

Pins

32 Groups of Parallel RGB Data



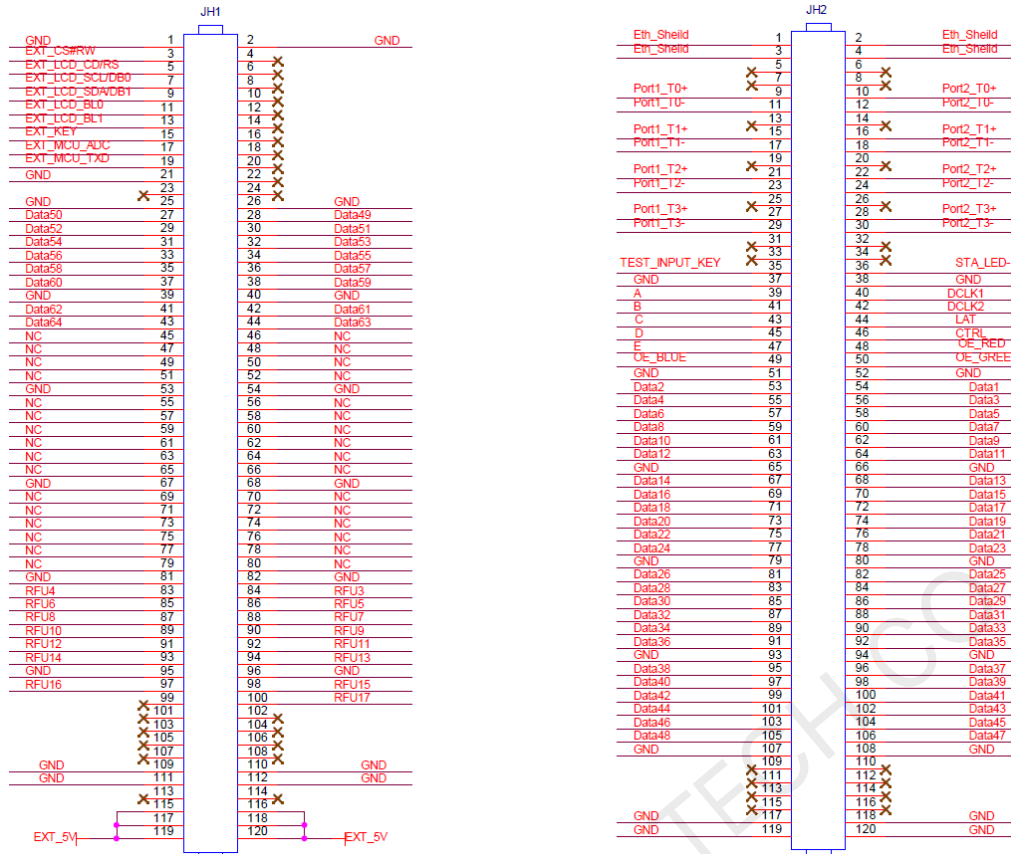
| JH1 | | | | | |
|-----------------------------------|-----------------|----|----|-----|---|
| | GND | 1 | 2 | GND | |
| LCD CS signal | EXT_CS#RW | 3 | 4 | NC | |
| LCD RS signal | EXT_LCD_CD/RS | 5 | 6 | NC | |
| LCD clock signal | EXT_LCD_SCL/DB0 | 7 | 8 | NC | |
| LCD data signal | EXT_LCD_SDA/DB1 | 9 | 10 | NC | |
| LCD backlight signal 1 | EXT_LCD_BL0 | 11 | 12 | NC | |
| LCD backlight signal 2 | EXT_LCD_BL1 | 13 | 14 | NC | |
| LCD control button | EXT_KEY | 15 | 16 | NC | |
| A reserved pin for MCU connection | EXT_MCU_ADC | 17 | 18 | NC | |
| A reserved pin for MCU connection | EXT_MCU_TXD | 19 | 20 | NC | |
| | GND | 21 | 22 | NC | |
| | NC | 23 | 24 | NC | |
| | GND | 25 | 26 | GND | |
| / | G17 | 27 | 28 | R17 | / |
| / | R18 | 29 | 30 | B17 | / |
| / | B18 | 31 | 32 | G18 | / |
| / | G19 | 33 | 34 | R19 | / |
| / | R20 | 35 | 36 | B19 | / |
| / | B20 | 37 | 38 | G20 | / |
| | GND | 39 | 40 | GND | |
| / | G21 | 41 | 42 | R21 | / |
| / | R22 | 43 | 44 | B21 | / |

