    | RES-0603-XS    |              | SMD resistor                                     |
| 158 | R8                                                                                                                                                                                                                                                              | 1    | Resistor_SMD | 0 $\Omega$    | RES-0603-XS    | DNP          | SMD resistor                                     |
| 159 | R12                                                                                                                                                                                                                                                             | 1    | Resistor_SMD | 0 $\Omega$    | RES-1206       | DNP          | SMD resistor<br>automotive                       |
| 160 | R13, R14, R219,<br>R227                                                                                                                                                                                                                                         | 4    | Resistor_SMD | 1k5           | RES-0603-SMALL |              | SMD resistor                                     |
| 161 | R15, R16, R98,<br>R101, R104,<br>R107, R209                                                                                                                                                                                                                     | 7    | Resistor_SMD | 1k            | RES-0603-SMALL |              | SMD resistor                                     |
| 162 | R17, R18, R178                                                                                                                                                                                                                                                  | 3    | Resistor_SMD | 100k          | RES-0603-SMALL |              | SMD resistor                                     |
| 163 | R19, R193,<br>R196, R212                                                                                                                                                                                                                                        | 4    | Resistor_SMD | 0 $\Omega$    | RES-1206       |              | SMD resistor<br>automotive                       |
| 164 | R20, R168,<br>R169, R170,<br>R171, R174,<br>R175, R176,<br>R177, R222,<br>R228                                                                                                                                                                                  | 11   | Resistor_SMD | 680 $\Omega$  | RES-0603-SMALL |              | SMD resistor<br>automotive, SMD<br>resistor      |
| 165 | R21, R22, R23,<br>R24, R25, R26,<br>R27, R28                                                                                                                                                                                                                    | 8    | Resistor_SMD | 50 $\Omega$   | RES-0402-SMALL | DNP          | SMD High frequency<br>(up to 40 GHz)<br>resistor |
| 166 | R29, R31                                                                                                                                                                                                                                                        | 2    | Resistor_SMD | 100 $\Omega$  | RES-0603-SMALL | DNP          | SMD resistor                                     |
| 167 | R30, R57                                                                                                                                                                                                                                                        | 2    | Resistor_SMD | 10 k $\Omega$ | RES-0603-SMALL | DNP          | SMD resistor                                     |
| 168 | R33                                                                                                                                                                                                                                                             | 1    | Resistor_SMD | 124 $\Omega$  | RES-0603-SMALL |              | SMD resistor<br>automotive                       |
| 169 | R34                                                                                                                                                                                                                                                             | 1    | Resistor_SMD | 240 $\Omega$  | RES-0603-SMALL |              | SMD resistor                                     |
| 170 | R36                                                                                                                                                                                                                                                             | 1    | Resistor_SMD | 50 $\Omega$   | RES-0805-SMALL |              | SMD resistor<br>automotive                       |
| 171 | R37, R45, R48,<br>R73, R74, R148,<br>R179, R195,<br>R207                                                                                                                                                                                                        | 9    | Resistor_SMD | 4k7           | RES-0603-SMALL |              | SMD resistor                                     |

| #   | Item                                                                                                                                                                                                                                                                                                                                                                                          | Qty. | Reference    | Value          | Footprint      | Ass.<br>Opt. | Description                                 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|----------------|----------------|--------------|---------------------------------------------|
| 172 | R38, R51, R52,<br>R99, R100,<br>R102, R103,<br>R105, R106,<br>R108, R109,<br>R111, R112,<br>R113, R118,<br>R120, R121,<br>R122, R126,<br>R128, R129,<br>R130, R134,<br>R136, R137,<br>R138, R142,<br>R143, R147,<br>R154, R155,<br>R162, R163,<br>R164, R165,<br>R166, R167,<br>R172, R173,<br>R198, R203,<br>R205, R206,<br>R213, R214,<br>R215, R216,<br>R232, R234,<br>R236, R243,<br>R244 | 52   | Resistor_SMD | 10k            | RES-0603-SMALL |              | SMD resistor                                |
| 173 | R39, R40, R41,<br>R42                                                                                                                                                                                                                                                                                                                                                                         | 4    | Resistor_SMD | 100 k $\Omega$ | RES-0603-SMALL | DNP          | SMD resistor                                |
| 174 | R50, R53, R241,<br>R246, R250,<br>R253                                                                                                                                                                                                                                                                                                                                                        | 6    | Resistor_SMD | 470 $\Omega$   | RES-0603-SMALL |              | SMD resistor                                |
| 175 | R58, R59, R62,<br>R63                                                                                                                                                                                                                                                                                                                                                                         | 4    | Resistor_SMD | TBD            | RES-0603-SMALL |              | SMD resistor                                |
| 176 | R61, R117,<br>R125, R133,<br>R141                                                                                                                                                                                                                                                                                                                                                             | 5    | Resistor_SMD | 0 $\Omega$     | RES-0603-SMALL | DNP          | SMD resistor                                |
| 177 | R65, R66, R71,<br>R72, R152,<br>R153                                                                                                                                                                                                                                                                                                                                                          | 6    | Resistor_SMD | 220 $\Omega$   | RES-0603-SMALL |              | SMD resistor<br>automotive                  |
| 178 | R67                                                                                                                                                                                                                                                                                                                                                                                           | 1    | Resistor_SMD | 12k            | RES-0603-SMALL |              | SMD resistor                                |
| 179 | R68, R69, R156,<br>R161, R197,<br>R217                                                                                                                                                                                                                                                                                                                                                        | 6    | Resistor_SMD | 10 $\Omega$    | RES-0603-SMALL |              | SMD resistor<br>automotive, SMD<br>resistor |
| 180 | R70                                                                                                                                                                                                                                                                                                                                                                                           | 1    | Resistor_SMD | 15 k $\Omega$  | RES-0603-SMALL |              | SMD resistor                                |
| 181 | R75, R149,<br>R202                                                                                                                                                                                                                                                                                                                                                                            | 3    | Resistor_SMD | 2.2 k $\Omega$ | RES-0603-SMALL |              | SMD resistor<br>automotive, SMD<br>resistor |
| 182 | R77, R78, R83,<br>R84, R89, R90,<br>R94, R95                                                                                                                                                                                                                                                                                                                                                  | 8    | Resistor_SMD | 60.4 $\Omega$  | RES-0805-SMALL |              | SMD resistor                                |
| 183 | R80, R86, R91,<br>R96, R115,<br>R124, R132,<br>R140                                                                                                                                                                                                                                                                                                                                           | 8    | Resistor_SMD | 47 k $\Omega$  | RES-0603-SMALL |              | SMD resistor                                |
| 184 | R110, R114,<br>R119, R123,<br>R127, R131,<br>R135, R139                                                                                                                                                                                                                                                                                                                                       | 8    | Resistor_SMD | 47 $\Omega$    | RES-0805-SMALL |              | SMD resistor                                |

| #   | Item                                     | Qty. | Reference     | Value     | Footprint            | Ass. Opt. | Description                               |
|-----|------------------------------------------|------|---------------|-----------|----------------------|-----------|-------------------------------------------|
| 185 | R146                                     | 1    | Resistor_SMD  | 12.1 kΩ   | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 186 | R157, R158, R204                         | 3    | Resistor_SMD  | 10 kΩ     | RES-0603-SMALL       | DNP       | SMD resistor                              |
| 187 | R159                                     | 1    | Resistor_SMD  | 0 Ω       | RES-0603-XS          | DNP       | SMD resistor                              |
| 188 | R181                                     | 1    | Resistor_SMD  | 300 Ω     | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 189 | R182, R192, R201, R218                   | 4    | Resistor_SMD  | 5k1       | RES-0603-SMALL       |           | SMD resistor                              |
| 190 | R183                                     | 1    | Resistor_SMD  | 8K2       | RES-0603-SMALL       |           | SMD resistor                              |
| 191 | R184                                     | 1    | Resistor_SMD  | 180 kΩ    | RES-0603-SMALL       | DNP       | SMD resistor                              |
| 192 | R185                                     | 1    | Resistor_SMD  | 1K1       | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 193 | R186                                     | 1    | Resistor_SMD  | 464K      | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 194 | R187                                     | 1    | Resistor_SMD  | 200K      | RES-0603-SMALL       |           | SMD resistor                              |
| 195 | R188, R191                               | 2    | Resistor_SMD  | 910 Ω     | RES-0603-SMALL       |           | SMD resistor                              |
| 196 | R190                                     | 1    | Resistor_SMD  | 1.3 kΩ    | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 197 | R194                                     | 1    | Resistor_SMD  | 1.27 kΩ   | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 198 | R199                                     | 1    | Resistor_SMD  | 1.6 kΩ    | RES-0603-SMALL       |           | SMD resistor                              |
| 199 | R200                                     | 1    | Resistor_SMD  | 750 Ω     | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 200 | R208, R210, R211, R223, R224, R225, R226 | 7    | Resistor_SMD  | 1 kΩ      | RES-0603-SMALL       | DNP       | SMD resistor                              |
| 201 | R220, R221                               | 2    | RPot          | 10 kΩ     | TRIM-3386F           |           | Potentiometer                             |
| 202 | R229, R230                               | 2    | Resistor_SMD  | 1 kΩ      | RES-0805-SMALL       |           | SMD resistor automotive                   |
| 203 | R231                                     | 1    | Resistor_SMD  | 1 MΩ      | RES-0805-SMALL       |           | SMD resistor                              |
| 204 | R233, R235                               | 2    | Resistor_SMD  | 5.76 kΩ   | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 205 | R238, R242, R245, R251, R252             | 5    | Resistor_SMD  | 2.49 kΩ   | RES-0603-SMALL       |           | SMD resistor                              |
| 206 | R247                                     | 1    | Resistor_SMD  | 40.2 kΩ   | RES-0603-SMALL       |           | SMD resistor automotive                   |
| 207 | R248                                     | 1    | Resistor_SMD  | 13 kΩ     | RES-0603-SMALL       | DNP       | SMD resistor                              |
| 208 | R249                                     | 1    | Resistor_SMD  | 13 kΩ     | RES-0603-SMALL       |           | SMD resistor                              |
| 209 | R254, R255, R256                         | 3    | Resistor_SMD  | 2.49 kΩ   | RES-0603-SMALL       | DNP       | SMD resistor                              |
| 210 | RB1                                      | 1    | SW PUSHBUTTON | RESET     | DIPTRONICS-DTS-65R-V |           | Pushbutton for PCB 4 pins - RED - H=9.5mm |
| 211 | S1                                       | 1    | SWITCH        | DC switch | NKK-CS12ANW03        |           | Slide switch 2 positions ON-ON - set OPEN |

