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| | |
|---|---|
| TITLE: | TIME CARD |
| DESCRIPTION: | X4 PCIE TIME CARD |

| | |
|---|---|
| DESIGNER: | BHUMARIN I., ZUJIAN ZHAO |
| REVIEWER: | BHOOSHAN URVA |
| APPROVER: | BHOOSHAN URVA |

R4006-G0001-03-SC REV2.0

MP: - SCHEMATIC RELEASE DATE: SEP 02, 2022.
- SCHEMATIC RELEASE FOR PCBA CPN: R4006-G0001-03 REV03.

PCB CPN: R4006-B0001-02_R01.

BOM NOTE: - MANUALLY CHANGE U34 FROM G222-00082-01 TO G229-10017-01 FOR THE BOM FILE.
- MANUALLY CHANGE U23 FROM G221-10224-01 TO G221-10359-01 FOR THE BOM FILE.

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUJIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 [MP] |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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A3 (297X420)

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| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUJIAN ZHAO |
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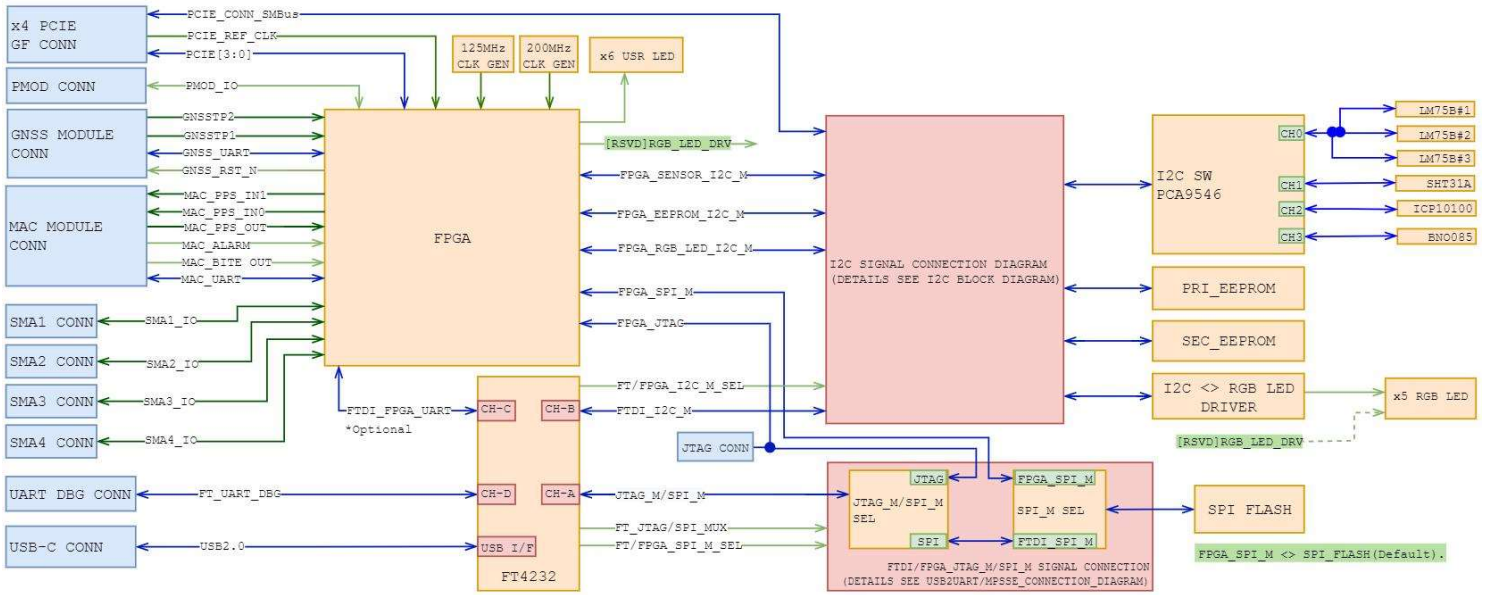
# SYS_BLOCK_DIAGRAM




| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
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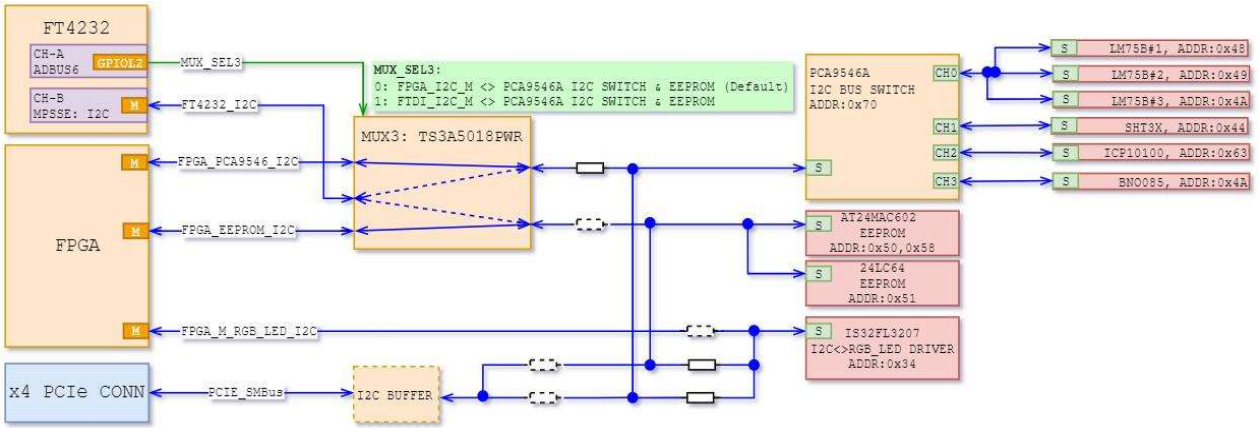
# I2C_BLOCK_DIAGRAM




| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
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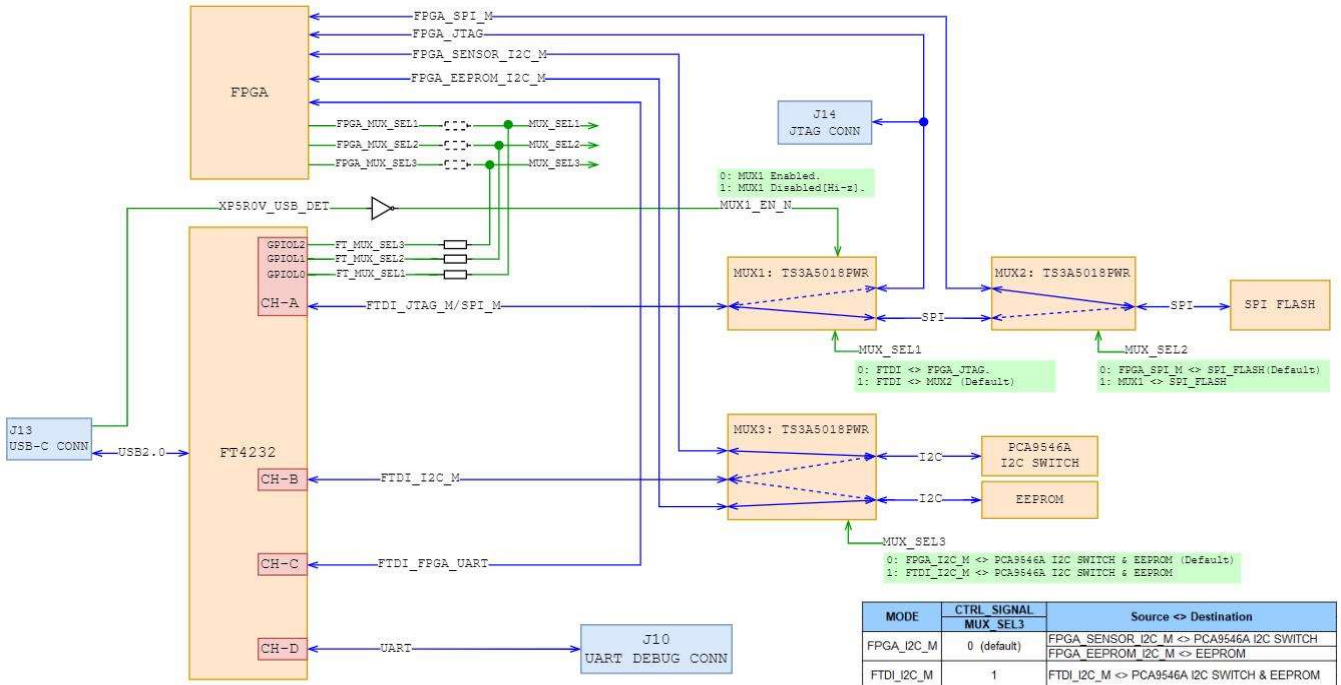
# USB2UART/MPSSE_CONNECTION_DIAGRAM




| MODE | CTRL_SIGNAL MUX_SEL3 | Source <> Destination |
|---|---|---|
| FPGA_I2C_M | 0 (default) | FPGA_SENSOR_I2C_M <> PCA9546A I2C SWITCH |
| | | FPGA_EEPROM_I2C_M <> EEPROM |
| FTDI_I2C_M | 1 | FTDI_I2C_M <> PCA9546A I2C SWITCH & EEPROM |
| | | |

| MODE | CTRL_SIGNAL MUX_SEL1 | CTRL_SIGNAL MUX_SEL2 | Source <> Destination | COMMENT |
|---|---|---|---|---|
| FTDI_JTAG_M | 0 | 0 | FTDI_JTAG<>FPGA<>SPI_FLASH | Use the FTDI chip as JTAG master to program the SPI flash by JTAG. |
| FTDI_JTAG_M | 0 | 1 | FTDI_JTAG_M <> FPGA_JTAG | FTDI JTAG master <> FPGA. |
| FPGA_SPI_M | 1 | 0 | FPGA_SPI_M <> SPI_FLASH | FPGA <> SPI flash config (Default) |
| FTDI_SPI_M | 1 | 1 | FTDI_SPI_M <> SPI_FLASH | FTDI SPI master <> SPI flash |
| | | | | |

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUTIAN ZHAO |
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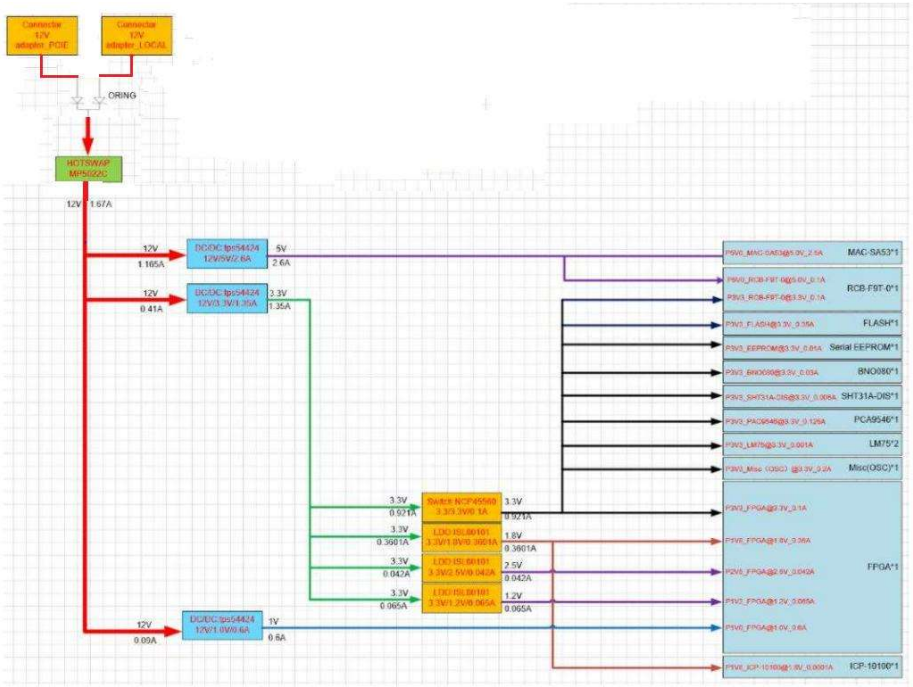
# PWR_BLOCK_DIAGRAM




PWR_BLOCK_DIAGRAM

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
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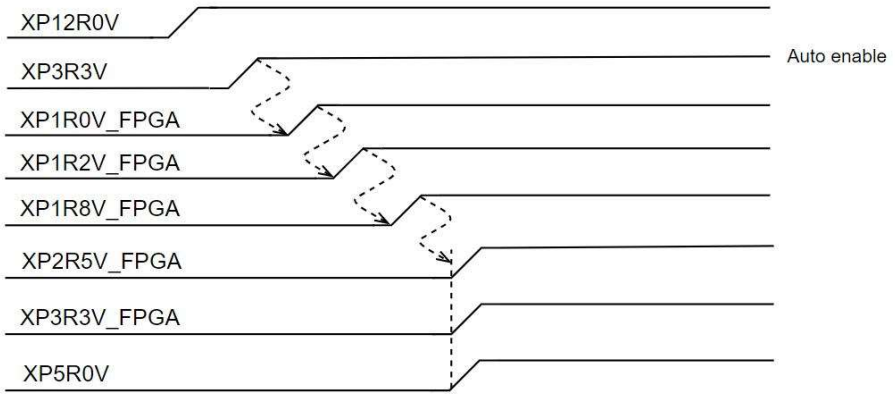
# PWR_SEQ_DIAGRAM




PWR_SEQ_DIAGRAM

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
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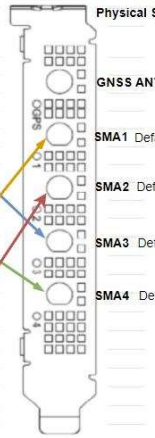
# FPGA<>SMA CONN MAPPING

**EVT**

| FPGA pin | Signal name | Buffer IC | SMA CONN |
|---|---|---|---|
| J15 | SMA1_SIG_OUT_BF_EN_N | U13 | J1 |
| W11 | ANT1_OUT | | |
| H15 | SMA1_SIG_IN_BF_EN_N | | |
| Y11 | ANT1_IN | | |
| | | | |
| H14 | SMA2_SIG_OUT_BF_EN_N | U14 | J2 |
| W12 | ANT2_OUT | | |
| J14 | SMA2_SIG_IN_BF_EN_N | | |
| Y12 | ANT2_IN | | |
| | | | |
| K13 | SMA3_SIG_OUT_BF_EN_N | U15 | J3 |
| V10 | ANT3_OUT | | |
| K14 | SMA3_SIG_IN_BF_EN_N | | |
| AA21 | ANT3_IN | | |
| | | | |
| M13 | SMA4_SIG_OUT_BF_EN_N | U16 | J4 |
| W10 | ANT4_OUT | | |
| L13 | SMA4_SIG_IN_BF_EN_N | | |
| AA20 | ANT4_IN | | |



