

BOTTOM LEFT CONNECTOR BOTTOM RIGHT CONNECTOR 78 80 GND_HV 82 ESC_PHY1_LINKSTATUS|GPI068 +3V3 Connector HV 78 GND_HV ESC_TX1_DATA3|GPI072| 77 +3V3_Connector_HV GND_HV GND_HV GND_HV> ENET_MII_RX_ERR | GPI0113 79 GND_HV 79 4 EPWM1B GPI0146 +3V3_Connector_HV +3V3_Connector_HV ENET_MII_TX_Data1 | GPI0122 EPWM1A | GPI0145 ENET_MII_TX_EN GPI0118 81 6 EPWM2B GPI0148 ESC_RX0_DV GPI078 81 ENET_MII_TX_ERR | GPI0119 +3V3 Connector HV +3V3_Connector_HV EPWM2A | GPI0147 GND_HV 83 84 GND_HV 8 GND_HV 84 ESC_PHY_RESETn | GPI076 +3V3_Connector_HV +3V3_Connector_HV GND_HV ESC_LED_STATE_RUN|GPI062 ENET_MII_TX_Data2 | GPI0123 85 86 GND_HV 10 EPWM3B | GPI0150 86 ENET_MII_TX_CLK | GPI0120 +3V3_Connector_HV EPWM3A|PGI0149 +3V3_Connector_HV GND HV 88 ESC_RXO_ERR | GPIO79 88 ENET_MII_RX_Data3 | GPI0117 12 EPWM4B | GPI0152 GND HV ENET MIL RX Data1 | GPI0115 EPWM4AIGPI0151 ESC RX1 DATA0 | GPI063 90 ESC_LED_RUN|GPI061 ENET_MII_TX_Data3 | GPI0124 89 14 GND_HV 14 GND_HV 16 FreePin2 90 ENET_MII_TX_Data0|GPI0121 ESC_RX1_DATA3 | GPI066 GND_HV ENET_CLK_25MHz 91 92 ENET_MII_RX_Data2 | GPI0116, 16 EPWM5B GPI09 FreePin1 EPWM5AI GPI08 GND_HV GND_HV 93 94 ESC_RX1_DATA2 | GPI065 MCAN_RX|GPI070 17 18 MCAN_TX GPIO4 94 GND_HV 18 EPWM6B | GPI0156 EPWM6AIGPI0155 ESC_RX1_DATA1 | GPI064 FreePin3 95 96 FreePin4 20 GND_HV 96 ESC_LED_LINK1_ACTIVE | GPI05 GND_HV GND_HV GND_HV ESC_LED_ERR | GPI060 98 GND_HV 98 FreePin6 22 EPWM7B | GPI0158 12CA SCLIGPIO1 I2CA_SDA|GPI00 FreePin5 EPWM7AIGPI0157 GND_HV ESC_LED_LINKO_ACTIVE | GPI058 SCIC_RX|GPI013 00 GND_HV 24 EPWM8B GPI0160 GND_HV EPWM8A | GPI0159 ESC_RX1_DV | GPI0136 FreePin7 101 02 FreePin8 26 GND_HV 102 ESC_TX1_DATA2 | GPI0134 ESC_TX1_DATA1 | GPI0132 GND_HV GND HV GND_HV 10 04 G<u>ND_HV</u> 28 EPWM<u>9B|GPI0162</u> 04 GND_HV SPIA_MOSI | GPI016 27 28 SPIA_MISO|GPI017 EPWM9A GPI0161 27 GND_HV 10 06 ESC_I2C_SCL | GPI030 08 ESC_I2C_SDA | GPI029 GND_HV 105 06 GND_HV 30 EPWM10B|GPI0164 ESC_TX1_DATA0|GPI0131 105 SPIA_STEn | GPI019 SPIA_CLK | GPI018 EPWM10A | GPI0163 32 GND_HV ESC_LATCHO | GPI0125 10 GND HV GND_HV GND HV 10 GND_HV 112 ESC_SYNCO | GPI0127 14 ESC_TX1_ENA | GPI0129 10× 34 EPWM11B | GPI0166 GND_HV 10 SPIC_MISO | GPI0101 EPWM11A|GPI0165 SPIC_MOSI|GPI0100 12_× 36 EPWM12B|GPI0168 ESC_LATCH1 | GPI0126 11: SPIC_CLK | GPI0102 SPIC_STEn | GPI0103 EPWM12A | GPI0167 38 GND_HV 14 AGND_HV 38 GND_HV ESC_SYNC1 | GPI0128 11 AGND_HV 11 GND_HV