| #   | Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Qty. | Reference              | Value    | Footprint                       | Ass.<br>Opt. | Description                            |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|----------|---------------------------------|--------------|----------------------------------------|
| 212 | SB1, SB2, SB4,<br>SB5, SB6, SB7,<br>SB8, SB11,<br>SB12, SB15,<br>SB16, SB17,<br>SB18, SB19,<br>SB20, SB21,<br>SB24, SB25,<br>SB26, SB27,<br>SB28, SB29,<br>SB30, SB31,<br>SB32, SB33,<br>SB34, SB35,<br>SB36, SB37,<br>SB38, SB39,<br>SB40, SB41,<br>SB42, SB43,<br>SB44, SB48,<br>SB49, SB50,<br>SB51, SB52,<br>SB53, SB54,<br>SB55, SB56,<br>SB57, SB58,<br>SB59, SB60,<br>SB61, SB64,<br>SB65, SB66,<br>SB67, SB68,<br>SB69, SB70,<br>SB71, SB72,<br>SB73, SB74,<br>SB75, SB76,<br>SB77, SB78,<br>SB79, SB80,<br>SB81, SB82,<br>SB83, SB84,<br>SB85, SB86,<br>SB87, SB88,<br>SB89, SB91,<br>SB92, SB93,<br>SB94, SB95,<br>SB96, SB97,<br>SB98, SB99,<br>SB100, SB101,<br>SB102, SB103,<br>SB104, SB105A,<br>SB106A, SB107,<br>SB108, SB109,<br>SB110, SB111,<br>SB114, SB120,<br>SB127, SB128,<br>SB131, SB132,<br>SB133, SB134,<br>SB135, SB136 | 108  | Circuit Breaker_Closed | Closed   | RES-0603-SMALL                  |              | Circuit breaker                        |
| 213 | SB2A, SB9,<br>SB10, SB13,<br>SB14, SB22,<br>SB23, SB62,<br>SB63, SB90,<br>SB105B,<br>SB106B, SB112,<br>SB113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 14   | Circuit Breaker_Open   | Open     | RES-0603-SMALL                  | DNP          | Circuit breaker                        |
| 214 | SB130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1    | Circuit Breaker_Closed | Closed   | RES-0805-SMALL                  |              | Circuit breaker                        |
| 215 | SD1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1    | MicroSD_Conector       | uSD card | MICRO_SD_693071010811_<br>WURTH |              | Conn SMD<br>microSD™ card<br>connector |

| #   | Item                                                       | Qty. | Reference  | Value         | Footprint           | Ass. Opt. | Description                                 |
|-----|------------------------------------------------------------|------|------------|---------------|---------------------|-----------|---------------------------------------------|
| 216 | SWD2                                                       | 1    | Header 5X2 | Secondary DAP | FTSH-105-01-XXX-D-K |           | Debug connector 5x2 1.27mm                  |
| 217 | SWJ1                                                       | 1    | Header 5X2 | Main DAP      | FTSH-105-01-XXX-D-K |           | Debug connector 5x2 1.27mm                  |
| 218 | T1, T2                                                     | 2    | NPN        | BC848         | SOT23_BEC_T         |           | NPN bipolar transistor                      |
| 219 | TP1, TP2, TP3, TP5, TP7, TP14, TP28, TP29, TP30            | 9    | Test Point | 5 V SMPS      | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 220 | TP4                                                        | 1    | Test Point | 5 V SMPS      | TEST-RING-3.1-RED   |           | PCB ring test point - red (drill 1.32 mm)   |
| 221 | TP6, TP11, TP26, TP27, TP35, TP36, TP101, TP105            | 8    | Test Point | 12 V          | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 222 | TP8                                                        | 1    | Test Point | 5 V SMPS      | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 223 | TP9                                                        | 1    | Test Point | CVM           | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 224 | TP10                                                       | 1    | Test Point | TESTMODE      | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 225 | TP12                                                       | 1    | Test Point | RESET_A       | TEST-RING-3.1-WHITE |           | PCB ring test point - white (drill 1.32 mm) |
| 226 | TP13                                                       | 1    | Test Point | RESET_B       | TEST-RING-3.1-WHITE |           | PCB ring test point - white (drill 1.32 mm) |
| 227 | TP15                                                       | 1    | Test Point | CAN_0_L       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 228 | TP16                                                       | 1    | Test Point | CAN_0_H       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 229 | TP17, TP20, TP39, TP42, TP45, TP48, TP59, TP67, TP68, TP80 | 10   | Test Point | GND           | TEST-RING-3.1-BLACK | DNP       | PCB ring test point - black (drill 1.32 mm) |
| 230 | TP18                                                       | 1    | Test Point | CAN_1_L       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 231 | TP19                                                       | 1    | Test Point | CAN_1_H       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 232 | TP21                                                       | 1    | Test Point | CAN_2_L       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 233 | TP22                                                       | 1    | Test Point | CAN_2_H       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 234 | TP23                                                       | 1    | Test Point | CAN_3_L       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 235 | TP24                                                       | 1    | Test Point | CAN_3_H       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 236 | TP25                                                       | 1    | Test Point | GND           | TEST-RING-3.1-BLACK |           | PCB ring test point - black (drill 1.32 mm) |
| 237 | TP37                                                       | 1    | Test Point | BM_0          | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 238 | TP38                                                       | 1    | Test Point | BP_0          | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |

| #   | Item       | Qty. | Reference  | Value       | Footprint           | Ass. Opt. | Description                                 |
|-----|------------|------|------------|-------------|---------------------|-----------|---------------------------------------------|
| 239 | TP40       | 1    | Test Point | BM_1        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 240 | TP41       | 1    | Test Point | BP_1        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 241 | TP43       | 1    | Test Point | BM_2        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 242 | TP44       | 1    | Test Point | BP_2        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 243 | TP46       | 1    | Test Point | BM_3        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 244 | TP47       | 1    | Test Point | BP_3        | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 245 | TP49       | 1    | Test Point | VDD_Flex_0  | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 246 | TP50       | 1    | Test Point | VDD_Flex_1  | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 247 | TP51       | 1    | Test Point | VDD_Flex_2  | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 248 | TP52       | 1    | Test Point | VDD_Flex_3  | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 249 | TP53       | 1    | Test Point | INT_N       | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 250 | TP54       | 1    | Test Point | AVDDH       | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 251 | TP55       | 1    | Test Point | DVDDH       | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 252 | TP56       | 1    | Test Point | A_VDDL      | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 253 | TP57       | 1    | Test Point | AVDDL_PLL   | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 254 | TP58       | 1    | Test Point | DVDDL       | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 255 | TP60       | 1    | Test Point | VDD_IO_ETH1 | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 256 | TP61       | 1    | Test Point | VDD_ETH1    | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 257 | TP62       | 1    | Test Point | CKL_Out     | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 258 | TP63, TP64 | 2    | Test Point | INH         | TEST-RING-3.1-WHITE | DNP       | PCB ring test point - white (drill 1.32 mm) |
| 259 | TP65       | 1    | Test Point | VCC_HBus    | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 260 | TP66       | 1    | Test Point | VCCQ_HBus   | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 261 | TP76       | 1    | Test Point | DS          | TEST-RING-3.1-WHITE |           | PCB ring test point - white (drill 1.32 mm) |
| 262 | TP77       | 1    | Test Point | VCC_eMMC    | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |
| 263 | TP78       | 1    | Test Point | VCCQ_eMMC   | TEST-RING-3.1-RED   | DNP       | PCB ring test point - red (drill 1.32 mm)   |

| #   | Item                                           | Qty. | Reference         | Value          | Footprint                                 | Ass. Opt. | Description                                                      |
|-----|------------------------------------------------|------|-------------------|----------------|-------------------------------------------|-----------|------------------------------------------------------------------|
| 264 | TP79                                           | 1    | Test Point        | VDD_uSD        | TEST-RING-3.1-RED                         | DNP       | PCB ring test point - red (drill 1.32 mm)                        |
| 265 | TP100                                          | 1    | Test Point        | Vbatt+         | TEST-RING-3.1-RED                         | DNP       | PCB ring test point - red (drill 1.32 mm)                        |
| 266 | TVS1, TVS2, TVS3, TVS4, TVS5, TVS6, TVS7, TVS8 | 8    | 2BDIOTRANSF00061  | ESD PROTECTION | SOT323-D-A-AA-A                           |           | SMD automotive dual-line TVS in SOT323-3L for CAN bus            |
| 267 | U1                                             | 1    | SR6G7_BGA476 RevB | SR6G7_BGA476   | 476FPBGA_OTB-476(961RS)-0.8-125-00-ENPLAS |           | Socket BGA476 pitch 0,8mm for SR6G7-EVBC6000P_REV_B              |
| 268 | U2                                             | 1    | STM6315RDW13F     | STM6315RDW13F  | SOT-143                                   |           | SMD reset circuit                                                |
| 269 | U3                                             | 1    | CMP-0440-00032-3  | SN74HC125DT    | SO14NB                                    |           | SMD quadruple bus buffer Gates with 3-State outputs              |
| 270 | U4                                             | 1    | FTDI2232          | FT2232HL       | TQFP64L                                   |           | IC FTDI SMD USB HS DUAL UART/ FIFO LQFP 64                       |
| 271 | U5                                             | 1    | USBLC6-2P6        | USBLC6-2P6     | SOT-666                                   |           | USBLC6-2P6                                                       |
| 272 | U6                                             | 1    | M93S46RMN6        | M93S46-WMN6P   | SO8NB                                     |           | 1K (x16) serial microwire bus EEPROM with Block protection       |
| 273 | U7                                             | 1    | LD1117S33TR       | LD1117S33TR    | SOT223_GOI_H_VR                           |           | Volt. Reg. Low drop out LIN. 3.3V SOT223                         |
| 274 | U8, U9, U10, U11                               | 4    | SN74LVC1T45       | SN74LVC1T45    | SC70-6                                    |           | IC SMD single-bit dual-supply bus transceiver SC-70-6            |
| 275 | U12, U13, U14, U15                             | 4    | MCP2542WFD        | MCP2542WFD     | SO8NB                                     |           | SMD CAN FD transceiver with wake up pattern (WUP) option         |
| 276 | U16, U17                                       | 2    | TJA1022T          | TJA1022T       | SO14NB                                    |           | SMD dual LIN 2.2A/SAE J2602 transceiver                          |
| 277 | U18, U19, U20, U21                             | 4    | TJA1080           | TJA1080ATS     | SSOP20                                    |           | SMD FlexRay transceiver                                          |
| 278 | U22                                            | 1    | KSZ9031RNX        | KSZ9031RNX     | 48QFN_7X7X0.85_0.5_EXPAD_3.5X3.5          |           | SMD gigabit Ethernet transceiver with RGMII support              |
| 279 | U23, U24                                       | 2    | HSP061-4M10Y      | HSP061-4M10Y   | UQFN10                                    |           | SMD automotive 4-line ESD protection for high speed lines        |
| 280 | U25                                            | 1    | DP83TG720S-Q1     | DP83TG720S-Q1  | 36VQFN_6.1X6.1X0.9_0.5_EXPAD_3.7          |           | SMD 1000BASE-T1 automotive Ethernet PHY                          |
| 281 | U26                                            | 1    | LD39050PUR        | LD39050PUR     | 6DFN_3X3                                  |           | SMD 500 mA low quiescent current and low noise voltage regulator |
| 282 | U27                                            | 1    | HSP061-4M10Y      | HSP061-4M10Y   | UQFN10                                    | DNP       | SMD automotive 4-line ESD protection for high speed lines        |

