



NexAIoT Co., Ltd.

IoT Automation Solutions Business Group

Applied Panel Display

APPD 1206T/1501T/1701T/1901T

User Manual

CONTENTS

Preface

Copyright	iv
Disclaimer	iv
Acknowledgements	iv
Regulatory Compliance Statements	iv
Declaration of Conformity	iv
RoHS Compliance	v
Warranty and RMA	vi
Safety Information	ix
Installation Recommendations	ix
Safety Precautions	x
Technical Support and Assistance	xi
Conventions Used in this Manual	xi
Global Service Contact Information	xii
Package Contents	xiv
Ordering Information	xv

Chapter 1: Product Introduction

Overview - APPD 1206T	1
Key Features	1
Overview - APPD 1501T	2
Key Features	2
Overview - APPD 1701T	3
Key Features	3

Overview - APPD 1901T	4
Key Features	4
Specifications	5
APPD 1206T	5
Specifications	6
APPD 1501T	6
Specifications	7
APPD 1701T	7
Specifications	8
APPD 1901T	8
Knowing Your APPD Series	9
Front Top View of APPD 1206T	9
Front Top View of APPD 1701T	9
Front Top View of APPD 1501T	9
Front Top View of APPD 1901T	9
Rear View	10
Power & OSD Menu Button Description	10
Rear Bottom View of APPD 1206T	11
Rear Bottom View of APPD 1701T	11
Rear Bottom View of APPD 1501T	11
Rear Bottom View of APPD 1901T	11
Rear Bottom View	12
External I/O Description	12
Rear View of APPD 1206T	13
Rear View of APPD 1501T	14

Rear View of APPD 1701T	15
Rear View of APPD 1901T	16
Mechanical Dimensions.....	17
APPD 1206T	17
APPD 1501T	18
APPD 1701T	19
APPD 1901T	20

Chapter 2: Connector Pin Definitions

External I/O Interfaces	21
VGA Port.....	22
DVI Port (DVI-D).....	22
USB Port.....	23

Chapter 3: System Setup

Panel Mounting	24
----------------------	----

Chapter 4: Adjusting the Display

OSD Menu Functions	26
--------------------------	----

Appendix A: Extended Display Identification Data Timing Support.....39

Appendix B: Power Consumption.....41

PREFACE

Copyright

This publication, including all photographs, illustrations and software, is protected under international copyright laws, with all rights reserved. No part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without the prior written consent from NexAloT Co., Ltd.

Disclaimer

The information in this document is subject to change without prior notice and does not represent commitment from NexAloT Co., Ltd. However, users may update their knowledge of any product in use by constantly checking its manual posted on our website: <http://www.nexaiot.com>. NexAloT shall not be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of any product, nor for any infringements upon the rights of third parties, which may result from such use. Any implied warranties of merchantability or fitness for any particular purpose is also disclaimed.

Acknowledgements

APPD 1206T, APPD 1501T, APPD 1701T and APPD 1901T are trademarks of NexAloT Co., Ltd. All other product names mentioned herein are registered trademarks of their respective owners.

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



NexAloT RoHS Environmental Policy and Status Update

NexAloT 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, NexAloT 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 NexAloT development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NexAloT 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 NexAloT 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 NexAloT naming convention.

Warranty and RMA

NexAloT Warranty Period

1. NexAloT makes products in accordance with the Industry standard and, NexAloT 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 NexAloT Panel PC product lines (the APPC, MPCC 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 NexAloT determines customer's warranty claim is valid, NexAloT 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 NexAloT 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 NexAloT or, products which have been subjected to misuse, abuse, accident, improper installation, or usage not in accordance with the product instruction. NexAloT 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 NexAloT 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 NexAloT and,
 - d. Accessory/parts were added to products after they were shipped from NexAloT.

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 NexAloT service person or, which have been subjected to misuse, abuse, accident, or improper installation.
- c. It doesn't have the original NexAloT Serial Number labeling for NexAloT's warranty period identification or, tracking.

