# IAC-IMX6-Kit Embedded Development Kit

# Hardware Manual

Version: 1.0
2014,03

| | | | |
|---|---|---|---|
| CSI_D3P | 41 | 42 | NC |
| GND | 43 | 44 | ON/OFF |
| CSI_CLK0M | 45 | 46 | NC |
| CSI_CLK0P | 47 | 48 | NC |
| GND | 49 | 50 | NC |
| GND | 51 | 52 | NC |
| MLB_SP | 53 | 54 | NC |
| MLB_SN | 55 | 56 | NC |
| GND | 57 | 58 | NC |
| MLB_DP | 59 | 60 | NC |
| MLB_DN | 61 | 62 | NC |
| GND | 63 | 64 | NC |
| MLB_CP | 65 | 66 | NC |
| MLB_CN | 67 | 68 | NC |
| GND | 69 | 70 | NC |
| NC | 71 | 72 | NC |
| GND | 73 | 74 | GND |
| CSI1_D13 | 75 | 76 | CSI1_PCLK |
| CSI1_D15 | 77 | 78 | CSI1_D12 |
| CSI1_D17 | 79 | 80 | CSI1_D14 |
| CSI1_D19 | 81 | 82 | CSI1_D16 |
| CSI1_D11 | 83 | 84 | CSI1_D18 |
| CSI1_D9 | 85 | 86 | CSI1_D10 |
| CSI1_D7 | 87 | 88 | CSI1_D8 |
| CSI1_D5 | 89 | 90 | CSI1_D6 |
| CSI1_D3 | 91 | 92 | CSI1_D4 |

| | | | |
|---|---|---|---|
| CSI1_D1 | 93 | 94 | CSI1_D2 |
| CSI1_DEN | 95 | 96 | CSI1_D0 |
| CSI1_VS | 97 | 98 | CSI1_HS |
| GND | 99 | 100 | GND |

J4:CAN

| PIN | Signal Name |
|---|---|
| 1 | CANH1 |
| 2 | CANL1 |
| 3 | CANH2 |
| 4 | CANL2 |
| 5 | GND_CAN |
| 6 | GND_CAN |

J6:Serial Port 4/5

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| J_RXD4 | 1 | 2 | J_TXD4 |
| J_RXD5 | 3 | 4 | J_TXD5 |
| GND | 5 | 6 | GND |
| J_485A4 | 7 | 8 | J_485B4 |
| J_485A5 | 9 | 10 | J_485B5 |

J7:Debug Port

| PIN | Signal Name |
|---|---|
| 1 | J_DRXD |
| 2 | J_DTXD |
| 3 | GND |

J9:LVDS (LVDS0)

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | +3.3VD |
| GND | 3 | 4 | GND |
| LVDS0_TXN0 | 5 | 6 | LVDS0_TXP0 |
| GND | 7 | 8 | GND |
| LVDS0_TXN1 | 9 | 10 | LVDS0_TXP1 |
| LVDS0_TXN2 | 11 | 12 | LVDS0_TXP2 |
| GND | 13 | 14 | GND |
| LVDS0_CLKN | 15 | 16 | LVDS0_CLKP |
| LVDS0_TXN3 | 17 | 18 | LVDS0_TXP3 |
| GPIO4_IO18 | 19 | 20 | GPIO4_IO20 |

J10:LVDS (LVDS1)

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | +3.3VD |
| GND | 3 | 4 | GND |
| LVDS1_TXN0 | 5 | 6 | LVDS1_TXP0 |
| GND | 7 | 8 | GND |
| LVDS1_TXN1 | 9 | 10 | LVDS1_TXP1 |
| LVDS1_TXN2 | 11 | 12 | LVDS1_TXP2 |
| GND | 13 | 14 | GND |
| LVDS1_CLKN | 15 | 16 | LVDS1_CLKP |
| LVDS1_TXN3 | 17 | 18 | LVDS1_TXP3 |
| GPIO4_IO21 | 19 | 20 | GPIO4_IO23 |

J11:Reserved Power Supply Interface

| PIN | Signal Name |
|---|---|
| 1 | +12.0VD |
| 2 | GND |
| 3 | +5.0VD |
| 4 | GND |
| 5 | +3.3VD |
| 6 | GND |

J12:Capacitive Touch Panel Interface

| PIN | Signal Name |
|---|---|
| 1 | +3.3VD |
| 2 | GND |
| 3 | I2C3_SDA |
| 4 | I2C3_SCL |
| 5 | GPIO4_IO25 |
| 6 | GPIO4_IO27 |

