DCDC_3V3
GND
B2
Header 9X2 female
I2C2_SCL
CSI_VSYNC
CSI_PIXCLK
CSI_DATA7
CSI_DATA5
CSI_DATA3
CSI_DATA1
CAM_RESET
I2C2_SDA
CSI_HSYNC
CSI_MCLK
CSI_DATA6
CSI_DATA4
CSI_DATA2
CSI_DATA0
CAM_PWDN
CSI_D7
CSI_D5
CSI_D3
CSI_D1
CSI_D6
CSI_D4
CSI_D2
CSI_D0
R18
120
P2
JTAG_nTRST/SAI_TXD
JTAG_TDI/SAI_BCLK
JTAG_TMS/SAI_MCLK
JTAG_TCK/SAI_RXD
JTAG_TDO/SAI_SYNC
POR_B
JTAG_DACK
R19
10k
VSYS
C1
0.22uF
C2
22uF
U3
XL1050
TXD
VSS
VDD
RXD
Rs
CANH
CANL
VREF
CAN1_TX
CAN1_RX
R27
10k
R7
120
CAN1_H
CAN1_L
P4
WJ124-3.81-2P
MCP2551-I/SN
C27
0.22uF
C28
22uF
U4
XL1050
CAN2_TX
CAN2_RX
R28
10k
R8
120
CAN2_H
CAN2_L
P5
WJ124-3.81-2P
MCP2551-I/SN
P6
Header 15
B1A
imx6ull_som_W_2E Rev4.4
GND
5V
JTAG_TMS
JTAG_TRST
JTAG_TCK
JTAG_TDO
JTAG_MOD
JTAG_TDI
GPIO_9
GPIO_4
GPIO_1
GPIO_0
CLK1_P
CLK1_N
GPIO_8
GPIO_5
UART1_TXD
UART1_RXD
UART3_RTS
UART3_CTS
JTAG_TMS/SAI_MCLK
JTAG_nTRST/SAI_TXD
JTAG_TCK/SAI_RXD
JTAG_TDO/SAI_SYNC
JTAG_TDI/SAI_BCLK
USB_OTG1_ID
DEBUG_TX
DEBUG_RX
CAN1_RX
CAN1_TX
SAI2.MCLK
SAI2.TX_DATA
SAI2.RX_DATA
SAI2.TX_SYNC
SAI2.TX_BCK
PWM2.OUT
PWM3.OUT
I2C2.SDA
I2C2.SCL
PWM1.OUT
PWM4.OUT
I2C3.SCL
I2C3.SDA
CAN1.RTS
CAN1.TX
GPIO1.IO[11]
GPIO1.IO[15]
GPIO1.IO[14]
GPIO1.IO[12]
GPIO1.IO[10]
GPIO1.IO[13]
GPIO1.IO[9]
GPIO1.IO[4]
GPIO1.IO[1]
GPIO1.IO[0]
GPIO1.IO[8]
GPIO1.IO[5]
GPIO1.IO[16]
GPIO1.IO[17]
GPIO1.IO[27]
GPIO1.IO[26]
PWM8.OUT
PWM7.OUT
PWM6.OUT
CSI.HSYNC
USB.OTG1_PWR
USB.OTG1_OC
SD2.RESET_B
SD1.RESET_B
UART5.CTS_B
UART5.TX
CSI.VSYNC
CSI.FIELD
UART1.TX
UART1.RX
UART3.RTS_B
UART3.CTS_B
SD2.VSELECT
SD1.VSELECT
ENET1.RDATA2
ENET1.RDATA3
ENET2.TX_ER
ENET2.RX_CLK
UART5.RTS_B
UART5.RX
CSI.DATA[2]
CSI.DATA[3]
CSI_DATA[11]
CSI_DATA[10]
J3
Vbus
D-
D+
ID
GND
C46391
C3
47uF
U1
CH340C
VCC
R232
RTS
DTR
DCD
RI
DSR
CTS
TXD
RXD
V3
UD+
UD-
NC
DEBUG_RX
DEBUG_TX
C4
22nF
CN1
Header 2X2
VSYS
(5V)
CN2
Header 4X2
ECSPI4_MOSI
ECSPI4_MISO
ECSPI4_CLK
LORA_RESET
ECSPI4_SS0
LORA_PPS
P3
Header 10 female
JTAG_TDI/SAI_BCLK
JTAG_TDO/SAI_SYNC
JTAG_nTRST/SAI_TXD
JTAG_TCK/SAI_RXD
JTAG_TMS/SAI_MCLK
I2C1_SCL
I2C1_SDA
USB2_HOST_VBUS
FB1
120 Ohms
C33
22uF
C31
0.22uF
CN3
VBUS
USB_HOST_D_N
USB_HOST_D_P
C42675
GND_CHASSIS
FB2
90 Ohms
USB_OTG2_D_N
USB_OTG2_D_P
D14
D141
ESD05V32D-A
USB1_HOST_VBUS
USB2_HOST_VBUS
R1
R2
0.0
USB1_HOST_VBUS
FB3
120 Ohms