RMA that NexAloT has determined not to be covered by the warranty will be charged the NexAloT 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.

NexAloT Return Merchandise Authorization (RMA) Procedure

For the RMA (Return Merchandise Authorization) shipment, customer is responsible for packaging and shipping the product to the designated NexAloT service sites, with shipping charges prepaid by the customer. The original NexAloT shipping box should be used whenever possible. NexAloT 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 "NexAloT RMA Service Form" with the returned products.
2. Customers need to write down all the information related to the problem on the " NexAloT 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. NexAloT 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 NexAloT 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. NexAloT will repair defective products covered under this limited warranty that are returned to NexAloT; if products do prove to be defective, they will be repaired during their warranty period unless other warranty terms have been specified.
2. NexAloT owns all parts removed from repaired products.
3. NexAloT 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, NexAloT reserves the right to claim for a NDF (No Defect Found) Service Charge.
6. NexAloT 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, NexAloT may authorize Independent/Third-party suppliers to repair the defective products for NexAloT.

Out Of Warranty Service

There will be a service charge from NexAloT 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, NexAloT will either return the product to the customer or, just scrap it, followed by customer’s instruction.

1. Testing and Parts Replacement

NexAloT 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: NexAloT 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.

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 NexAloT products, visit NexAloT'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.

Global Service Contact Information

Headquarters

NEXCOM International Co., Ltd.

9F, No. 920, Chung-Cheng Rd.,
ZhongHe District, New Taipei City, 23586,
Taiwan, R.O.C.

Tel: +886-2-8226-7786

Fax: +886-2-8226-7782

www.nexcom.com

America

USA

NEXCOM USA

46665 Fremont Blvd.,
Fremont CA 94538, USA

Tel: +1-510-656-2248

Fax: +1-510-656-2158

Email: sales@nexcom.com

www.nexcomusa.com

Asia

Taiwan

NEXCOM Intelligent Systems

Taipei Office

13F, No.920, Chung-Cheng Rd.,
ZhongHe District,
New Taipei City, 23586, Taiwan, R.O.C.

Tel: +886-2-8226-7796

Fax: +886-2-8226-7792

Email: sales@nexcom.com.tw

www.nexcom.com.tw

NEXCOM Intelligent Systems

Taichung Office

16F, No.250, Sec. 2, Chongde Rd.,
Beitun Dist.,

Taichung City 406, R.O.C.

Tel: +886-4-2249-1179

Fax: +886-4-2249-1172

Email: sales@nexcom.com.tw

www.nexcom.com.tw

Japan

NEXCOM Japan

9F, Tamachi Hara Bldg.,
4-11-5, Shiba Minato-ku,
Tokyo, 108-0014, Japan

Tel: +81-3-5419-7830

Fax: +81-3-5419-7832

Email: sales@nexcom-jp.com

www.nexcom-jp.com

China

NEXCOM China

Floor 5, No.4, No.7 fengxian middle Rd.,
(Beike Industrial Park), Haidian District,
Beijing, 100094, China

Tel: +86-10-5704-2680

Fax: +86-10-5704-2681

Email: sales@nexcom.cn

www.nexcom.cn

NEXCOM Shanghai

Room 603/604, Huiyinmingzun Plaza Bldg., 1,
No.609, Yunlin East Rd.,
Shanghai, 200333, China
Tel: +86-21-5278-5868
Fax: +86-21-3251-6358
Email: sales@nexcom.cn
www.nexcom.cn

NEXCOM Surveillance Technology Corp.