| #   | Item   | Qty. | Reference        | Value                 | Footprint                     | Ass.<br>Opt. | Description                                                                 |
|-----|--------|------|------------------|-----------------------|-------------------------------|--------------|-----------------------------------------------------------------------------|
| 283 | U28    | 1    | S71KL256SC00     | S71KL256SC0BHB<br>000 | 24BGA_6X8_1.0_5X5_CYPR<br>ESS |              | SMD HyperFlash™<br>and HyperRAM™<br>Multi-Chip package<br>1.8V/3V           |
| 284 | U29    | 1    | LM217LD          | LM217LD               | SO8NB                         |              | SMD Low current 1.2<br>to 37 V adjustable<br>voltage regulators             |
| 285 | U30    | 1    | A7986A           | A7986A                | HSOP8                         |              | DC-DC switching<br>Buck (step down)<br>regulator, adjustable,<br>3A, HSOP-8 |
| 286 | U31    | 1    | L5963DN          | L5963DN               | PowerSSO 36                   |              | Automotive dual<br>monolithic switching<br>regulator with LDO<br>and HSD    |
| 287 | U34    | 1    | REG_FIX          | LD1117DT50            | TO252_GOI_H_VR                |              | Volt. Reg. Low drop<br>out LIN. TO-252                                      |
| 288 | U35    | 1    | IS21ES08G-JCLI   | IS21ES08G-JCLI        | 153FBGA_11.5X13X0.5           |              | SMD 8GB eMMC<br>with eMMC 5.0<br>interface                                  |
| 289 | U36    | 1    | EMIF06-MSD02N16  | EMIF06-MSD02N16       | QFN16_3.5X1.2_PITCH0.4        |              | SMD 6-line IPAD, EMI<br>filter and ESD<br>protection                        |
| 290 | X1     | 1    | Crystal 4 Pin    | 40 MHz                | QUARZO-SMD-ECS-2236Q          |              | SMD quartz ECS                                                              |
| 291 | X2     | 1    | XTAL             | 12 MHz                | QUARZO-SMD-TXC-7B-<br>SERIES  |              | Crystal oscillator                                                          |
| 292 | X3, X4 | 2    | Crystal 4 Pin    | 25 MHz                | QUARZO-SMD-ECS-33B            |              | SMD ECX-33B SMD<br>CRYSTAL -<br>automotive                                  |
| 293 | X5     | 1    | 2BQUACRYSSF00084 | XT-2PIN               | QUARZO-SMD-ECX12Q             |              | SMD quartz<br>ultraminature<br>ECX-12Q                                      |

Figure 24. MAIN

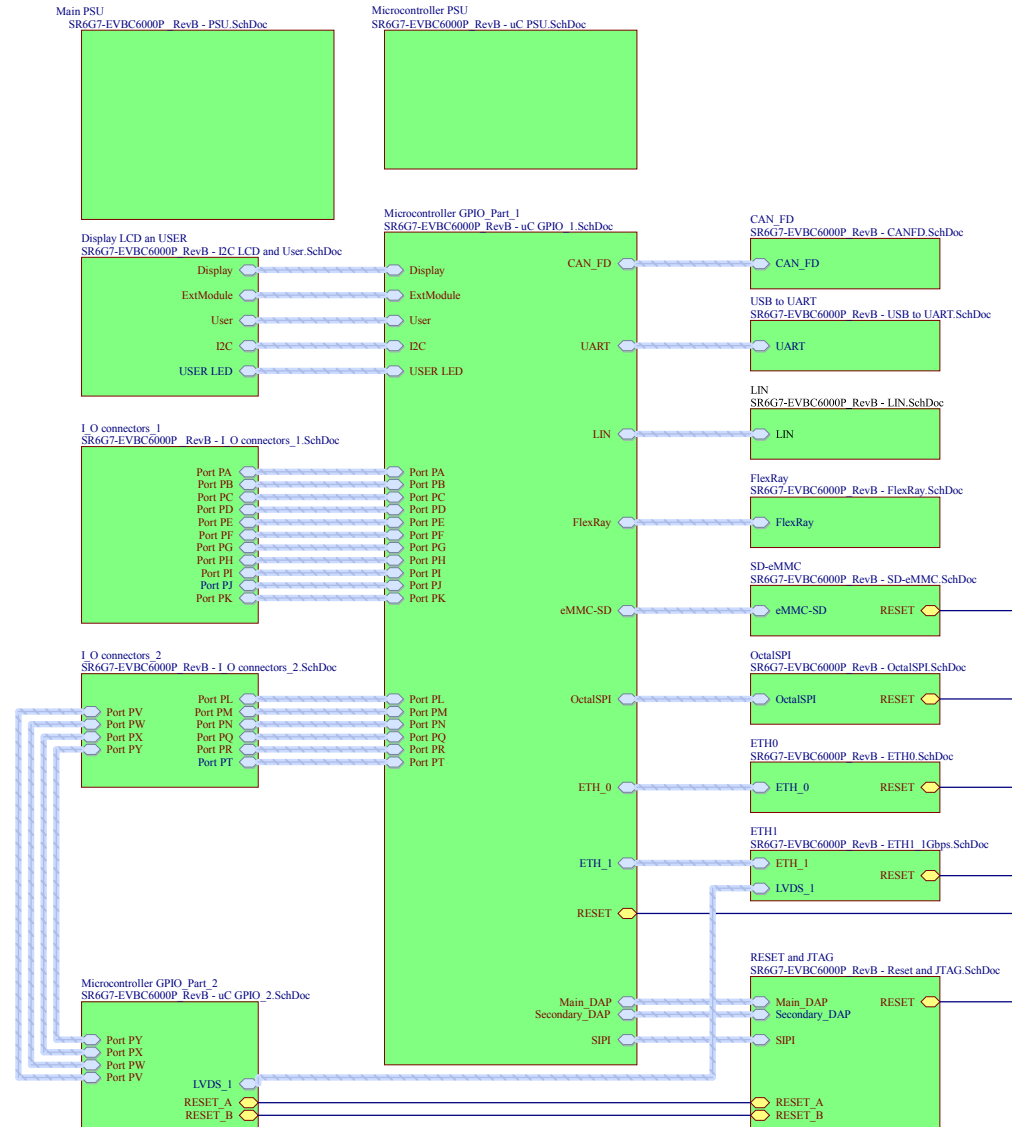
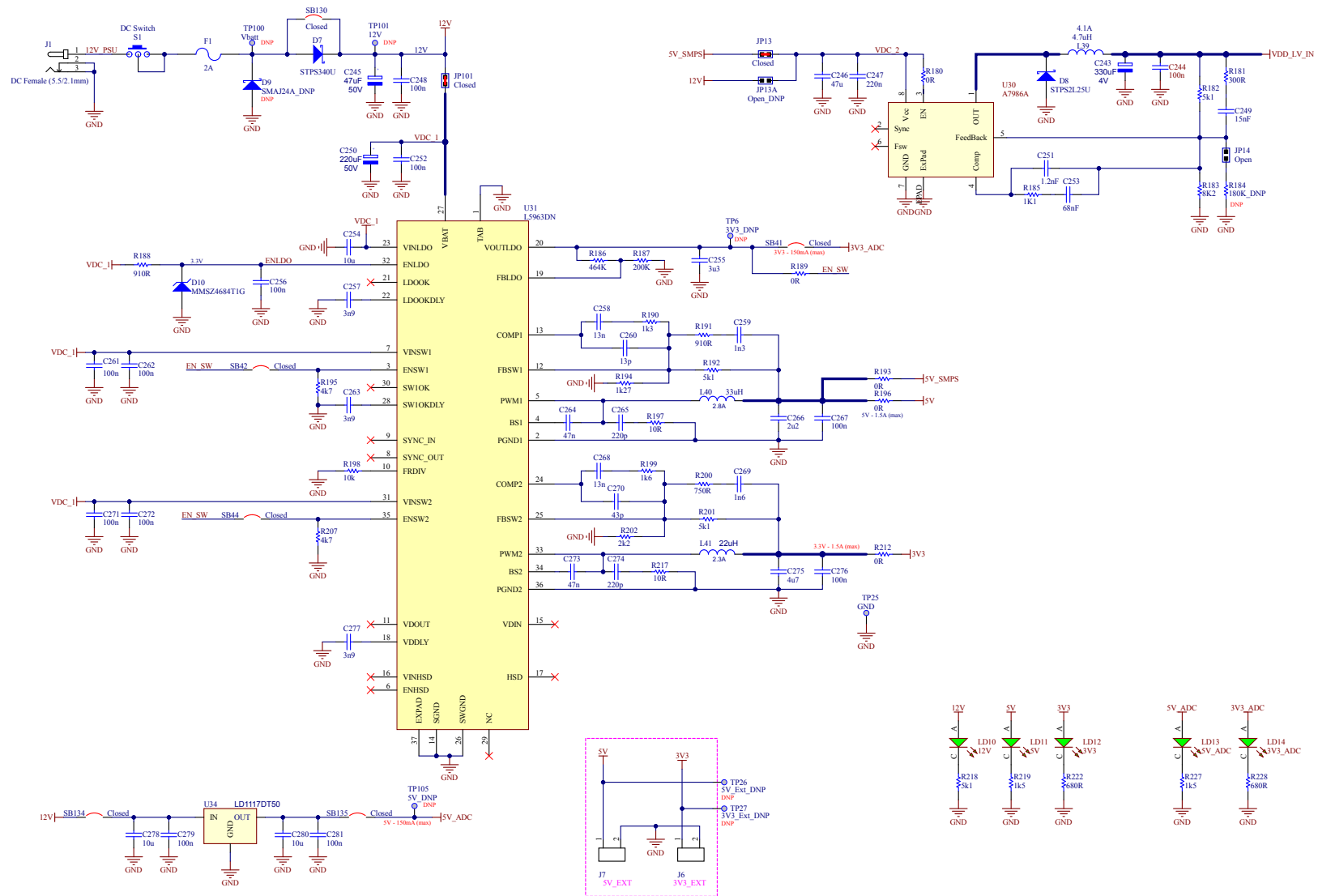


