NEXAIOT

NexAIoT Co., Ltd.

IoT Automation Solutions Business Group
Applied Panel Display
APPD xx00-1/-2
User Manual

www.nexaiot.com

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PREFACE

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Acknowledgements

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Regulatory Compliance Statements

This section provides the FCC compliance statement for Class B devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

This equipment has been tested and verified to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance

NexAIoT RoHS Environmental Policy and Status Update

NexAIoT is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NexAIoT has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard NexAIoT development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NexAIoT are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NexAIoT RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual NexAIoT naming convention.

Warranty and RMA

NexAIoT Warranty Period

1. NexAIoT makes products in accordance with the Industry standard and, NexAIoT warrants that all her Industry-grade IPC and System products will be free from defect in neither material nor workmanship for twenty-four (24) months from the day of invoice issued.

2. For NexAIoT Panel PC product lines (the APPC, MPPC series), they are also guaranteed against defect in materials and workmanship for the period of twenty-four (24) months in their motherboard design. For 3rd party parts, it follows with original suppliers' standard: 12 months for battery pack and LCD, 24 months for adapter / add on modules (including GSM module, RFID module, and antenna).

3. If NexAIoT determines customer's warranty claim is valid, NexAIoT will repair or replace product(s) without additional charge for parts and labor. An extended Warranty Program will extend the warranty period of the product accordingly.

Warranty Coverage

The warranty applies only to products manufactured or distributed by NexAIoT and her subsidiaries. This warranty covers all the products/shipments except for:

1. Any claimed defect, products that have been repaired or modified by persons who have not been authorized by NexAIoT or, products which have been subjected to misuse, abuse, accident, improper installation, or usage not in accordance with the product instruction. NexAIoT assumes no liability as a consequence of such events under the term of this warranty.

One example is the replacement of Tablet's or Hand-held's LCD display due to scratching stains or other degradation; these will not be covered under this warranty.

2. Damages caused by customers' delivery/shipping of the product or, product failure resulted from electrical power/voltage shock, or, installation of parts/components which are not supplied/approved by NexAIoT in advance.

3. Third-party products:

   a. Software, such as the device drivers,

   b. External devices such as HDD, printer, scanner, mouse, LCD panel, battery, and so on,

   c. Accessory/parts that were not approved by NexAIoT and,

   d. Accessory/parts were added to products after they were shipped from NexAIoT.

Product will be treated as "Out of Warranty " if:

a. It expires the warranted 24 months period from the day it was purchased.

b. It had been altered by persons other than an authorized NexAIoT service person or, which have been subjected to misuse, abuse, accident, or improper installation.

c. It doesn't have the original NexAIoT Serial Number labeling for NexAIoT's warranty period identification or, tracking.

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RMA that NexAIoT has determined not to be covered by the warranty will be charged the NexAIoT Standard Repair Fee for the repairing. If a RMA is determined to be not repairable, customer will be notified and product(s) may be returned to customer at their request; a minimum service fee may be charged however.

NexAIoT Return Merchandise Authorization (RMA) Procedure

For the RMA (Return Merchandise Authorization) shipment, customer is responsible for packaging and shipping the product to the designated NexAIoT service sites, with shipping charges prepaid by the customer. The original NexAIoT shipping box should be used whenever possible. NexAIoT shall pay for the return of the product to the customer's location. In case of expedited shipping request, an extra service charge shall be assessed and the customer is responsible for this extra return shipping charge.

1. Customers should enclose the "NexAIoT RMA Service Form" with the returned products.

2. Customers need to write down all the information related to the problem on the " NexAIoT RMA Service Form " when applying for the RMA service; information will help to understand the problem, including the fault description, on-screen messages, and pictures if possible.

3. Customers could send back the faulty product with or without the accessories and key parts such as the CPU and DIMM. If the key parts are included, please be noted clearly within the return form. NexAIoT takes no responsibility for the parts which are not listed in the return form.

4. Customers hold the responsibility to ensure that the packing of defective products is durable enough to be resistant against further damage due to the transportation; damage caused by transportation is treated as " Out of Warranty " under our Warranty specification.

5. RMA product(s) returned by NexAIoT to any location other than the customer registered delivery address will incur an extra shipping charge, the customer is responsible for paying the extra shipping charges, duties, and taxes of this shipment.

Product Repairing

1. NexAIoT will repair defective products covered under this limited warranty that are returned to NexAIoT; if products do prove to be defective, they will be repaired during their warranty period unless other warranty terms have been specified.

2. NexAIoT owns all parts removed from repaired products.

3. NexAIoT will use parts made by various manufacturers in performing the repair.

4. The repaired products will be warranted subjected to the original warranty coverage and period only.

5. For products returned as defective but, proved to be no defect/fault after the RMA process, NexAIoT reserves the right to claim for a NDF (No Defect Found) Service Charge.

6. NexAIoT will issue RMA Report which included Repair Detailed Information to the customer when the defective products were repaired and returned.

7. In addition to the above, NexAIoT may authorize Independent/Third-party suppliers to repair the defective products for NexAIoT.

Out Of Warranty Service

There will be a service charge from NexAIoT for the "Out Of Warranty" product service; they are the Basic Diagnostic Service Fee and the Advanced Component Replacement Fee respectively. And, if the product can not be repaired, NexAIoT will either return the product to the customer or, just scrap it, followed by customer's instruction.

1. Testing and Parts Replacement

    NexAIoT will have the following Handling Charges for those OoW products that returned:

    a. Basic Labor Cost and Testing Fee: as Table listed.

    b. Parts Fee: NexAIoT will charge for main IC chipsets such as the N.B., S.B., Super-IO, LAN, Sound, Memory, and so on.

    c. 3rd-party Device Fee: products replacement for CPU, DIMM, HDD, Chassis, and UPS.

2. Out of Warranty product will have a three months warranty for the fixed issues. If the product failed with different problem within 3 months, they will still incur the service charge of "Out of Warranty".

3. Out of Warranty "products will not be repaired without a signed PI from the customer, the agreement of the repair process.

    Add-on card, 3rd Party Device and board level repair cost higher than new product prices, customer can abandon to sign PI to repair and, please contact with sales to buy new products.

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Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.

- Do not place the unit on an unstable surface, cart, or stand.

- Follow all warnings and cautions in this manual.

- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.

- Avoid using the system near water, in direct sunlight, or near a heating device.

- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver

- A flat-tipped screwdriver

- A grounding strap

- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.

2. Keep this User Manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.

4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.

7. The openings on the enclosure are for air convection to protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Place the power cord in a way so that people will not step on it. Do not place anything on top of the power cord. Use a power cord that has been approved for use with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well, or you cannot get it to work according to the user's manual.
    e. The equipment has been dropped and damaged.
    f. The equipment has obvious signs of breakage.

15. Do not place heavy objects on the equipment.

16. The unit uses a three-wire ground cable which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.

17. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

Technical Support and Assistance

1. For the most updated information of NexAIoT products, visit NexAIoT's website at www.nexaiot.com.

2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
   – Product name and serial number
   – Detailed information of the peripheral devices
   – Detailed information of the installed software (operating system, version, application software, etc.)
   – A complete description of the problem
   – The exact wordings of the error messages

Warning!
1. Handling the unit: carry the unit with both hands and handle it with care.

2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

Conventions Used in this Manual

Warning:
Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.

Caution:
Information to avoid damaging components or losing data.

Note:
Provides additional information to complete a task easily.

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Package Contents

Refer to the items listed in the table below for the package contents. The package contents may vary depending on your country region, some items may be optional. Please contact your local distributor for more information.

Item	Description	Qty
1	USB Touch Cable (1.8m)	1
2	VGA Cable (1.8m)	1
3	Terminal blocks 3-pin Phoenix Contact Plug	1
4	Panel Mounting Kit	12
5	Touch Pen	1
6	Serial Cable (1.8m)	1

Panel Mount Kit

Touch Pen

Terminal blocks
3-pin Phoenix
Contact Plug

Serial Cable

VGA Cable

USB Cable

Ordering Information

The following provides ordering information for the Applied Panel Display series.