J14:USB

| PIN | Signal Name |
|---|---|
| 1 | GND |
| 2 | USBDN_DM4 |
| 3 | USBDN_DP4 |
| 4 | +3.3VD |

J16:2*4GPIO

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | GND |
| GPIO_4 | 3 | 4 | GPIO_7 |

| | | | |
|---|---|---|---|
| GPIO_8 | 5 | 6 | GPIO_9 |
| GPIO_16 | 7 | 8 | GPIO_17 |
| GPIO_18 | 9 | 10 | GPIO_19 |

J21:SDIO

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | GND |
| SYS_RSTN | 3 | 4 | SD2_DAT0 |
| SD2_DAT3 | 5 | 6 | SD2_CMD |
| SD2_DAT2 | 7 | 8 | SD2_CLK |
| SD2_DAT1 | 9 | 10 | NC |

J23:HDMI

| PIN | Signal Name |
|---|---|
| 1 | HDMS_D2P |
| 2 | GND |
| 3 | HDMS_D2M |
| 4 | HDMS_D1P |
| 5 | GND |
| 6 | HDMS_D1M |
| 7 | HDMS_D0P |
| 8 | GND |
| 9 | HDMS_D0M |
| 10 | HDMS_CLKP |
| 11 | GND |
| 12 | HDMS_CLKM |
| 13 | HDMS_CEC_OUT |

| | |
|---|---|
| 14 | NC |
| 15 | DDC_CLK |
| 16 | DDC_DAT |
| 17 | GND |
| 18 | HDMI_5V |
| 19 | HP_DET |

J24:EIM

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | +3.3VD |
| EIM_AD15 | 3 | 4 | EIM_AD14 |
| EIM_AD13 | 5 | 6 | EIM_WAIT |
| EIM_BCLK | 7 | 8 | EIM_D31 |
| EIM_D30 | 9 | 10 | EIM_D29 |
| EIM_D28 | 11 | 12 | EIM_D27 |
| EIM_D26 | 13 | 14 | EIM_D25 |
| EIM_D24 | 15 | 16 | EIM_D23 |
| EIM_D22 | 17 | 18 | EIM_D21 |
| EIM_D20 | 19 | 20 | EIM_D19 |
| EIM_D18 | 21 | 22 | EIM_D17 |
| EIM_D16 | 23 | 24 | EIM_CS1N |
| EIM_CS0N | 25 | 26 | EIM_WRN |
| EIM_LBA | 27 | 28 | EIM_OEN |
| GND | 29 | 30 | GND |

J25:CSI&DSI

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|

| | | | |
|---|---|---|---|
| CSI_D0M | 1 | 2 | +5.0VD |
| CSI_D0P | 3 | 4 | +5.0VD |
| GND | 5 | 6 | I2C2_SDA |
| CSI_D1M | 7 | 8 | I2C2_SCL |
| CSI_D1P | 9 | 10 | GPIO4_IO16 |
| GND | 11 | 12 | GPIO4_IO19 |
| CSI_D2M | 13 | 14 | GPIO4_IO17 |
| CSI_D2P | 15 | 16 | DSI_D0M |
| GND | 17 | 18 | DSI_D0P |
| CSI_D3M | 19 | 20 | GND |
| CSI_D3P | 21 | 22 | DSI_CLK0M |
| GND | 23 | 24 | DSI_CLK0P |
| CSI_CLK0M | 25 | 26 | GND |
| CSI_CLK0P | 27 | 28 | DSI_D1M |
| GND | 29 | 30 | DSI_D1P |

J26:EIM

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | +3.3VD |
| +3.3VD | 3 | 4 | +3.3VD |
| CSI1_PCLK | 5 | 6 | CSI1_D13 |
| CSI1_D12 | 7 | 8 | CSI1_D15 |
| CSI1_D14 | 9 | 10 | CSI1_D17 |
| CSI1_D16 | 11 | 12 | CSI1_D19 |
| CSI1_D18 | 13 | 14 | CSI1_D11 |
| CSI1_D10 | 15 | 16 | CSI1_D9 |

| | | | |
|---|---|---|---|
| CSI1_D8 | 17 | 18 | CSI1_D7 |
| CSI1_D6 | 19 | 20 | CSI1_D5 |
| CSI1_D4 | 21 | 22 | CSI1_D3 |
| CSI1_D2 | 23 | 24 | CSI1_D1 |
| CSI1_D0 | 25 | 26 | CSI1_DEN |
| CSI1_HS | 27 | 28 | CSI1_VS |
| GND | 29 | 30 | GND |