| JH1 | | | | | |
|-----|--------|-----|-----|--------|---|
| / | B22 | 45 | 46 | G22 | / |
| / | G23 | 47 | 48 | R23 | / |
| / | R24 | 49 | 50 | B23 | / |
| / | B24 | 51 | 52 | G24 | / |
| | GND | 53 | 54 | GND | |
| / | G25 | 55 | 56 | R25 | / |
| / | R26 | 57 | 58 | B25 | / |
| / | B26 | 59 | 60 | G26 | / |
| / | G27 | 61 | 62 | R27 | / |
| / | R28 | 63 | 64 | B27 | / |
| / | B28 | 65 | 66 | G28 | / |
| | GND | 67 | 68 | GND | |
| / | G29 | 69 | 70 | R29 | / |
| / | R30 | 71 | 72 | B29 | / |
| / | B30 | 73 | 74 | G30 | / |
| / | G31 | 75 | 76 | R31 | / |
| / | R32 | 77 | 78 | B31 | / |
| / | B32 | 79 | 80 | G32 | / |
| | GND | 81 | 82 | GND | |
| / | RFU4 | 83 | 84 | RFU3 | / |
| / | RFU6 | 85 | 86 | RFU5 | / |
| / | RFU8 | 87 | 88 | RFU7 | / |
| / | RFU10 | 89 | 90 | RFU9 | / |
| / | RFU12 | 91 | 92 | RFU11 | / |
| / | RFU14 | 93 | 94 | RFU13 | / |
| | GND | 95 | 96 | GND | |
| / | RFU16 | 97 | 98 | RFU15 | / |
| | NC | 99 | 100 | RFU17 | / |
| | NC | 101 | 102 | NC | |
| | NC | 103 | 104 | NC | |
| | NC | 105 | 106 | NC | |
| | NC | 107 | 108 | NC | |
| | GND | 109 | 110 | GND | |
| | GND | 111 | 112 | GND | |
| | NC | 113 | 114 | NC | |
| | EXT_5V | 115 | 116 | EXT_5V | |
| | EXT_5V | 117 | 118 | EXT_5V | |
| | EXT_5V | 119 | 120 | EXT_5V | |

| JH2 | | | | | |
|-----------------------|------------|----|----|------------|-----------------------|
| Chassis ground | Eth_Sheild | 1 | 2 | Eth_Sheild | Chassis ground |
| Chassis ground | Eth_Sheild | 3 | 4 | Eth_Sheild | Chassis ground |
| | NC | 5 | 6 | NC | |
| | NC | 7 | 8 | NC | |
| Gigabit Ethernet port | Port1_T0+ | 9 | 10 | Port2_T0+ | Gigabit Ethernet port |
| | Port1_T0- | 11 | 12 | Port2_T0- | |
| | NC | 13 | 14 | NC | |
| | Port1_T1+ | 15 | 16 | Port2_T1+ | |
| | Port1_T1- | 17 | 18 | Port2_T1- | |
| | NC | 19 | 20 | NC | |
| | Port1_T2+ | 21 | 22 | Port2_T2+ | |
| | Port1_T2- | 23 | 24 | Port2_T2- | |
| | NC | 25 | 26 | NC | |