Figure 25. Power supply





**Figure 27. uC GPIO\_1**

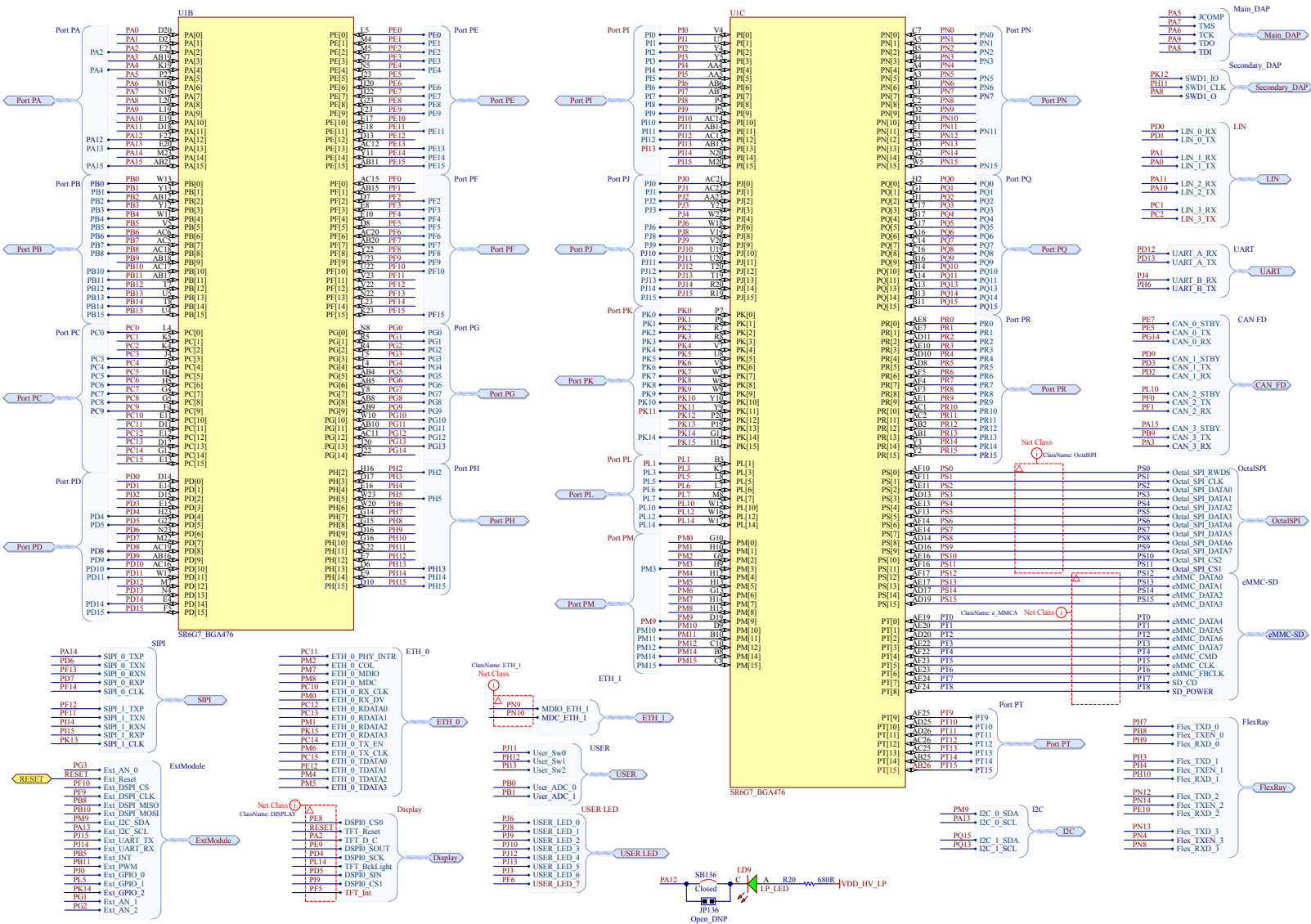


Figure 28. uC GPIO\_2

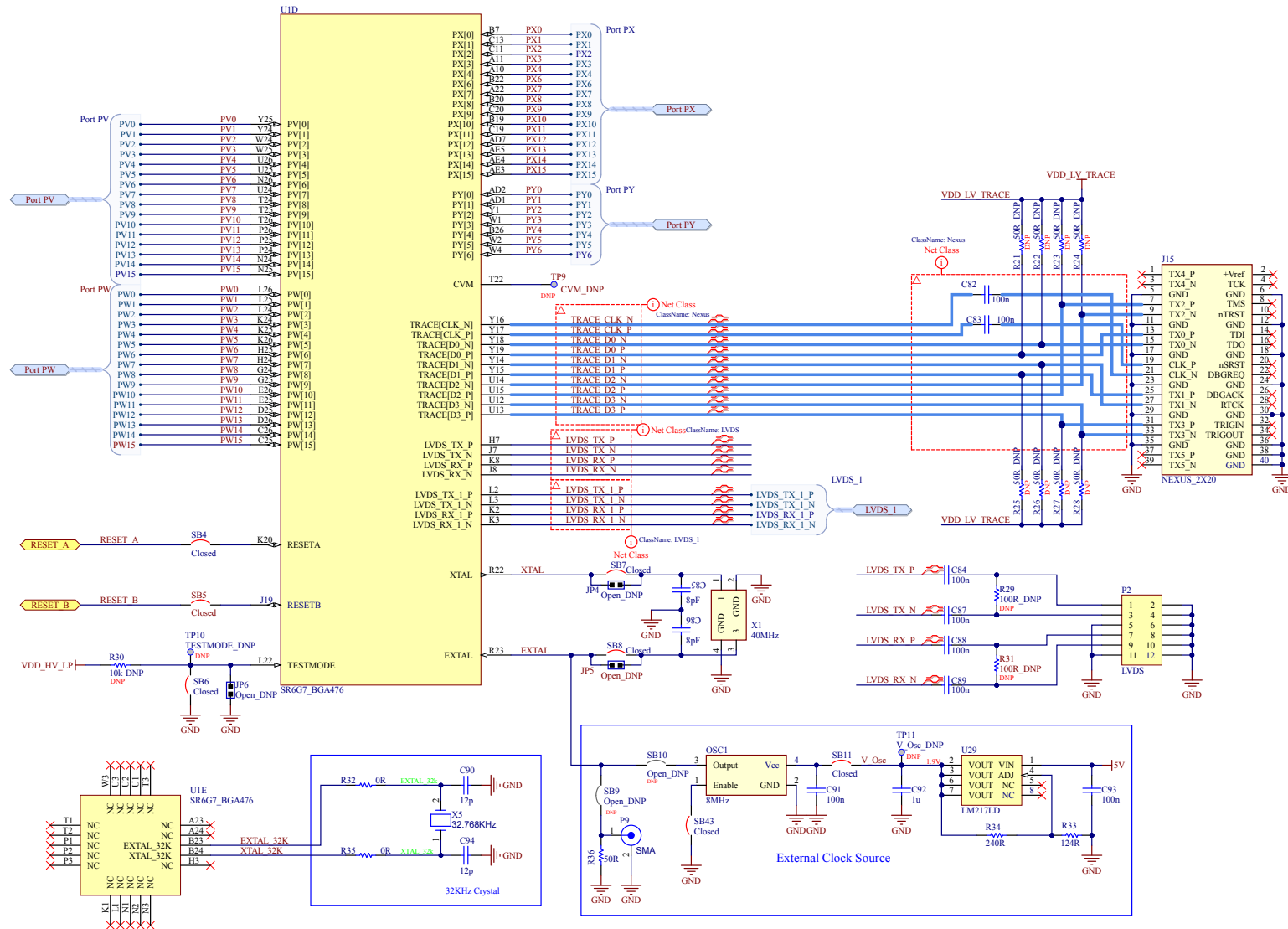