J27:2*4GPIO

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | GND |
| GPIO4_IO24 | 3 | 4 | GPIO4_IO26 |
| GPIO4_IO28 | 5 | 6 | GPIO4_IO30 |
| GPIO5_IO05 | 7 | 8 | GPIO5_IO07 |
| GPIO5_IO09 | 9 | 10 | GPIO5_IO11 |

J28:SATA

| PIN | Signal Name |
|---|---|
| 1 | GND |
| 2 | SATA_TXP |
| 3 | SATA_TXM |
| 4 | GND |
| 5 | SATA_RXM |
| 6 | SATA_RXP |
| 7 | GND |
| 8 | GND_SATA |
| 9 | GND_SATA |

J29:MLB

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| +3.3VD | 1 | 2 | +3.3VD |
| MLB_SP | 3 | 4 | MLB_SN |
| MLB_DP | 5 | 6 | MLB_DN |
| MLB_CP | 7 | 8 | MLB_CN |
| GND | 9 | 10 | GND |

J30:SATA Power Supply Interface

| PIN | Signal Name |
|---|---|
| 1 | +5.0VD |
| 2 | GND |
| 3 | GND |
| 4 | +12.0VD |

U19:MINI_PCIE

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| Reserved | 1 | 2 | PCIE_3V3 |
| Reserved | 3 | 4 | GND |
| Reserved | 5 | 6 | PCIE_1V5 |
| Reserved | 7 | 8 | UIM_PWR |
| GND | 9 | 10 | UIM_DATA |
| PCIE_CLK1_N | 11 | 12 | UIM_CLK |
| PCIE_CLK1_P | 13 | 14 | UIM_RESET |
| GND | 15 | 16 | UIM_VPP |
| Reserved | 17 | 18 | GND |

| | | | |
|---|---|---|---|
| Reserved | 19 | 20 | GPIO5_IO19 |
| GND | 21 | 22 | GPIO5_IO21 |
| PCIE_RXM | 23 | 24 | PCIE_3V3 |
| PCIE_RXP | 25 | 26 | GND |
| GND | 27 | 28 | PCIE_1V5 |
| GND | 29 | 30 | I2C2_SCL |
| PCIE_TXM | 31 | 32 | I2C2_SDA |
| PCIE_TXP | 33 | 34 | GND |
| Reserved | 35 | 36 | USBDN_DM3 |
| Reserved | 37 | 38 | USBDN_DP3 |
| Reserved | 39 | 40 | GND |
| Reserved | 41 | 42 | LED_WWAN |
| Reserved | 43 | 44 | LED_WLAN |
| Reserved | 45 | 46 | LED_WPAN |
| Reserved | 47 | 48 | PCIE_1V5 |
| Reserved | 49 | 50 | GND |
| Reserved | 51 | 52 | PCIE_3V3 |

U20:SIM Card Interface

| Signal Name | PIN | PIN | Signal Name |
|---|---|---|---|
| UIM_PWR | 1 | 4 | GND |
| UIM_RESET | 2 | 5 | UIM_VPP |
| UIM_CLK | 3 | 6 | UIM_DATA |

# Ⅳ. Mainboard Function Illustraion

Will be completed in later

# Ⅴ. Structure & Size Chart

# Ⅵ. Software Description

IAC-I.MX6-KIT provides the software support for Linux & Android.

The ***IAC-IMX6-Kit Linux User Manual*** will introduce the IAC-IMX6-Kit development kit's setting up and using in Linux . The detailed content could refer to the relative documentation.

# Ⅶ. Remark

1. Before connect to LCD, confirm LCD power specification.

2. Please use the original connecting accessories, avoid damaging the main board.

3. We ensure offering communication technology support through E-mail, telephone for lifelong technical support service.

4. We ensure offering 6 months repair service for free, if malfunction occurs in warranty because of quality problem, contact our retailer or our company with purchase receipt in warranty period, we will repair or replace it.

5. Under these circumstances, we do not offer repair for free:

● Over warranty time;

● Do not have purchase receipt;

● Liquid inlet, Damp or Mold;

● Malfunction and damage is not due to product quality but drops, intense sharking, arbitrarily modify, disoperation after purchase;

● Damage of force majeure.

6. We reserve intellectual property for the software and hardware technical data of QY-IMX6S; users can only use them for teaching, testing, researching. Shall not be

engaged in any commercial purpose. Shall not distribute them on the Internet. Shall not intercept, modify them to tamper copyright.

7. We accept batch order; we can offer technical support and service.

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