| JH2 | | | | | |
|-----------------------|----------------|-----|-----|-----------|-----------------------------------|
| | Port1_T3+ | 27 | 28 | Port2_T3+ | |
| | Port1_T3- | 29 | 30 | Port2_T3- | |
| | NC | 31 | 32 | NC | |
| | NC | 33 | 34 | NC | |
| Test button | TEST_INPUT_KEY | 35 | 36 | STA_LED- | Running indicator (active low) |
| | GND | 37 | 38 | GND | |
| Line decoding signal | A | 39 | 40 | DCLK1 | Shift clock output 1 |
| Line decoding signal | B | 41 | 42 | DCLK2 | Shift clock output 2 |
| Line decoding signal | C | 43 | 44 | LAT | Latch signal output |
| Line decoding signal | D | 45 | 46 | CTRL | Afterglow control signal |
| Line decoding signal | E | 47 | 48 | OE_RED | Display enable signal |
| Display enable signal | OE_BLUE | 49 | 50 | OE_GREEN | Display enable signal |
| | GND | 51 | 52 | GND | |
| / | G1 | 53 | 54 | R1 | / |
| / | R2 | 55 | 56 | B1 | / |
| / | B2 | 57 | 58 | G2 | / |
| / | G3 | 59 | 60 | R3 | / |
| / | R4 | 61 | 62 | B3 | / |
| / | B4 | 63 | 64 | G4 | / |
| | GND | 65 | 66 | GND | |
| / | G5 | 67 | 68 | R5 | / |
| / | R6 | 69 | 70 | B5 | / |
| / | B6 | 71 | 72 | G6 | / |
| / | G7 | 73 | 74 | R7 | / |
| / | R8 | 75 | 76 | B7 | / |
| / | B8 | 77 | 78 | G8 | / |
| | GND | 79 | 80 | GND | |
| / | G9 | 81 | 82 | R9 | / |
| / | R10 | 83 | 84 | B9 | / |
| / | B10 | 85 | 86 | G10 | / |
| / | G11 | 87 | 88 | R11 | / |
| / | R12 | 89 | 90 | B11 | / |
| / | B12 | 91 | 92 | G12 | / |
| | GND | 93 | 94 | GND | |
| / | G13 | 95 | 96 | R13 | / |
| / | R14 | 97 | 98 | B13 | / |
| / | B14 | 99 | 100 | G14 | / |
| / | G15 | 101 | 102 | R15 | / |
| / | R16 | 103 | 104 | B15 | / |
| / | B16 | 105 | 106 | G16 | / |
| | GND | 107 | 108 | GND | |
| | NC | 109 | 110 | NC | |
| | NC | 111 | 112 | NC | |
| | NC | 113 | 114 | NC | |
| | NC | 115 | 116 | NC | |
| | GND | 117 | 118 | GND | |
| | GND | 119 | 120 | GND | |

64 Groups of Serial Data



| JH1 | | | | | |
|-----------------------------------|-----------------|----|----|--------|---|
| | GND | 1 | 2 | GND | |
| LCD CS signal | EXT_CS#RW | 3 | 4 | NC | |
| LCD RS signal | EXT_LCD_CD/RS | 5 | 6 | NC | |
| LCD clock signal | EXT_LCD_SCL/DB0 | 7 | 8 | NC | |
| LCD data signal | EXT_LCD_SDA/DB1 | 9 | 10 | NC | |
| LCD backlight signal 1 | EXT_LCD_BLD | 11 | 12 | NC | |
| LCD backlight signal 2 | EXT_LCD_BLD | 13 | 14 | NC | |
| LCD control button | EXT_KEY | 15 | 16 | NC | |
| A reserved pin for MCU connection | EXT_MCU_ADC | 17 | 18 | NC | |
| A reserved pin for MCU connection | EXT_MCU_TXD | 19 | 20 | NC | |
| | GND | 21 | 22 | NC | |
| | NC | 23 | 24 | NC | |
| | GND | 25 | 26 | GND | |
| / | Data50 | 27 | 28 | Data49 | / |
| / | Data52 | 29 | 30 | Data51 | / |
| / | Data54 | 31 | 32 | Data53 | / |
| / | Data56 | 33 | 34 | Data55 | / |
| / | Data58 | 35 | 36 | Data57 | / |
| / | Data60 | 37 | 38 | Data59 | / |
| | GND | 39 | 40 | GND | |
| / | Data62 | 41 | 42 | Data61 | / |
| / | Data64 | 43 | 44 | Data63 | / |
| | NC | 45 | 46 | NC | |
| | NC | 47 | 48 | NC | |
| | NC | 49 | 50 | NC | |