GND_HV 16 GND_HV 18 GPI045 ADC_IN1415_N 115 16 ADC_A0A1_N 40 EPWM13B|GPI0138 GND_HV 115 SPIB_MOSI | GPI024 SPIB_MISO | GPI025 EPWM13A|GPI0137 ADC_IN1415_P 11 18 ADC_A0A1_P 42 EPWM14B|GPI0140 ESC_TX1_CLK | GPI0130 11 SPIB_CLK | GPI026 EPWM14A|GPI0139 SPIB_STEn | GPI027 20 GPI045 22 GND_HV 24 SSIA_CLK | GPI056 AGND_HV 119 20 AGND_HV 44 GND_HV GPI044 11 GND_HV GND_HV> GND_HV ADC_A2A3_N 121 .22 ADC_A4A5_N 46 EPWM15B|GPI0142 EPWM15A|GPI0141 GND_HV 12 SCIB_TX | GPI022 SCIB_RX|GPI023 GPI020_nErr1 47 ADC_A2A3_P 123 .24 ADC_A4A5_P 48 EPWM16B GPI0144 SSIA_FSS | GP | 12 GPI015_Err1 EPWM16AIGPI0143 26 SSIA_TX [GPI056] 28 GND_HV 30 GPI053 32 GPI040 34 GND_HV 36 GPI050 38 GPI050 AGND_HV 125 AGND_HV 50 GND_HV SSIA_RX | GPI055 125 GPI021_nErr2 GP<u>1095_Err2</u> GND_HV ADC_B0B1_N 12 28 ADC_B2B3_N 52 UARTA_RX | GPI043 GND_HV 12 GPI099_Err3 GPI0104_nErr3 UARTA_TX | GPI042 ADC_B0B1_P 129 30 ADC_B2B3_P 54 ESC_TXO_DATA1 | GPI088 GPI052 12 ESC_TX0_DATA2 GPI089 GND_HV GND_HV > 32 AGND_HV GPI014_nErr4 GPI096_Err4 AGND_HV GND_HV> GPI051 ADC_B4B5_N 133 34 ADC_C2C3_N 58 ESC_MDIO_CLK | GPI046 ESC_TX0_DATA3 GPI090 GP1034 GND_HV 13 GP1033 ADC_B4B5_P 135 36 ADC_C2C3_P 60 ESC_TXO_ENA|GPI084 GPI049 13 ESC_RXO_DATA2 | GPI082 GND_HV GND_HV AGND_HV 137 38 AGND_HV 38 CANB_TX | GPI038 62 GND_HV CANB_RX GPI039 13 ENET_MDIO_CLK | GPI0105 ENET_RMII_CLK | GPI073 ⟨GND_HV 40 GND_HV 42 CANA_TX|GPI037 ADC_C4C5_N 139 40 ADC_DOD1_N 64 ESC_RXO_DATA1|GPI081 ENET_PPS0|GPI047 GND_HV 1 ENET_MII_INTR | GPI0108 ESC_RX0_DATA0 | GPI080 ADC_C4C5_P 141 42 ADC_DOD1_P GND_HV > ESC_RX0_DATA3 | GPI083 CANA_RX | GPI036 GND_HV AGND_HV 143 44 CM-<u>I2CA_SCL | GPI032</u> 44 AGND_HV 68 GND_HV ENET_MDIO_DATA | GPI0106 ENET_REVMII_MDIO_RST | GPI0107 CM-I2CA_SDA|GPI031 14 ⟨GND_HV 46 GND_HV FSC PHYO_LINKSTATUS | GPIO86 ENET_MII_COL|GPI0110 69 ADC_D2D3_N 145 46 ADC_D4D5_N 70 ESC_MDIO_DATA|GPI0153 GND_HV 145 ENET_MII_RX_DV|GPI0112 48 P0_CLK_25MHz ADC_D2D3_P 147 148 ADC_D4D5_P 72 ESC_RXO_CLK | GPI077 P1_CLK_25MHz 14 GND_HV GND HV ESC_TX0_DATA0 | GPI087 50 GND_HV AGND_HV 149 74 GND_HV 50 AGND_HV GND_HV 14 ENET_MII_CRS | GPI0109 ENET_PPS1 | GPI048 GND_HV 76 ESC_RX1_CLK | GPI069 [NET_MII_RX_CLK | GPI0111 ENET_MII_RX_Data0 | GPI0114 ESC_RX1_ERR | GPI071 ERM5-075-05.0-L-DV-K-TR ERM5-075-05.0-L-DV-K-TR ERM5-075-05.0-L-DV-K-TR ERM5-075-05.0-L-DV-K-TR Sheet: /Connector Bottom/ File: Connector Bottom.kicad sch Title:

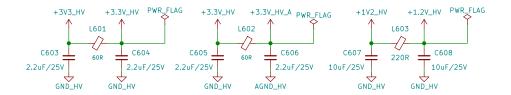
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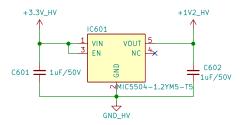
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Ferrit Beads





LDO 1.2V for MCU Core

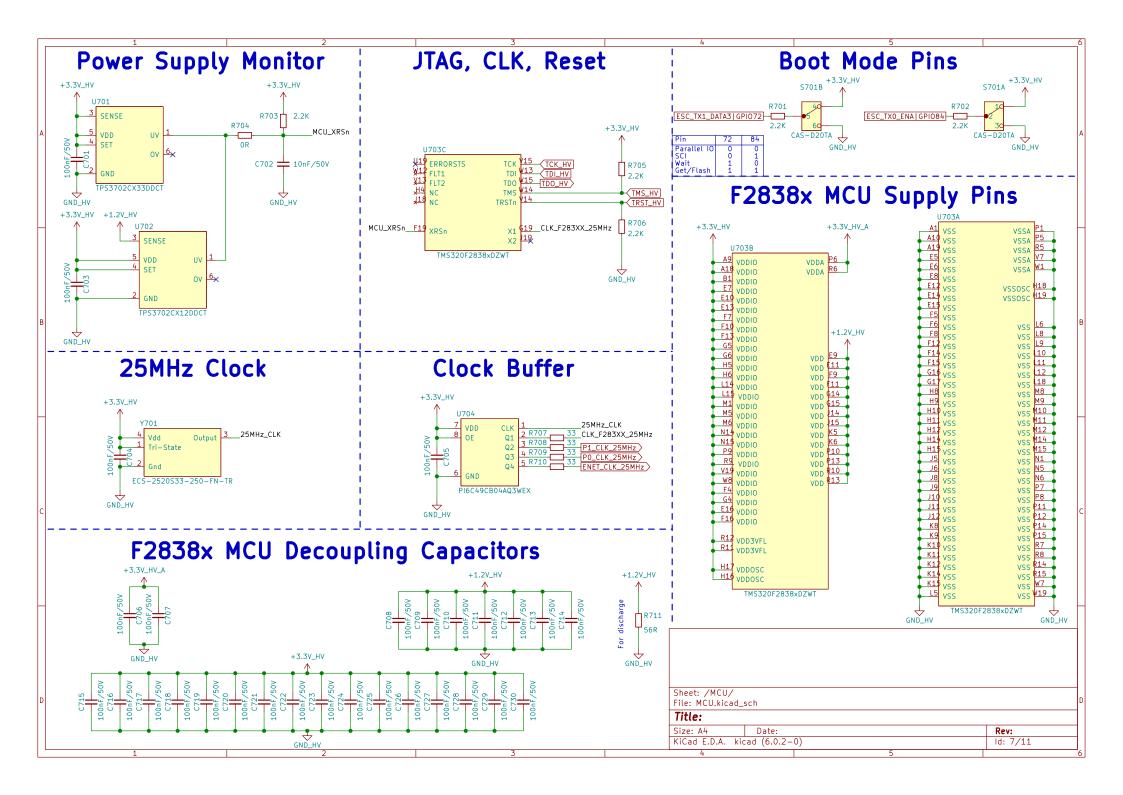


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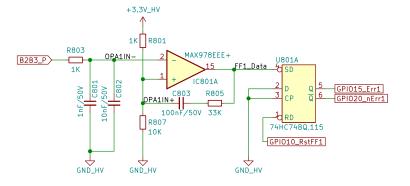
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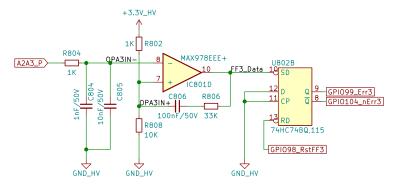
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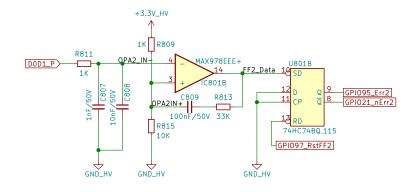
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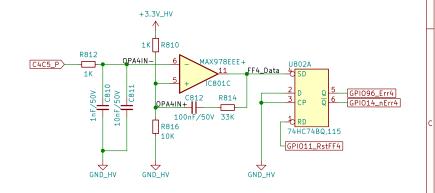
Error3 - A2A3