Physical SMA CONN

GNSS ANT

**SMA1** Default = 10MHz Out

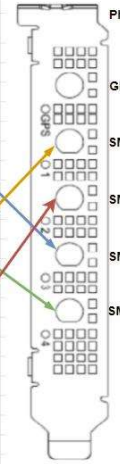
**SMA2** Default = 1PPS Out

**SMA3** Default = 10MHz In

**SMA4** Default = 1PPS In

**DVT**

| FPGA pin | Signal name | Buffer IC | SMA CONN |
|---|---|---|---|
| J15 | SMA3_SIG_OUT_BF_EN_N | U13 | J1 |
| W11 | ANT3_OUT | | |
| H15 | SMA3_SIG_IN_BF_EN_N | | |
| Y11 | ANT3_IN | | |
| | | | |
| H14 | SMA4_SIG_OUT_BF_EN_N | U14 | J2 |
| W12 | ANT4_OUT | | |
| J14 | SMA4_SIG_IN_BF_EN_N | | |
| Y12 | ANT4_IN | | |
| | | | |
| K13 | SMA1_SIG_OUT_BF_EN_N | U15 | J3 |
| V10 | ANT1_OUT | | |
| K14 | SMA1_SIG_IN_BF_EN_N | | |
| AA21 | ANT1_IN | | |
| | | | |
| M13 | SMA2_SIG_OUT_BF_EN_N | U16 | J4 |
| W10 | ANT2_OUT | | |
| L13 | SMA2_SIG_IN_BF_EN_N | | |
| AA20 | ANT2_IN | | |



Physical SMA CONN

GNSS ANT

**SMA1** Default = 10MHz Out

**SMA2** Default = 10MHz In

**SMA3** Default = 1PPS In

**SMA4** Default = 1PPS Out

FPGA<>SMA CONN MAPPING

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
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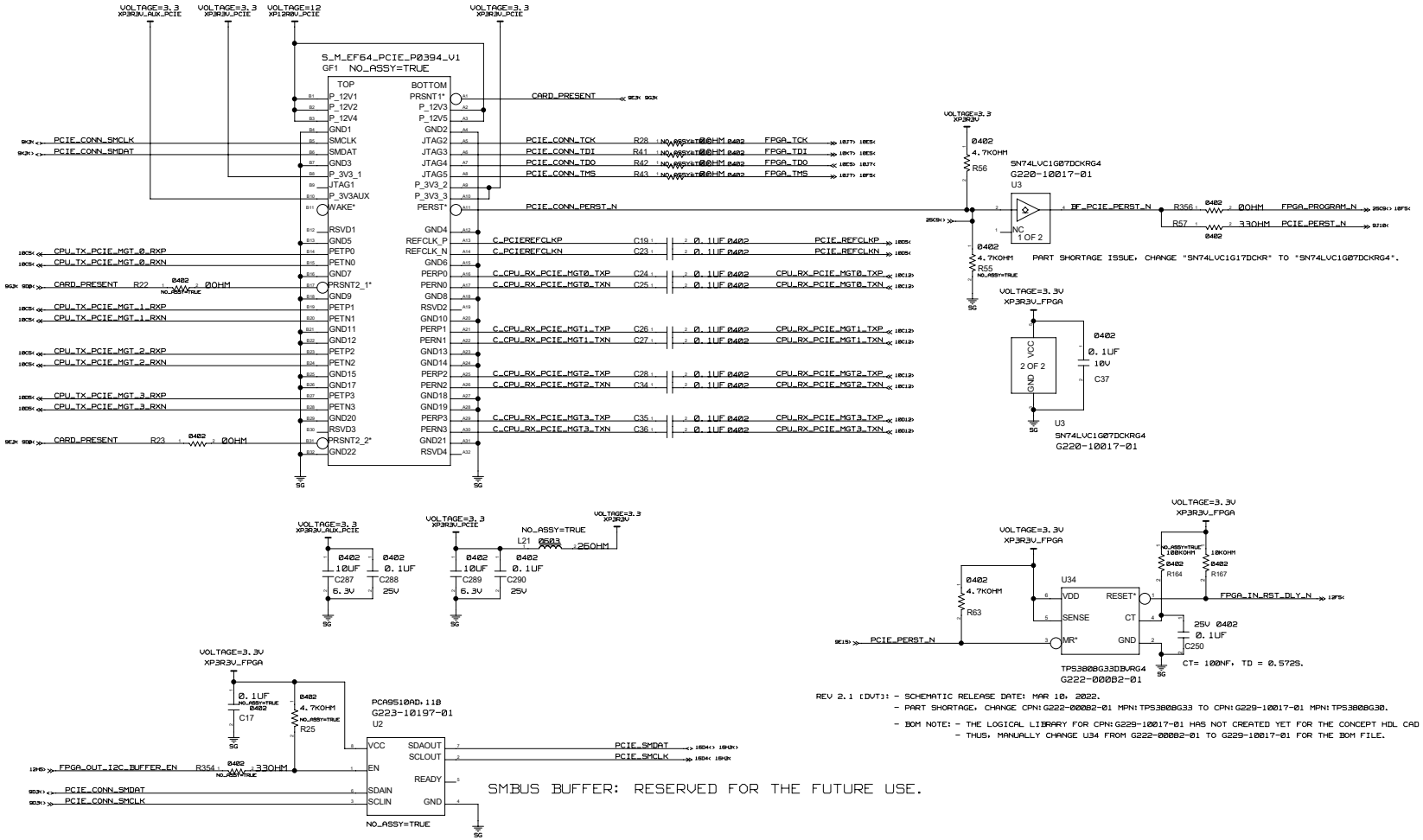
# PCIE_X4_GF_CONN




REV 2.1 [DVT]: - SCHEMATIC RELEASE DATE: MAR 10, 2022.
- PART SHORTAGE, CHANGE CPN:G222-00082-01 MPN:TPS3808G33 TO CPN:G229-10017-01 MPN:TPS3808G30.
- BOM NOTE: - THE LOGICAL LIBRARY FOR CPN:G229-10017-01 HAS NOT CREATED YET FOR THE CONCEPT HDL CAD
- THUS, MANUALLY CHANGE U34 FROM G222-00082-01 TO G229-10017-01 FOR THE BOM FILE.

PCIEx4_GF_CONN

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 [MP] |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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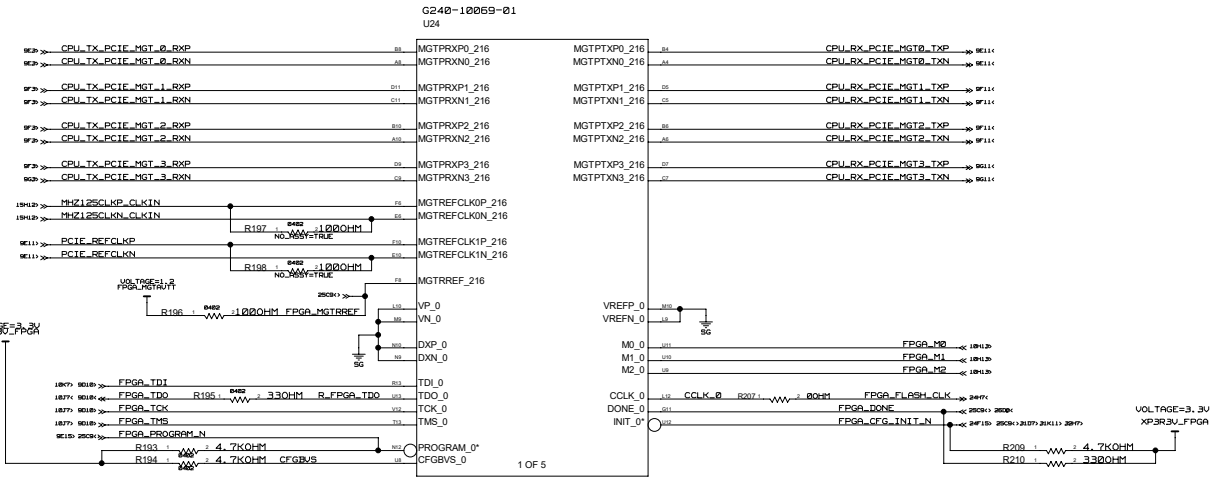
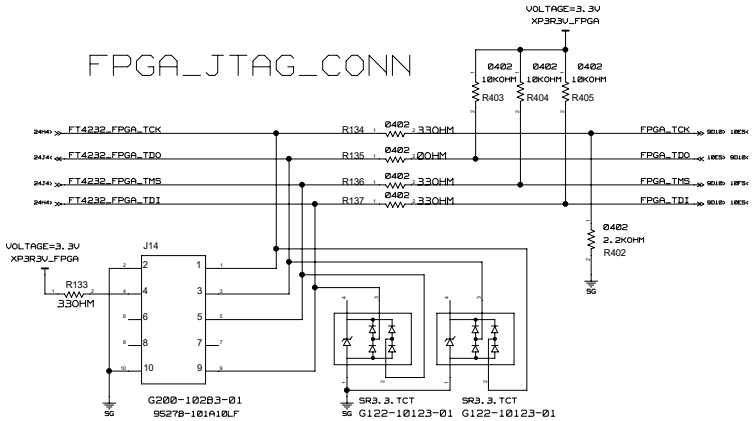
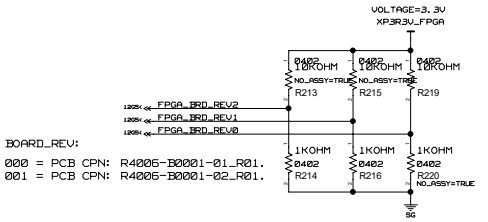
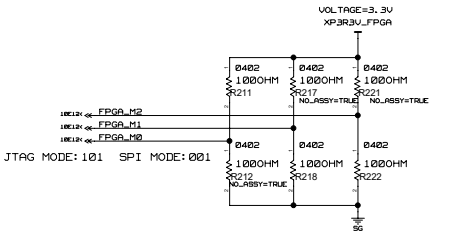
# FPGA 1/5



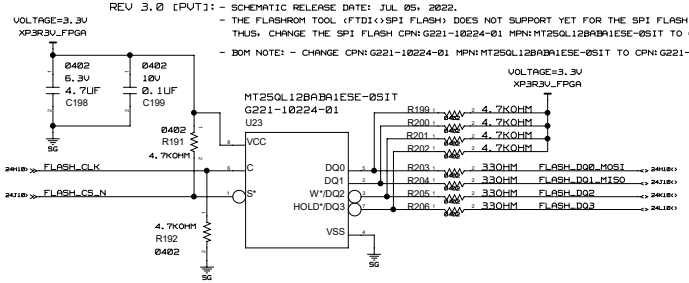

# FPGA_JTAG_CONN




REV 3.0 [PVT]: - SCHEMATIC RELEASE DATE: JUL 05, 2022.
- THE FLASHROM TOOL (FTDI<>SPI FLASH) DOES NOT SUPPORT YET FOR THE SPI FLASH CPN: G221-10224-01 MPN: MT25QL128ABA1ESE-0SIT. THUS, CHANGE THE SPI FLASH CPN: G221-10224-01 MPN: MT25QL128ABA1ESE-0SIT TO CPN: G221-10359-01 MPN: MX25L25645GM2I-08G.
- BOM NOTE: - CHANGE CPN: G221-10224-01 MPN: MT25QL128ABA1ESE-0SIT TO CPN: G221-10359-01 MPN: MX25L25645GM2I-08G.




FPGA_1/5

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 [MP] |
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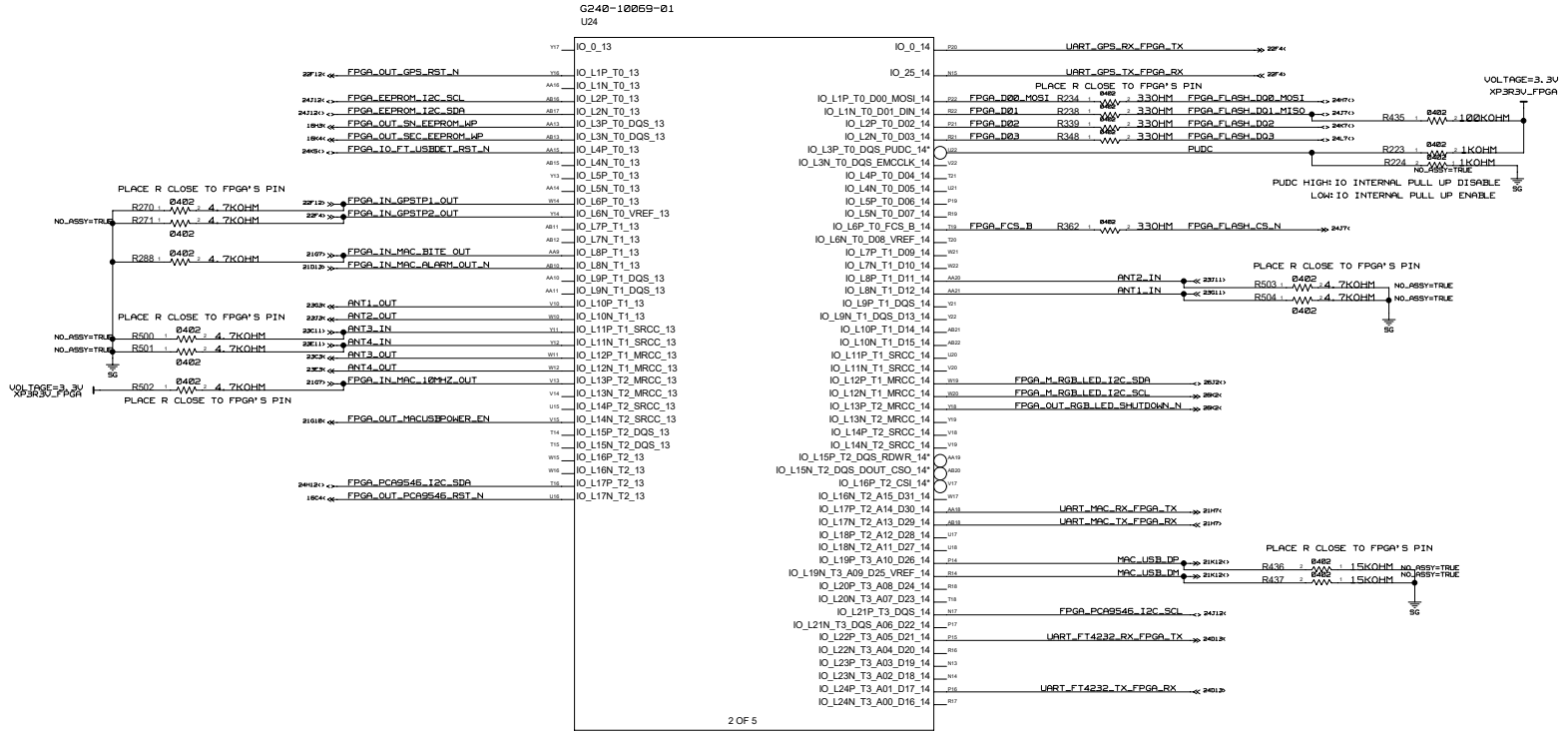
# FPGA 2/5




FPGA_2/5

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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# FPGA 3/5