Room202, Building B,
the GuangMing Industrial Zone Zhonghua Rd.,
Minzhi Street, Longhua District,
Shenzhen 518131, China
Tel: +86-755-8364-7768
Fax: +86-755-8364-7738
Email: steveyang@nexcom.com.tw
www.nexcom.cn

NEXCOM United System Service

Hui Yin Ming Zun Building Room 1108,
Building No. 11, 599 Yunling Road, Putuo District,
Shanghai, 200062, China
Tel: +86-21-6125-8282
Fax: +86-21-6125-8281
Email: frankyang@nexcom.cn
www.nexcom.cn

Europe

United Kingdom

NEXCOM EUROPE

10 Vincent Avenue,
Crownhill Business Centre,
Milton Keynes, Buckinghamshire
MK8 0AB, United Kingdom
Tel: +44-1908-267121
Fax: +44-1908-262042
Email: sales.uk@nexcom.eu
www.nexcom.eu

Italy

NEXCOM ITALIA S.r.l

Via Lanino 42,
21047 Saronno (VA), Italia
Tel: +39 02 9628 0333
Fax: +39 02 9625 570
Email: nexcomitalia@nexcom.eu
www.nexcomitalia.it

Package Contents

Before continuing, verify that the package you received is complete. The APPD series package, APPD 1206T/1501T/1701T/1901T, should have all the items listed in the table.



Note: 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



USB Cable



Serial Cable



VGA Cable



Terminal blocks
3-pin Phoenix
Contact Plug

Ordering Information

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

- **Barebone**

- **APPD 1206T (P/N: 10IA1206T00X0)**

12.1" XGA industrial 4:3 TFT LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 12~24VDC input, RS-232 and USB touch screen interfaces

- **APPD 1501T (P/N: 10IA1501T00X0)**

15" XGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 12~24VDC input, RS232 and USB touch screen interfaces

- **APPD 1701T (P/N: 10IA1701T00X0)**

17" SXGA industrial 4:3 LCD flush touch monitor with VGA, DVI-D and DisplayPort, 12~24VDC input, RS-232 and USB touch screen

- **APPD 1901T (P/N: 10IA1901T00X0)**

19" SXGA industrial 4:3 LED backlight flush touch monitor with VGA, DVI-D and DisplayPort, 12~24VDC input, RS232 and USB touch screen interfaces

- **Optional**

- **12V, 60W AC/DC power adapter w/o power cord ((P/N: 7400060048X00)**
- **1.8m DVI-D male to DVI-D male cable (P/N: 603DVI0007X00)**

CHAPTER 1: PRODUCT INTRODUCTION

Overview - APPD 1206T



Note: Photo is for reference. Please refer to the mechanical engineering drawing for final appearance.

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
- Ultra slim in depth
- OSD multi-language function

Overview - APPD 1501T



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
- Ultra slim in depth
- OSD multi-language function

Note: Photo is for reference. Please refer to the mechanical engineering drawing for final appearance.

Overview - APPD 1701T



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
- Ultra slim in depth
- OSD multi-language function

Note: Photo is for reference. Please refer to the mechanical engineering drawing for final appearance.

Overview - APPD 1901T



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
- Ultra slim in depth
- OSD multi-language function

Note: Photo is for reference. Please refer to the mechanical engineering drawing for final appearance.

Specifications

APPD 1206T

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

Rear I/O

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

OSD Function

- OSD keypad
- Multilanguage OSD

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adapter (+12V, 60W)
- 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: -5°C to 50°C
 - Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 317 x 243 x 53.5mm
- Weight: 2.8kg

Certifications

- CE approval
- FCC Class B

Specifications

APPD 1501T

Panel

- LED size: 15", 4:3
- Resolution: WXGA 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

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
- Multilanguage OSD

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adapter (+12V, 60W)
- 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: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 384.37 x 309.95 x 51mm
- Weight: 3.9kg

Certifications

- CE approval
- FCC Class B

Specifications

APPD 1701T

Panel

- LED 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%
- Touch interface: USB and RS232

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 block

OSD Function

- OSD keypad
- Multilanguage OSD

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adapter (+12V, 60W)
- 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: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 410 x 340.4 x 53.9mm
- Weight: 4.8kg

Certifications

- CE approval
- FCC Class B

Specifications

APPD 1901T

Panel

- LED 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: 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 block