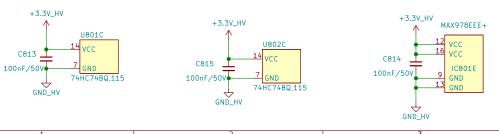
Error2 - D0D1



Error4 - C4C5



Power Supply

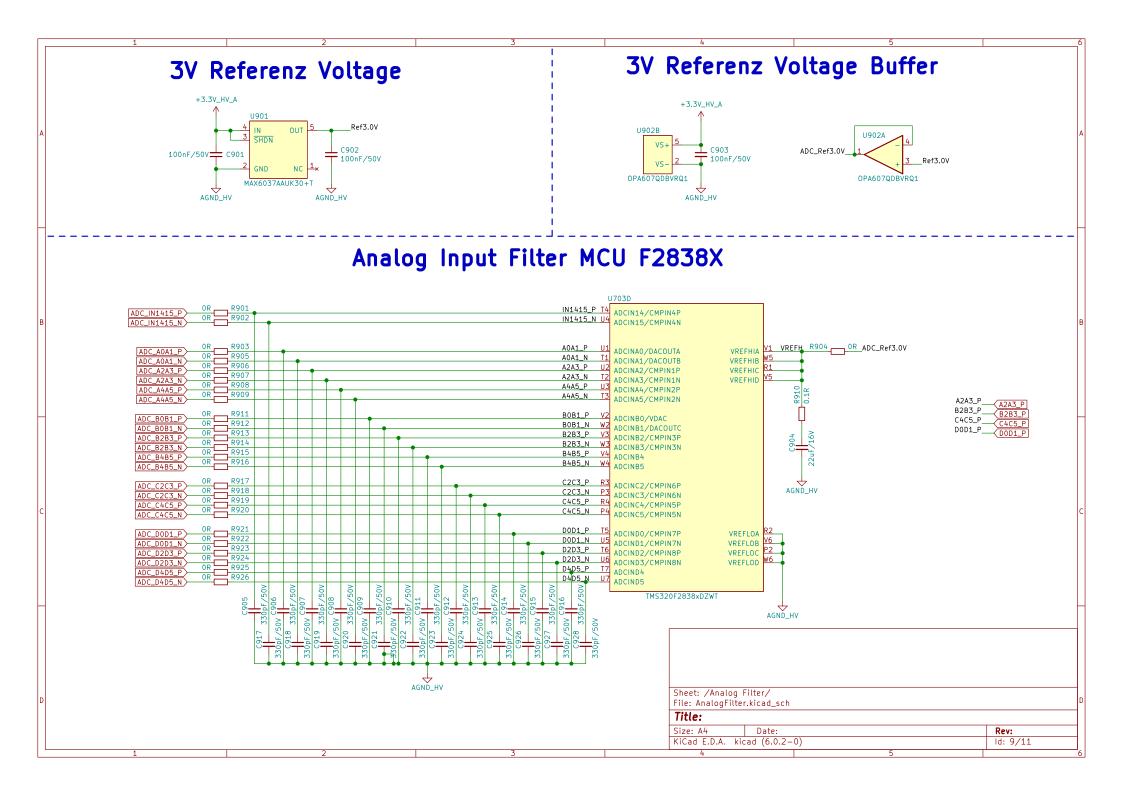