G240-10069-01
U24

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | J16 | IO_0_15 | IO_0_16 | F15 | | |
| | | M17 | IO_25_15 | IO_25_16 | F21 | | |
| 24J5< | FPGA_OUT_MUX1_SEL | H13 | IO_L1P_T0_AD0P_15 | IO_L1P_T0_16 | F13 | FPGA_OUT_SMA1_LED_BLUE_N | >26D12 |
| 24J5< | FPGA_OUT_MUX2_SEL | G13 | IO_L1N_T0_AD0N_15 | IO_L1N_T0_16 | F14 | FPGA_OUT_SMA1_LED_GREEN_N | >26C12 |
| 24J12< | FPGA_OUT_MUX3_SEL | G15 | IO_L2P_T0_AD8P_15 | IO_L2P_T0_16 | F16 | FPGA_OUT_SMA1_LED_RED_N | >26D12 |
| | | G16 | IO_L2N_T0_AD8N_15 | IO_L2N_T0_16 | E17 | | |
| 23K3< 25E6< | SMA4_SIG_IN_BF_EN_N | J14 | IO_L3P_T0_DQS_AD1P_15 | IO_L3P_T0_DQS_16 | C14 | FPGA_OUT_SMA2_LED_BLUE_N | >26F12 |
| 23K3< 25F6< | SMA4_SIG_OUT_BF_EN_N | H14 | IO_L3N_T0_DQS_AD1N_15 | IO_L3N_T0_DQS_16 | C15 | FPGA_OUT_SMA2_LED_GREEN_N | >26E12 |
| | | G17 | IO_L4P_T0_15 | IO_L4P_T0_16 | E13 | FPGA_OUT_SMA2_LED_RED_N | >26E12 |
| | | G18 | IO_L4N_T0_15 | IO_L4N_T0_16 | E14 | | |
| 23C3< 25D5< | SMA3_SIG_OUT_BF_EN_N | J15 | IO_L5P_T0_AD9P_15 | IO_L5P_T0_16 | E16 | | |
| 23C3< 25C5< | SMA3_SIG_IN_BF_EN_N | H15 | IO_L5N_T0_AD9N_15 | IO_L5N_T0_16 | C16 | | |
| | | H17 | IO_L6P_T0_15 | IO_L6P_T0_16 | D14 | LED_DATOUT2 | >26C3 |
| | | H18 | IO_L6N_T0_VREF_15 | IO_L6N_T0_VREF_16 | D15 | LED_DATOUT3 | >26B3 |
| 25J12>25H5<> | FPGA_IO_0 | J22 | IO_L7P_T1_AD2P_15 | IO_L7P_T1_16 | B15 | | |
| 25J5<> 25J12<> | FPGA_IO_1 | H22 | IO_L7N_T1_AD2N_15 | IO_L7N_T1_16 | B16 | | |
| 25J5<> 25J12<> | FPGA_IO_2 | H20 | IO_L8P_T1_AD10P_15 | IO_L8P_T1_16 | C13 | LED_DATOUT1 | >26C3 |
| 25J5<> 25J12<> | FPGA_IO_3 | G20 | IO_L8N_T1_AD10N_15 | IO_L8N_T1_16 | B13 | LED_DATOUT0 | >26C3 |
| 25J7<> 25J5<> | FPGA_IO_4 | K21 | IO_L9P_T1_DQS_AD3P_15 | IO_L9P_T1_DQS_16 | A15 | | |
| 25K5<> 25J7<> | FPGA_IO_5 | K22 | IO_L9N_T1_DQS_AD3N_15 | IO_L9N_T1_DQS_16 | A16 | | |
| 25K5<> 25J7<> | FPGA_IO_6 | M21 | IO_L10P_T1_AD11P_15 | IO_L10P_T1_16 | A13 | FPGA_USR_LED1 | >26D3 |
| 25K5<> 25J7<> | FPGA_IO_7 | L21 | IO_L10N_T1_AD11N_15 | IO_L10N_T1_16 | A14 | FPGA_USR_LED0 | >26D3 |
| 9H15> | FPGA_IN_RST_DLY_N | J20 | IO_L11P_T1_SRCC_15 | IO_L11P_T1_SRCC_16 | B17 | | |
| | | J21 | IO_L11N_T1_SRCC_15 | IO_L11N_T1_SRCC_16 | B18 | | |
| 18G15> | FPGA_IN_SHT3X_ALERT_N | J19 | IO_L12P_T1_MRCC_15 | IO_L12P_T1_MRCC_16 | D17 | FPGA_OUT_SMA3_LED_BLUE_N | >26G12 |
| 18G12< | FPGA_OUT_SHT3X_RST_N | H19 | IO_L12N_T1_MRCC_15 | IO_L12N_T1_MRCC_16 | C17 | FPGA_OUT_SMA3_LED_GREEN_N | >26G12 |
| | | K19 | IO_L13P_T2_MRCC_15 | IO_L13P_T2_MRCC_16 | C18 | FPGA_OUT_SMA3_LED_RED_N | >26G12 |
| | | K19 | IO_L13N_T2_MRCC_15 | IO_L13N_T2_MRCC_16 | C19 | | |
| | | L19 | IO_L14P_T2_SRCC_15 | IO_L14P_T2_SRCC_16 | E19 | FPGA_OUT_SMA4_LED_BLUE_N | >26J12 |
| | | L20 | IO_L14N_T2_SRCC_15 | IO_L14N_T2_SRCC_16 | D19 | FPGA_OUT_SMA4_LED_GREEN_N | >26H12 |
| 25D6< 17D12> | FPGA_IN_LM75B_INT1_N | N22 | IO_L15P_T2_DQS_15 | IO_L15P_T2_DQS_16 | F18 | FPGA_OUT_SMA4_LED_RED_N | >26H12 |
| 25D6< 17G12> | FPGA_IN_LM75B_INT2_N | M22 | IO_L15N_T2_DQS_ADV_B_15 | IO_L15N_T2_DQS_16 | E18 | | |
| 25D6< 17K12> | FPGA_IN_LM75B_INT3_N | M19 | IO_L16P_T2_A28_15 | IO_L16P_T2_16 | B20 | FPGA_OUT_GPS_LED_BLUE_N | >26K12 |
| | | L19 | IO_L16N_T2_A27_15 | IO_L16N_T2_16 | A20 | FPGA_OUT_GPS_LED_GREEN_N | >26K12 |
| 18H18> | FPGA_BRD_REV2 | N18 | IO_L17P_T2_A26_15 | IO_L17P_T2_16 | A18 | FPGA_OUT_GPS_LED_RED_N | >26K12 |
| 18H18> | FPGA_BRD_REV1 | N19 | IO_L17N_T2_A25_15 | IO_L17N_T2_16 | A19 | | |
| 18H18> | FPGA_BRD_REV0 | N20 | IO_L18P_T2_A24_15 | IO_L18P_T2_16 | F19 | | |
| | | M20 | IO_L18N_T2_A23_15 | IO_L18N_T2_16 | F20 | | |
| 23G3< 25G5< | SMA1_SIG_OUT_BF_EN_N | K13 | IO_L19P_T3_A22_15 | IO_L19P_T3_16 | D20 | | |
| 23G3< 25G5< | SMA1_SIG_IN_BF_EN_N | K14 | IO_L19N_T3_A21_VREF_15 | IO_L19N_T3_VREF_16 | C20 | | |
| 23J7< 25G5< | SMA2_SIG_OUT_BF_EN_N | M13 | IO_L20P_T3_A20_15 | IO_L20P_T3_16 | C22 | IO_L20P_16 | <>25C3> |
| 23K3< 25G5< | SMA2_SIG_IN_BF_EN_N | L13 | IO_L20N_T3_A19_15 | IO_L20N_T3_16 | B22 | IO_L20N_16 | <>25C3> |
| | | K17 | IO_L21P_T3_DQS_15 | IO_L21P_T3_DQS_16 | B21 | IO_L21P_16 | <>25C3> |
| 28F15< | FPGA_OUT_BN0088_RST_N | J17 | IO_L21N_T3_DQS_A18_15 | IO_L21N_T3_DQS_16 | A21 | IO_L21N_16 | <>25C3> |
| 28F2> | FPGA_IN_BN0088_INT_N | L14 | IO_L22P_T3_A17_15 | IO_L22P_T3_16 | E22 | IO_L22P_16 | <>25C3> |
| 28F2< | FPGA_OUT_BN0088_BOOT_N | L15 | IO_L22N_T3_A16_15 | IO_L22N_T3_16 | D22 | IO_L22N_16 | <>25C3> |
| | | L16 | IO_L23P_T3_FOE_B_15 | IO_L23P_T3_16 | E21 | IO_L23P_16 | <>25C3> |
| 9K2< | FPGA_OUT_I2C_BUFFER_EN | K16 | IO_L23N_T3_FWE_B_15 | IO_L23N_T3_16 | D21 | IO_L23N_16 | <>25C3> |
| 21H14> | FPGA_IN_MAC_USB_OC_N | M16 | IO_L24P_T3_RS1_15 | IO_L24P_T3_16 | G21 | IO_L24P_16 | <>25D3> |
| 21L5< | RSVD_DBG_USB_MUX_SEL | M16 | IO_L24N_T3_RS0_15 | IO_L24N_T3_16 | G22 | IO_L24N_16 | <>25D3> |

3 OF 5

FPGA_3/5

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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# FPGA 4/5

## VCCIO = 2.5V.

G240-10069-01
U24

| | | | |
|---|---|---|---|
| F4 | IO_0_35 | IO_0_34 | T3 |
| L6 | IO_25_35 | IO_25_34 | U7 |
| B1 | IO_L1P_T0_AD4P_35 | IO_L1P_T0_34 | T1 |
| A1 | IO_L1N_T0_AD4N_35 | IO_L1N_T0_34 | U1 |
| C2 | IO_L2P_T0_AD12P_35 | IO_L2P_T0_34 | U2 |
| B2 | IO_L2N_T0_AD12N_35 | IO_L2N_T0_34 | V2 |
| E1 | IO_L3P_T0_DQS_AD5P_35 | IO_L3P_T0_DQS_34 | R3 |
| D1 | IO_L3N_T0_DQS_AD5N_35 | IO_L3N_T0_DQS_34 | R2 |
| E2 | IO_L4P_T0_35 | IO_L4P_T0_34 | W2 |
| D2 | IO_L4N_T0_35 | IO_L4N_T0_34 | V2 |
| G1 | IO_L5P_T0_AD13P_35 | IO_L5P_T0_34 | W1 |
| F1 | IO_L5N_T0_AD13N_35 | IO_L5N_T0_34 | V1 |
| F3 | IO_L6P_T0_35 | IO_L6P_T0_34 | U3 |
| E3 | IO_L6N_T0_VREF_35 | IO_L6N_T0_VREF_34 | V3 |
| K1 | IO_L7P_T1_AD6P_35 | IO_L7P_T1_34 | AA1 |
| J1 | IO_L7N_T1_AD6N_35 | IO_L7N_T1_34 | AB1 |
| H2 | IO_L8P_T1_AD14P_35 | IO_L8P_T1_34 | AB3 |
| G2 | IO_L8N_T1_AD14N_35 | IO_L8N_T1_34 | AB2 |
| K2 | IO_L9P_T1_DQS_AD7P_35 | IO_L9P_T1_DQS_34 | Y3 |
| J2 | IO_L9N_T1_DQS_AD7N_35 | IO_L9N_T1_DQS_34 | AA3 |
| J5 | IO_L10P_T1_AD15P_35 | IO_L10P_T1_34 | AA5 |
| H5 | IO_L10N_T1_AD15N_35 | IO_L10N_T1_34 | AB5 |
| H3 | IO_L11P_T1_SRCC_35 | IO_L11P_T1_SRCC_34 | Y4 |
| G3 | IO_L11N_T1_SRCC_35 | IO_L11N_T1_SRCC_34 | AA4 |
| H4 | IO_L12P_T1_MRCC_35 | IO_L12P_T1_MRCC_34 | Y4 |
| G4 | IO_L12N_T1_MRCC_35 | IO_L12N_T1_MRCC_34 | W4 |
| K4 | IO_L13P_T2_MRCC_35 | IO_L13P_T2_MRCC_34 | R4 |
| J4 | IO_L13N_T2_MRCC_35 | IO_L13N_T2_MRCC_34 | T4 |
| L3 | IO_L14P_T2_SRCC_35 | IO_L14P_T2_SRCC_34 | T5 |
| K3 | IO_L14N_T2_SRCC_35 | IO_L14N_T2_SRCC_34 | U5 |
| M1 | IO_L15P_T2_DQS_35 | IO_L15P_T2_DQS_34 | W6 |
| L1 | IO_L15N_T2_DQS_35 | IO_L15N_T2_DQS_34 | W5 |
| M3 | IO_L16P_T2_35 | IO_L16P_T2_34 | U6 |
| M2 | IO_L16N_T2_35 | IO_L16N_T2_34 | V5 |
| K6 | IO_L17P_T2_35 | IO_L17P_T2_34 | R6 |
| J6 | IO_L17N_T2_35 | IO_L17N_T2_34 | T6 |
| L5 | IO_L18P_T2_35 | IO_L18P_T2_34 | Y6 |
| L4 | IO_L18N_T2_35 | IO_L18N_T2_34 | AA6 |
| N4 | IO_L19P_T3_35 | IO_L19P_T3_34 | V7 |
| N3 | IO_L19N_T3_VREF_35 | IO_L19N_T3_VREF_34 | W7 |
| P1 | IO_L20P_T3_35 | IO_L20P_T3_34 | AB7 |
| P1 | IO_L20N_T3_35 | IO_L20N_T3_34 | AB6 |
| P5 | IO_L21P_T3_DQS_35 | IO_L21P_T3_DQS_34 | V9 |
| P4 | IO_L21N_T3_DQS_35 | IO_L21N_T3_DQS_34 | V8 |
| P2 | IO_L22P_T3_35 | IO_L22P_T3_34 | AA8 |
| N2 | IO_L22N_T3_35 | IO_L22N_T3_34 | AB8 |
| M6 | IO_L23P_T3_35 | IO_L23P_T3_34 | Y8 |
| M5 | IO_L23N_T3_35 | IO_L23N_T3_34 | Y7 |
| P6 | IO_L24P_T3_35 | IO_L24P_T3_34 | W9 |
| N5 | IO_L24N_T3_35 | IO_L24N_T3_34 | Y9 |

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| | | | |
|---|---|---|---|
| 25P2(1) | IO_L20P_35 | IO_L20P_34 | 25S2(1) |
| 25P2(1) | IO_L20N_35 | IO_L20N_34 | 25S2(1) |
| 25P2(1) | IO_L21P_35 | IO_L21P_34 | 25S2(1) |
| 25P2(1) | IO_L21N_35 | IO_L21N_34 | 25S2(1) |
| 25P2(1) | IO_L22P_35 | IO_L22P_34 | 25S2(1) |
| 25P2(1) | IO_L22N_35 | IO_L22N_34 | 25S2(1) |
| 25P2(1) | IO_L23P_35 | IO_L23P_34 | 25S2(1) |
| 25P2(1) | IO_L23N_35 | IO_L23N_34 | 25S2(1) |
| 25P2(1) | IO_L24P_35 | IO_L24P_34 | 25S2(1) |
| 25P2(1) | IO_L24N_35 | IO_L24N_34 | 25S2(1) |