C36
22uF
C35
0.22uF
J2
USB_OTG_D_N
USB_OTG_D_P
GND_CHASSIS_2
FB4
90 Ohms
USB_OTG1_D_N
USB_OTG1_D_P
D15
D151
ESD05V32D-A
J701
C799
47uF
C46391
P7
Header 15
B1B
imx6ull_som_W_2E Rev4.4
I2C2_SDA
I2C2_SCL
RXI1_N
RXI1_P
TXO1_N
TXO1_P
I2C1_SCL
I2C1_SDA
SD1_CD
SD1_DATA0
SD1_DATA3
SD1_DATA1
SD1_CMD
SD1_DATA2
SD1_CLK
ECSPI4_SS0
ECSPI4_MISO
ECSPI4_MOSI
ECSPI4_CLK
UART5_RX
UART5_TX
UART4_TX
UART4_RX
NAND_DQS
NAND_WP
NAND_CE1
NAND_CE0
NAND_CLE
NAND_READY
UART1_RTS
SD1_DATA0
SD1_DATA3
SD1_DATA1
SD1_CMD
SD1_DATA2
SD1_CLK
NAND_DATA7
NAND_DATA6
NAND_DATA5
NAND_DATA4
NAND_DATA3
NAND_ALE
GPIO1.IO[31]
GPIO1.IO[30]
ENET2.COL
ENET2.CRS
I2C2.SDA
I2C2.SCL
CSI.DATA[15]
CSI.DATA[14]
ESPI2_MISO
ECSPI2_MOSI
GPIO1.IO[18]
GPIO1.IO[29]
GPIO4.IO[16]
GPIO4.IO[14]
GPIO4.IO[13]
GPIO4.IO[15]
GPIO4.IO[12]
GPIO1.IO[19]
GPIO2.IO[18]
GPIO2.IO[21]
GPIO2.IO[19]
GPIO2.IO[16]
GPIO2.IO[20]
GPIO2.IO[17]
GPIO4.IO[9]
GPIO4.IO[8]
GPIO4.IO[7]
GPIO4.IO[6]
GPIO4.IO[5]
GPIO4.IO[10]
ENET2.TDATA[2]
ENET2.TDATA[3]
CSI.FIELD
SD1.RESET_B
SD1.DATA6
SD1.DATA5
SD1.DATA7
SD1.DATA4
SD1.CD_B
SD1.DATA0
SD1.DATA3
SD1.DATA1
SD1.CMD
SD1.DATA2
SD1.CLK
SD2.DATA7
SD2.DATA6
SD2.DATA5
SD2.DATA4
SD2.DATA3
SD2.RESET_B
I2C1.SCL
I2C1.SDA
QSPIA_SS0
QSPIA_SCLK
QSPIA_DATA[2]
QSPIA_DATA[1]
QSPIA_DATA[3]
QSPIA_DATA[0]
ENET1.TX_ER
SAI2.TX_SYNC
SAI2.TX_BCLK
SAI2.RX_SYNC
SAI2.RX_DATA
SAI2.MCLK
QSPIA.SS1_B
SAI2.RX_BCLK
QSPIB.DATA[3]
QSPIB.DATA[2]
QSPIB.DATA[1]
QSPIA_DQS
CSI.DATA[12]
CSI.DATA[13]
PWM5.OUT
PWM4.OUT
ECSPI3_MOSI
ESPI3_SCLK
ECSPI3_MISO
ECSPI3_SS0
CSI.DATA[5]
CAN1.TX
CAN2.RX
CAN1.RX
CAN2.TX
ECSPI4_SS0
ECSPI4_MISO
ECSPI4_MOSI
ECSPI4_SCLK
ECSPI4_SS3
PWM3.OUT
ECSPI2_SCLK
ECSPI2_SS0
ECSPI3_RDY
UART3.CTS_B
UART3.RX
UART3.RTS_B
UART3.TX
SD2.CD_B
UART5.RTS_B
USB.OTG2_PWR
USB.OTG1_PWR
USB.OTG2_OC
USB.OTG1_OC
UART2.RTS_B
UART2.CTS_B
UART2.RX
UART2.TX
ECSPI3_SS1
B1C
imx6ull_som_W_2E Rev4.4
{eCSPI1_MOSI}
{eCSPI1_CLK}
{eCSPI1_SS0}
{eCSPI1_MISO}
CSI_PIXCLK
CSI_DATA6
CSI_DATA4
CSI_DATA5
CSI_DATA7
CSI_DATA1
CSI_DATA0
CSI_DATA2
CSI_DATA3
CSI_VSYNC
CSI_HSYNC
CSI_MCLK
GPIO4_IO2
GPIO4_IO0
GPIO4_IO1
GPIO4_IO3
GPIO4_IO4
CAN2_TX
CAN2_RX
I2C3_SCL
GPIO3_IO_6
NAND_DATA0
NAND_nRE
NAND_nWE
NAND_DATA1
NAND_DATA2
LCD_DATA_10
LCD_DATA_11
LCD_DATA_1
LCD_ENABLE
GPIO4.IO[18]