Barebone

- **APPD 1200-1 (P/N: 10IA0120000X0)**
  12.1" XGA industrial 4:3 TFT LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 24VDC input, RS-232, and USB touch screen interfacess

- **APPD 1500-1 (P/N: 10IA0150000X0)**
  15" XGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and display port, 24VDC input, RS232, and USB touch screen interfaces

- **APPD 1700-1 (P/N: 10IA0170000X0)**
  17" SXGA industrial 4:3 LCD flush touch monitor with VGA, DVI-D and DisplayPort, 24VDC input, RS-232, and USB touch screen

- **APPD 1900-1 (P/N: 10IA0190000X0)**
  19" SXGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 24VDC input, RS232, and USB touch screen interfaces

- **APPD 1200-2 (P/N: 10IA0120001X0)**
  12.1" XGA industrial 4:3 TFT LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 24VDC input, RS-232, and USB touch screen interface

- **APPD 1500-2 (P/N: 10IA0150001X0)**
  15" XGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and display port, 24VDC input, RS-232, and USB touch screen interface

- **APPD 1600-2 (P/N: 10IA0160000X0)**
  15.6" FHD industrial 16:9 LED backlight flush touch monitor with VGA, DVI-D and display port, 24VDC input, USB touch screen interface

- **APPD 1700-2 (P/N: 10IA0170001X0)**
  17" SXGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and display port, 24VDC input, RS-232, and USB touch screen interface

- **APPD 1900-2 (P/N: 10IA0190001X0)**
  19" SXGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and display port, 24VDC input, RS-232, and USB touch screen interface

- **APPD 2100-2 (P/N: 10IA0210000X0)**
  21.5" FHD industrial 16:9 LED backlight flush touch monitor with VGA,
  DVI-D and display port, 24VDC input, USB touch screen interface

Optional
- **24V, 60W AC/DC power adapter w/o power cord
  (P/N: 7400060054X00)**

- **1.8m DVI-D male to DVI-D male cable (P/N: 603DVI0007X00)**

CHAPTER 1: PRODUCT INTRODUCTION

The images shown in this chapter are examples for reference. Please refer to the mechanical engineering drawings for the final appearance.

Overview

APPD 1200-1

Key Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 1500-1

Key Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 1700-1

Key Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

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APPD 1900-1

Key Features

- IP65 compliant plastic front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS232 and USB (optional)

- Ultra slim in depth
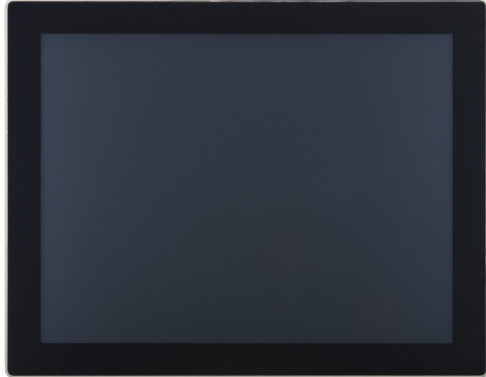
- Multiple mounting way for easy integration

APPD 1200-2

Key Features

▪ IP65 compliant aluminum front bezel with flush panel by 5-wire touch screen

▪ Triple display input interface: analog VGA/DVI-D/DisplayPort

▪ Shares identical appearance with APPC series

▪ Dual touch screen interface: RS-232 and USB (optional)

▪ Ultra slim in depth

▪ Multiple mounting way for easy integration

APPD 1500-2

Key Features

- IP65 compliant aluminum front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS-232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 1600-2

Key Features

- IP65 compliant aluminum front bezel with zero bezel flush front design

- 7H Hardness 10 points P-Cap multi-touch

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 1700-2

Key Features

- IP65 compliant aluminum front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS-232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 1900-2

Key Features

- IP65 compliant aluminum front bezel with flush panel by 5-wire touch screen

- Triple display input interface: analog VGA/DVI-D/DisplayPort

- Shares identical appearance with APPC series

- Dual touch screen interface: RS-232 and USB (optional)

- Ultra slim in depth

- Multiple mounting way for easy integration

APPD 2100-2

Key Features

▪ IP65 compliant aluminum front bezel with zero bezel flush front design

▪ 7H Hardness 10 points P-Cap multi-touch

▪ Triple display input interface: analog VGA/DVI-D/DisplayPort

▪ Shares identical appearance with APPC series

▪ Ultra slim in depth

▪ Multiple mounting way for easy integration

Specifications

APPD 1200-1

Panel

- LCD size: 12.1", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 500cd/m2
- Contrast ratio: 700
- LCD color: 16.7M
- Viewing angle: 70 (U), 70 (D), 80 (L), 80 (R)
- Backlight: LED

Touch Screen

- 5-Wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB and RS232 (optional)

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9)/USB type A
- Video port: VGA (1 x DB15)/DVI-D (1 x DVI-I connector)/DisplayPort
- DC power input connector: 3-pin Phoenix terminal Blocks

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24VDC ±20%
  - Optional 24V, 60W AC/DC power adapter w/o power cord limits to be at 90% RH at max 50°C
- Vibration
  - IEC 68 2-64
  - 2Grms @ sine, 5~500Hz, 1hr/axis (operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr /axis (nonoperating)
- Shock:
  - IEC 68 2-27
  - 20G@wall mount, half sine, 11ms
  - Operating temperature: -20°C~60°C
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90% relative humidity, non condensing limits to be at 90% RH at max 50°C
- Dimension: 317 x 243 x 53.5mm
- Weight: 2.8 kg

Certifications

- CE approval
- FCC Class B

APPD 1500-1

Panel

- LCD size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 400cd/m2
- Contrast ratio: 2500
- LCD color: 16.7M
- Viewing angle: 88 (U), 88 (D), 88 (L), 88 (R)
- Backlight: LED

Touch Screen

- 5-Wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB and RS232 (optional)

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9)/USB type A
- Video port: VGA (1 x DB15)/DVI-D (1 x DVI-I connector)/DisplayPort
- DC power input connector: 3-pin Phoenix terminal blocks

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24VDC ±20%
  - Optional 24V, 60W AC/DC power adapter w/o power cord
- Vibration
  - IEC 68 2-64
  - 2Grms @ sine, 5~500Hz, 1hr/axis (operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - 20G@wall mount, half sine, 11ms
  - Operating temperature: -20°C~60°C
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90% relative humidity, non-condensing limits to be at 90% RH at max 50°C
- Dimension: 384.25 x 309.83 x 53.2mm
- Weight: 3.9 kg

Certifications

- CE approval
- FCC Class B

APPD 1700-1

Panel

- LCD size: 17", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 350cd/m2
- Contrast ratio: 800
- LCD color: 16.7M
- Viewing angle: 60 (U), 80 (D), 80 (L), 80 (R)
- Backlight: LED

Touch Screen

- 5-Wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB and RS232 (optional)

Rear I/O

- Touch interface port: RS232 (1 x DB9)/USB type A
- Video port: VGA (1 x DB15)/DVI-D (1 x DVI-I connector)/DisplayPort
- DC power input connector: 3-pin Phoenix terminal blocks

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24VDC ±20%
  - Optional 24V, 60W AC/DC power adapter w/o power cord
- Vibration
  - IEC 68 2-64
  - 2Grms @ sine, 5~500Hz, 1hr/axis (operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - 20G@wall mount, half sine, 11ms
  - Operating temperature: -20°C~60°C
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90% relative humidity, non-condensing limits to be at 90% RH at max 50°C
- Dimension: 410.42 x 340.31 x 55.9mm
- Weight: 4.8 kg

Certifications

- CE approval
- FCC Class B

APPD 1900-1

Panel

- LCD size: 19", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 350cd/m2
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing angle: 80 (U), 80 (D), 85 (L), 85 (R)
- Backlight: LED

Touch Screen

- 5-Wire resistive (flush panel type)
- Light transmission: 81%
- Touch interface: USB and RS232

Rear I/O

- Touch interface port: RS-232 (1 x DB9)/USB type A
- Video port: VGA (1 x DB15)/DVI-D (1 x DVI-I connector)/DisplayPort
- DC power input connector: 3-pin Phoenix terminal blocks

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24VDC ±20%
  - Optional 24V, 60W AC/DC power adapter w/o power cord
- Vibration
  - IEC 68 2-64
  - 2Grms @ sine, 5~500Hz, 1hr/axis (operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - 20G@wall mount, half sine, 11ms
  - Operating temperature: -20°C~60°C
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90% relative humidity, non-condensing limits to be at 90% RH at max 50°C
- Dimension: 457.64 x 379.24 x 51.25mm
- Weight: 5.5 kg

Certifications

- CE approval
- FCC Class B

APPD 1200-2

Panel

- LCD size: 12.1", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 500cd/m²
- Contrast ratio: 1200:1
- LCD Color: 16.7M
- Viewing angle: 88 (U), 88 (D), 88 (L), 88 (R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 78%
- Interface: USB

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9) / USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone 400C\RAL 090 80 10 aluminum front bezel and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (operating), IEC60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing (limits to be at 90% RH at max 50°C)
- Dimension: 291.7mm x 230.2mm x 55.35mm
- Weight: 2.7Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