Figure 29. Reset and clock

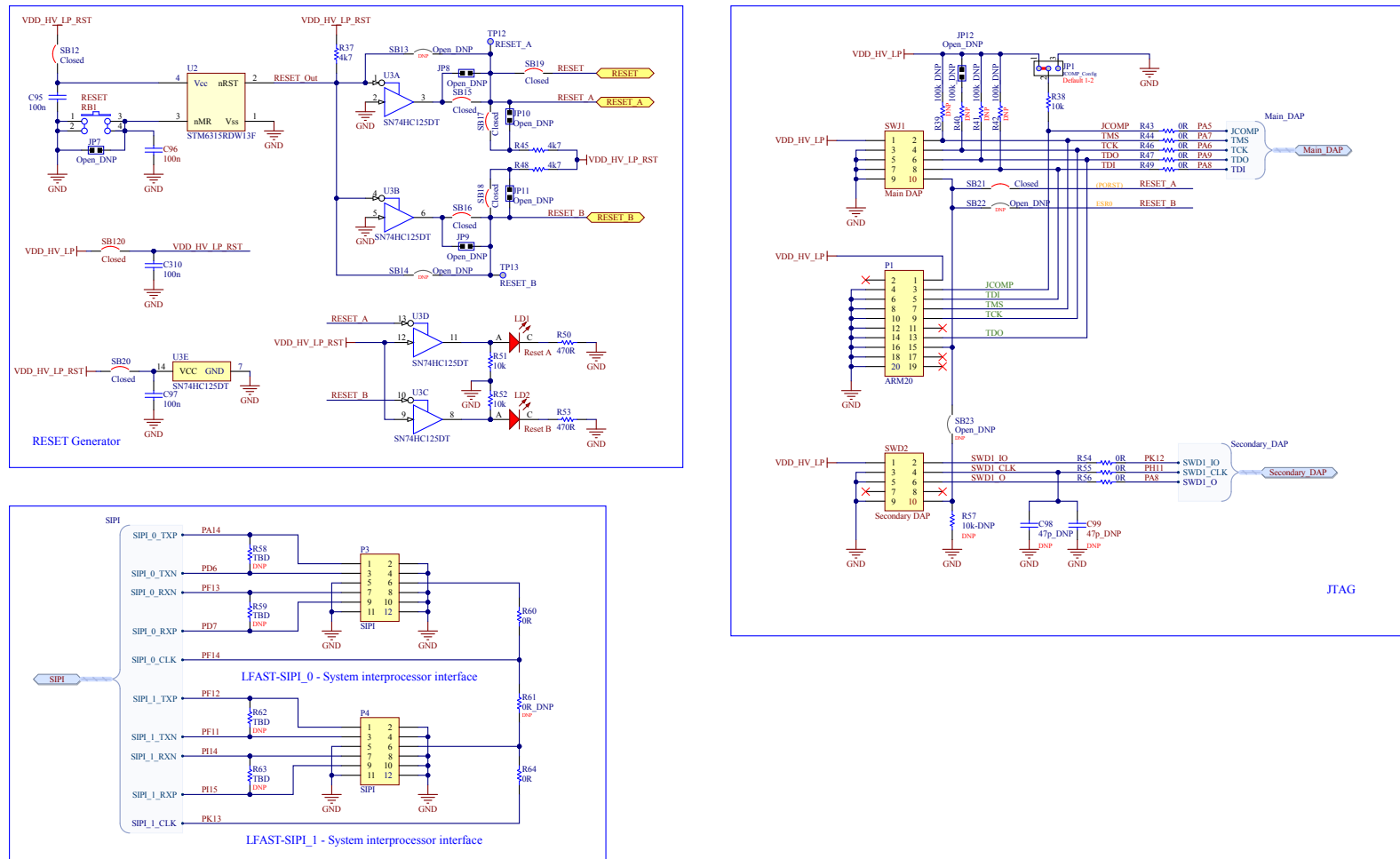


Figure 30. USB to UART

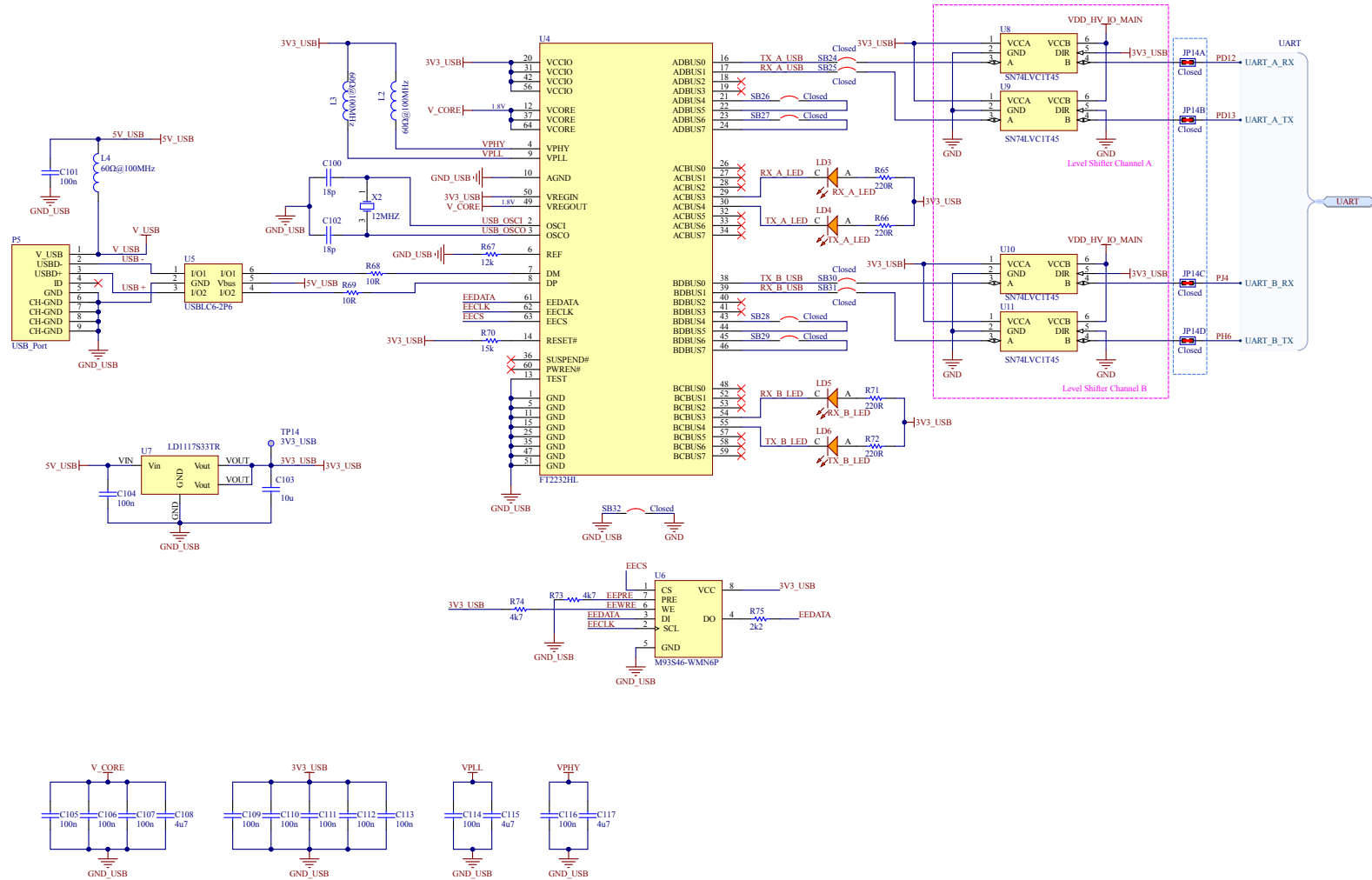
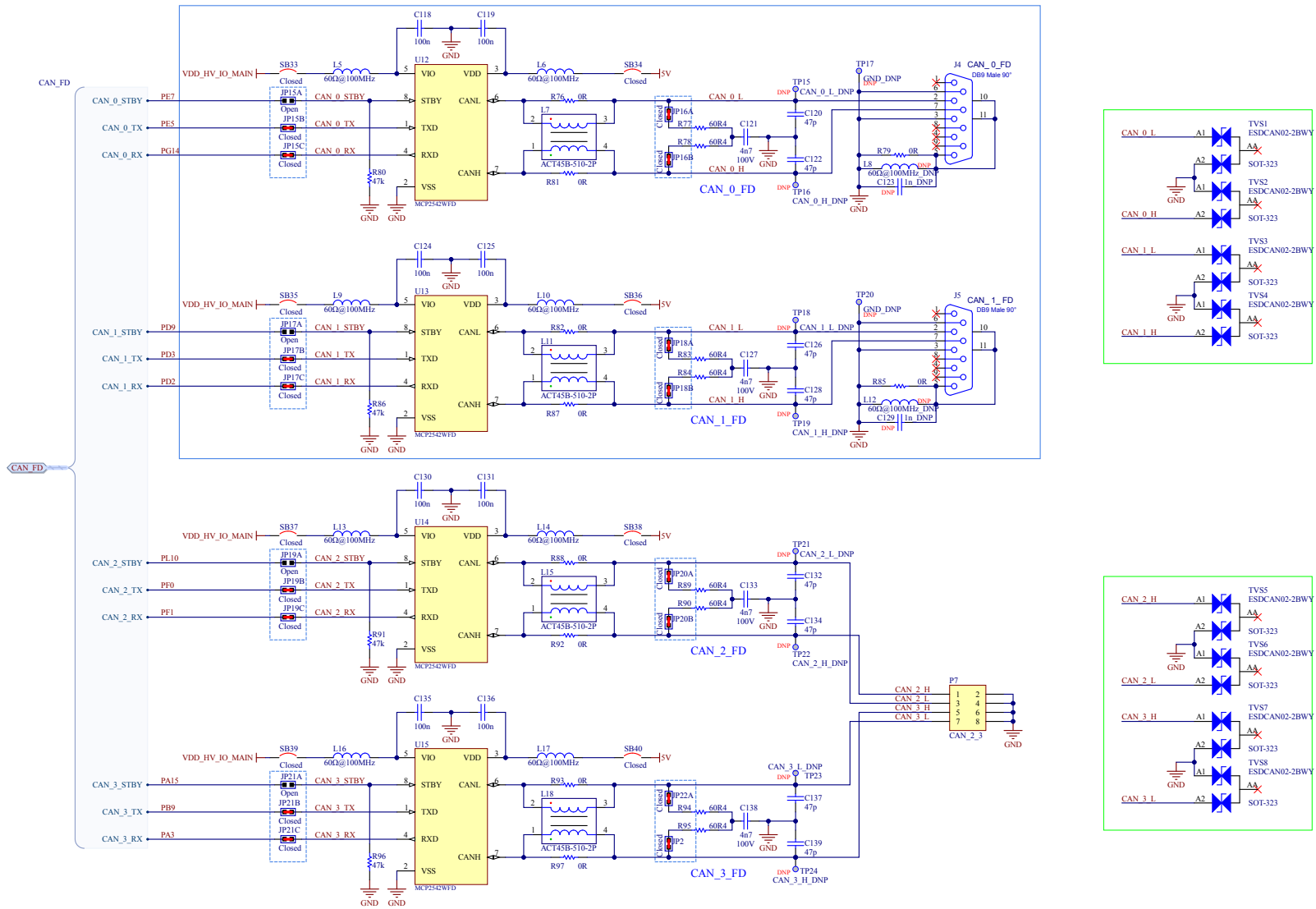