| JH1 | | | | | |
|-----|--------|-----|-----|--------|---|
| | NC | 51 | 52 | NC | |
| | GND | 53 | 54 | GND | |
| | NC | 55 | 56 | NC | |
| | NC | 57 | 58 | NC | |
| | NC | 59 | 60 | NC | |
| | NC | 61 | 62 | NC | |
| | NC | 63 | 64 | NC | |
| | NC | 65 | 66 | NC | |
| | GND | 67 | 68 | GND | |
| | NC | 69 | 70 | NC | |
| | NC | 71 | 72 | NC | |
| | NC | 73 | 74 | NC | |
| | NC | 75 | 76 | NC | |
| | NC | 77 | 78 | NC | |
| | NC | 79 | 80 | NC | |
| | GND | 81 | 82 | GND | |
| / | RFU4 | 83 | 84 | RFU3 | / |
| / | RFU6 | 85 | 86 | RFU5 | / |
| / | RFU8 | 87 | 88 | RFU7 | / |
| / | RFU10 | 89 | 90 | RFU9 | / |
| / | RFU12 | 91 | 92 | RFU11 | / |
| / | RFU14 | 93 | 94 | RFU13 | / |
| | GND | 95 | 96 | GND | |
| / | RFU16 | 97 | 98 | RFU15 | / |
| | NC | 99 | 100 | RFU17 | / |
| | NC | 101 | 102 | NC | |
| | NC | 103 | 104 | NC | |
| | NC | 105 | 106 | NC | |
| | NC | 107 | 108 | NC | |
| | GND | 109 | 110 | GND | |
| | GND | 111 | 112 | GND | |
| | NC | 113 | 114 | NC | |
| | EXT_5V | 115 | 116 | EXT_5V | |
| | EXT_5V | 117 | 118 | EXT_5V | |
| | EXT_5V | 119 | 120 | EXT_5V | |

| JH2 | | | | | |
|-----------------------|----------------|----|-----------|------------|-----------------------------------|
| Chassis ground | Eth_Sheild | 1 | 2 | Eth_Sheild | Chassis ground |
| Chassis ground | Eth_Sheild | 3 | 4 | Eth_Sheild | Chassis ground |
| | NC | 5 | 6 | NC | |
| | NC | 7 | 8 | NC | |
| Gigabit Ethernet port | Port1_T0+ | 9 | 10 | Port2_T0+ | Gigabit Ethernet port |
| | Port1_T0- | 11 | 12 | Port2_T0- | |
| | NC | 13 | 14 | NC | |
| | Port1_T1+ | 15 | 16 | Port2_T1+ | |
| | Port1_T1- | 17 | 18 | Port2_T1- | |
| | NC | 19 | 20 | NC | |
| | Port1_T2+ | 21 | 22 | Port2_T2+ | |
| | Port1_T2- | 23 | 24 | Port2_T2- | |
| | NC | 25 | 26 | NC | |
| | Port1_T3+ | 27 | 28 | Port2_T3+ | |
| Port1_T3- | 29 | 30 | Port2_T3- | | |
| | NC | 31 | 32 | NC | |
| | NC | 33 | 34 | NC | |
| Test button | TEST_INPUT_KEY | 35 | 36 | STA_LED- | Running indicator (active low) |
| | GND | 37 | 38 | GND | |

| JH2 | | | | | |
|-----------------------|---------|-----|-----|----------|--------------------------|
| Line decoding signal | A | 39 | 40 | DCLK1 | Shift clock output 1 |
| Line decoding signal | B | 41 | 42 | DCLK2 | Shift clock output 2 |
| Line decoding signal | C | 43 | 44 | LAT | Latch signal output |
| Line decoding signal | D | 45 | 46 | CTRL | Afterglow control signal |
| Line decoding signal | E | 47 | 48 | OE_RED | Display enable signal |
| Display enable signal | OE_BLUE | 49 | 50 | OE_GREEN | Display enable signal |
| | GND | 51 | 52 | GND | |
| / | Data2 | 53 | 54 | Data1 | / |
| / | Data4 | 55 | 56 | Data3 | / |
| / | Data6 | 57 | 58 | Data5 | / |
| / | Data8 | 59 | 60 | Data7 | / |
| / | Data10 | 61 | 62 | Data9 | / |
| / | Data12 | 63 | 64 | Data11 | / |
| | GND | 65 | 66 | GND | |
| / | Data14 | 67 | 68 | Data13 | / |
| / | Data16 | 69 | 70 | Data15 | / |
| / | Data18 | 71 | 72 | Data17 | / |
| / | Data20 | 73 | 74 | Data19 | / |
| / | Data22 | 75 | 76 | Data21 | / |
| / | Data24 | 77 | 78 | Data23 | / |
| | GND | 79 | 80 | GND | |
| / | Data26 | 81 | 82 | Data25 | / |
| / | Data28 | 83 | 84 | Data27 | / |
| / | Data30 | 85 | 86 | Data29 | / |
| / | Data32 | 87 | 88 | Data31 | / |
| / | Data34 | 89 | 90 | Data33 | / |
| / | Data36 | 91 | 92 | Data35 | / |
| | GND | 93 | 94 | GND | |
| / | Data38 | 95 | 96 | Data37 | / |
| / | Data40 | 97 | 98 | Data39 | / |
| / | Data42 | 99 | 100 | Data41 | / |
| / | Data44 | 101 | 102 | Data43 | / |
| / | Data46 | 103 | 104 | Data45 | / |
| / | Data48 | 105 | 106 | Data47 | / |
| | GND | 107 | 108 | GND | |
| | NC | 109 | 110 | NC | |
| | NC | 111 | 112 | NC | |
| | NC | 113 | 114 | NC | |
| | NC | 115 | 116 | NC | |
| | GND | 117 | 118 | GND | |
| | GND | 119 | 120 | GND | |