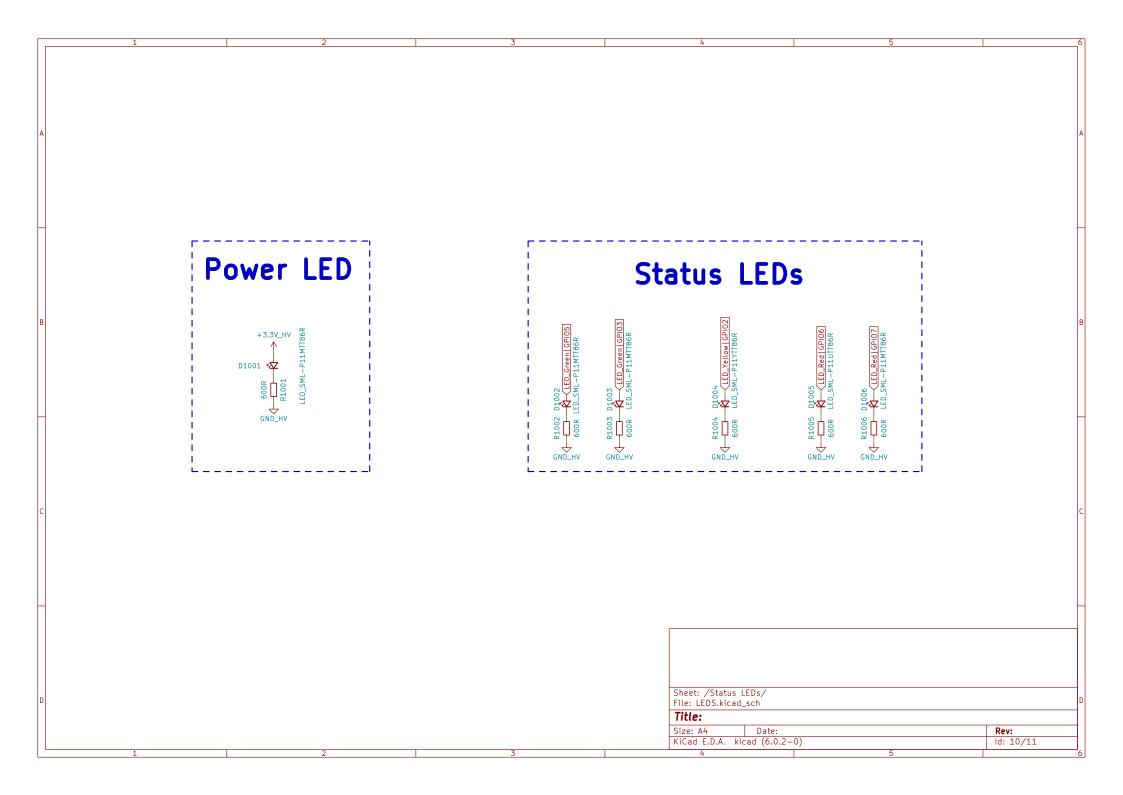
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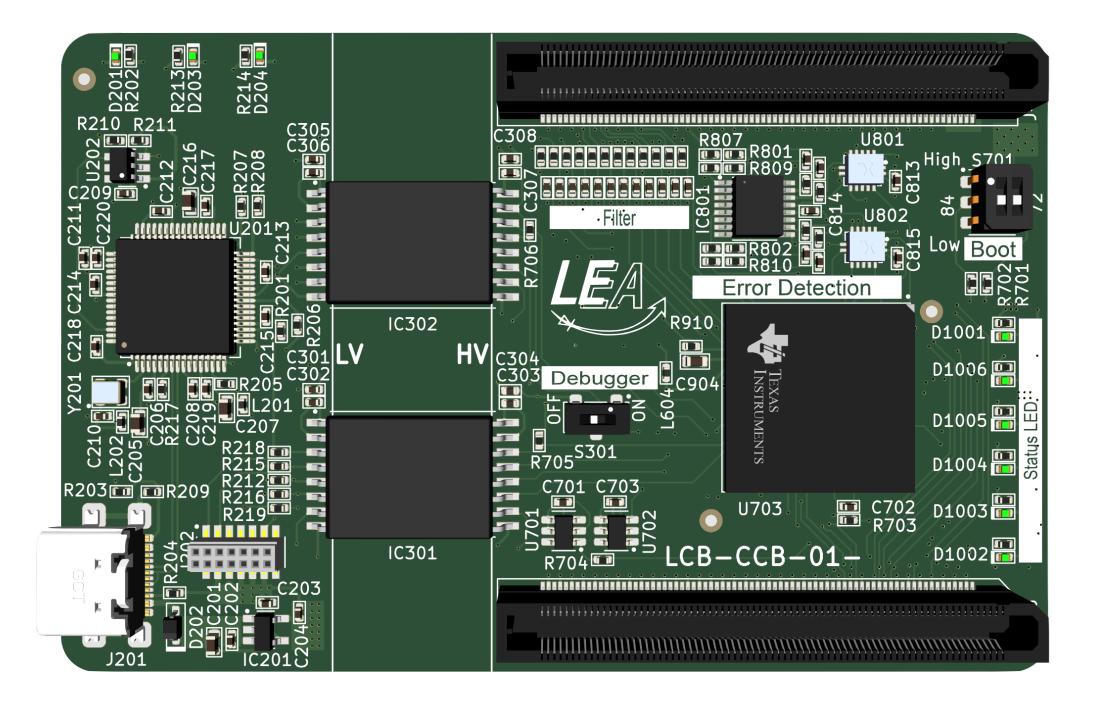