Figure 31. CANFD



**Figure 32. LIN**

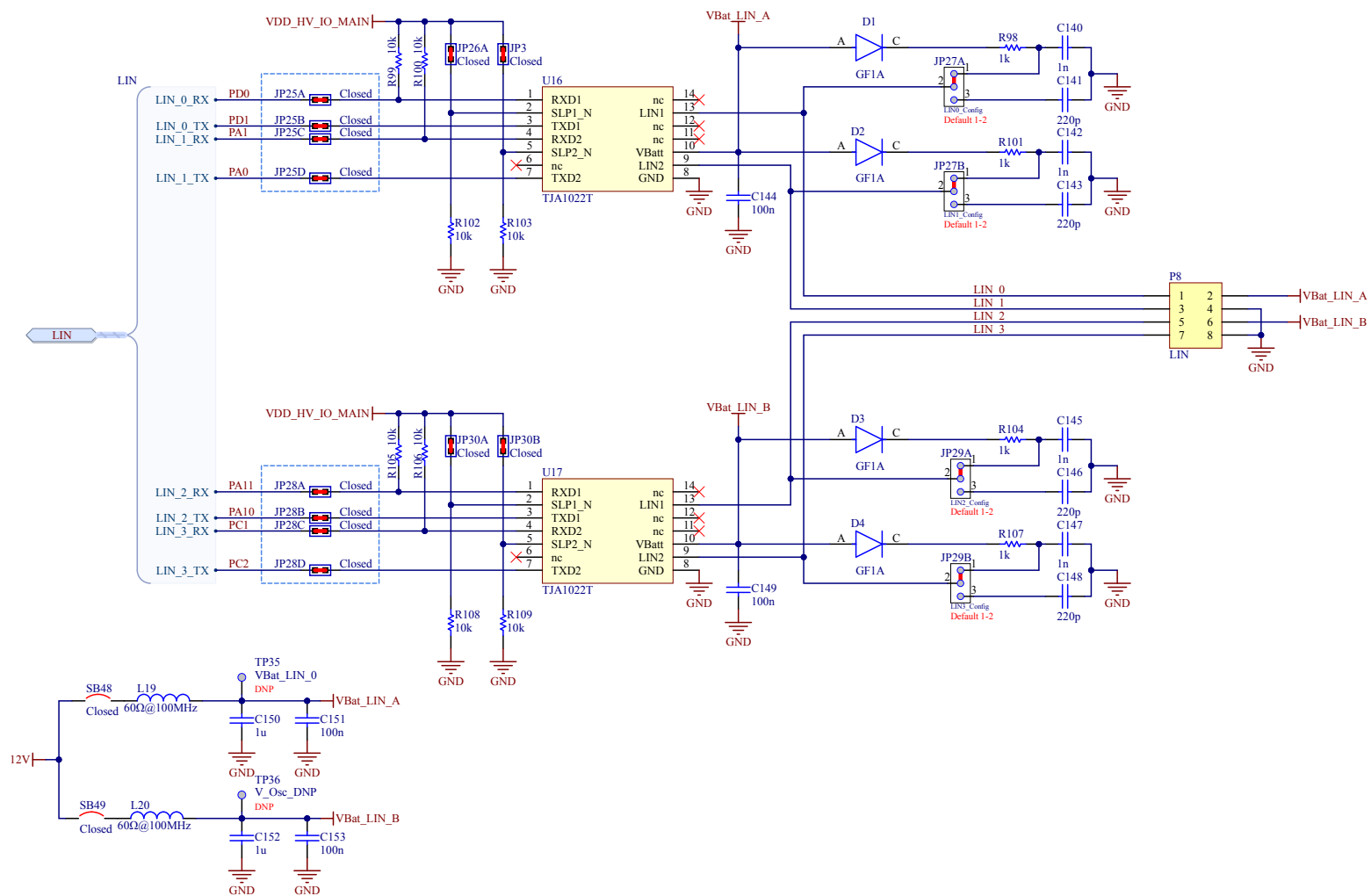


Figure 33. FlexRay

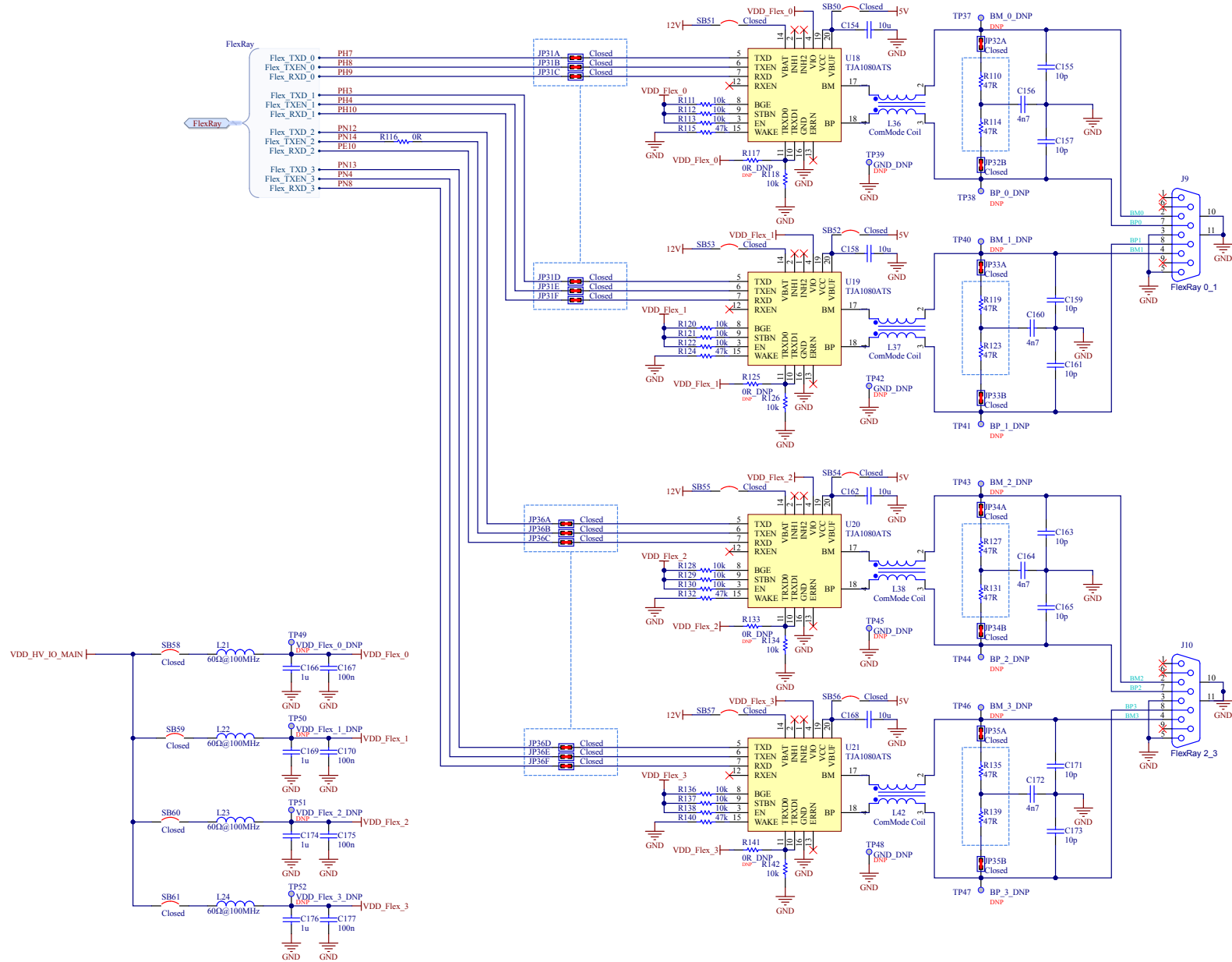




Figure 35. Ethernet 1

