# GTWV070VHB01P
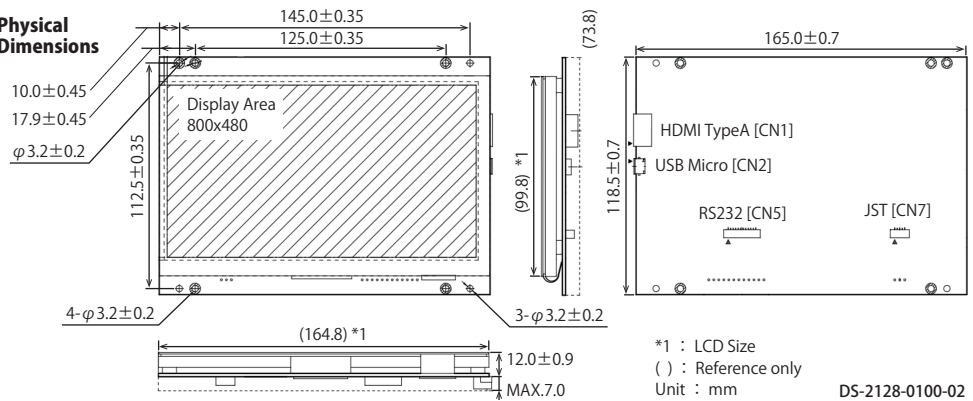
# SIMPLIFIED DATASHEET

## ◆ Features

- This is the part number of the RS-232 interface specification.

## ◆ Physical Dimensions



145.0±0.35
125.0±0.35
(73.8)
10.0±0.45
17.9±0.45
φ3.2±0.2
112.5±0.35
Display Area 800x480
4-φ3.2±0.2
3-φ3.2±0.2
(99.8) *1
118.5±0.7
(164.8) *1
12.0±0.9
MAX.7.0

165.0±0.7
HDMI TypeA [CN1]
USB Micro [CN2]
RS232 [CN5]
JST [CN7]

*1 : LCD Size
( ) : Reference only
Unit : mm
DS-2128-0100-02

## Specifications

### ◆ Basic Specification

| Item | | Content |
|---|---|---|
| Display | Type | TFT-LCD |
| | Size | 7.0 inches (display area：154.08 x 85.92 [mm] ) |
| | Number of pixels | 800 × RGB × 480 |
| | Pixel pitch | 0.1926 × 0.1790 [mm] |
| | Colors | 16.7M (24-bit color) |
| | Recommended viewing direction | 12 o' clock |
| | Gray scale inversion direction | 6 o' clock |
| | Brightness | Min. 500 cd/m² (nit),　Typ. 850 cd/m² (nit)　*1 |
| | Display signal interface | DVI　(HDMI connector Type A) |
| Touch Panel | Type | Metallized projective capacitive touch |
| | Touch active area | 156.64 x 89.05 [mm] |
| | Number of touches | Max. 10 points |
| | Interface | USB (HID compliance, full speed 12Mbps.)　*2, RS232　*2 |
| Control | Display commands | Backlight (display brightness) adjustment |
| | Touch commands | Touch sensitivity adjustment, touch mode selection, touch data send, etc. |
| | Other commands | Memory switch setting, initialize, etc. |

(Control interface: USB, RS232, interface)

*1 : 100% brightness/White screen at the center of display (Factory status)
*2 : Touch data acquisition by commands