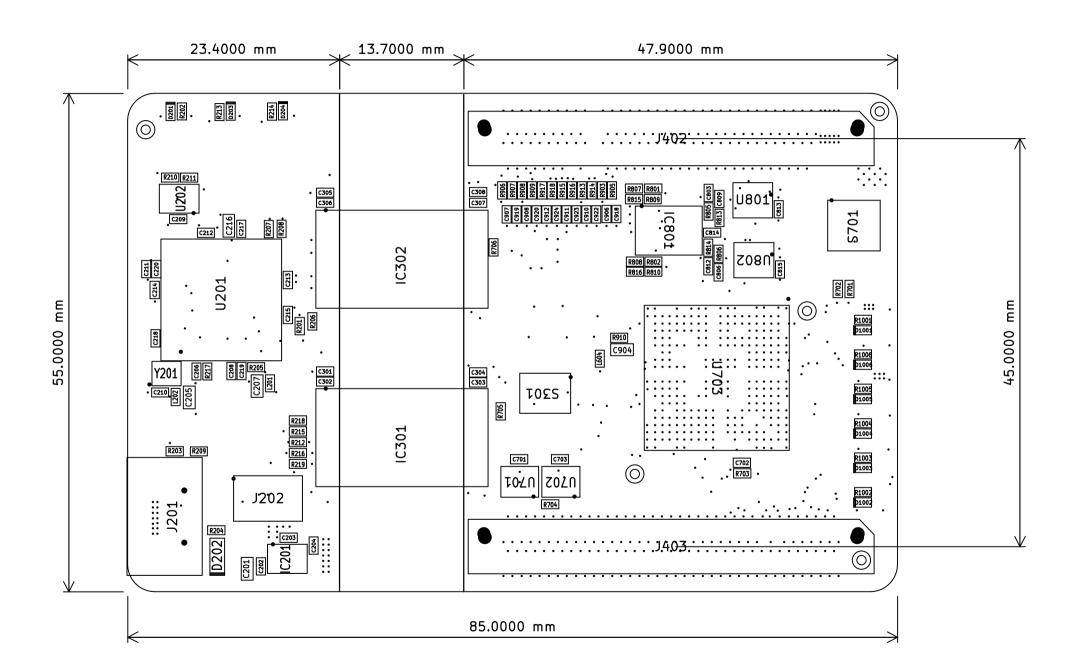
F2838x MCU GPIO configuration

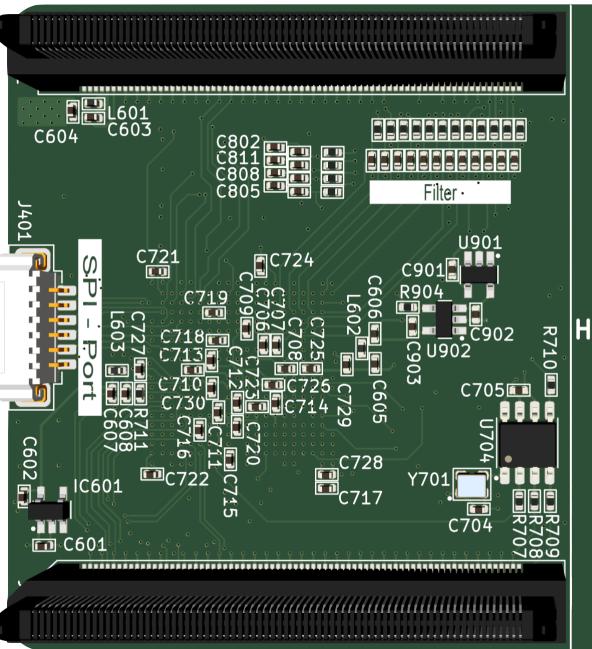
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ESC_LED_RUN|GPI061
                                                          GPIO_0
                      I2CA_SDA | GPI00
                                                          GPIO_1
                                                                                                                  ESC_LED_STATE_RUN | GPI062
                       I2CA_SCL | GPI01
                                                                                          GPIO_63 116
                                                          GPIO_2
                  LED Yellow | GPI02
                    LED_Green | GPI03 >
                                                          GPI0_3
                                                          GPIO 4
                      MCAN_TX | GPIO4
                   LED Green | GPI05
                                                                                           GPIO_67 819 X
                      LED_Red | GPI06
                                                          GPI0_6
                                                                                           LED_Red | GPI07
                                                          GPIO_7
                                                          GPIO_8
                                                                                          GPI0_9
                        EPWM5B | GPI09
                         GPI010 RstFF1
                                                          GPI0_10
                         GPI011_RstFF4
                                                          GPI0_11
                                                                                           GPIO_73 16 ENET_RMII_CLK | GPIO73
                                                          GPIO 12
                      SCIC_TX|GPI012
                                                                                            GPIO_74 C17 X
                       SCIC_RX|GPI013
                                                          GPI0_13
                                                                                           GPI0_75 016 ×
                            GPI014_nErr4
GPI015_Err1
                                                          GPI0_14
                                                                                          GPIO_75 116 | SC_PHY_RESETn | GPIO76 |
GPIO_77 115 | SSC_RXO_CLK | GPIO77 |
GPIO_78 115 | SSC_RXO_DV | GPIO78 |
GPIO_80 115 | SSC_RXO_DV | GPIO79 |
GPIO_80 115 | SSC_RXO_DATA0 | GPIO80 |
GPIO_80 114 | SSC_RXO_DATA1 | GPIO81 |
GPIO_82 114 | SSC_RXO_DATA2 | GPIO82 |
GPIO_83 114 | SSC_RXO_DATA2 | GPIO82 |
GPIO_84 114 | SSC_RXO_DATA2 | GPIO82 |
GPIO_85 114 | SSC_RXO_DAT
                                                          GPI0_15
                    SPIA_MOSIIGPI016
                                                          GPI0_16
                                                          GPI0_17
                    SPIA_MISO | GPI017
                     SPIA_CLK | GPI018
                                                          GPI0_18
                                                          GPI0_19
                           GPI020_nErr1
                                                          GPI0_20
                           GPI021_nErr2
                                                          GPI0_21
                                                                                          SCIB_TX | GPI022
                                                          GPI0_22
                                                          GPI0_23
                       SCIB_RX | GPI023
                                                          GPI0_24
                   SPIB_MOSI | GPI024
                                                          GPI0_25
                   SPIB_MISO | GPI025
                    SPIB_CLK | GPI026
                                                          GPI0_26
                                                                                          SPIB_STEn | GPI027
                                                          GPI0_27
                                                          GPI0_28
                            SCIA_RX_HV>
                                                          GPI0_29
               ESC_I2C_SDA|GPI029
                                                                                          GPI0_91 B5
                                                                                          GPI0_30
               ESC_I2C_SCL | GPI030
              CM-I2CA_SDA|GPI031