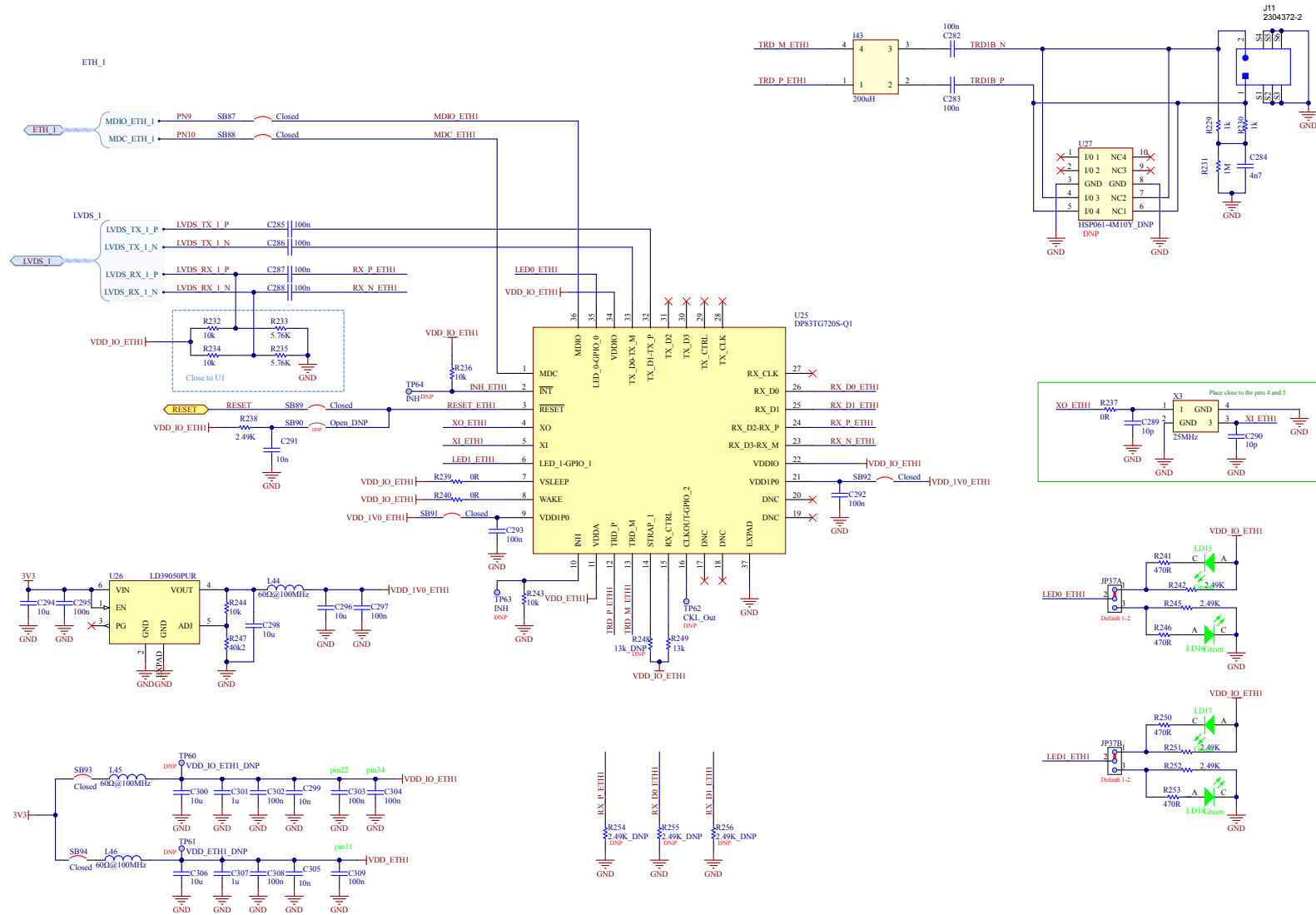


Figure 36. I2C user LCD

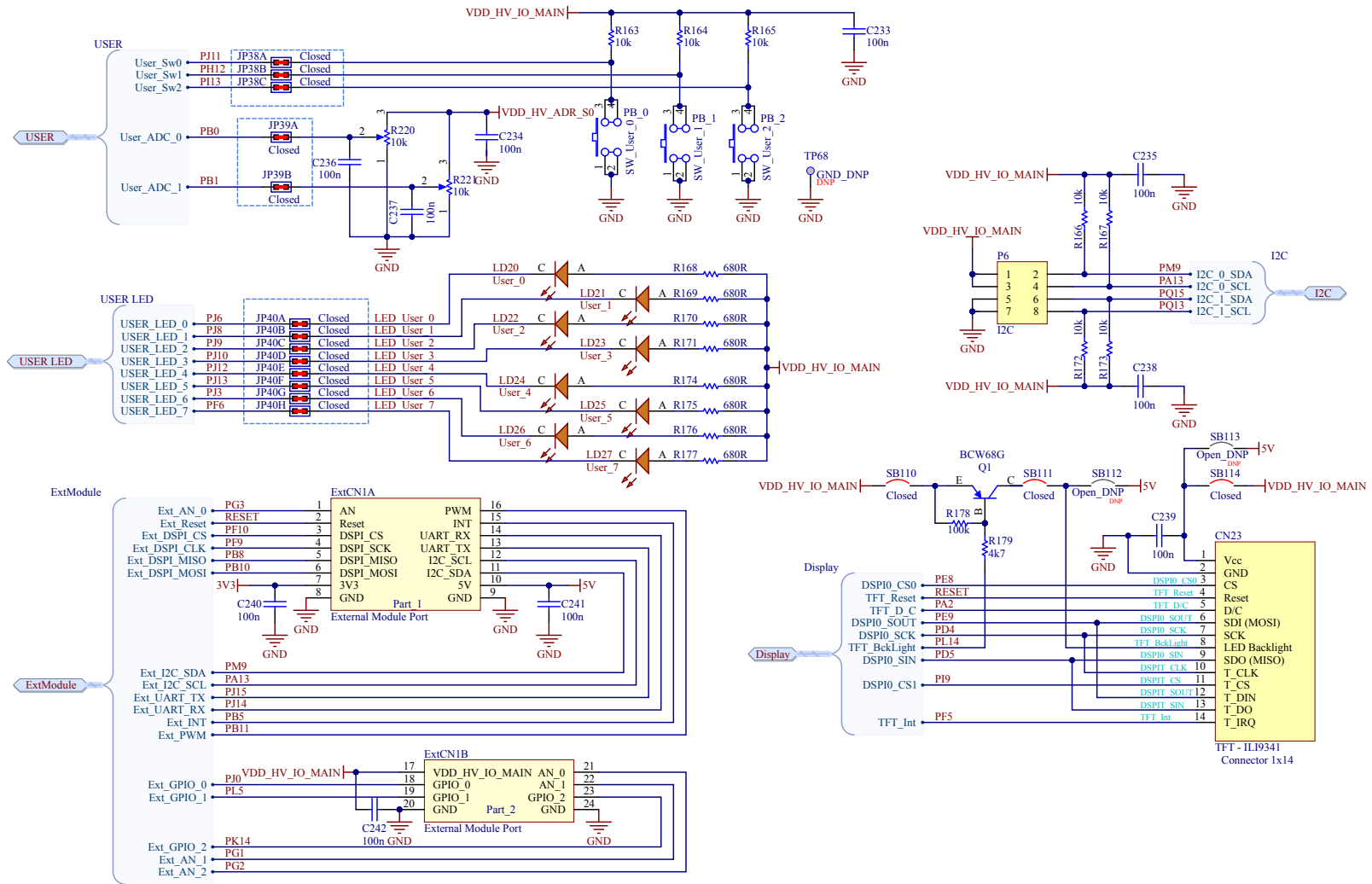
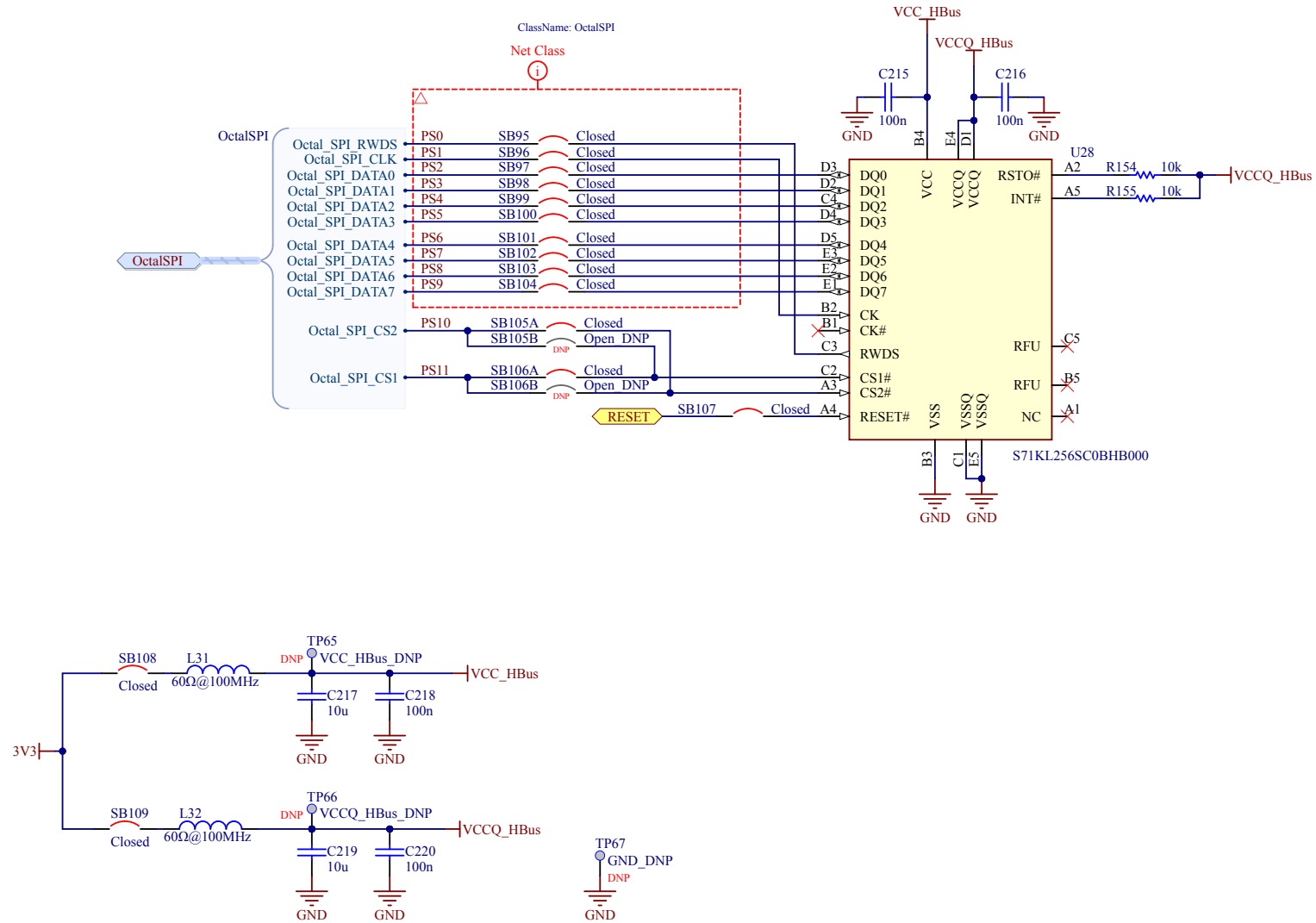
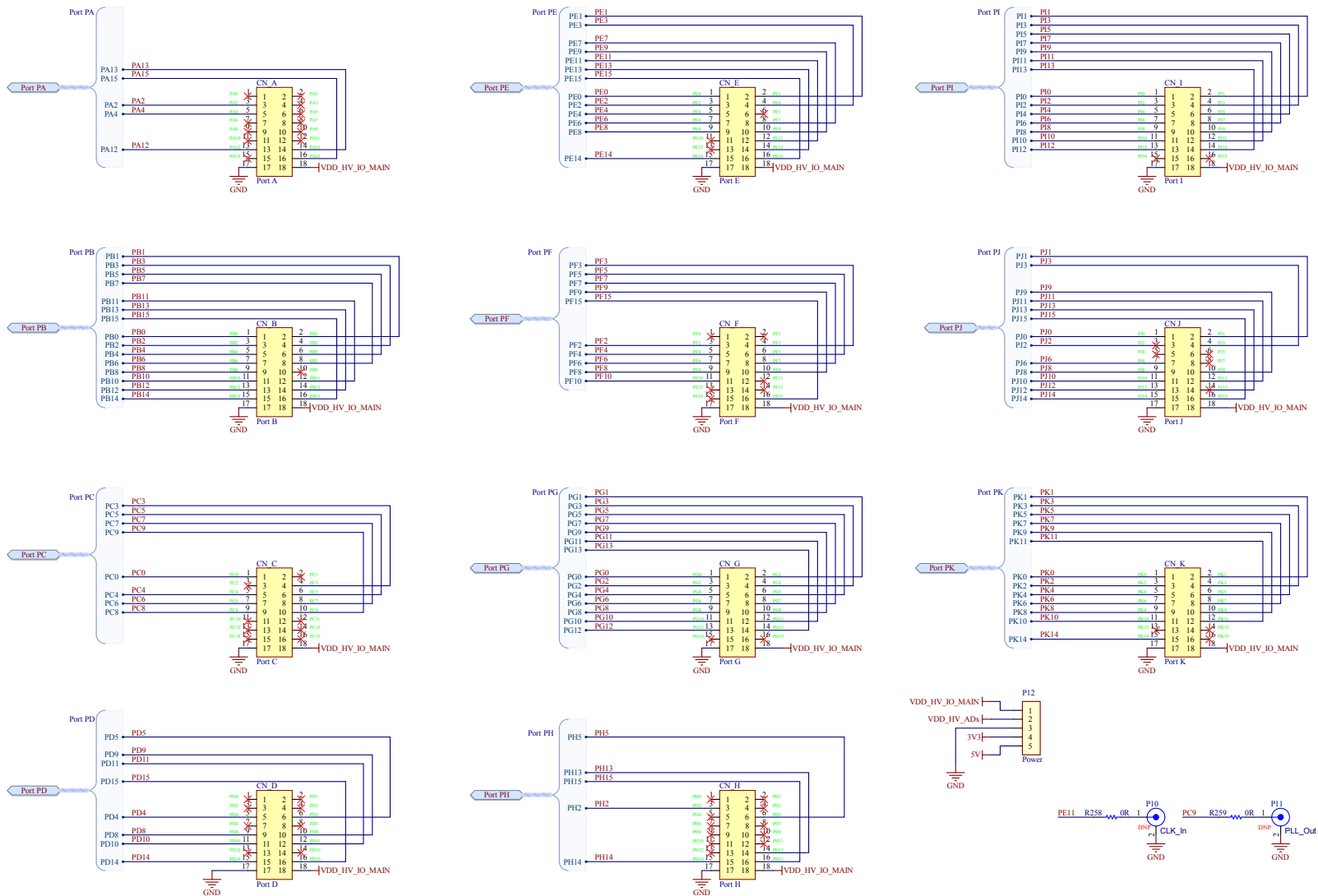