RSVD EXTERNAL R TERM. PLACE R CLOSE TO FPGA'S PIN

NO_ASSY=TRUE
R275 0402 100OHM
FPGA_IN_MAC_PPS_OUTP
FPGA_IN_MAC_PPS_OUTN
21D4
21D4
R438 0402 10KOHM
R439 0402 10KOHM
R440 0402 10KOHM
R441 0402 10KOHM
VOLTAGE=2.5V
XP2RSV_FPGA
SG

NO_ASSY=TRUE
R276 0402 100OHM
FPGA_OUT_MAC_PPS_IN0P
FPGA_OUT_MAC_PPS_IN0N
21C4
21D4
LVDS_25 OUTPUT

NO_ASSY=TRUE
R277 0402 100OHM
FPGA_OUT_MAC_PPS_IN1P
FPGA_OUT_MAC_PPS_IN1N
21C4
21C4
LVDS_25 OUTPUT

R278 0402 100OHM
MHZ200CLKP_CLKIN
MHZ200CLKN_CLKIN
15D12
15D12
R355 0402 10KOHM
R358 0402 10KOHM
R359 0402 10KOHM
R360 0402 10KOHM
VOLTAGE=2.5V
XP2RSV_FPGA
SG

FPGA_4/5

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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# FPGA 5/5

U24
G240-10069-01

5 OF 5

| | | | |
|---|---|---|---|
| GND_1 | VCCADC_0 | GND_2 | VCCAUX_1 |
| GND_3 | VCCAUX_2 | GND_4 | VCCAUX_3 |
| GND_5 | VCCAUX_4 | GND_6 | VCCAUX_5 |
| GND_7 | | GND_8 | VCCBATT_0 |
| GND_9 | VCCBRAM_1 | GND_10 | VCCBRAM_2 |
| GND_11 | VCCBRAM_3 | GND_12 | |
| GND_13 | VCCINT_1 | GND_14 | VCCINT_2 |
| GND_15 | VCCINT_3 | GND_16 | VCCINT_4 |
| GND_17 | VCCINT_5 | GND_18 | VCCINT_6 |
| GND_19 | VCCINT_7 | GND_20 | VCCINT_8 |
| GND_21 | VCCINT_9 | GND_22 | VCCINT_10 |
| GND_23 | VCCINT_11 | GND_24 | VCCINT_12 |
| GND_25 | VCCINT_13 | GND_26 | VCCINT_14 |
| GND_27 | | GND_28 | VCCO_0_1 |
| GND_29 | VCCO_0_2 | GND_30 | |
| GND_31 | VCCO_13_1 | GND_32 | VCCO_13_2 |
| GND_33 | VCCO_13_3 | GND_34 | VCCO_13_4 |
| GND_35 | VCCO_13_5 | GND_36 | |
| GND_37 | VCCO_14_1 | GND_38 | VCCO_14_2 |
| GND_39 | VCCO_14_3 | GND_40 | VCCO_14_4 |
| GND_41 | VCCO_14_5 | GND_42 | VCCO_14_6 |
| GND_43 | | GND_44 | VCCO_15_1 |
| GND_45 | VCCO_15_2 | GND_46 | VCCO_15_3 |
| GND_47 | VCCO_15_4 | GND_48 | VCCO_15_5 |
| GND_49 | VCCO_15_6 | GND_50 | |
| GND_51 | VCCO_16_1 | GND_52 | VCCO_16_2 |
| GND_53 | VCCO_16_3 | GND_54 | VCCO_16_4 |
| GND_55 | VCCO_16_5 | GND_56 | VCCO_16_6 |
| GND_57 | | GND_58 | VCCO_34_1 |
| GND_59 | VCCO_34_2 | GND_60 | VCCO_34_3 |
| GND_61 | VCCO_34_4 | GND_62 | VCCO_34_5 |
| GND_63 | VCCO_34_6 | GND_64 | |
| GND_65 | VCCO_35_1 | GND_66 | VCCO_35_2 |
| GND_67 | VCCO_35_3 | GND_68 | VCCO_35_4 |
| GND_69 | VCCO_35_5 | GND_70 | VCCO_35_6 |
| GND_71 | | GND_72 | |
| GND_73 | | GND_74 | MGTAVCC_1 |
| GND_75 | MGTAVCC_2 | GND_76 | MGTAVCC_3 |
| GND_77 | MGTAVCC_4 | GND_78 | MGTAVCC_5 |
| GND_79 | | GND_80 | MGTAVTT_1 |
| GND_81 | MGTAVTT_2 | GND_82 | MGTAVTT_3 |
| GND_83 | MGTAVTT_4 | GND_84 | MGTAVTT_5 |
| GND_85 | MGTAVTT_6 | GND_86 | |
| GND_87 | | GNDADC_0 | |

XP1R8V_FPGA_VCCAUX — VOLTAGE=1.8V XP1R8V_FPGA
C200 C206 C212 C219 C106 C113 C120 C128 C138 L33 0603 120OHM C150 C158

XP1R0V_FPGA_VCCINT — VOLTAGE=1.0V XP1R0V_FPGA
C201 C207 C214 C222 C109 C114 C121 C129 C133 C141 C147 C152 C156 C161 C166 C169 C171 C173 C175 C176 C177 L12 0603 120OHM C178 C179

VOLTAGE=3.3V XP3R3V_FPGA
C202 C210 C215 C103 C112 C119 C126 C132 C139 C144 C149 C154 C159 C163 C167 C170 C172 C174
C203 C211 C216 C221 C107 C115 C223 C130 C134 C140 C145 C153 C157 C162 C165

VOLTAGE=2.5V XP2R5V_FPGA
C204 C208 C213 C220 C108 C116 C122 C127 C135 C142 C146 C151 C160 C93 C164 C168 C291 C292

XP1R0V_FPGA_MGTAVCC — VOLTAGE=1.0V XP1R0V_FPGA
C218 C105 C111 C118 C124 C131 C137 L34 0603 120OHM C148 C155

VOLTAGE=1.2 FPGA_MGTAVTT
VOLTAGE=1.2V XP1R2V_FPGA
C205 C209 C217 C104 C110 C117 C125 L35 0603 120OHM C136 C143

FPGA_5/5

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 14 of 35 | CELESTICA |

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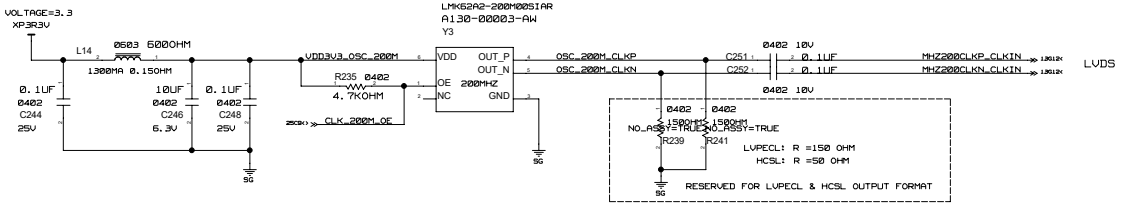
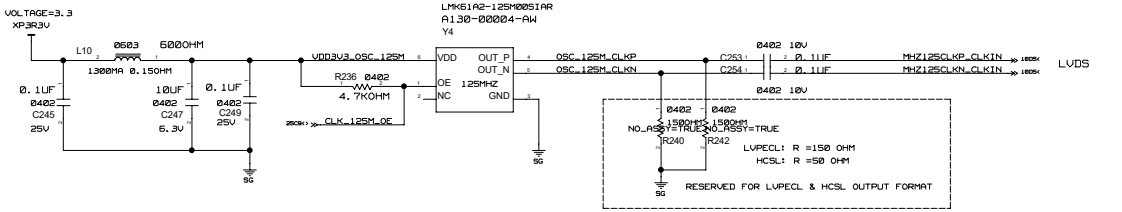
# CLOCK_GENERATOR

## CLOCK GENERATOR: 200MHZ.




## CLOCK GENERATOR: 125MHZ.




CLOCK_GENERATOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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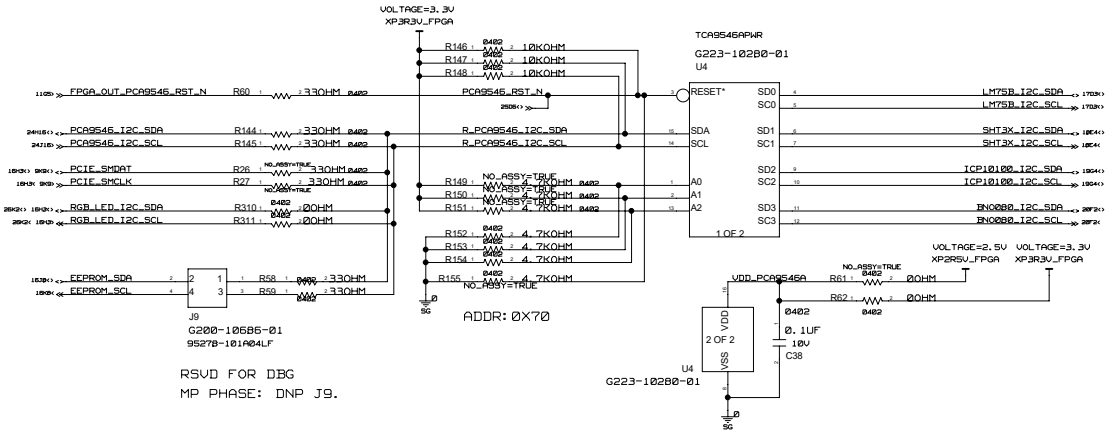
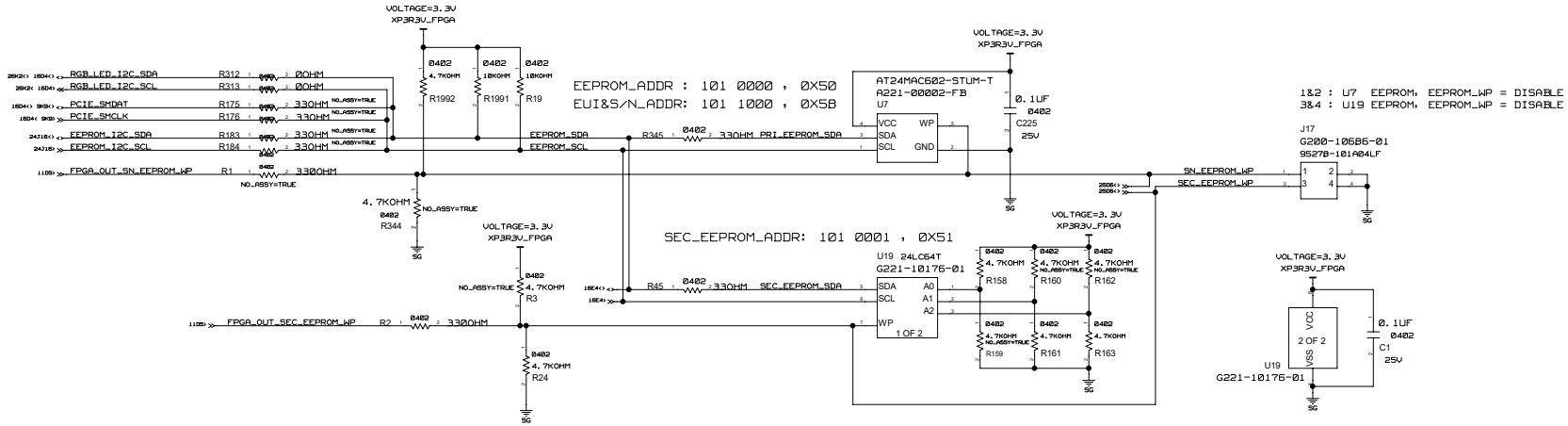
# PCA9546A_I2C_SWITCH




# EEPROM




# I2C_SWITCH&EEPROM

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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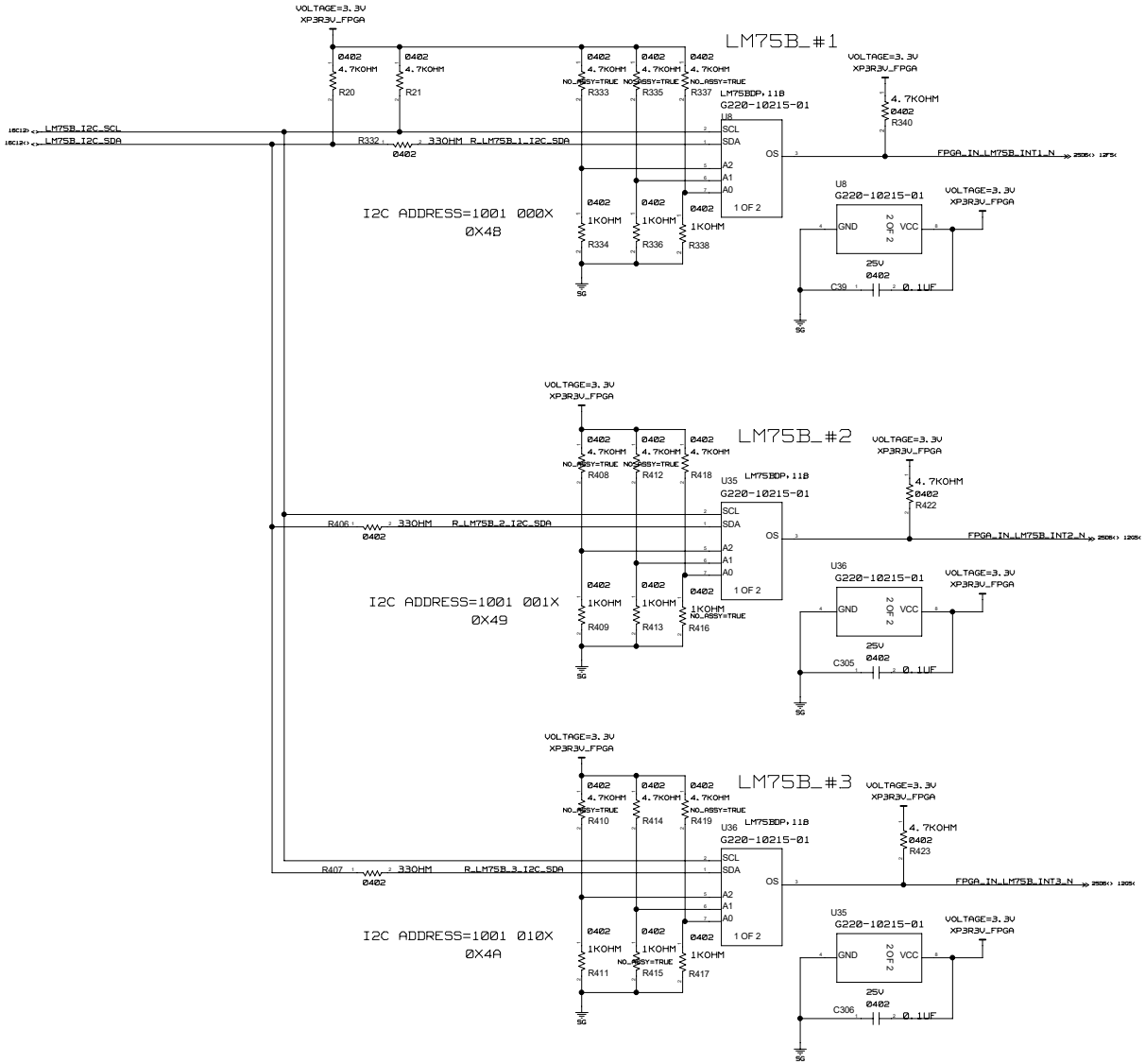
# TEMPERATURE_SENSOR