APPD 1500-2

Panel

- LCD size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 350cd/m²
- Contrast ratio: 1000:1
- LCD Color: 16.7M
- Viewing angle: 89 (U), 89 (D), 89 (L), 89 (R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9) / USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone 400C\RAL 090 80 10 aluminum front bezel and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (operating), IEC60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing (limits to be at 90% RH at max 50°C)
- Dimension: 358.1mm x 281.1mm x 55.35mm
- Weight: 3.7Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

APPD 1600-2

Panel

- LCD size: 15.6", 16:9
- Resolution: FHD 1920 x 1080
- Luminance: 400cd/m²
- Contrast ratio: 3000:1
- LCD Color: 16.7M
- Viewing angle: 89 (U), 89 (D), 89 (L), 89 (R)
- Backlight: LED

Touch Screen

- Ten points P-Cap (projected capacitive touch)
- Touch light transmission: 85%
- Anti-scratch surface: 7H hardness
- Touch interface: USB

Rear I/O

- Touch screen interface port: USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Black silver
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (operating), IEC 60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing
- Dimension: 388.1mm x 245.3mm x 51.8mm
- Weight: 3.8Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

APPD 1700-2

Panel

- LCD size: 17", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 400cd/m²
- Contrast ratio: 1000:1
- LCD Color: 16.7M
- Viewing angle: 80 (U), 80 (D), 85 (L), 85 (R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 78%
- Interface: USB

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9) / USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone 400C\RAL 090 80 10 aluminum front bezel and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (operating), IEC60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing (limits to be at 90% RH at max 50°C)
- Dimension: 391.8mm x 325.6mm x 56.65mm
- Weight: 4.5Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

APPD 1900-2

Panel

- LCD size: 19", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 350cd/m²
- Contrast ratio: 1000:1
- LCD Color: 16.7M
- Viewing angle: 80 (U), 80 (D), 85 (L), 85 (R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

Rear I/O

- Touch screen interface port: RS-232 (1 x DB9) / USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Pantone 400C\RAL 090 80 10 aluminum front bezel and black silver chassis box
- IP protection: IP65 front

- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (Panel Mounting operating), IEC60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (Panel Mounting operating), IEC 60068-2-64
  - 1G@sine, 5~500Hz, 1hr/axis (VESA Mounting operating), IEC 60068-2-64
  - 1Grms@random condition, 5~500Hz, 0.5hr/axis (VESA Mounting operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing (limits to be at 90% RH at max 50°C)
- Dimension: 425.4mm x 350mm x 53.1mm
- Weight: 5.1Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

APPD 2100-2

Panel

- LCD size: 21.5", 16:9
- Resolution: FHD 1920 x 1080
- Luminance: 500cd/m²
- Contrast ratio: 1000:1
- LCD Color: 16.7M
- Viewing angle: 89 (U), 89 (D), 89 (L), 89 (R)
- Backlight: LED

Touch Screen

- Ten points P-Cap (projected capacitive touch)
- Touch light transmission: 85%
- Anti-scratch surface: 7H hardness
- Touch interface: USB

Rear I/O

- Touch screen interface port: USB Type-A
- Video port: VGA (1 x DB15) / DVI-D (1 x DVI-I connector) /DisplayPort
- DC power input connector: 3-pin Phoenix terminal block

OSD Function

- OSD keypad

Mechanical & Environment

- Color: Black silver
- IP protection: IP65 front

- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 24V DC ± 20%
  - Power adapter: optional AC/DC power adapter (24V DC, 60W)
- Vibration:
  - 2G@sine, 5~500Hz, 1hr/axis (Panel Mounting operating), IEC 60068-2-64
  - 2Grms@random condition, 5~500Hz, 0.5hr/axis (Panel Mounting operating), IEC 60068-2-64
  - 1G@sine, 5~500Hz, 1hr/axis (VESA Mounting operating), IEC 60068-2-64
  - 1Grms@random condition, 5~500Hz, 0.5hr/axis (VESA Mounting operating), IEC 60068-2-64
- Shock:
  - 20G@wall mount, half sine, 11ms (operating), IEC 60068-2-27
- Temperature:
  - Operating temperature: 0°C~50° (Ambient with air flow)
  - Storage temperature: -20°C~75°C
- Operating humidity: 10%~90%, non-condensing (limits to be at 90%RH at max 40°C; limits to be at 44% RH at max 50°C)
- Dimension: 524.9mm x 321.2mm x 54.8mm
- Weight: 6.3Kg

Certifications

- CE approval (EN 55032, EN 55035)
- FCC Class A

Knowing Your APPD Series

Rear View

1 **LED**

Display the power status of the display. Green LED indicates the display is switched on, if the display is not connected to a computer, the LED will flash red.

2 **Power Switch**

Press to power-on or power-off the display.

3 ◀|▼

Press to move the selection down, back to previous, or decrease the value.

4 **MENU (for OSD)**

Press to enable the OSD menu or confirm the selection in the OSD menu.

5 ▶|▲

Press to move the selection up, go to next, or increase the value.

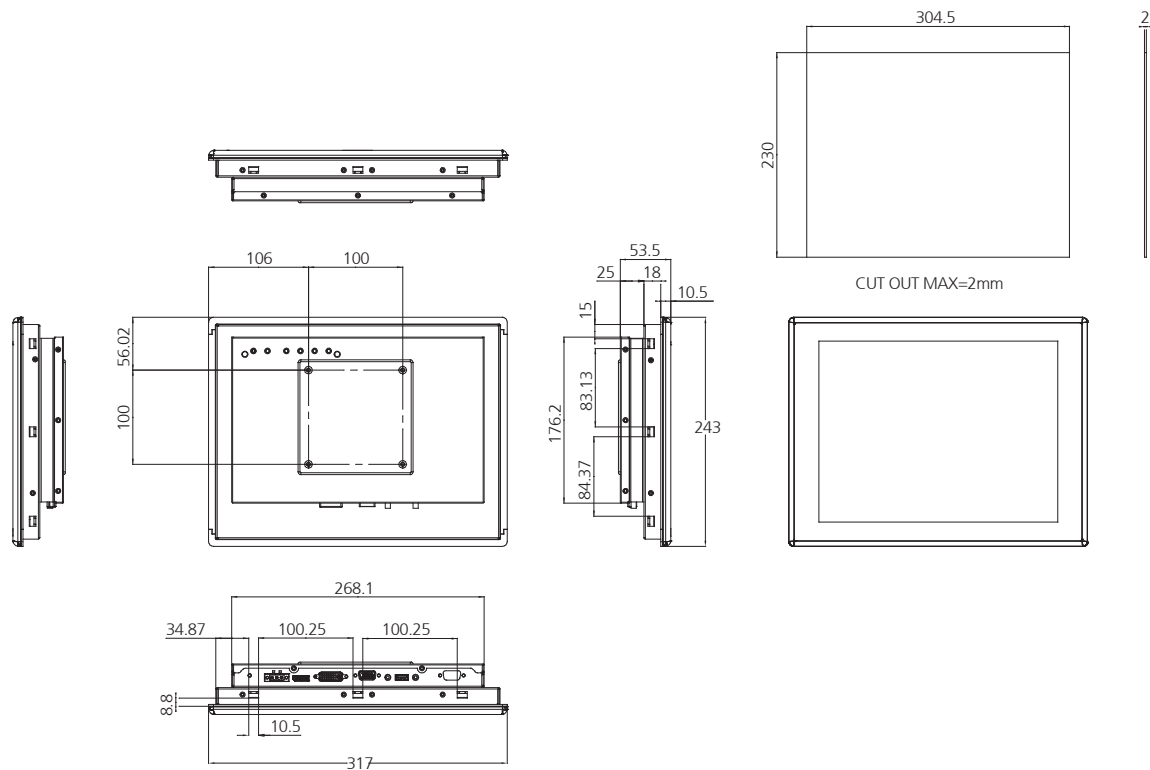**6** **AUTO|EXIT**

Press to exit the OSD menu, or return to main menu.

The image shown above is an example of the APPD 1900-1 rear view. The rear view of other products within the same series is similar.