### ◆ Electrical Specifications

| Parameter | | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---|---|---|---|---|---|---|---|
| Power | Power supply voltage | VCC | 4.75 | 5.0 | 5.25 | VDC | — |
| RS232 I/F | RS232 input voltage  RXD | VsIH1 | 3.0 | — | 15.0 | VDC | |
| | | VsIL1 | −15.0 | — | −3.0 | VDC | |
| RESET | Logic input voltage  /RESET | VIL4 | — | — | 0.3 | VDC | VCC=5.0V |
| GPIO | Logic input voltage  GPIO | VilH | 2.4 | — | 3.3 | VDC | |
| Common | | VilL | 0 | — | 0.8 | VDC | |
| RS232 | output voltage  TXD | VsOH1 | 5.0 | — | — | VDC | RL= 3kΩ |
| | | VsOL1 | — | — | −5.0 | VDC | |
| Power supply | Power supply current | ICC-1 | — | 640 | 830 | mADC | Brightness 100% *3 |
| | | ICC-2 | — | 380 | — | mADC | Brightness 50% *4 |
| | | ICC-3 | — | 50 | 70 | mADC | No connection |
| | | ICC-4 | — | 20 | 30 | mADC | No connection *6 |
| | Power consumption | P-1 | — | 3.20 | 4.15 | W | Brightness 100% *3 |
| | | P-2 | — | 1.90 | — | W | Brightness 50% *4 |
| | | P-3 | — | 0.25 | 0.35 | W | No connection |
| | | P-4 | — | 0.10 | 0.15 | W | No connection *6 |

(*5 applies to ICC-1, ICC-2 and P-1, P-2)

Measuring conditions：
ambient temperature＝25℃,　VCC＝5.0VDC,　TMDS clock frequency＝33MHz,　refresh rate＝60Hz
*3 : All black display　*4 : All white display　*5 : Touch interface: valid　*6 : Power down mode

### ◆ Environmental / Physical Specifications

| Parameter | Contect |
|---|---|
| Operating Temperature | −20 to +70℃　(Storage temperature is −30 to +80℃) |
| Operating Humidity (No condensation) | Temp. ≦ 60℃, 80% RH MAX. TEmp. > 60℃, absolute humidity shall be less than 80% RH at 60℃　(Same for Storage Humidity) |
| Vibration (non-operating) | 10-55-10Hz, all amplitude 1mm, 30 minutes, X-Y-Z |
| Shock (non-operating) | 392m/s²(40G)　9ms X-Y-Z,　3 times each direction |
| Weight | Approximately 262g |

### ◆ Connectors

**DVI [CN1]**　HDMI connector Type A

| Pin | Terminal | Content | | Pin | Terminal | Content |
|---|---|---|---|---|---|---|
| 1 | TMDS Data2+ | Data lane | | 2 | TMDS Data2 Shield | Shield |
| 3 | TMDS Data2− | | | 4 | TMDS Data1+ | Data lane |
| 5 | TMDS Data1 Shield | Shield | | 6 | TMDS Data1− | |
| 7 | TMDS Data0+ | Data lane | | 8 | TMDS Data0 Shield | Shield |
| 9 | TMDS Data0− | | | 10 | TMDS Clock+ | Clock lane |
| 11 | TMDS Clock Shield | Shield | | 12 | TMDS Clock− | |
| 13 | CEC | No connection | | 14 | Utility | No connection |
| 15 | DDC/SCL | DDC clock | | 16 | DDC/SDA | DDC data |
| 17 | DDC/CEC ground | Ground | | 18 | +5V Power | +5V |
| 19 | Hot Plug Detect | +5V | | | | |

**USB [CN2]**　Micro USB

| Pin | Terminal | Content |
|---|---|---|
| 1 | VBUS | VBUS |
| 2 | D− | Data− |
| 3 | D+ | Data + |
| 4 | ID | NC |
| 5 | GND | Ground |

**Power Connector [CN7]**　JST

| | Terminal | Content |
|---|---|---|
| 1 | VCC | +5V |
| 2 | GND | Ground |
| 3 | VCC | +5V |
| 4 | GND | Ground |
| 5 | NC | No connection |

**RS232 [CN5]**　JST SM12GB-GHS

| Pin | Terminal | Content |
|---|---|---|
| 1 | IC | Internal connection |
| 2 | GPIO | For power saving mode wakeup (GPIO is input only) |
| 3 | IC | Internal connection |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | /RESET | Reset input |
| 9 | NC | Noconnection |
| 10 | GND | Ground |
| 11 | TXD | RS232 send |
| 12 | RXD | RS232 receive |