GPIO4.IO[27]
GPIO4.IO[25]
GPIO4.IO[26]
GPIO4.IO[28]
GPIO4.IO[22]
GPIO4.IO[21]
GPIO4.IO[23]
GPIO4.IO[24]
GPIO4.IO[19]
GPIO4.IO[20]
GPIO4.IO[17]
GPIO4.IO[2]
GPIO4.IO[0]
GPIO4.IO[1]
GPIO4.IO[3]
GPIO4.IO[4]
GPIO3.IO[15]
GPIO3.IO[16]
GPIO3.IO[6]
GPIO3.IO[1]
SD2_WP
SD2_DATA6
SD2_DATA4
SD2_DATA5
SD2_DATA7
SD2_DATA1
SD2_DATA0
SD2_DATA2
SD2_DATA3
SD2_CLK
SD2.CMD
SD2.CD_B
SD2.DATA0
SD2.CLK
SD2.CMD
SD2.DATA1
SD2.DATA2
SAI3.RX_SYNC
SAI3.RX_BCLK
PWM2.OUT
UART4.RX
I2C1_SCL
ECSPI1_MOSI
ECSPI1_CLK
ECSPI1_SS0
ECSPI1_MISO
ECSPI2_SS0
ECSPI2_CLK
ECSPI2_MOSI
ECSPI2_MISO
I2C2_SDA
I2C2_SCL
I2C1_SDA
QSPIB_SS1_B
QSPIB_SCLK
QSPIB_SS0_B
QSPIB_DQS
QSPIB_DATA[0]
CSI.DATA[18]
CSI.DATA[19]
I2C3.SCL
SAI3.TX_SYNC
UART6_RX
SAI1_RX_DATA
SAI1_TX_SYNC
SAI1_TX_BCLK
SAI1_TX_DATA
SAI1MCLK
SAI1_RX_SYNC
SAI1.RX_BCLK
PWM7.OUT
PWM8.OUT
UART6_TX
SD1_RST
SD1_WP
SD1_CD_B
SD1_VSELECT
UART5_RX
UART5_TX
UART5_RTS
UART5_CTS
UART6_RTS_B
UART6_CTS_B
ESAI.TX2_RX3
ESAI.TX_FS
ESAI.TX_CLK
ESAI.TX0
ESAI.RX_HF_CLK
ESAI.TX_HF_CLK
ESAI.RX_FS
ESAI.TX4_RX1
ESAI.TX4_RX1
ECSPI4.RDY
ECSPI3.SS2
ECSPI3.SS3
ECSPI4.SS1
ECSPI4.SS2
CAN2.TX
CAN2.RX
SAI1.TX_SYNC
ECSPI2.RDY
P8
GPIO3_IO_6
GPIO4.IO4
GPIO4.IO1
GPIO4.IO2
TAMPER9
ONOFF
TAMPER1
TAMPER0
I2C3_SCL
GPIO4.IO3
GPIO4.IO0
POR_B
TAMPER5
TAMPER4
TAMPER8
TAMPER6
VSYS
DCDC_3V3
B1D
imx6ull_som_W_2E Rev4.4
LCD_DATA_17
GPIO3.IO[22]
UART7.RX
CSI.DATA[0]
SD2.DATA[7]
RXI2_N
RXI2_P
TXO2_N
TXO2_P
USB_OTG2_VBUS
USB_OTG2_D_N
USB_OTG2_D_P
POR_B
TAMPER_9
TAMPER_5
ONOFF
TAMPER_4
TAMPER_1
TAMPER_8
TAMPER_0
TAMPER_3
TAMPER_7
TAMPER_2
USB_OTG1_VBUS
TAMPER_6
USB_OTG1_D_P
USB_OTG1_D_N
GPIO5.IO[9]
GPIO5.IO[5]
GPIO5.IO[4]
GPIO5.IO[1]
GPIO5.IO[8]
GPIO5.IO[0]
GPIO5.IO[3]
GPIO5.IO[7]
GPIO5.IO[2]
GPIO5.IO[6]
USB2_HOST_VBUS
R20
0.0
USB_OTG2_D_N
USB_OTG2_D_P
TAMPER9
TAMPER5
ONOFF
TAMPER4
TAMPER1
TAMPER8
TAMPER0
TAMPER6
CAM_PWDN
LORA_RESET
CAM_RESET
USB1_HOST_VBUS
R17
0.0
USB_OTG1_D_P
USB_OTG1_D_N
J1
HYC77-TF09-200
DAT2
CD/DAT3
CMD
VDD
CLK
GND
DAT0
DAT1
Switch
Detect
Card
SD1_DATA2
SD1_DATA3
SD1_CMD
SD1_CLK
SD1_DATA0
SD1_DATA1
SD1_CD
D5
D6
D7
D8
D11
D12
D13
PESD5V0U1UA.115
CESDB5V0D3
VCCDIG33 : 3.3V
U201
AP3429KTTR-G1
VIN
LX
GND
EN
FB
C202
22uF
L200
2.2μH
C215
22pF
R213
680k
R214
150k
C201
22uF
1
2
3
4
5
6
A
B
C
D

