

# VPC-101RA1S

## 10.1" High Brightness Fanless Industrial Panel PC for In-Vehicle Edge Computing



- 1280x800, 1000nits, PCT with AG, AF Treatment for Sunlight Readable
- IP66-rated front frame and IK08 impact protection designed for harsh outdoor environments.
- NXP® i.MX 8 QuadXPlus Automotive Grade SoC-based In-Vehicle Computer
- Built-in Accelerometer, Gyroscope, and Magnetics Sensor
- 9-60VDC Input with Built-in Smart Power Management

## Specifications

### System

#### Processor

- NXP i.MX 8QuadXPlus Automotive SoC (AEC-Q100 Grade 3)
- Integrated 4 x Arm Cortex-A35 Cores Up to 1.2 GHz
- 1 x Arm Cortex-M4F Core Up to 264 MHz

#### Graphics

- Processor-integrated GPU-1 x GC7000Lite with 4 x Vec4 shader cores

#### Memory

- 1x On-board LPDDR4 4 GB

#### Sensor

- Built-in Accelerometer, Gyroscope, and Magnetic Sensor

#### Watchdog

- 1 ~ 255 Level Reset

### LCD

#### Size

- 10.1"

#### Resolution

- 1280 x 800

#### Brightness (Typ.)

- 1000 nits

#### Contrast Ratio (Typ.)

- 800:1

#### Viewing Angle (H/V)

- 178/178

#### Lifetime (hrs)

- 50000

### Touch

#### Touch Type

- PCT w/ AG and AF treatment

#### Bonding

- Air Bonding(option Optical Bonding)

#### Impact Protection Ratings

- IK08

### Interface

#### Audio

- 1 x Line-out, 1 x Mic-in

#### Ethernet

- 2 x GbE

#### CAN

- 3 x CAN-FD (optional)

#### USB

- 2 x USB 3.2 Gen 2

#### DIO

- 8 x DI (DC 5-60V), 8 x DO (DC 5V/100mA) (optional)

#### COM

- 1 x RS-232/422/485

- 1 x RS-232

#### Mgmt. Port

- 1 x USB Type-C for FW update

### Internal Expansion

#### M.2

- 1 x M.2 3042/3052 Key B for WWAN w/ Nano SIM Suppot
- 1 x M.2 2242 Key B for GPS
- 1 x M.2 2230 Key E for Wi-Fi

### Storage

#### Type

- Onboard eMMC 5.1 32 GB
- 1 x Micro SD Slot

### Power

#### Power Input

- DC 9-60V (nominal power input DC 12V/24V/48V)

#### Power Protection

- OCP, OVP, surge protection, reversed polarity protection

#### Power Management

- Ignition detection, Smart Power Management

### Software

#### Operating System

- Yocto Linux

### Environmental

#### Operating Temp.

- -30 ~ 70°C (-22°F ~ 158°F), ambient w/ air flow 0.6m/s airflow

#### Storage Temp.

- -40°C ~ 80°C (-40°F ~ 176°F)

#### Relative Humidity

- 10% RH ~ 90% RH (non-condensing)

#### Vibration

- IEC 60068-2-64, random, 2.5G@5~500Hz, 1hr/axis
- MIL-STD-810H, Method 514.8, Procedure I, Category 4

#### Shock

- MIL-STD-810H, Method 516.8, Procedure I, trucks and semi-trailers=15G (11ms)

### Certification / Compliance

- CE, FCC Class A, UKCA

### Mechanical

#### Antenna

- 6 x SMA connector mounting hole

#### Mounting

- VESA/Wall mounting

#### Cutout Dimensions (L x W)

- 251.5 x 169.5 mm (9.90 x 6.67 in.)

#### Net Weight

- 2.08 kg (4.59 lb)