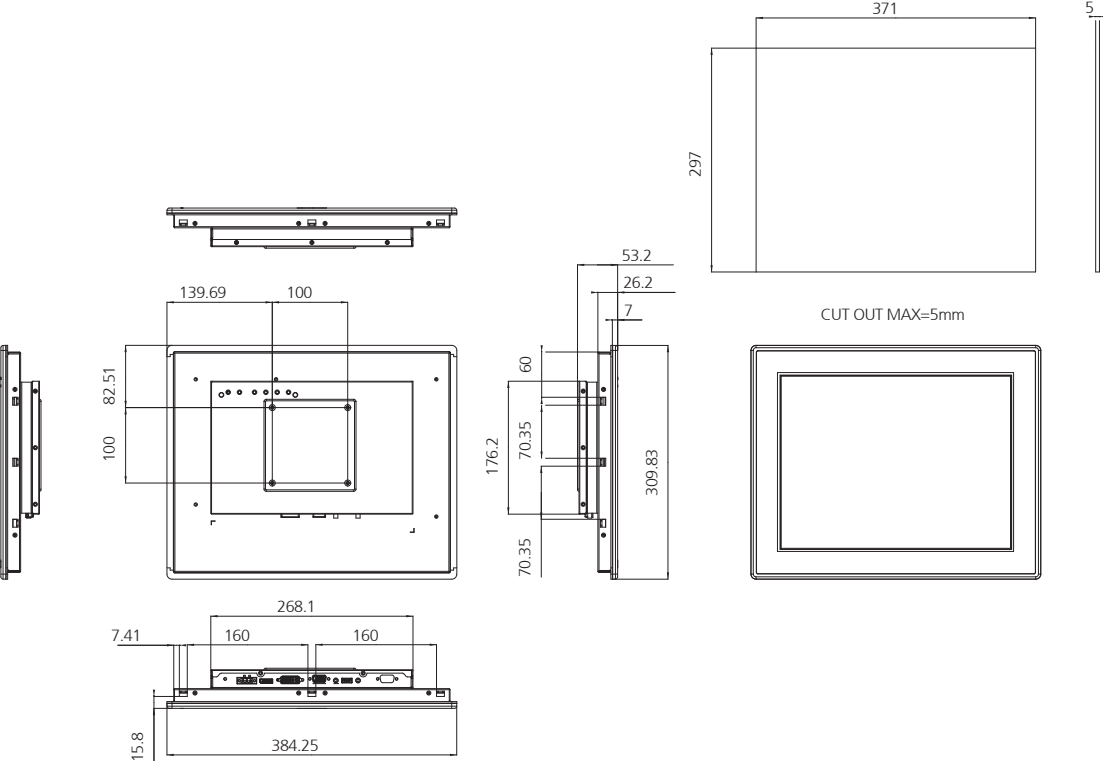The OSD will exit automatically if there is no activity in 5 seconds. This timer can be adjusted in OSD menu (Default: On, 5 seconds).

Rear Bottom View
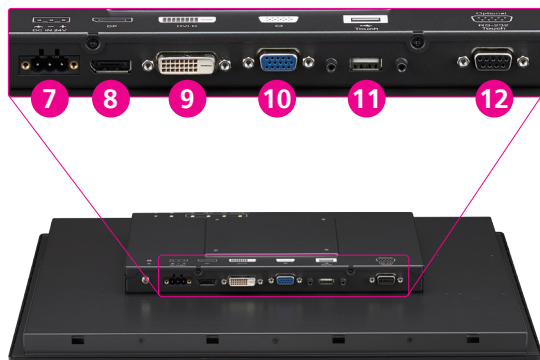
7 **24V DC +-20% Input**
Terminal block socket used to plug a DC power cord.

8 **DisplayPort**
Used to connect a monitor with a DisplayPort connector.

9 **DVI Port (DVI-D)**
Used to connect a monitor with a DVI connector. Note that only digital signals connector (DVI-D) can be supported.

10 **VGA Port (DB-15)**
Used to connect an analog VGA monitor.

11 **Touchscreen USB Port (Optional)**
This USB port must be connected to the USB port of the PC. The touchscreen cable is included in the accessory box.

12 **Touchscreen COM Port (Optional)**
This COM port must be connected to the COM (RS-232) port of the PC. The touchscreen cable is included in the accessory box.

The image shown above is an example of the APPD 1900-1 rear view. The rear view of other products within the same series is similar.

Avoid simultaneous connection of USB and COM ports, as the touchscreen interface supports only one connection at a time. Choose one connector for touchscreen functionality.

Mechanical Dimensions

APPD 1200-1

CUT OUT MAX=2mm

APPD 1500-1

CUT OUT MAX=5mm

APPD 1700-1

CUT OUT MAX=5mm

APPD 1900-1

436

3

366

CUT OUT MAX=3mm

51.25

27 24.25

6

176.22 100

118.75

100

52.9

111.52

176.2

112.52

379.24

268.1

104.5 97.35 104.5

41.49

15

10.5

457.64

APPD 1200-2

CUT OUT SIZE MAX T=3.0mm

APPD 1500-2

CUT OUT SIZE MAX T=3.0mm

APPD 1600-2

CUT OUT SIZE MAX T=2.0mm

APPD 1700-2

CUT OUT SIZE MAX T=3.0mm

APPD 1900-2

CUT OUT SIZE MAX T=3.0mm

APPD 2100-2

508.8
268.1
13.3
54.05
91.08 91.08 91.08 91.08
10.5

476.06
524.9
Active Area(524.9x267.78)
321.2
267.78
546.2
(24.5")

54.8
27.8
3.8
176.2
305.8

209.95   100
92.24
100
4-M4

527.4
-2
270.3

CUT OUT SIZE MAX T=3.0mm

CHAPTER 2: CONNECTOR PIN DEFINITIONS

External I/O Interfaces

12V-24V DC Power Input

Connector type: Phoenix Contact 1x3 3-pin terminal block
Connector location: J6
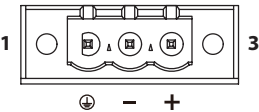
Pin	Definition
1	GND
2	-
3	+

DisplayPort

Connector type: DisplayPort
Connector location: J3
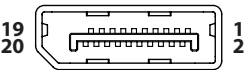
Pin	Definition	Pin	Definition
1	LANE0_P	2	GND
3	LANE0_N	4	LANE1_P
5	GND	6	LANE1_N
7	LANE2_P	8	GND
9	LANE2_N	10	LANE3_P
11	GND	12	LANE3_N
13	GND	14	GND
15	AUX_CH_P	16	GND
17	AUX_CH_N	18	HPD
19	DP POWER RETURN	20	DP_PWR

VGA Port

Connector type: DB-15 port, 15-pin D-Sub
Connector location: J2
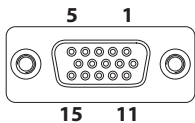
Pin	Definition	Pin	Definition
1	RED	2	GREEN
3	BLUE	4	GND
5	DET_VGA	6	RGND
7	GGND	8	BGND
9	VGA 5V Input	10	GND
11	GND	12	SDA
13	HSYNC or CSYNC	14	VSYNC
15	SCL		

DVI Port (DVI-D)

Connector type: 24-pin D-Sub, 2.0mm-M-180 (DVI)
Connector location: J4
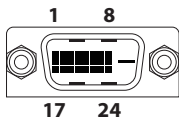
Pin	Definition	Pin	Definition
1	TMDS DATA 2-	2	TMDS DATA 2+
3	SHIELD	4	NC
5	NC	6	DDC CLOCK
7	DDC DATA	8	NC
9	TMDS DATA 1-	10	TMDS DATA 1+
11	SHIELD	12	NC
13	NC	14	+5V
15	GND	16	Hot PLUG DETECT
17	TMDS DATA 0-	18	TMDS DATA 0+
19	SHIELD	20	NC
21	NC	22	SHIELD
23	TMDS CLOCK+	24	TMDS CLOCK-

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COM Port

Connector type: RS-232 (for touch)
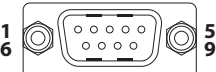
Pin	Definition
1	NC
2	RX
3	TX
4	NC
5	GND
6	NC
7	NC
8	NC
9	GND

USB Port

Connector type: USB port (for touch)
Connector location: J1
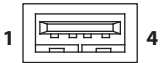
Pin	Definition
1	VCC5
2	DATA_N
3	DATA_P
4	GND

Avoid simultaneous connection of USB and COM ports, as the touchscreen interface supports only one connection at a time. Choose one connector for touchscreen functionality.

CHAPTER 3: MOUNTING INSTRUCTIONS

Panel Mounting

1. Select a place on the panel where you will mount the Industrial Touch Monitor.

2. Cut out a shape on the panel that corresponds to the Industrial Touch Monitor's rear dimensions.

   The thickness of the panel (e.g. steel board, plank, acrylic board, wall, etc.) where you will mount the Industrial Touch Monitor must not exceed 12mm. If the distance between the front bezel and panel mount hole is too wide, it will not fit the panel mount kit.

3. Slide the Industrial Touch Monitor through the hole until it is properly fitted against the panel.

4. Position the mounting clamps along the rear edges of the Industrial Touch Monitor. The first and second clamps must be positioned and secured diagonally prior to mounting the rest of the clamps. Tighten the clamp's screw until it touches the panel.