Note

The recommended power input is 5.0 V.

OE_RED, OE_GREEN and OE_BLUE are display enable signals. When RGB are not controlled separately, use OE_RED. When the PWM chip is used, they are used as GCLK signals.

In the mode of 128 groups of serial data, Data65–Data128 are multiplexed into Data1–Data64.

Reference Design for Extended Functions

| Pins for Extended Functions | | | |
|-----------------------------|------------------------------|------------------------------|----------------------------------|
| Pin | Recommended Module Flash Pin | Recommended Smart Module Pin | Description |
| RFU4 | HUB_SPI_CLK | Reserved | Clock signal of serial pin |
| RFU6 | HUB_SPI_CS | Reserved | CS signal of serial pin |
| RFU8 | HUB_SPI_MOSI | / | Module Flash data storage input |
| | / | HUB_UART_TX | Smart module TX signal |
| RFU10 | HUB_SPI_MISO | / | Module Flash data storage output |
| | / | HUB_UART_RX | Smart module RX signal |
| RFU3 | HUB_CODE0 | | Module Flash BUS control pin |
| RFU5 | HUB_CODE1 | | |

| Pins for Extended Functions | | |
|-----------------------------|--------------|------------------------------------|
| RFU7 | HUB_CODE2 | 74HC164 data signal |
| RFU9 | HUB_CODE3 | |
| RFU11 | HUB_H164_CSD | |
| RFU13 | HUB_H164_CLK | Dual power supply detection signal |
| RFU14 | POWER_STA1 | |
| RFU16 | POWER_STA2 | Dual card backup connection signal |
| RFU15 | MS_DATA | |
| RFU17 | MS_ID | Dual card backup identifier signal |

Note

The RFU8 and RFU10 are signal multiplex extension pins. Only one pin from either the Recommended Smart Module Pin or the Recommended Module Flash Pin can be selected at the same time.

Specifications

| | | |
|-------------------------|-------------------------|---|
| Maximum Resolution | 512x512@60Hz | |
| Electrical Parameters | Input voltage | DC 3.3 V to 5.5 V |
| | Rated current | 0.6 A |
| | Rated power consumption | 3.0 W |
| Operating Environment | Temperature | -20°C to +70°C |
| | Humidity | 10% RH to 90% RH, non-condensing |
| Storage Environment | Temperature | -25°C to +125°C |
| | Humidity | 0% RH to 95% RH, non-condensing |
| Physical Specifications | Dimensions | 70.0 mm × 45.0 mm × 8.0 mm |
| | Net weight | 17.4 g Note: It is the weight of a single receiving card only. |
| | Gross weight | 1.2 kg Note: It is the total weight of the products, printed materials and packing materials packed according to the packing specifications. |
| Packing Information | Packing specifications | Each receiving card is packaged in a blister pack. Each packing box contains 80 receiving cards. |
| | Packing box dimensions | 378.0 mm × 190.0 mm × 120.0 mm |

The amount of current and power consumption may vary depending on various factors such as product settings, usage, and environment.

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