OSD Function

- OSD keypad
- Multilanguage OSD

Mechanical & Environment

- Color: Pantone black and black silver chassis box
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~24VDC
- Power adapter: optional AC to DC power adapter (+12V, 60W)
- 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: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 457.64 x 379.24 x 49.15mm
- Weight: 5.5kg

Certifications

- CE approval
- FCC Class B

Knowing Your APPD Series

Front Top View of APPD 1206T



Power & OSD
Menu Buttons

Front Top View of APPD 1501T



Power & OSD
Menu Buttons

Front Top View of APPD 1701T



Power & OSD
Menu Buttons

Front Top View of APPD 1901T

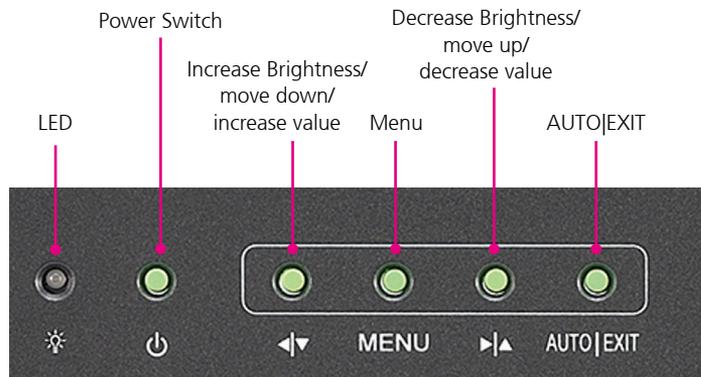


Power & OSD
Menu Buttons

Rear View



Power & OSD Menu Button Description



LED

Displays 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.

Power Switch

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



Inside OSD menu: Press to move the selection down in OSD menu.
Configuring options: Press to increase the value.



Inside OSD menu: Press to move the selection up in OSD menu.
Configuring options: Press to decrease the value

OSD Menu

No OSD Menu: Press to load the OSD menu.

Inside OSD Menu: Press to select the highlighted option in OSD menu.

AUTO|EXIT

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



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 of APPD 1206T



Rear Bottom View of APPD 1501T



Rear Bottom View of APPD 1701T



Rear Bottom View of APPD 1901T

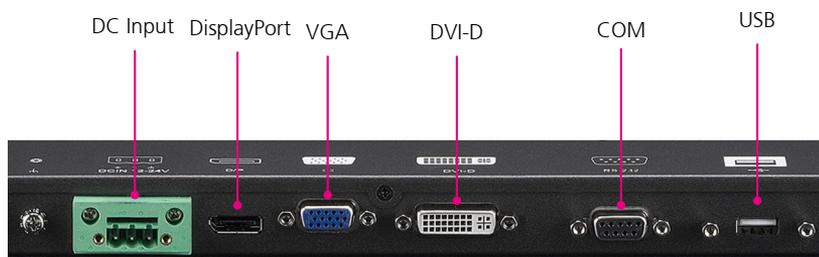


Rear Bottom View



External I/O

External I/O Description



Touchscreen Connector (USB) (Optional)

This USB connector must be attached to the USB port of the PC. The touchscreen cable is included in the accessory box.

Touchscreen Connector (DB-9) (Optional)

This RS-232 connector must be connected to the RS-232 port of the PC.

DVI Port (DVI-D)

Connected with a standard DVI connector through I/O port of this unit. Only supports digital signals.

VGA Port (DB-15)

Used to connect an analog VGA monitor.

DisplayPort

DisplayPort to connect the system with display devices.

12 – 24V DC Input

Terminal block socket used to plug a DC power cord.



RS-232 & USB touchscreen interface does not allow connection into the system at the same time.