The Torque value: APPD series: 5.8~6.5 kg-cm

Do not overtighten the screws to prevent damaging the Panel PC.

304.50

230.00

2mm

APPD 1200-1

371.00

297.00

5mm

APPD 1500-1

396.40

5mm

326.40

APPD 1700-1

436.00

3

366.00

APPD 1900-1

279

2

APPD 1200-2

217

345

3

268

APPD 1500-2

375.1

231.4

2

APPD 1600-2

381

314

3

APPD 1700-2

APPD 1900-2
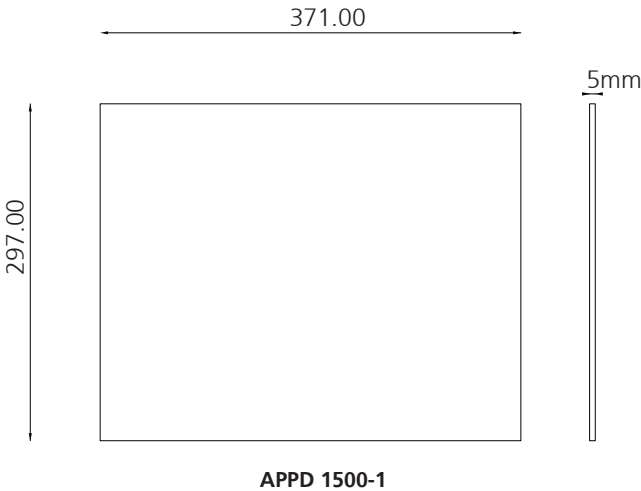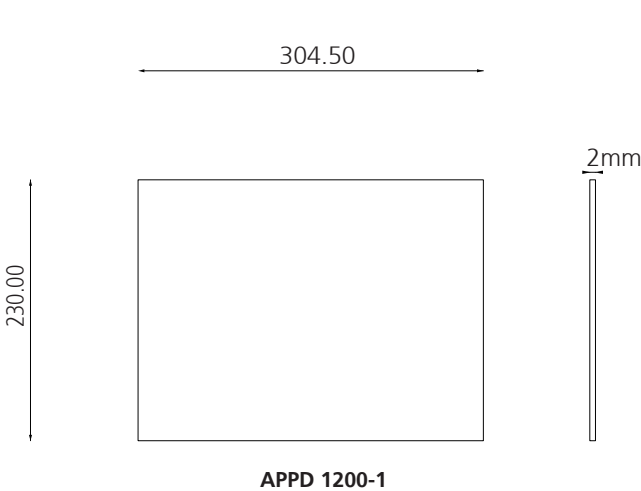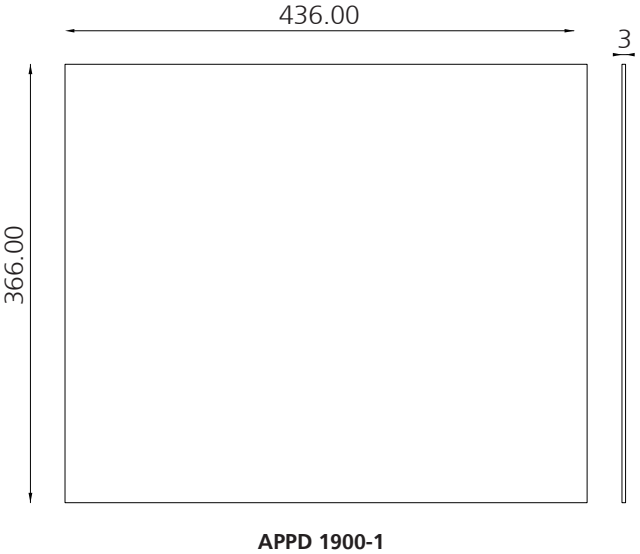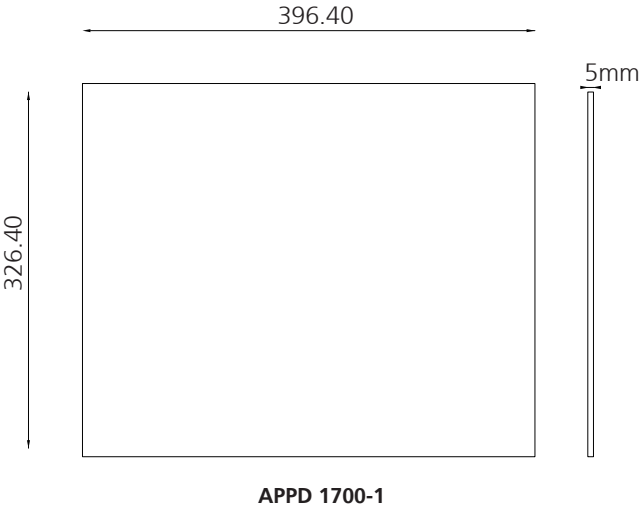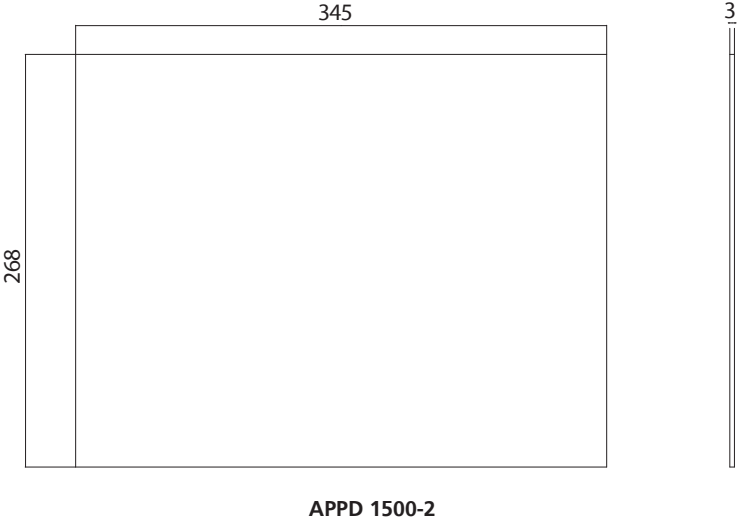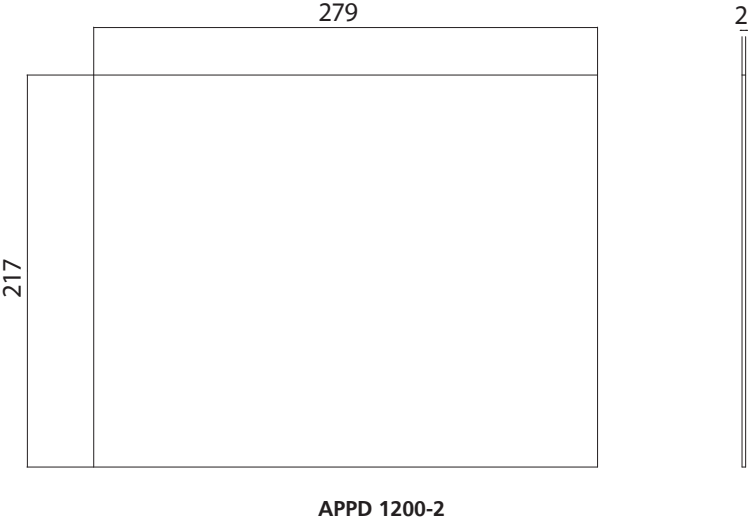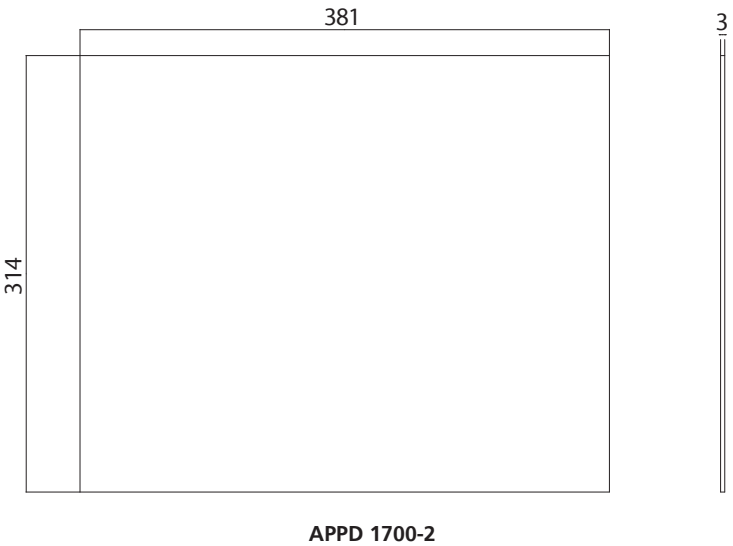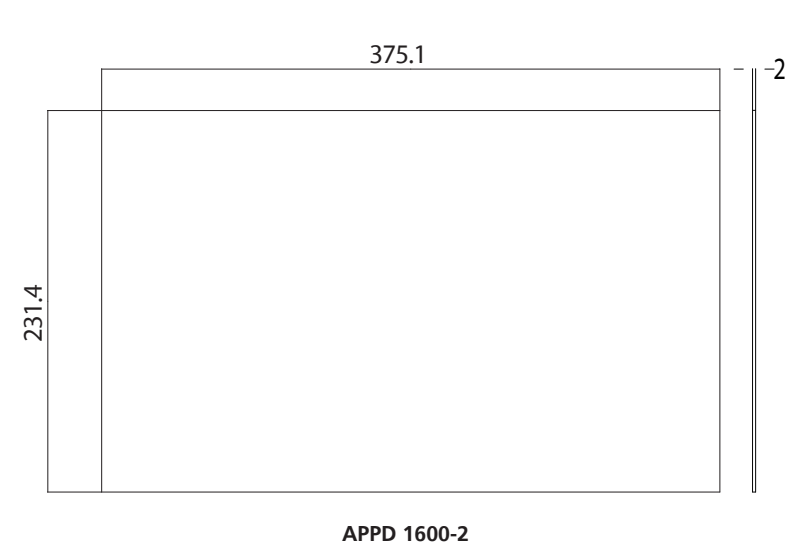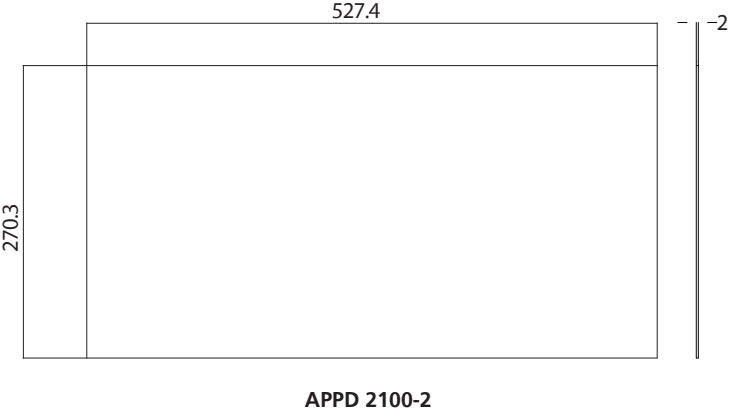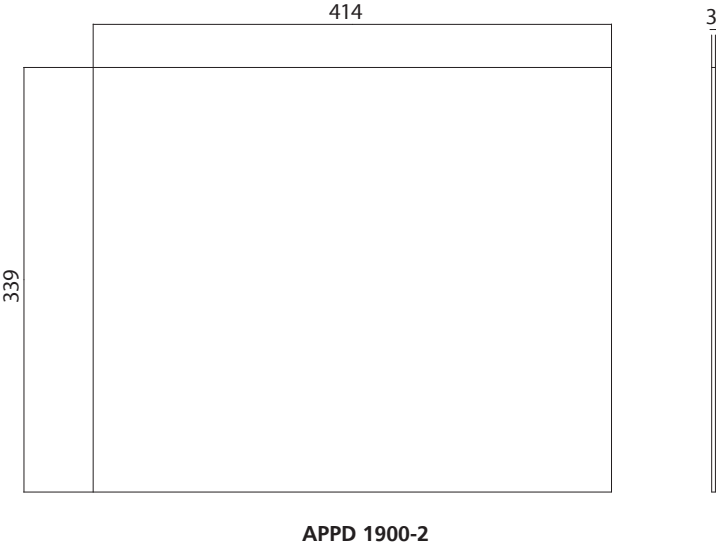
APPD 2100-2