ICAP Classification: CP: IUO: PUBI:

Drawing Title:

Page Title:

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INPUT

100ohm

CN10

TX+ 1
TX- 2
RX+ 3
nc4 4
nc5 5
RX- 6
nc7 7
nc8 8

TX_P
TX_N
RX_P
RJ_45
RX_N
RJ_78

RC01456

Power Over Ethernet

Matched Net Lengths [Tolerance = 100mil]
Diff Pair 100ohm
Matched Net Lengths [Tolerance = 100mil]
Diff Pair 100ohm
Matched Net Lengths [Tolerance = 100mil]   Diff Pair 100ohm
Diff Pair 100ohm
Matched Net Lengths [Tolerance = 100mil]
Diff Pair 100ohm

NOTE : Place for additional ferrite beads

T4

16
15
14
11
10
9

H1601CG

1 TXO1_P
2
3 TXO1_N
6 RXI1_P
7
8 RXI1_N

0.0 ohm

R46 75
R33 75
R26 75
C37 1nF
C32 1nF
R42 75
C26 1nF
C34 1nF
C89 1000pF

Chassis

Chassis   R96 0.0

INPUT

100ohm

CN4

TX+ 1
TX- 2
RX+ 3
nc4 4
nc5 5
RX- 6
nc7 7
nc8 8

TX2_P
TX2_N
RX2_P
RJ_45_2
RX2_N
RJ_78_2

RC01456

Power Over Ethernet

Matched Net Lengths [Tolerance = 100mil]
Diff Pair 100ohm
Matched Net Lengths [Tolerance = 100mil]
Matched Net Lengths [Tolerance = 100mil]   Diff Pair 100ohm
Diff Pair 100ohm
Matched Net Lengths [Tolerance = 100mil]
Diff Pair 100ohm

NOTE : Place for additional ferrite beads

T3

16
15
14
11
10
9

H1601CG

1 TXO2_P
2
3 TXO2_N
6 RXI2_P
7
8 RXI2_N

R29 75
R30 75
R31 75
C23 1nF
R32 75
C25 1nF
C29 1nF
C30 1nF
C38 1000pF

Chassis_2   Chassis_2   R34 0.0

i.MX6ULL IOMUX

i.MX6ULL IOMUX pin mapping schematic sheet (columns 1–6, rows A–D) showing signal-name to pad assignments. Pin list includes TEST_MODE, POR_B, ONOFF, SNVS_PMIC_ON_REQ, CCM_PMIC_STBY_REQ, BOOT_MODE0/1, SNVS_TAMPER0–9, JTAG_MOD/TMS/TDO/TDI/TCK/TRST_B, GPIO1_IO00–IO09, UART1–5 TXD/RXD/CTS/RTS, ENET1/ENET2 signals, LCD_CLK/ENABLE/VSYNC/HSYNC/RESET/DATA00–23, NAND signals, SD1 signals, CSI signals, and corresponding GPIO2/GPIO3/GPIO4/GPIO5 mappings, with right-margin pull configuration notes (100K PD, 100K PU, 47K PU, Keeper, etc.).