TEMPERATURE_SENSOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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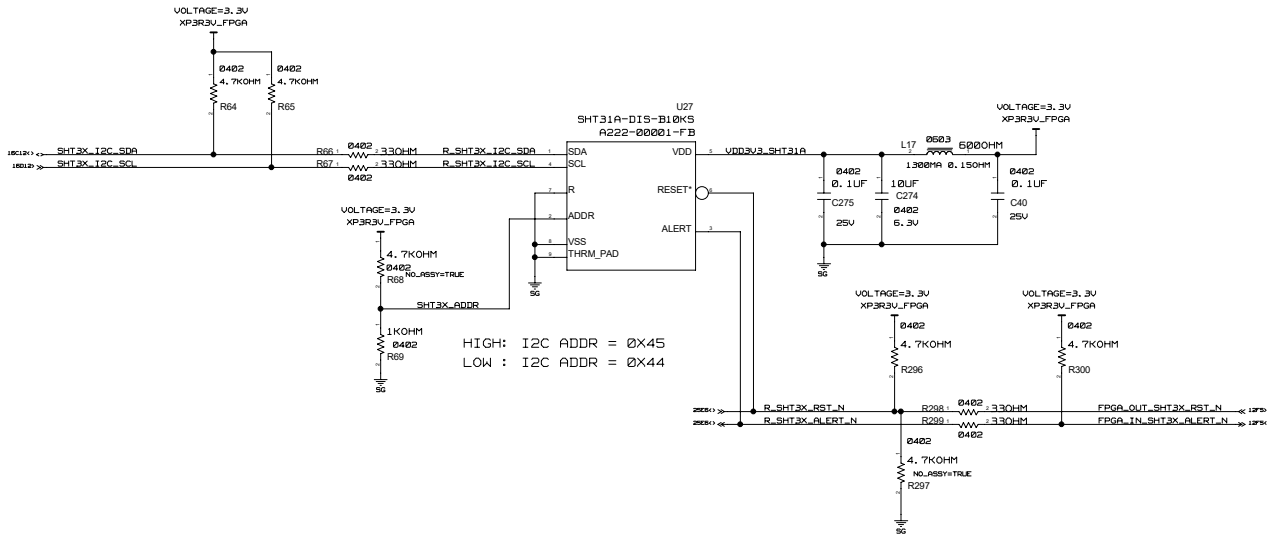
# HUMIDITY_SENSOR




HUMIDITY_SENSOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 1B of 35 | CELESTICA |

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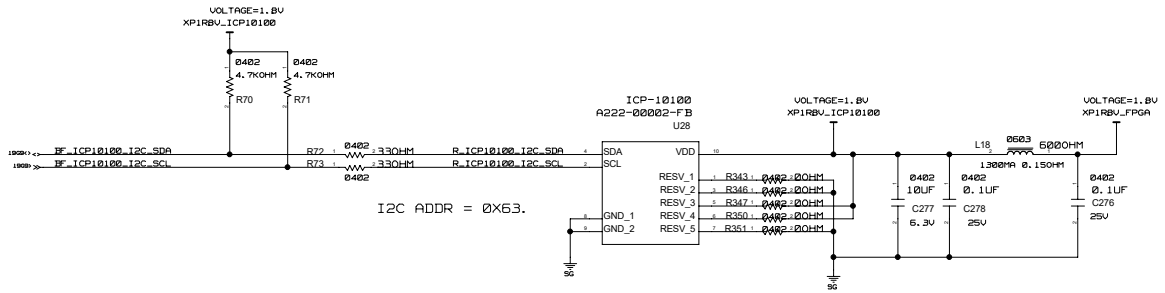
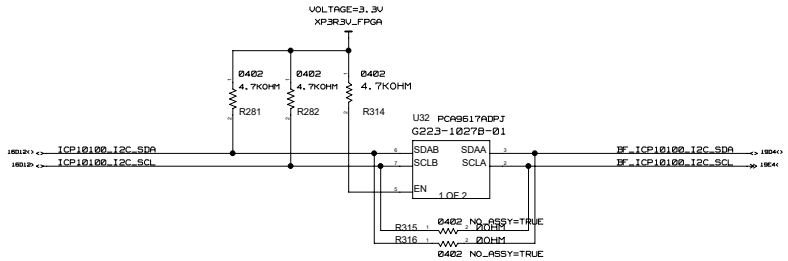
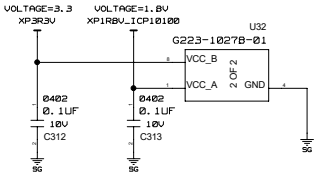
USE PURSUANT TO COMPANY INSTRUCTIONS

# AIR_PRESSURE_SENSOR




U32: - G220-10219-01 (EVT) SHOW NOT FOR NEW DESIGN IN THE ENOVIA SYSTEM.
- THE EVT >> DVT PHASE, CHANGE G220-10219-01 TO G223-1027B-01.

- G223-1027B-01: - P1GULS5V9617AUEX: VCC(B) AND VCC(A) CAN BE APPLIED IN ANY SEQUENCE AT POWER-UP
- PCA9617ADPJ : VCC(B) AND VCC(A) CAN BE APPLIED IN ANY SEQUENCE AT POWER-UP
- TCA9617ADGKR : DURING POWER-UP, VCCB MUST RISE BEFORE VCCA.

- THUS, TO SUPPORT TI CHIP (TCA9617ADGKR). FOR THE DVT, CONNECT VCC_B PIN TO XP3R3V.

AIR_PRESSURE_SENSOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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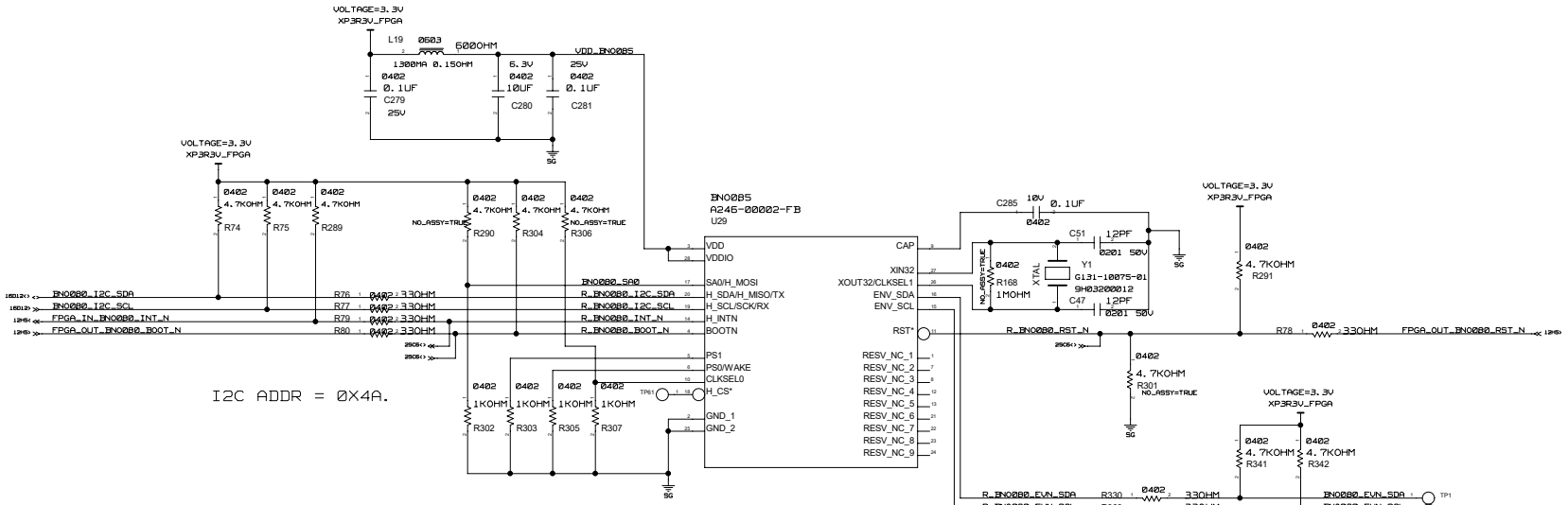
# VIBRATION_SENSOR




## VIBRATION_SENSOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUITAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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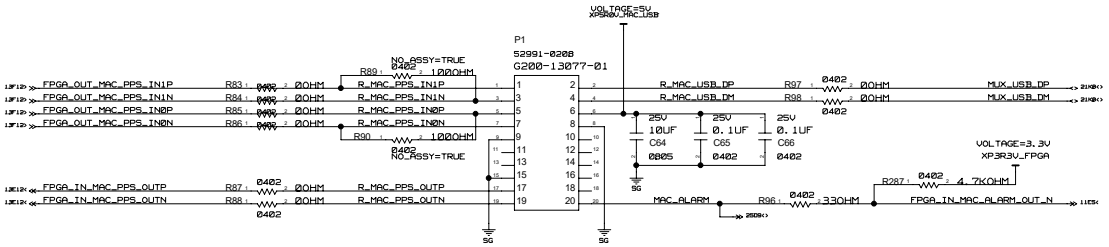
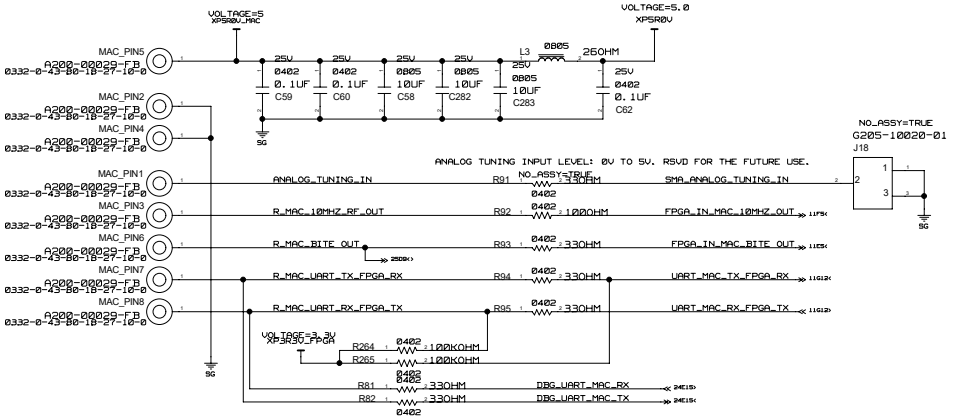
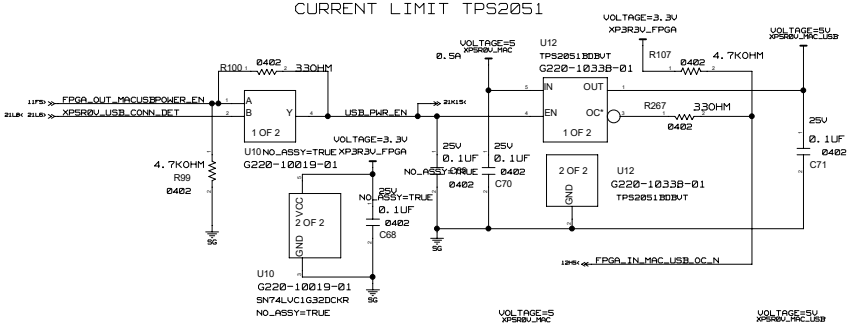
USE PURSUANT TO COMPANY INSTRUCTIONS

# MINIATURE_ATOMIC_CLOCK_MODULE

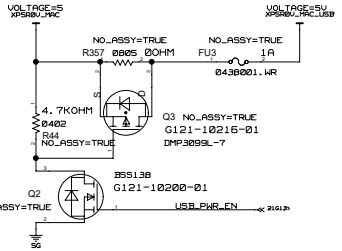



## CURRENT LIMIT TPS2051

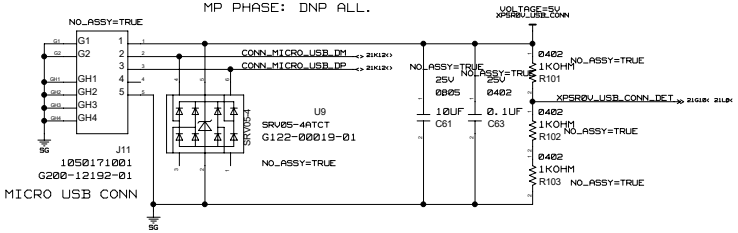


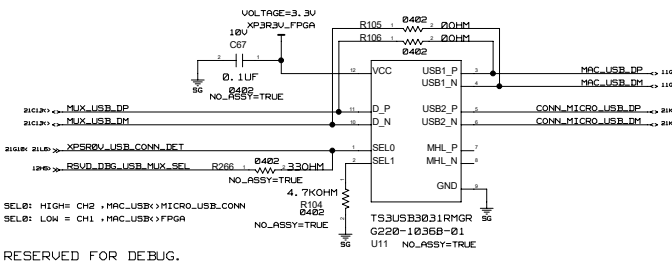

MP PHASE: DNP U10 AND POP R100.




## RESERVED FOR DEBUG

MP PHASE: DNP ALL.




RESERVED FOR DEBUG.

MP PHASE: DNP ALL AND POP ONLY R105,R106.