Figure 37. OctalSPI

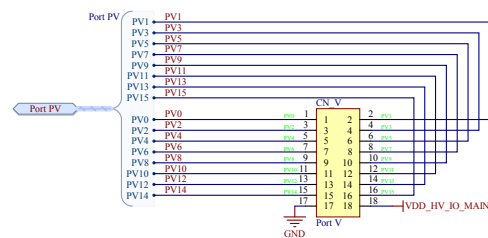
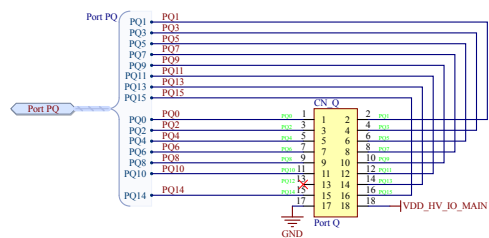
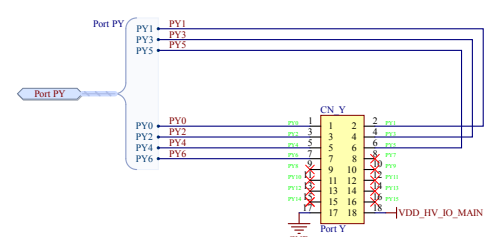
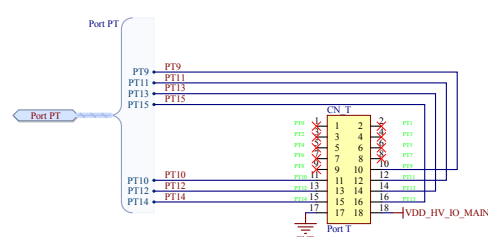
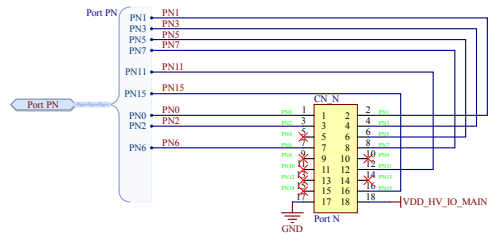
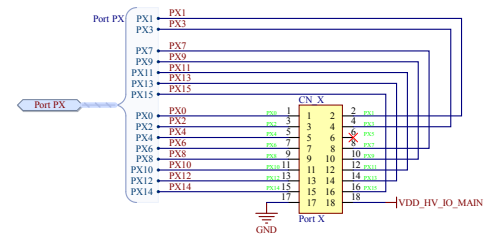
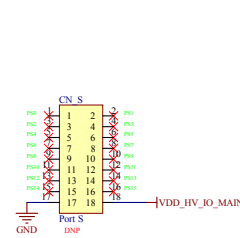
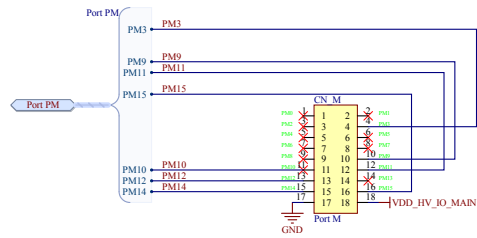
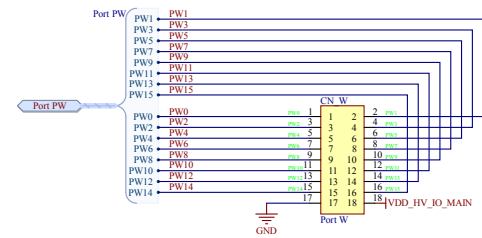
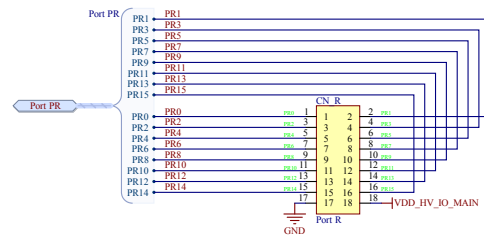
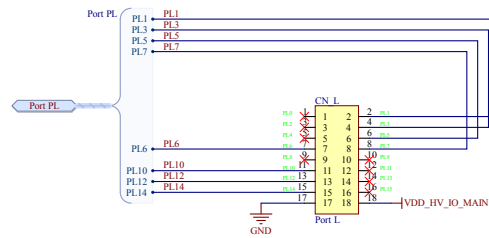




### Figure 39. IO user\_1



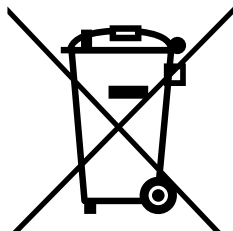
### Figure 40. IO user\_2



## 10 Product disposal

### Disposal of this product: WEEE (Waste Electrical and Electronic Equipment)

(Applicable in Europe)



This symbol on the product, accessories, or accompanying documents indicates that the product and its electronic accessories must not be disposed of with household waste at the end of their working life.

To prevent possible harm to the environment and human health from uncontrolled waste disposal, separate these items from other types of waste and recycle them responsibly at a designated collection point to promote the sustainable reuse of material resources.

#### Household users:

Contact the retailer that you purchased the product from or your local authority for details of your nearest designated collection point.

#### Business users:

Contact your dealer or supplier for further information.

## Revision history

**Table 38. Document revision history**

| Date        | Revision | Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25-May-2023 | 1        | Initial release.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 05-Dec-2023 | 2        | Replaced <i>Figure 13. Hyperbus schema</i> and <i>Figure 21. User area schema</i> .                                                                                                                                                                                                                                                                                                                                                                          |
| 29-Aug-2024 | 3        | Removed "Section 4. Hardware description overview", updated and moved "Section 4.1 Hardware features" to Section 4: Hardware features.<br>Moved "Section 4.2 Hardware dimensions" to Section 4.1: Hardware dimensions.<br>Updated Section 6.3: CAN interface, Section 6.4: FlexRay interface, Section 6.6: LINFlexD interface, Section 6.7: Hyperbus interface, Section 6.8: eMMC/SD interface, Table 24. Debug connectors and Section 6.15: User area.<br>. |
| 26-Aug-2025 | 4        | Removed "ST restricted" watermark.<br>Updated Section 3: Handling precautions.<br>Added Section 10: Product disposal.                                                                                                                                                                                                                                                                                                                                        |

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