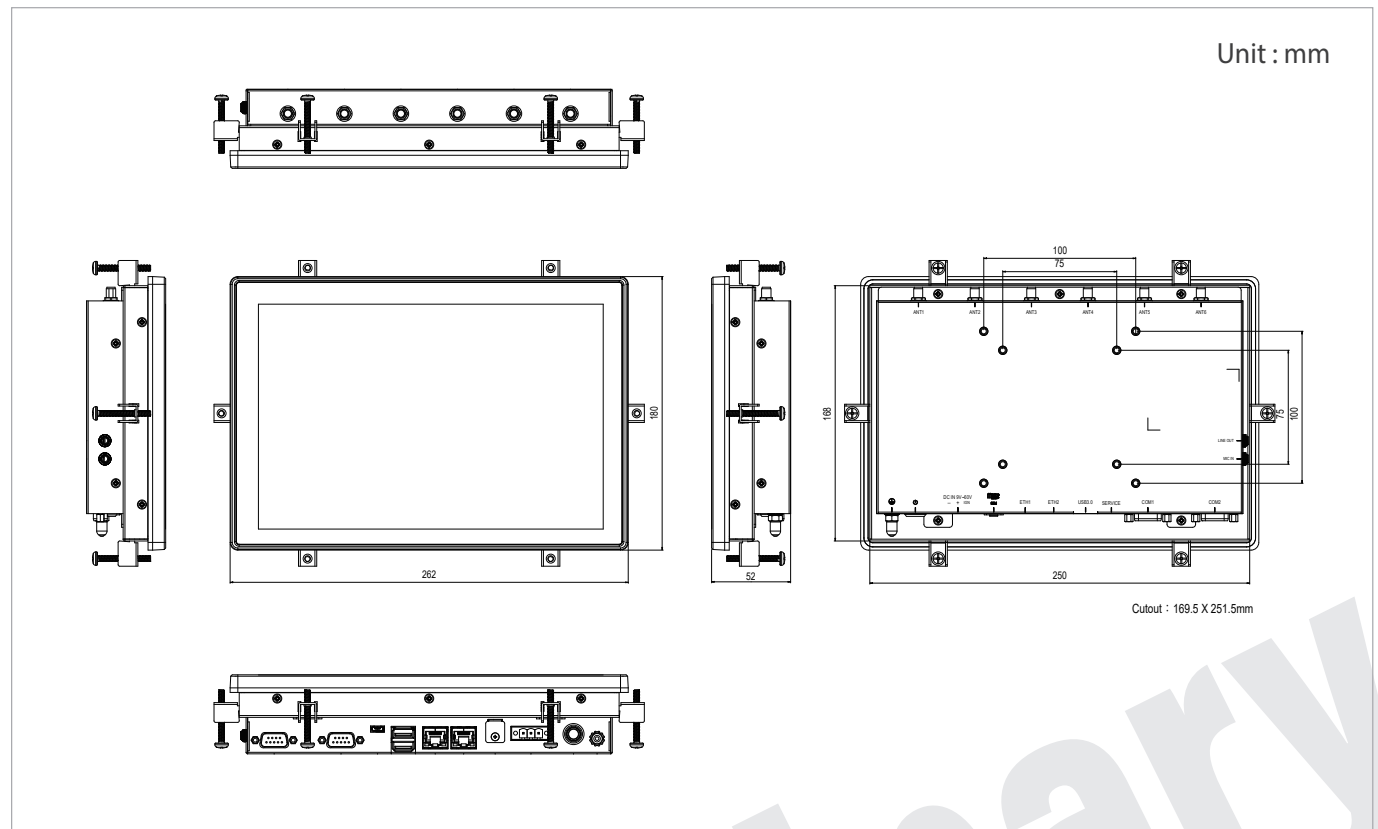
#### Dimensions (L x W x H)

- 262 x 180 x 52mm (10.31 x 7.09 x 2.05 in.)

#### Ingress Protection

- Front Frame IP66

## Dimensions



## Ordering Information

|                 |                                                                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model Number    | VPC-101RA1S-(OB)<br>OB=Optical Bonding                                                                                                                     |
| Description     | 10.1", 1280x800, 1000nits, PCT, NXP i.MX 8QuadXPlus Automotive-Grade SoC / Onbaord LPDDR4 4GB / Onboard eMMC 5.1 32GB / 2 x GbE / 2 x RS-232 / 2 x USB 3.2 |
| State of Origin | Made in Taiwan                                                                                                                                             |

## Optional Accessories

|               |                                               |
|---------------|-----------------------------------------------|
| Wi-Fi         | M.2 2230 Key A-E Wi-Fi module, -40°C ~ 85°C   |
| WWAN          | M.2 3042/3052 Key B WWAN module, -40°C ~ 85°C |
| GNSS          | M.2 2242 Key B GNSS module, -40°C ~ 85°C      |
| Power Adapter | AC/DC 100-240V/12V 60W C14 power adapter      |

All specifications are subject to change without notice.