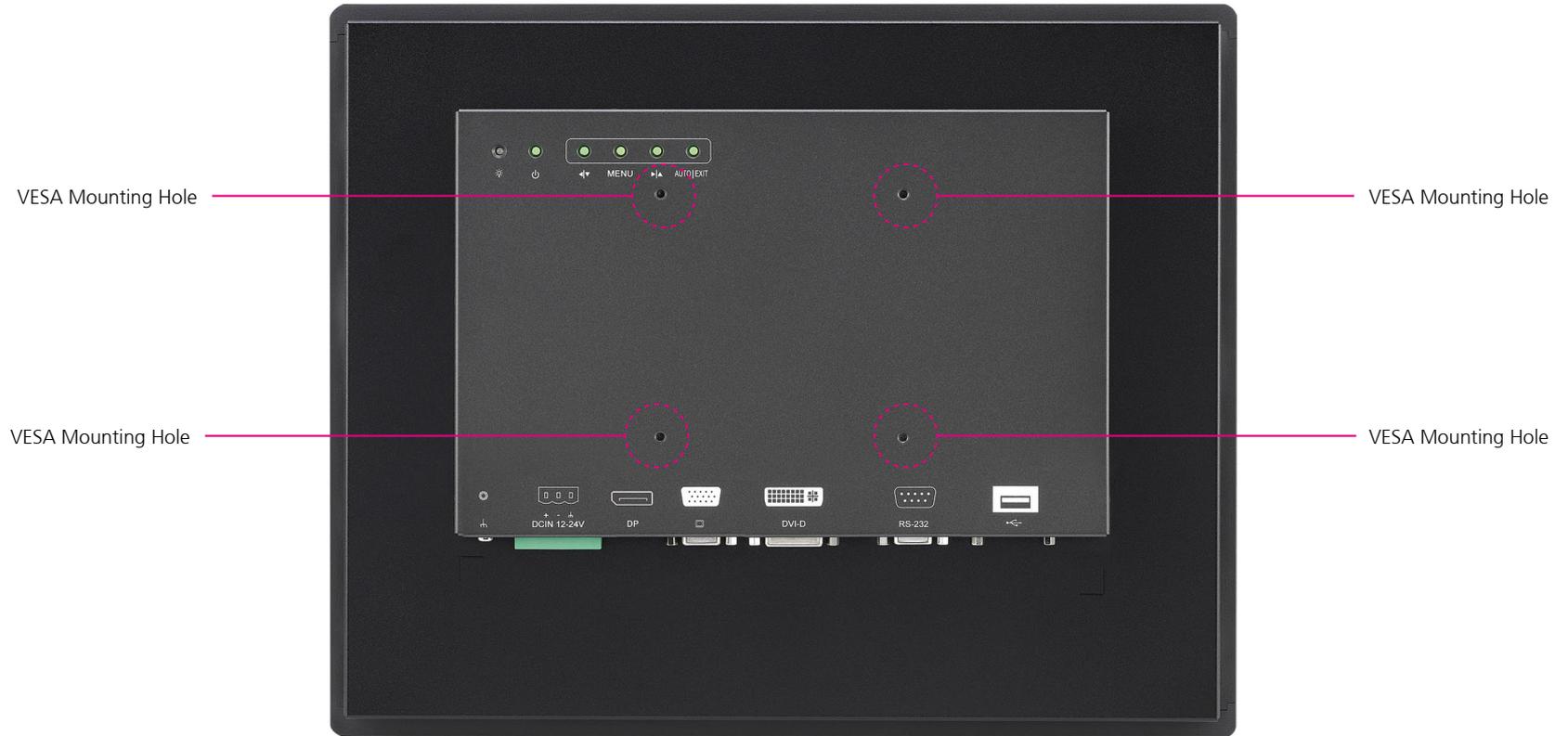
Rear View of APPD 1206T



VESA Mounting Holes

These are mounting holes for VESA mount (100x100mm)

Rear View of APPD 1501T



VESA Mounting Holes

These are mounting holes for VESA mount (100x100mm)