## MAC_MODULE_CONN

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 21 of 35 | CELESTICA |

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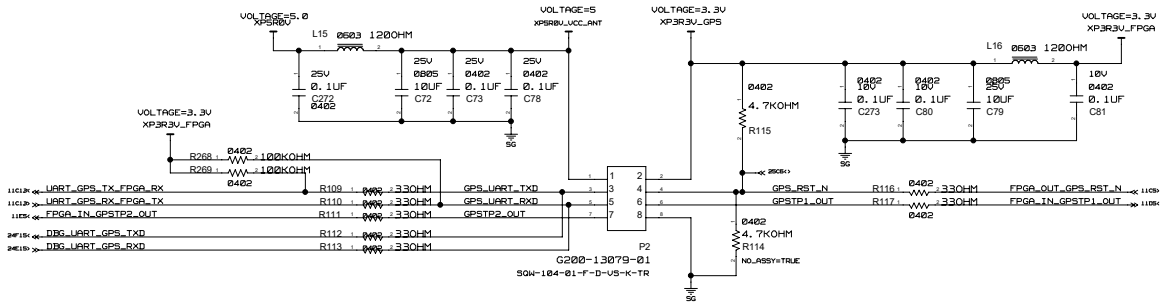
# GPS_MODULE_CONN




GPS_MODULE_CONN

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 22 of 35 | CELESTICA |

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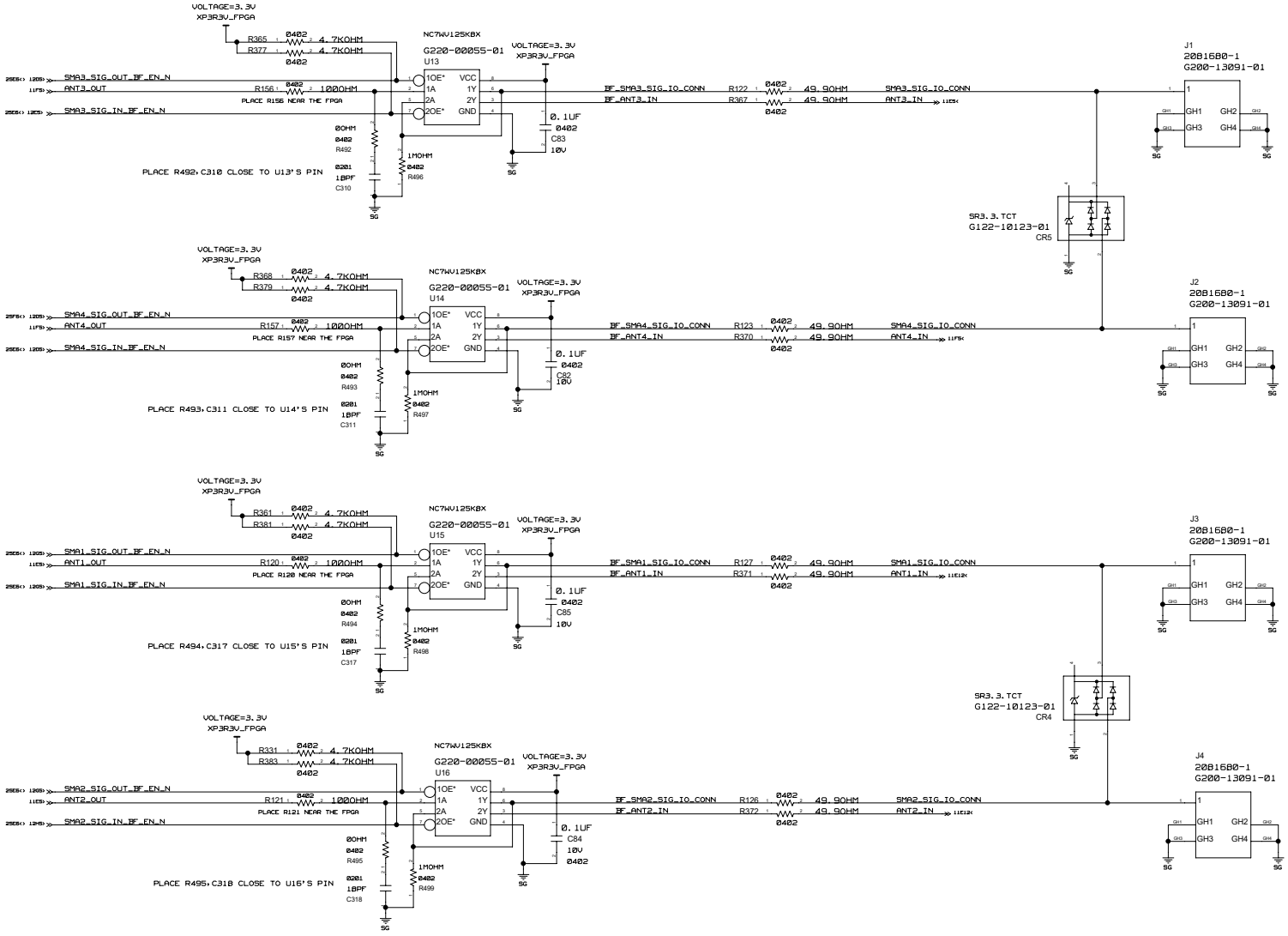
# SMA_CONN




SMA_CONN

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 23 of 35 | CELESTICA |

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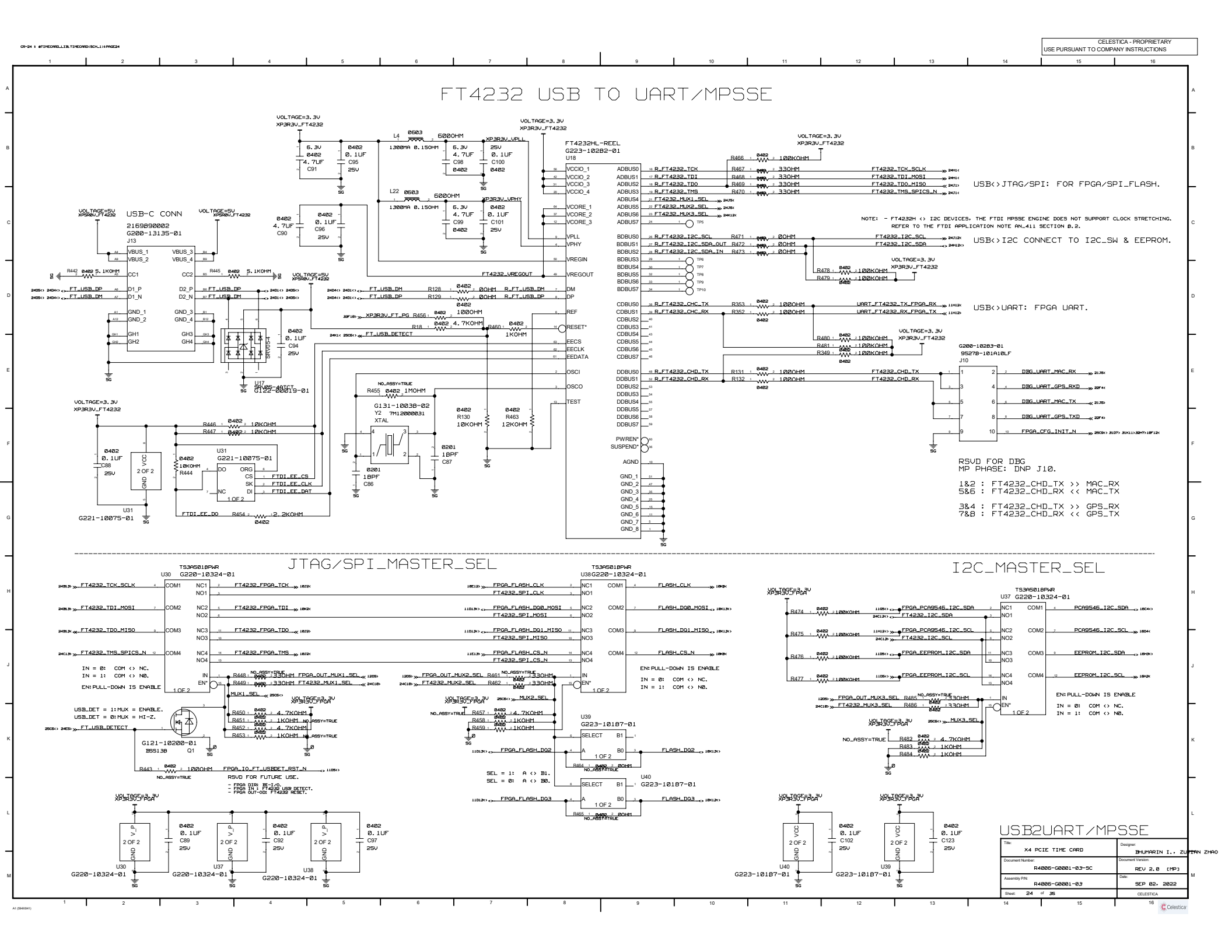
# FT4232 USB TO UART/MPSSE




## USB2UART/MPSSE

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUITIN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 24 of 35 | CELESTICA |

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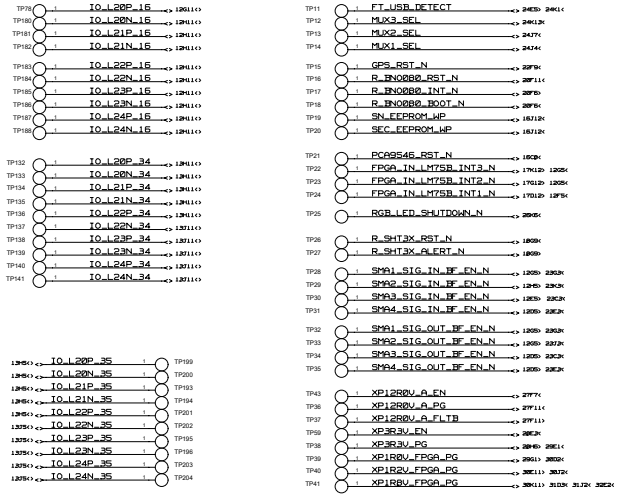
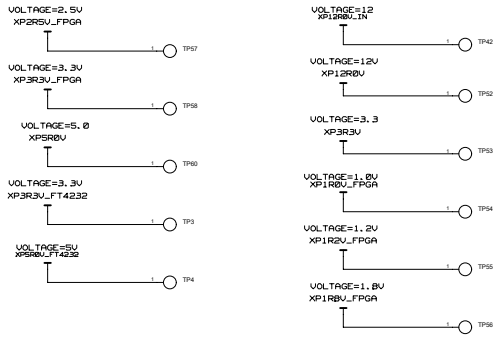
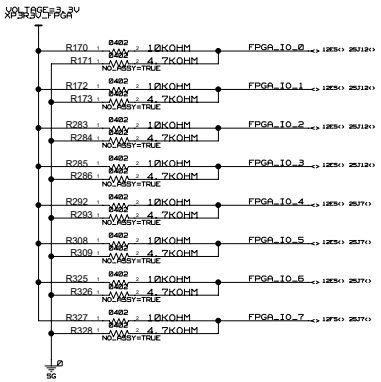
# TEST POINT



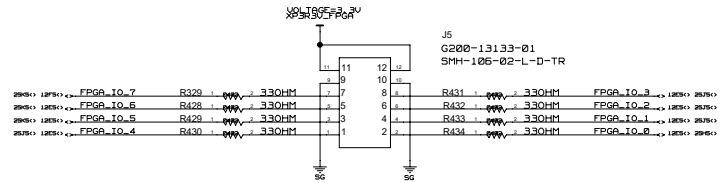




PLACE ALL TEST POINTS AT THE BOTTOM SIDE OF THE PCB

---




## PMOD CONN




## TEST_POINT&PMOD_CONN

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUITIN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 25 of 35 | CELESTICA |

A1 (5940341)

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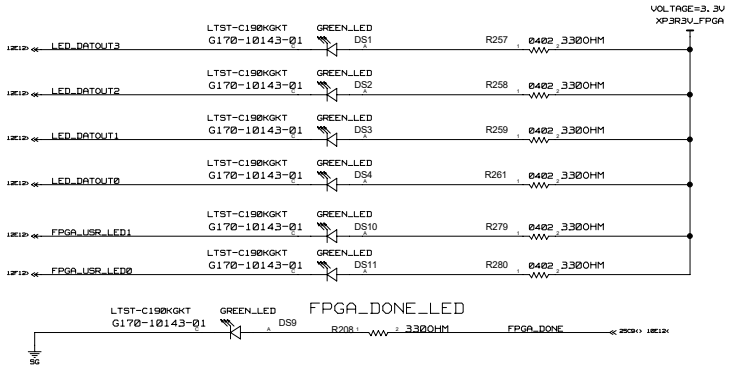
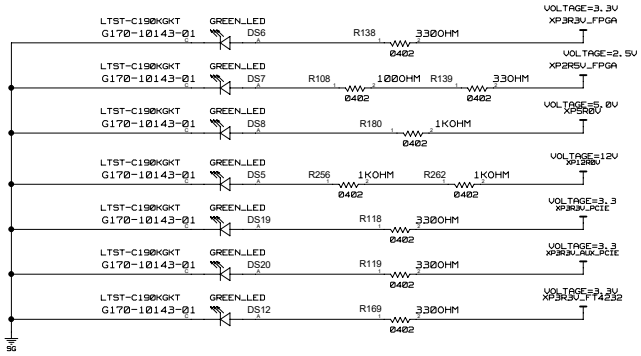
## USR_LED_STATUS