Mounting Hole Locations

All products in this series comply with the VESA specification (100x100mm).

APPD 1200-1

APPD 1500-1
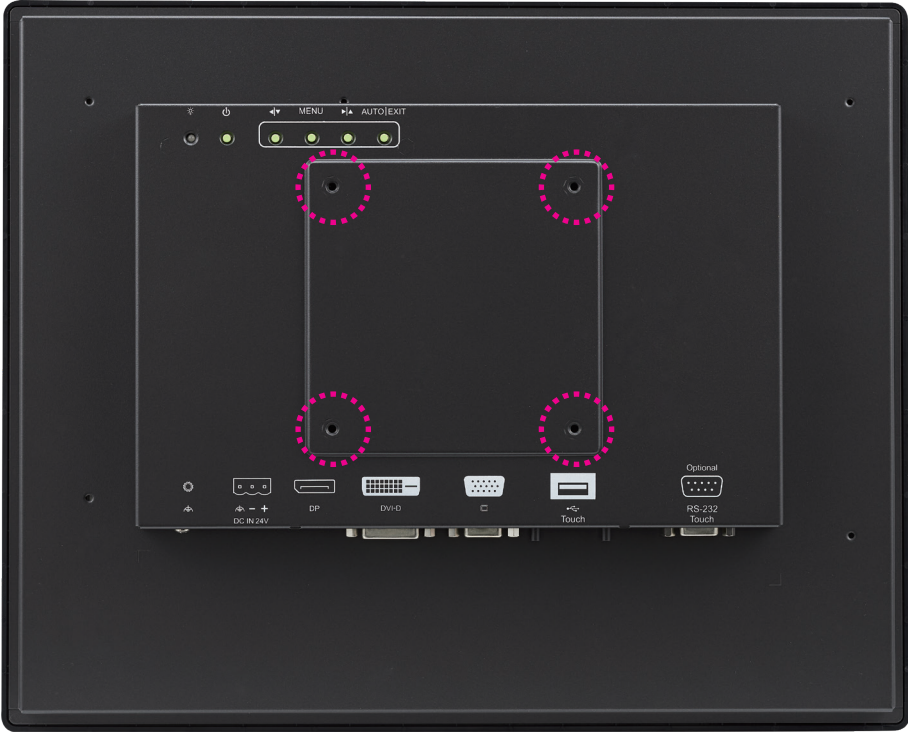
APPD 1700-1

APPD 1900-1

APPD 1200-2

APPD 1500-2

APPD 1600-2

APPD 1700-2

APPD 1900-2

APPD 2100-2
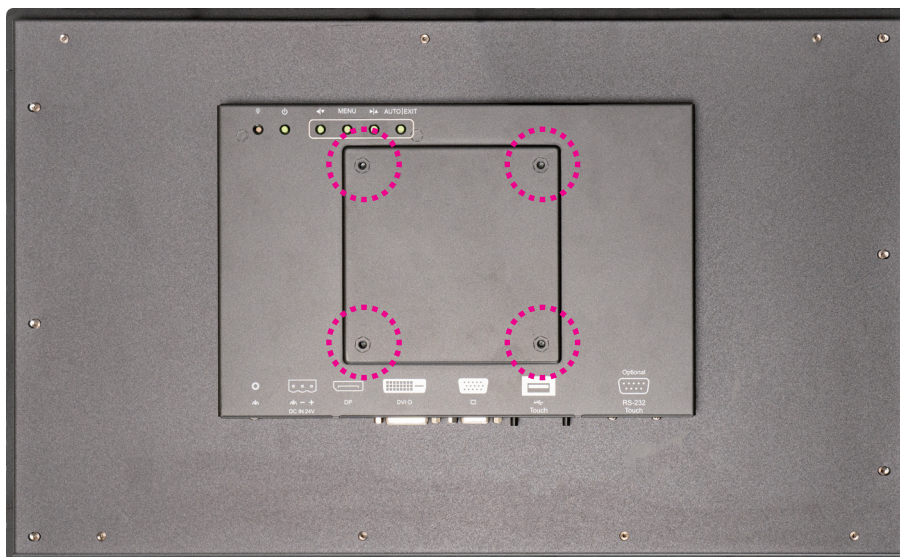
CHAPTER 4: ON-SCREEN DISPLAY MENU

Adjusting the Display

The On-Screen Display (OSD) menu offers various options to customize the display. Consult the following descriptions for detailed configuration instructions.

- Press **MENU** to enable the OSD menu or confirm the selection. The option will be highlighted in red once selected.

- Press ►|▲ to move the selection up, go to next, or increase the value.

- Press ◄|▼ to move the selection down, back to previous, or decrease the value.

- Press **AUTO|EXIT** to exit the OSD menu or return to the main menu.