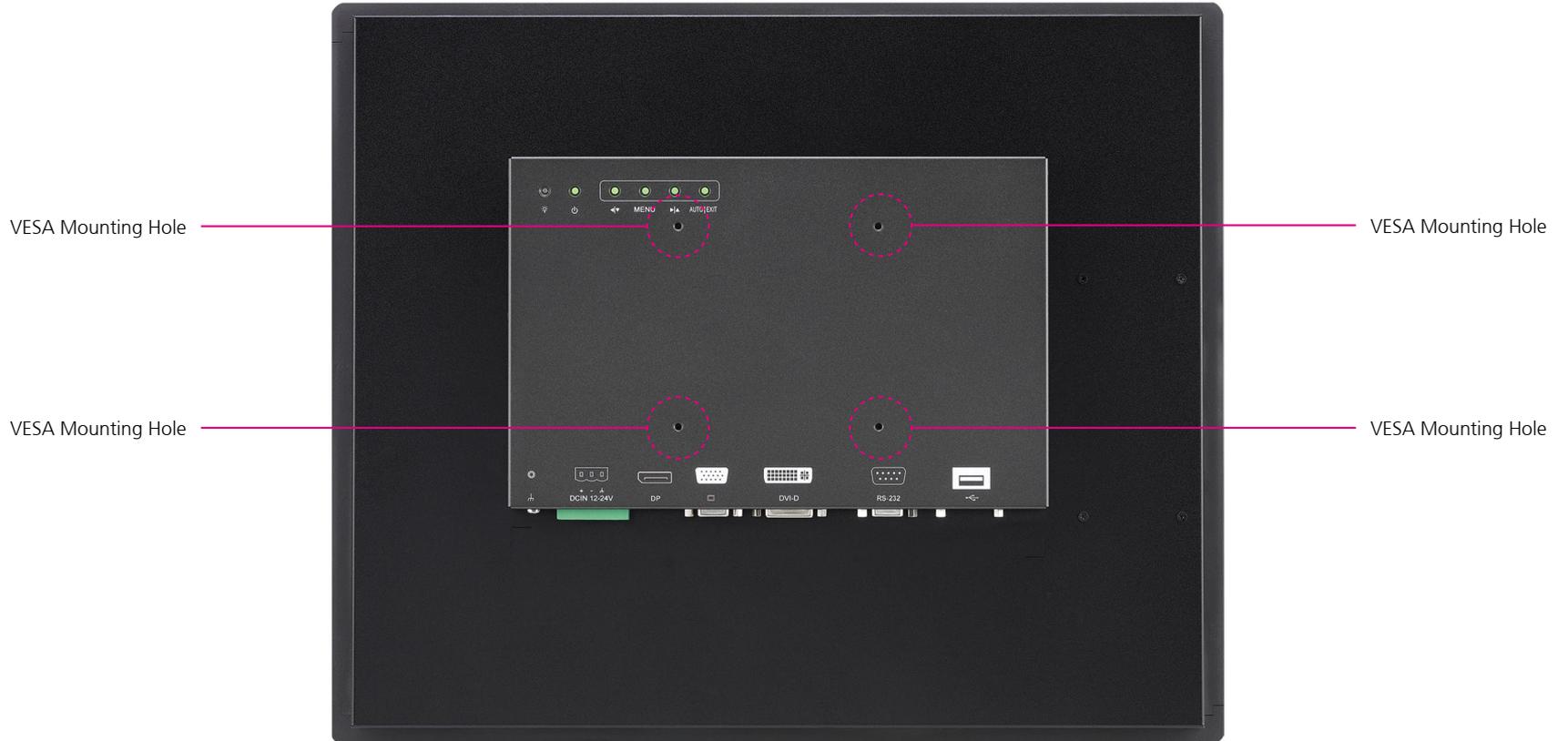
Rear View of APPD 1701T



VESA Mounting Holes

These are mounting holes for VESA mount (100x100mm)