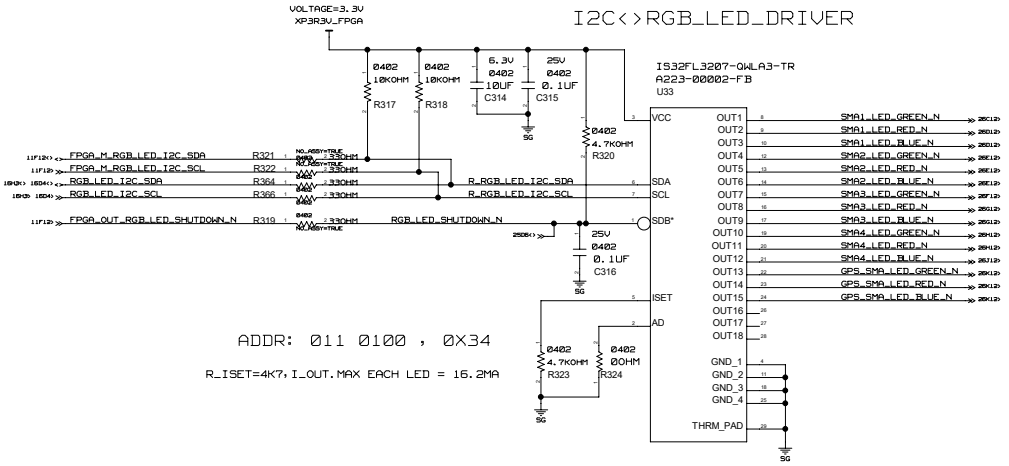

## FPGA_DONE_LED




## PWR_LED_STATUS



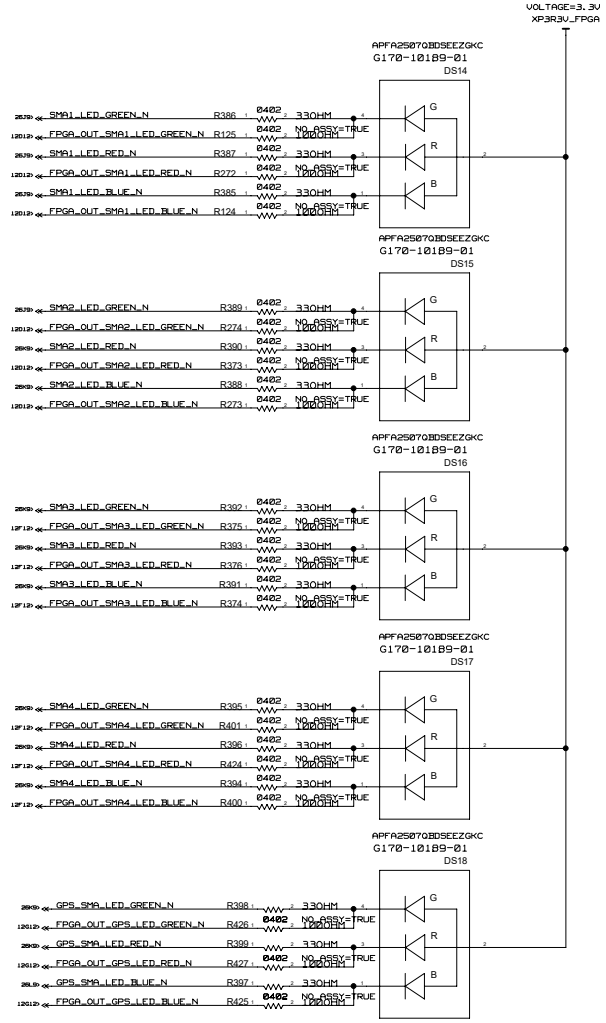

## I2C<>RGB_LED_DRIVER




ADDR: 011 0100 , 0X34

R_ISET=4K7, I_OUT.MAX EACH LED = 16.2MA

## RGB_LED_STATUS




## LED_INDICATOR

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 26 of 35 | CELESTICA |

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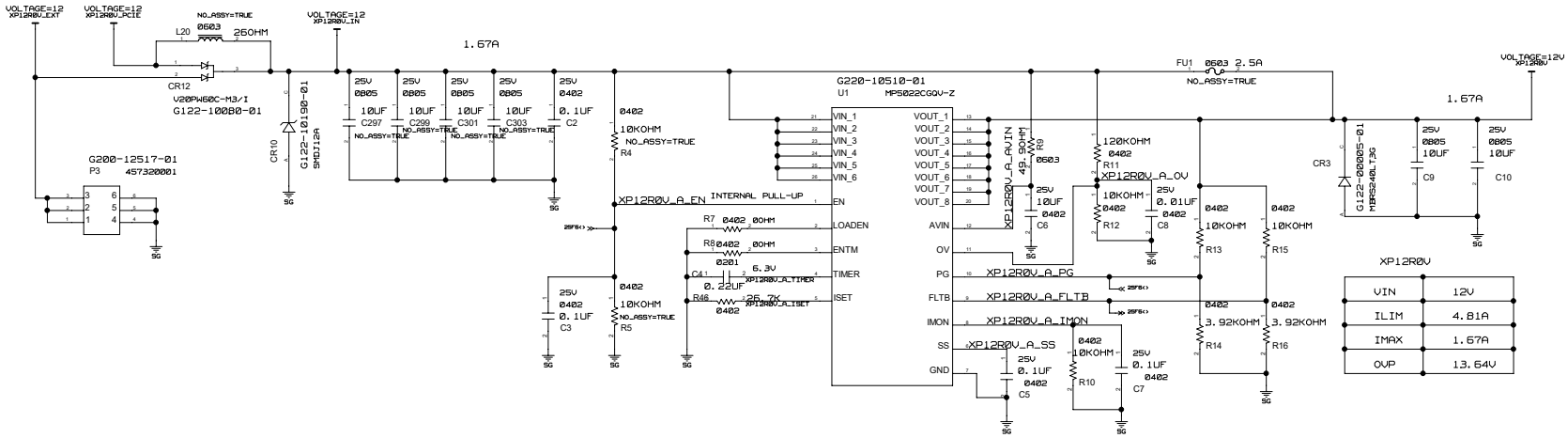
# XP12R0V INPUT




XP12R0V

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 27 of 35 | CELESTICA |

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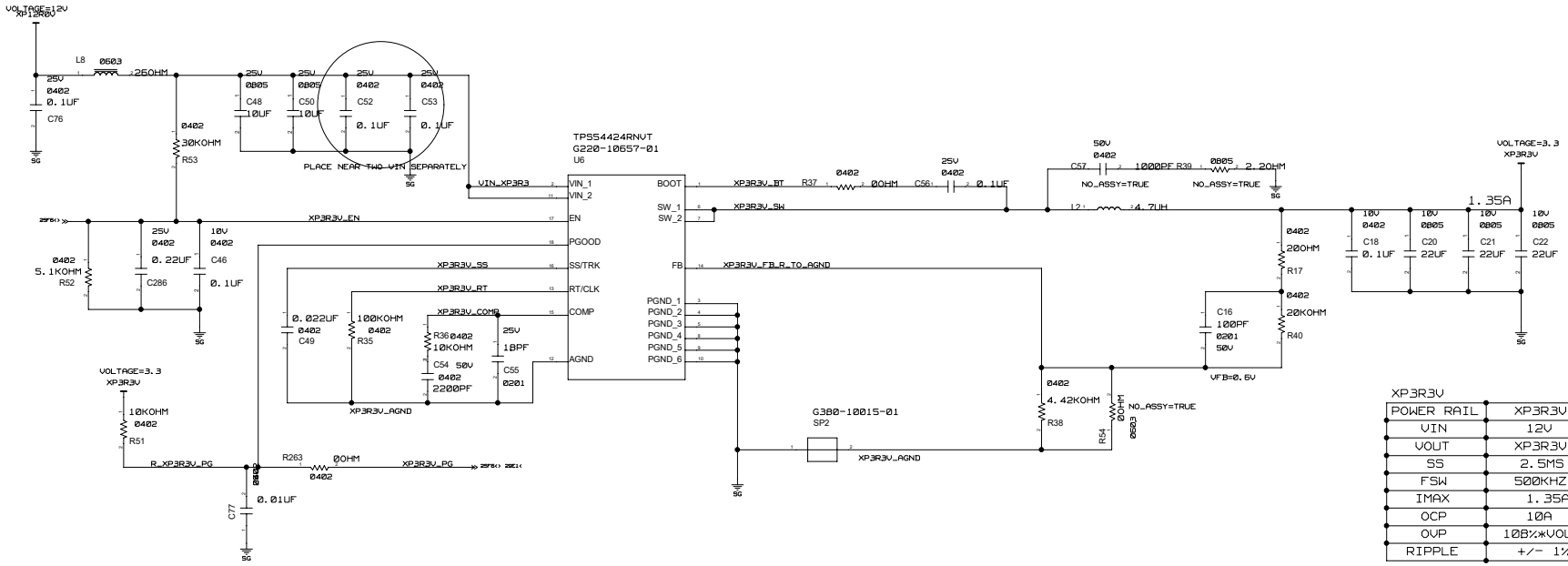
# XP3R3V



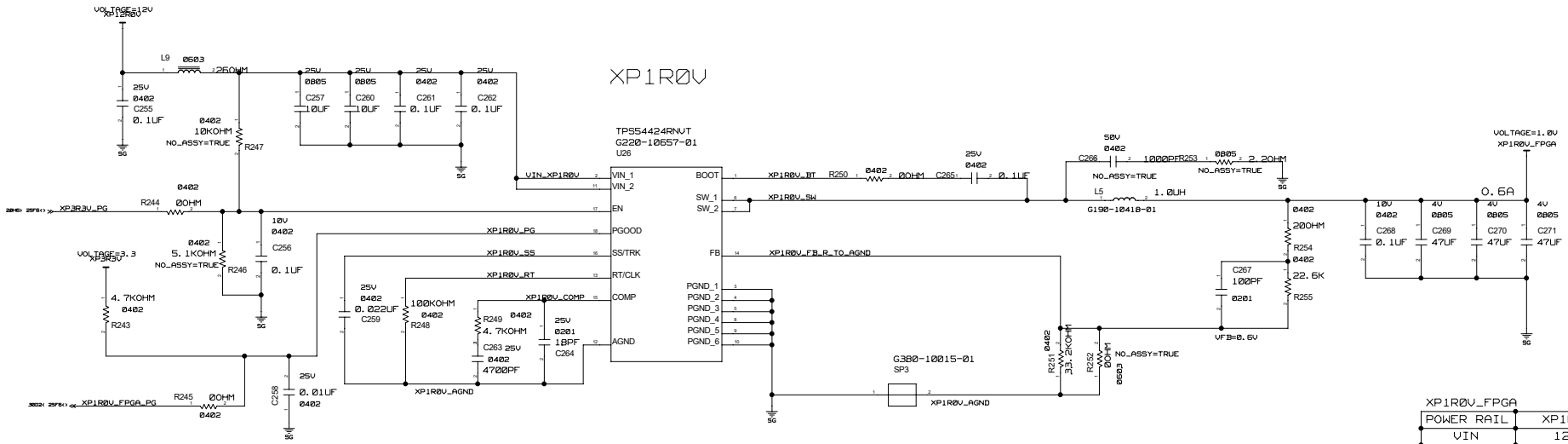

XP3R3V

| POWER RAIL | XP3R3V |
|---|---|
| VIN | 12V |
| VOUT | XP3R3V |
| SS | 2.5MS |
| FSW | 500KHZ |
| IMAX | 1.35A |
| OCP | 10A |
| OVP | 108%*VOUT |
| RIPPLE | +/- 1% |

XP3R3V

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 28 of 35 | CELESTICA |

# XP1R0V_FPGA




| XP1R0V_FPGA | |
|---|---|
| POWER RAIL | XP1R0V |
| VIN | 12V |
| VOUT | XP1R0V |
| SS | 2.5MS |
| FSW | 500KHZ |
| IMAX | 0.6A |
| OCP | 10A |
| OVP | 108%xVOUT |
| RIPPLE | +/- 1% |

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Celestica, Inc.
Enterprise Server & Storage Development
5000 Long Dong Ave.
Shanghai P.R.C. 201203
Engr BHUMARIN I., ZUJIAN ZHAO

| | | | |
|---|---|---|---|
| Title | X4 PCIE TIME CARD | Sheet | XP1R0V_FPGA |
| Size C+ | Document Number R4005-G0001-03-SC | Rev REV 2.0 (MP) | Sheet 29 OF 35 |
| Date: | SEP 02, 2022 | | |

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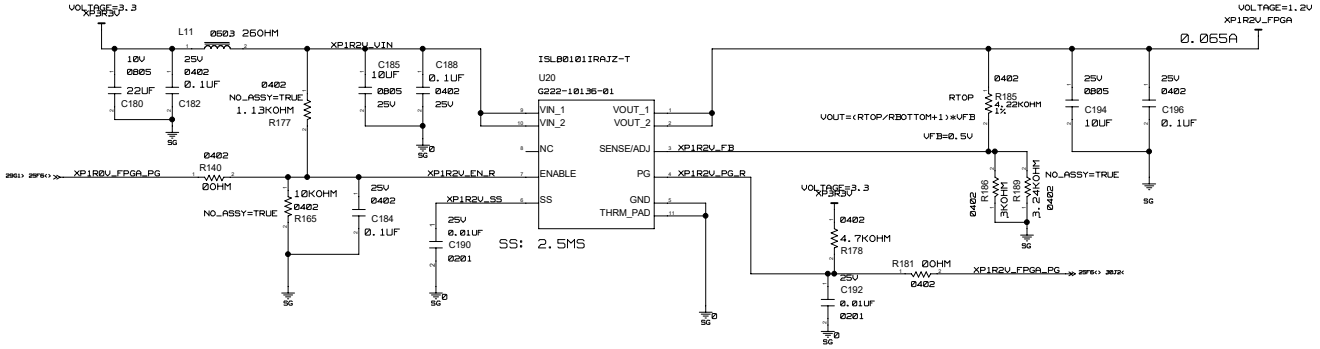
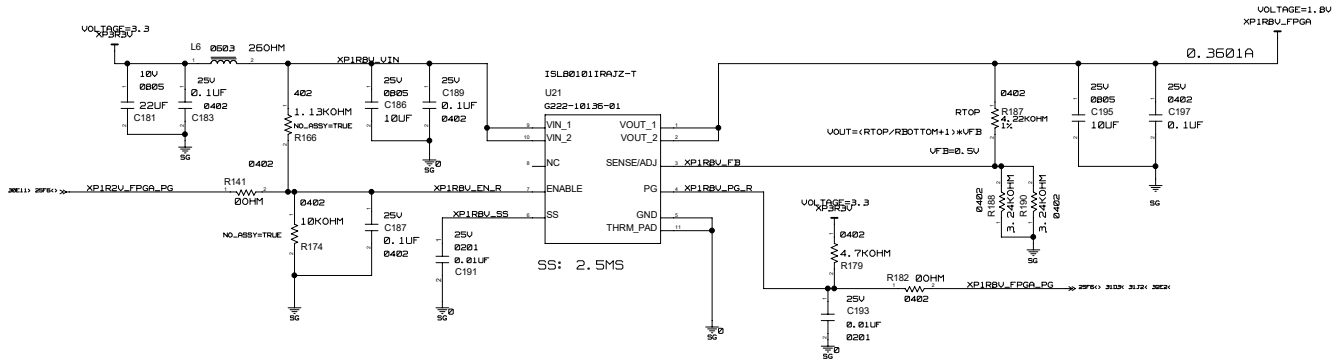
# XP1R2V_FPGA




| XP1R2V_FPGA | |
|---|---|
| PARAMETERS | VALUE(TYP) |
| VIN | 3.3V |
| VOUT | 1.2V |
| IOUT | 0.065A |
| OCP | 1.75A |

# XP1R8V_FPGA




| XP1R8V_FPGA | |
|---|---|
| PARAMETERS | VALUE(TYP) |
| VIN | 3.3V |
| VOUT | 1.8V |
| IOUT | 0.3601A |
| OCP | 1.75A |