                                                          GPIO 31
             CM-I2CA_SCL | GPI032
| GPI033
                                                 T13 GPI0_33
                                                  U14 GPIO_34
                                                   T14 GPI0_35
                     CANA_RX | GPI036 V16 GPI0_36
                                                  U16 GPIO_37
                                                                                           GPIO_98 F1 GPIO98_RstFF3
                      CANA_TX | GPI037
                                                  T16 GPIO_38
                                                                                        GPI0_99 G1
                      CANB_TX | GPI038
                                                          GPIO 39
                     CANB_RX | GPI039
                                                          GPI0_40
                                     GPI041
                                                          GPI0_41
                    UARTA_TX | GPI042
                   UARTA RXIGPI043
                                                                                         GPI0_105 J3
                                                                                                                  ENET_MDIO_CLK | GPI0105
                                                                                                                  ENET_MDIO_DATA|GPI0106
                                     GPI045
                                                                                          GPI0_106
                                                                                                                  ENET_REVMII_MDIO_RST|GPI0107
                                                          GPI0_46
           ESC_MDIO_CLK | GPIO46
                                                                                         GPI0_107
                  ENET_PPS0 | GPI047
                                                          GPIO 47
                                                                                         GPI0_108
                                                                                                                 ENET_MII_INTR|GPI0108
                                                                                         GPI0_109 N2
                 ENET_PPS1 | GPI048
                                                                                                                 ENET_MII_CRS | GPI0109
                                                                                         GPI0_110 M2
                                                          GPI0_49
                                     GPI049
                                                                                                                 ENET_MII_COL|GPI0110
                                                                                         GPI0_111 M4
                                                                                                                  ENET_MII_RX_CLK | GPI0111
                                                          GPI0_50
                                                                                        GPI0_112 M3
                                                  R19 GPI0_51
                                                                                                                  ENET_MII_RX_DV|GPI0112
                                                 P16 GPI0_52
                                                                                         GPI0_113 N4
                                                                                         GPI0_113 N4 ENET_MII_RX_ERR | GPI0113 | N3 ENET_MII_RX_Data0 | GPI0114
                                                  P17 GPI0_53
                                                  P18 GPI0_54
                                                                                         GPIO_115 V12 ENET_MII_RX_Data1 | GPIO115
                       SSIA_TX | GPI054
                                                 P19 GPI0_55
                                                                                        SIA_CLK | GPIO56 N16 GPIO_56
                     SSIA_FSS | GPI057 N18 GPI0_57
                                                                                        ESC_LED_LINKO_ACTIVE | GPIO_58
ESC_LED_LINK1_ACTIVE | GPIO_59 M1 GPIO_59
                                                                                         GPIO_121 V16 ENET_MII_TX_Data0 | GPIO121
              ESC_LED_ERR | GPI060
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TMS320F2838xDZWT