Brightness/Contrast

Adjust the brightness or contrast of the display within the range of 0 to 100.

1. Press the ▶|▲ / ◀|▼ to select **Brightness/Contrast**, then press **MENU** button to confirm the selection and access the second-level.

2. Press the ▶|▲ / ◀|▼ to select Brightness or Contrast, then press **MENU** button to confirm the selection and access the next option.

3. Press ▶|▲ / ◀|▼ to increase/decrease the desired value, the press **MENU** button to apply the setting.

4. Press ◀|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

• Alternatively, you can adjust the brightness using the shortcut keys without accessing the OSD menu. Press the ▶|▲ / ◀|▼ to adjust it directly.

Brightness/Contrast	Brightness	▮▮▮▮▮▮▮▯ 90
Color Settings	Contrast	▮▮▮▮▮▯▯▯ 50
Input Source		
Display Settings		
Other Settings		
Information		

Brightness

▮▮▮▮▮▮▮▯ 80
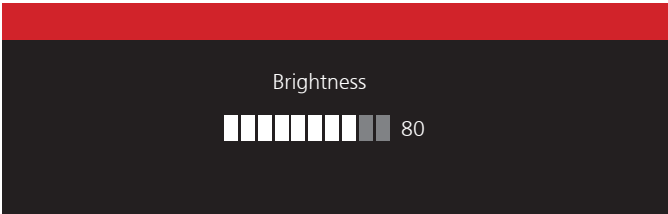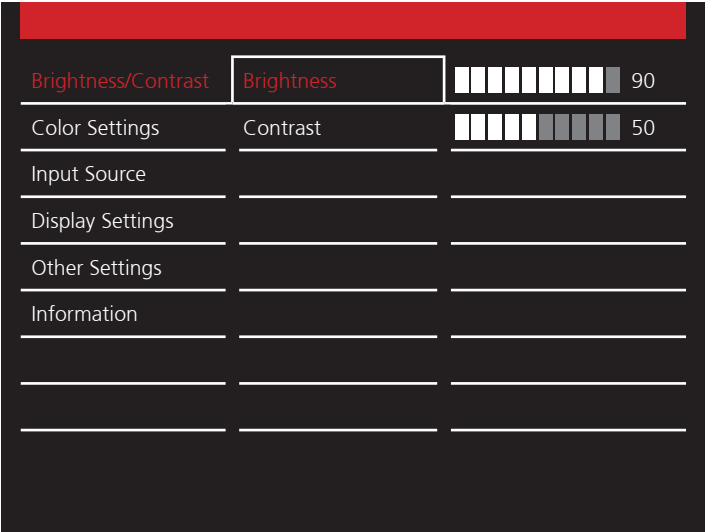
Color Settings

Adjust the color settings, including color temperature, red, green, and blue.

1. Press the ▶|▲ / ◀|▼ to select **Color Settings**, then press **MENU** button to confirm the selection and access the second-level.

- To adjust the color temperature, press ▶|▲ / ◀|▼ to select **Color Temp.** and press **MENU** button to access the next options. Press the ▶|▲ / ◀|▼ to select the desired color temperature or select **User Color** to customize the color temperature. Once confirmed, press **MENU** button to apply the setting.

- You can also customize the red, green, and blue colors independently. The adjustable range is from 0 to 100. Adjust the desired values by pressing the ▶|▲ / ◀|▼ at the item level (R, G, or B) you want to adjust, then press **MENU** button to apply the setting.

2. Press ◀|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

Brightness/Contrast	Color Temp.	User Color
Color Settings	Red	50
Input Source	Green	50
Display Settings	Blue	50
Other Settings		
Information		

Input Source

Select the connector for connecting the monitor or detecting by the system. The available options are Auto Select, VGA, DispalyPort, and DVI.

1. Press the ▶|▲ / ◀|▼ to select **Input Source**, then press **MENU** button to confirm the selection and access the second-level menu.

2. Press ▶|▲ / ◀|▼ to select the appropriate connector based on the one on the monitor you want to connect, or select **Auto Select** to let the system detect it. Once confirmed, press **MENU** button to apply the setting.

3. Press ◀|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

Brightness/Contrast	● Auto Select	
Color Settings	VGA	
Input Source	DisplayPort	
Display Settings	DVI	
Other Settings		
Information		

Display Settings

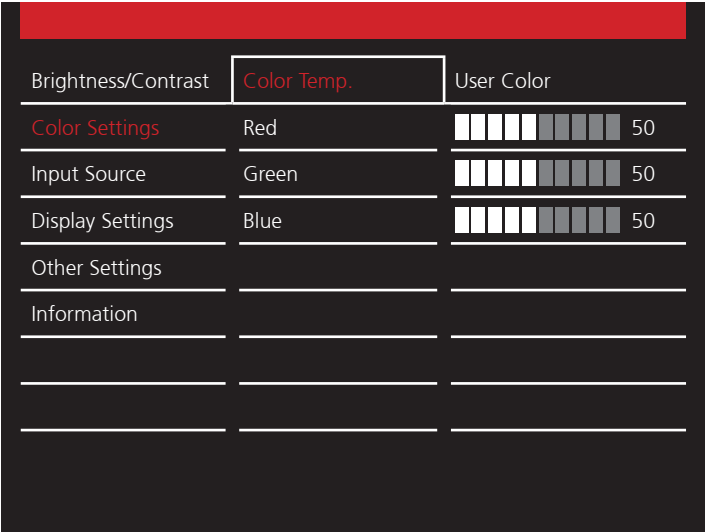This setting is specifically for adjusting the H.Position, V.Position, Clock, Phase, and Aspect Ratio of the image on the screen.

1. Press the ▶|▲ / ◀|▼ to select **Display Setting**, then press **MENU** button to confirm the selection and access the second-level.

- Press the ▶|▲ / ◀|▼ to select the item (**H.Position**, **V.Position**, **Clock**, **Phase**) you want to adjust, then press **MENU** button to confirm and access the corresponding options. The adjustable range is from 0 to 100. Adjust the desired values by pressing ▶|▲ / ◀|▼, then press **MENU** button to apply the setting.

- To adjust the **Aspect Ration**, press the ▶|▲ / ◀|▼, then press **MENU** button to confirm and access the next options. Press ▶|▲ / ◀|▼ to select the desired option and press **MENU** button to apply the setting. The available options are **Full**, **4:3**, **16:9**, and **KeepInputRation**.

2. Press ◀|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

Brightness/Contrast	H. Position	████████	50
Color Settings	V. Position	████████	50
Input Source	Clock	████████	50
Display Settings	Phase	████████	10
Other Settings	Aspect Ratio	Full	
Information			

Other Settings
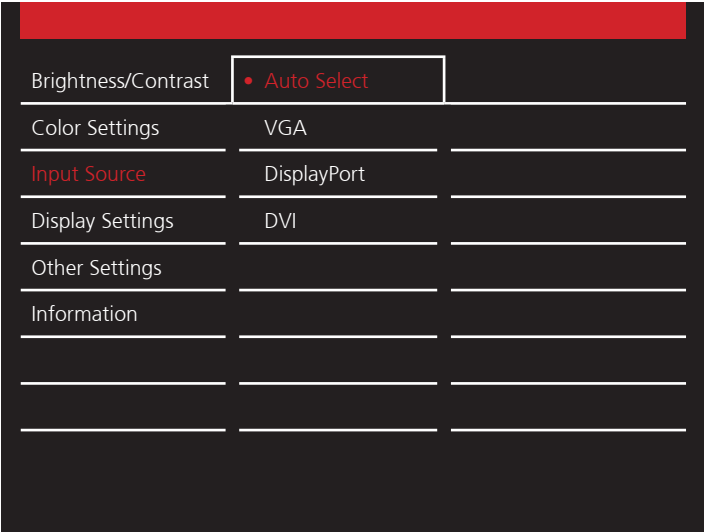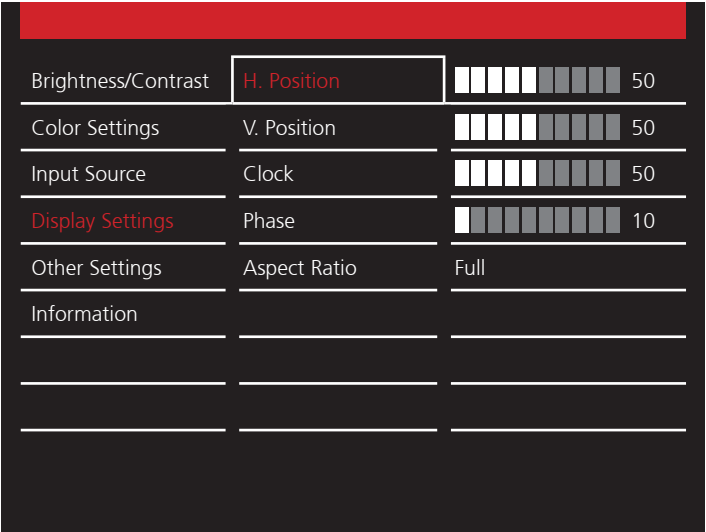
The settings on this tab are specific to the display of the OSD.