## XP1R2V_FPGA & XP1R8V_FPGA

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 30 of 35 | CELESTICA |

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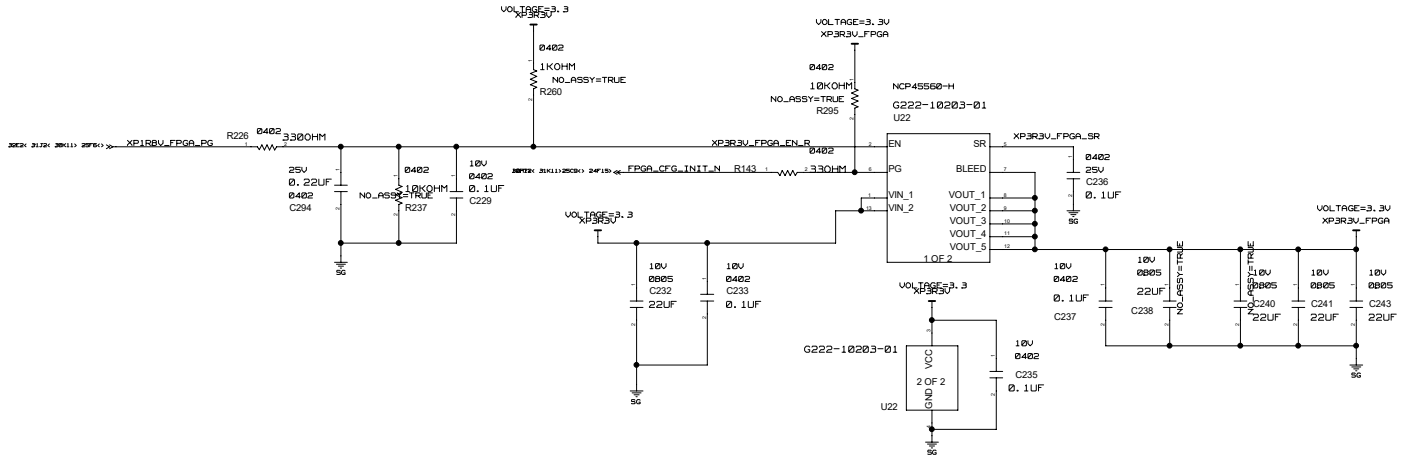
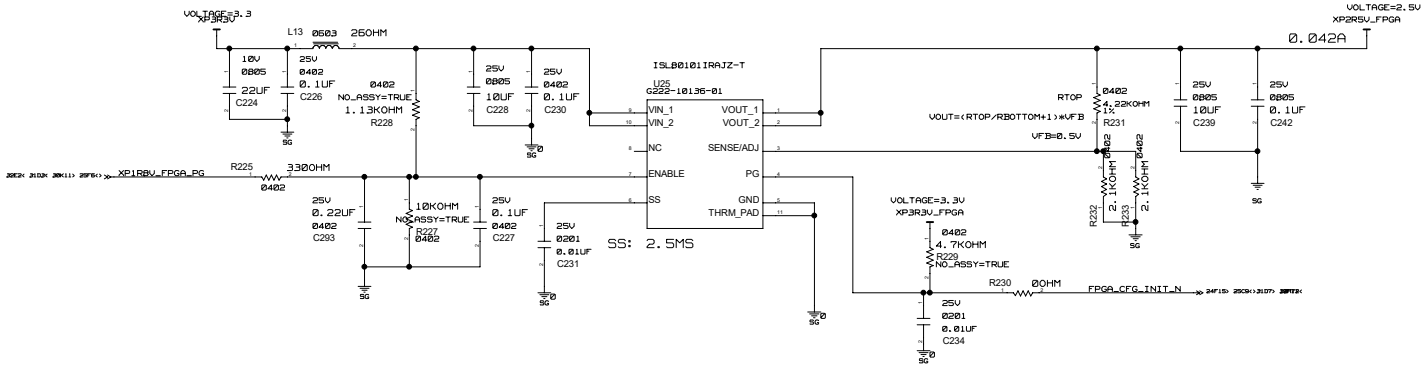
# XP3R3V_FPGA




| XP3R3V_FPGA | |
|---|---|
| VIN | 3V3 |
| RDSON | 4.3MOHM |
| IMAX | 0.1A |

# XP2R5V_FPGA




| XP2R5V_FPGA | |
|---|---|
| PARAMETERS | VALUE(TYP) |
| VIN | 3.3V |
| VOUT | 2.5V |
| IOUT | 0.042A |
| OCP | 1.75A |

## XP2R5V_FPGA&XP3R3V_FPGA

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 31 of 35 | CELESTICA |

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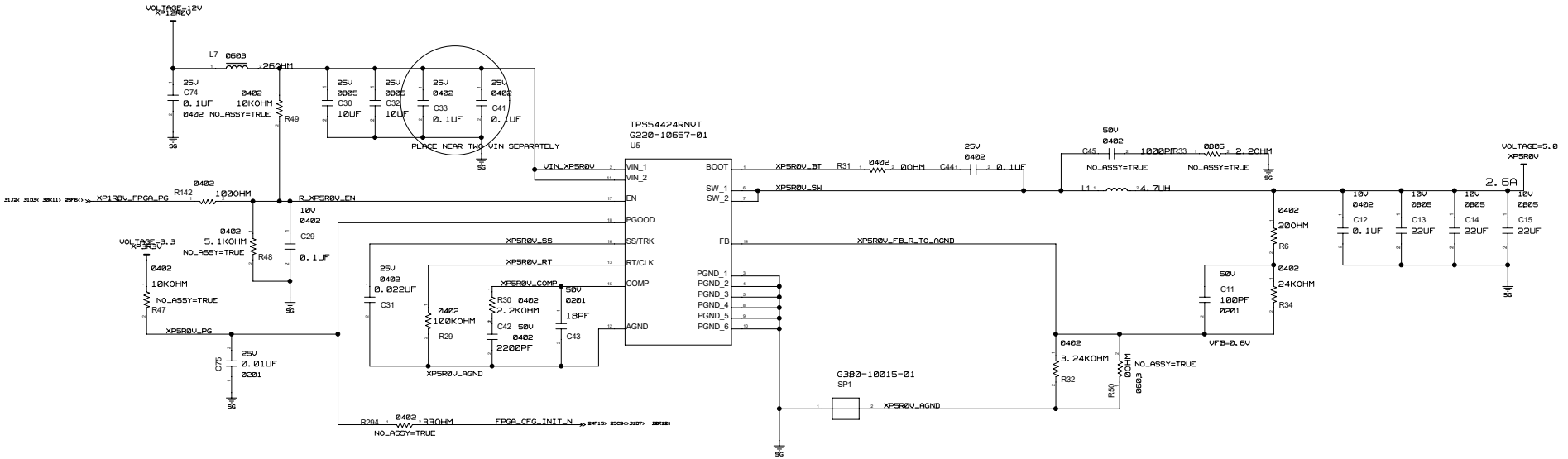
# XP5R0V




| XP5R0V | |
|---|---|
| POWER RAIL | XP5R0V |
| VIN | 12V |
| VOUT | XP5R0V |
| SS | 2.5MS |
| FSW | 500KHZ |
| IMAX | 2.6A |
| OCP | 10A |
| OVP | 108%*VOUT |
| RIPPLE | +/- 1% |

XP5R0V

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUITAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 32 of 35 | CELESTICA |

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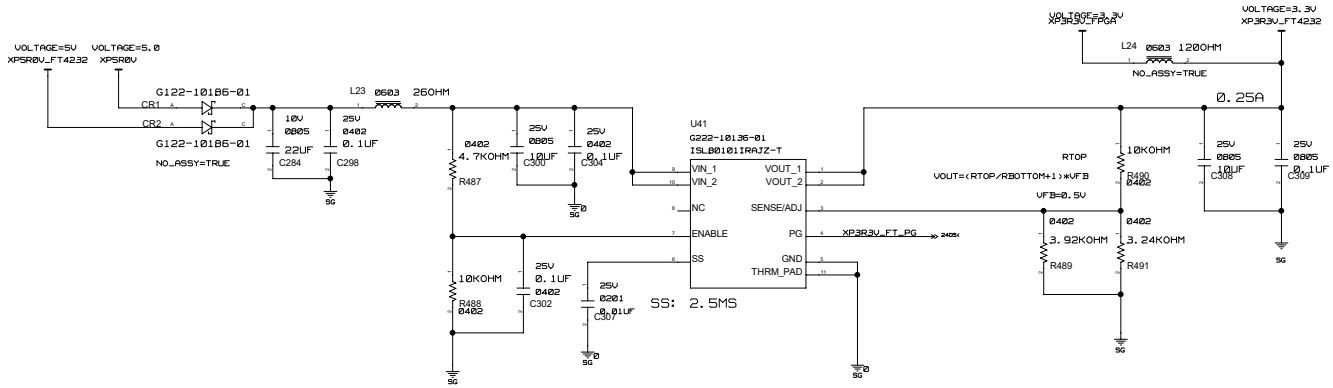
# XP3R3V_REG_FT




## XP3R3V_FT4232

| PARAMETERS | VALUE(TYP) |
|---|---|
| VIN | 5.0V |
| VOUT | 3.3V |
| IOUT | 0.25A |
| OCP | 1.75A |

## XP3R3V_FTDI

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
| Sheet: 33 of 35 | CELESTICA |

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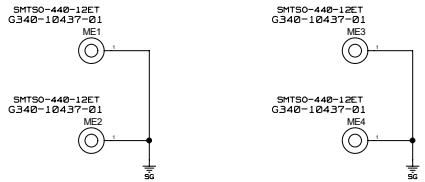
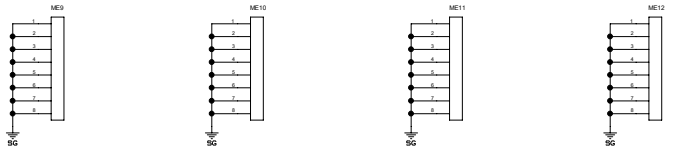
## STANDOFFS FOR GPS MODULE.




## MOUNTING HOLES FOR MAC MODULE.

## MOUNTING HOLES FOR THE PCIE CARD




## SOLDER PREFORM, ALLOY SAC305, 0603H

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| G3B0-10013-01 SP42 | G3B0-10013-01 SP43 | G3B0-10013-01 SP44 | G3B0-10013-01 SP45 | G3B0-10013-01 SP46 | G3B0-10013-01 SP47 | G3B0-10013-01 SP48 | G3B0-10013-01 SP49 | G3B0-10013-01 SP50 | G3B0-10013-01 SP51 | G3B0-10013-01 SP52 | G3B0-10013-01 SP53 |
| G3B0-10013-01 SP54 | G3B0-10013-01 SP55 | G3B0-10013-01 SP56 | G3B0-10013-01 SP57 | G3B0-10013-01 SP58 | G3B0-10013-01 SP59 | G3B0-10013-01 SP60 | G3B0-10013-01 SP61 | G3B0-10013-01 SP62 | G3B0-10013-01 SP63 | G3B0-10013-01 SP64 | G3B0-10013-01 SP65 |
| G3B0-10013-01 SP66 | G3B0-10013-01 SP67 | G3B0-10013-01 SP68 | G3B0-10013-01 SP69 | G3B0-10013-01 SP70 | G3B0-10013-01 SP71 | | | | | | |

## SOLDER PREFORM, ALLOY SAC305, 0201

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| G3B0-10015-01 SP4 | G3B0-10015-01 SP5 | G3B0-10015-01 SP6 | G3B0-10015-01 SP7 | G3B0-10015-01 SP8 | G3B0-10015-01 SP9 | G3B0-10015-01 SP10 | G3B0-10015-01 SP11 | G3B0-10015-01 SP12 | G3B0-10015-01 SP13 | G3B0-10015-01 SP14 | G3B0-10015-01 SP15 |
| G3B0-10015-01 SP16 | G3B0-10015-01 SP17 | G3B0-10015-01 SP18 | G3B0-10015-01 SP19 | G3B0-10015-01 SP20 | G3B0-10015-01 SP21 | G3B0-10015-01 SP22 | G3B0-10015-01 SP23 | G3B0-10015-01 SP24 | G3B0-10015-01 SP25 | G3B0-10015-01 SP26 | G3B0-10015-01 SP27 |
| G3B0-10015-01 SP28 | G3B0-10015-01 SP29 | G3B0-10015-01 SP30 | G3B0-10015-01 SP31 | G3B0-10015-01 SP32 | G3B0-10015-01 SP33 | G3B0-10015-01 SP34 | G3B0-10015-01 SP35 | G3B0-10015-01 SP36 | G3B0-10015-01 SP37 | G3B0-10015-01 SP38 | G3B0-10015-01 SP39 |
| G3B0-10015-01 SP40 | G3B0-10015-01 SP41 | | | | | | | | | | |

MECH_PART

| | |
|---|---|
| Title: X4 PCIE TIME CARD | Designer: IHUMARIN I., ZUTIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 (MP) |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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# CHANGE_LIST

| PAGE/REV | CONTENT | PAGE/REV | CONTENT |
|---|---|---|---|
| R4006-G0001-01-SC<br>REV 1.0 [EVT] | - SCHEMATIC RELEASE DATE: OCT 12, 2021.<br>- SCHEMATIC RELEASE FOR THE PCB CPN: R4006-B0001-01_R01.PCB RELEASE DATE: OCT 12, 2021. | | |
| | - SCHEMATIC RELEASE DATE: OCT 14, 2021.<br>- SCHEMATIC RELEASE FOR ASSY_CPN:R4006-G00001-01. | | |
| R4006-G0001-01-SC<br>REV 2.0 [EVT] | - SCHEMATIC RELEASE DATE: OCT 20, 2021.<br>- CHANGED R1B5 FROM CPN:G155-03241-01 TO CPN:G155-03001-01. R1B9 = NO_ASSY. | | |
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| R4006-G0001-02-SC<br>REV 1.0 [DVT] | - SCHEMATIC RELEASE DATE: FEB 25, 2022.<br>- SCHEMATIC RELEASE FOR THE PCB CPN: R4006-B0001-02.PCB RELEASE DATE: FEB 25,2022. | | |
| R4006-G0001-02-SC<br>REV 2.0 [DVT] | - SCHEMATIC RELEASE DATE: MAR 10, 2022. SCHEMATIC RELEASE FOR PCBA CPN:R4006-G0001-02 REV03.<br>- PART SHORTAGE, CHANGED CPN:G222-00002-01"TPS3B0BG33" TO CPN:G229-10017-01"TPS3B0BG30". | | |
| | - THE LOGICAL LIBRARY FOR CPN:G229-10017-01 HAS NOT CREATED YET FOR THE CONCEPT HDL CAD<br>- THUS, MANUALLY CHANGE U34 FROM G222-00002-01 TO G229-10017-01 FOR THE BOM FILE. | | |
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| R4006-G0001-03-SC<br>REV 1.0 [PVT] | - SCHEMATIC RELEASE DATE: JUL 05, 2022.<br>- SCHEMATIC RELEASE FOR PCBA CPN:R4006-G0001-03 REV01. | | |
| | - THE FLASHROM TOOL (FTDI<>SPI FLASH) DOES NOT SUPPORT YET FOR THE SPI FLASH CPN:G221-10224-01 MPN:MT25QL128ABA1ESE-0SIT.<br>- THUS, MANUALLY CHANGE U23 FROM G221-10224-01 TO G221-10359-01 FOR THE BOM FILE. | | |
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| R4006-G0001-03-SC<br>REV 2.0 [MP] | - SCHEMATIC RELEASE DATE: SEP 02, 2022.<br>- SCHEMATIC RELEASE FOR PCBA CPN:R4006-G0001-03 REV03. | | |
| | - R450 = ASSY. R451 = NO_ASSY. R402= 2K2.<br>- CTH-MFG REQ. CHANGE Q'TY FOR CPN G300-10015-01 FROM 63 PCS TO 41 PCS. CPN G300-10013-01 FROM 62 PCS TO 30 PCS. | | |
| | - CTH-MFG REQ. CHANGE REFDES FOR CPN:G300-10015-01= SP1-SP41. THIS CHANGE WILL NOT AFFECT THE PCB LAYOUT.<br>- CTH-MFG REQ. CHANGE REFDES FOR CPN:G300-10013-01= SP42-SP71. THIS CHANGE WILL NOT AFFECT THE PCB LAYOUT. | | |
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| Title: X4 PCIE TIME CARD | Designer: BHUMARIN I., ZUJIAN ZHAO |
| Document Number: R4006-G0001-03-SC | Document Version: REV 2.0 [MP] |
| Assembly P/N: R4006-G0001-03 | Date: SEP 02, 2022 |
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A3 (297X420)