D18 EPWM1B|GPI0146 ENET_MII_TX_Data1 | GPI0122 ENET_MII_TX_Data2 | GPI0123 GPI0_147 GPI0_123 EPWM2A | GPI0147 P14 EPWM2B | GPI0148 ENET_MII_TX_Data3 | GPI0124 GPI0_124 GPI0_148 GPIO_149 13 EPWM3AI PGIO149 ESC_LATCHO | GPI0125 GPI0_125 GPIO_150 B13 GPI0_126 ESC_LATCH1 | GPI0126 EPWM3B|GPI0150 GPIO_151 C13 ESC_SYNC0|GPI0127 GPI0_127 EPWM4A|GPI0151 ESC_SYNC1 | GPI0128 GPI0_128 GPI0_152 EPWM4B | GPI0152 GPIO_153 A12 ESC_TX1_ENA|GPI0129 GPI0_129 ESC_MDIO_DATA | GPI0153 GPIO_154 B12 ESC_PHY_CLK | GPIO154 ESC_TX1_CLK | GPI0130 GPI0_155 (12 EPWM6A | GPI0155 V10 GPI0_131 ESC_TX1_DATA0 | GPI0131 W18 GPI0_132 GPIO_156 012 ESC_TX1_DATA1 | GPI0132 EPWM6B | GPI0156 GPIO_157 B10 GPI0_133 EPWM7A GPI0157 ESC_TX1_DATA2|GPI0134 V18 GPIO_158 C10 EPWM7B | GPIO158 GPI0_134 SCIA_TX_HV U18 GPIO_159 010 EPWM8A|GPIO159 GPI0_160 B9 ESC_RX1_DV|GPI0136 T17 GPI0_136 EPWM8B|GPI0160 GPI0_161 C9 EPWM13A | GPI0137 GPI0_137 EPWM9A|GPI0161 GPI0_138 EPWM13B|GPI0138 GPI0_162 EPWM9B|GPI0162 GPI0_163 A8 GPI0_139 EPWM14A | GPI0139 EPWM10A|GPI0163 GPIO_164 B8 EPWM10B GPIO164 M19 EPWM14B|GPI0140 GPIO 140 EPWM15A | GPI0141 M1 GPI0_141 GPIO_165 C5 EPWM11A|GPIO165 L19 GPIO_142 GPIO_166 D5 EPWM11B | GPIO166 EPWM15B|GPI0142 GPI0_167 C4 EPWM16A GPI0143 GPI0_143 EPWM12A GPI0167 F17 GPI0_168 D4 EPWM16B|GPI0144 GPI0_144 EPWM12B|GPI0168 EPWM1A GPI0145 E1 GPI0_145 TMS320F2838xDZWT







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UPB

V LV



Designed by LEA in Paderborn