1. Press the ►|▲ / ◄|▼ to select **Other Setting**, then press **MENU** button to confirm the selection and access the second-level.

• Press the ►|▲ / ◄|▼ to select the item (**OSD Transparency**, **OSD H.Position**, **OSD V.Position**, **OSD Timeout**) you want to adjust, then press **MENU** button to confirm and access the corresponding options. The adjustable range is from 0 to 100. Adjust the desired values by pressing ►|▲ / ◄|▼, then press **MENU** button to apply the setting.

• To adjust the **OSD Rotation**, use the ►|▲ / ◄|▼ buttons on the second-level menu, then press the **MENU** button to confirm and access the next set of options. Press ►|▲ / ◄|▼ to select the desired option and press **MENU** button to apply the setting. The available options are **RotateOff**, **Rotate90**, **Rotate180**, and **Rotate270**.

• To restore all settings to the factory defaults, select **All Reset** by pressing ►|▲ / ◄|▼, then press **MENU** button to confirm. This will reset all previously modified settings to their default values.

2. Press ◄|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

Brightness/Contrast	OSD Transparency	50
Color Settings	OSD H.Position	50
Input Source	OSD V.Position	50
Display Settings	OSD Timeout	10
Other Settings	OSD Rotation	Rotate Off
Information	All Reset	
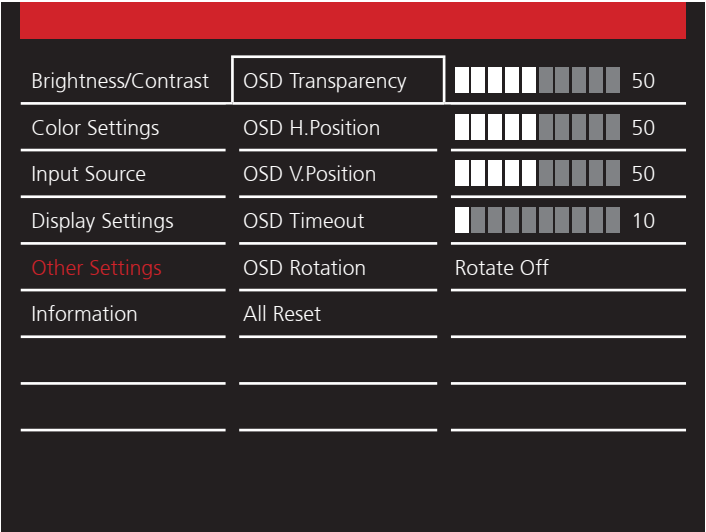
Information

This page shows the information of the display.

1. Press the ▶|▲ / ◀|▼ to select **Information**, then press **MENU** button to confirm and view the informaion.

2. Press ◀|▼ to retuen to upper menu or **AUTO|EXIT** button to exit the OSD menu after confirmation.

Brightness/Contrast	Resolution: 1280 x 1024	
Color Settings	H.Freq: 80 KHz	
Input Source	V.Freq: 75 KHz	
Display Settings	V.Total: 1066 Lines	
Other Settings		
Information		

APPENDIX A: SUPPORTED RESOLUTION TABLES

APPD 1200-1

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz

APPD 1500-1

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	70Hz	1024 x 768	70Hz
1024 x 768	75Hz	1024 x 768	75Hz	1024 x 768	75Hz

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APPD 1700-1

VGA		DVI		DisplayPort	
Resolution	**Frequency**	**Resolution**	**Frequency**	**Resolution**	**Frequency**
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	75Hz	1024 x 768	60Hz	1024 x 768	60Hz
1280 x 960	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1280 x 1024	60Hz	1280 x 1024	60Hz	1280 x 1024	60Hz
1280 x 1024	75Hz	1280 x 1024	75Hz	1280 x 1024	75Hz

APPD 1900-1

VGA		DVI		DisplayPort	
Resolution	**Frequency**	**Resolution**	**Frequency**	**Resolution**	**Frequency**
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	75Hz	1024 x 768	60Hz	1024 x 768	60Hz
1280 x 960	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1280 x 1024	60Hz	1280 x 1024	60Hz	1280 x 1024	60Hz
1280 x 1024	75Hz	1280 x 1024	75Hz	1280 x 1024	75Hz

APPD 1200-2

VGA		DVI		DisplayPort	
Resolution	**Frequency**	**Resolution**	**Frequency**	**Resolution**	**Frequency**
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz

APPD 1500-2

VGA		DVI		DisplayPort	
Resolution	**Frequency**	**Resolution**	**Frequency**	**Resolution**	**Frequency**
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
640 x 480	72Hz	640 x 480	72Hz	640 x 480	72Hz
640 x 480	75Hz	640 x 480	75Hz	640 x 480	75Hz
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	70Hz	1024 x 768	70Hz
1024 x 768	75Hz	1024 x 768	75Hz	1024 x 768	75Hz

APPD 1600-2

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
800 x 600	56Hz	800 x 600	56Hz	800 x 600	56Hz
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1280 x 960	60Hz	1280 x 960	60Hz	1280 x 960	60Hz
1280 x 1024	75Hz	1280 x 1024	60Hz	1280 x 1024	60Hz
1360 x 768	60Hz	1360 x 768	60Hz	1360 x 768	60Hz
1600 x 900	60Hz	1600 x 900	60Hz	1600 x 900	60Hz
1680 x 1050	60Hz	1680 x 1050	60Hz	1680 x 1050	60Hz
1920 x 1080	60Hz	1920 x 1080	60Hz	1920 x 1080	60Hz

APPD 1700-2

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
640 x 480	72Hz	640 x 480	72Hz	640 x 480	72Hz
640 x 480	75Hz	640 x 480	75Hz	640 x 480	75Hz
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	70Hz	1024 x 768	70Hz
1024 x 768	75Hz	1024 x 768	75Hz	1024 x 768	75Hz
1280 x 960	60Hz	1280 x 960	60Hz	1280 x 960	60Hz

APPD 1900-2

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
640 x 480	72Hz	640 x 480	72Hz	640 x 480	72Hz
640 x 480	75Hz	640 x 480	75Hz	640 x 480	75Hz
800 x 600	60Hz	800 x 600	60Hz	800 x 600	60Hz
800 x 600	72Hz	800 x 600	72Hz	800 x 600	72Hz
800 x 600	75Hz	800 x 600	75Hz	800 x 600	75Hz
1024 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1024 x 768	70Hz	1024 x 768	70Hz	1024 x 768	70Hz
1024 x 768	75Hz	1024 x 768	75Hz	1024 x 768	75Hz
1280 x 960	60Hz	1280 x 960	60Hz	1280 x 960	60Hz

APPD 2100-2

VGA		DVI		DisplayPort	
Resolution	Frequency	Resolution	Frequency	Resolution	Frequency
640 x 480	60Hz	640 x 480	60Hz	640 x 480	60Hz
800 x 600	56Hz	640 x 480	56Hz	640 x 480	56Hz
800 x 600	60Hz	640 x 480	60Hz	640 x 480	60Hz
1024 x 768	60Hz	800 x 600	60Hz	800 x 600	60Hz
1280 x 960	60Hz	800 x 600	60Hz	800 x 600	60Hz
1280 x 1024	60Hz	800 x 600	60Hz	800 x 600	60Hz
1360 x 768	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1600 x 900	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1680 x 1050	60Hz	1024 x 768	60Hz	1024 x 768	60Hz
1920 x 1080	60Hz	1280 x 960	60Hz	1280 x 960	60Hz

APPENDIX B: POWER CONSUMPTION

APPD xx00-1 Series

Input VDC +24V	APPD1200-1	APPD1500-1	APPD1700-1	APPD1900-1
Total (A)	0.32A	0.71A	0.62A	0.52A
Total (W)	7.68W	17.0W	14.84W	12.53W

APPD xx00-2 Series

Input VDC +24V	APPD1200-2	APPD1500-2	APPD1600-2	APPD1700-2	APPD1900-2	APPD2100-2
Total (A)	0.47A	0.50A	0.66A	0.67A	0.69A	0.92A
Total (W)	11.16W	11.90W	15.82W	15.99W	16.56W	22.08W