Rear View of APPD 1901T

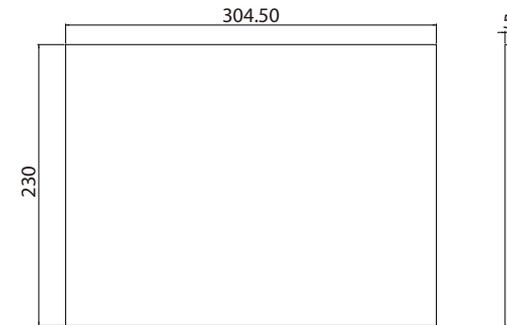
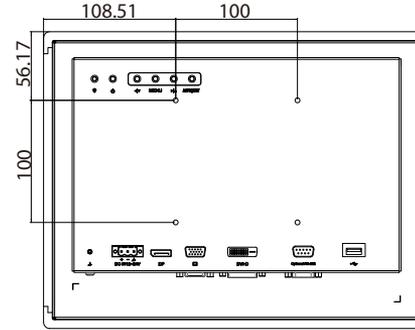
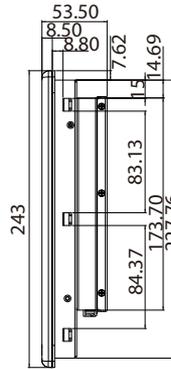
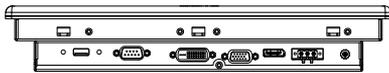
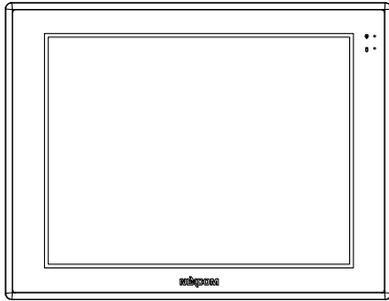
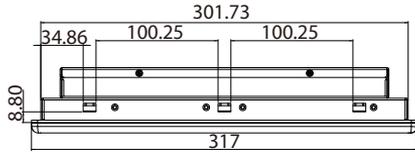


VESA Mounting Holes

These are mounting holes for VESA mount (100x100mm)

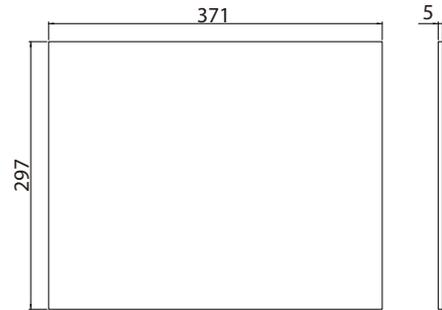
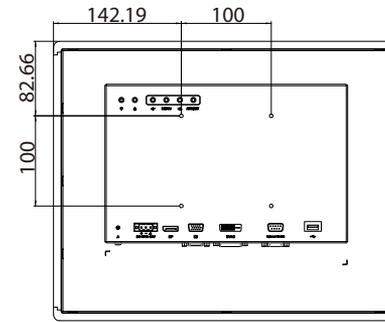
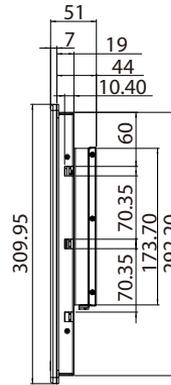
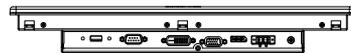
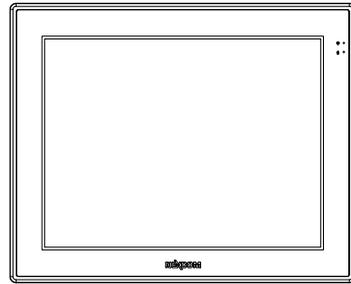
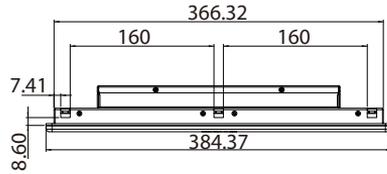
Mechanical Dimensions

APPD 1206T



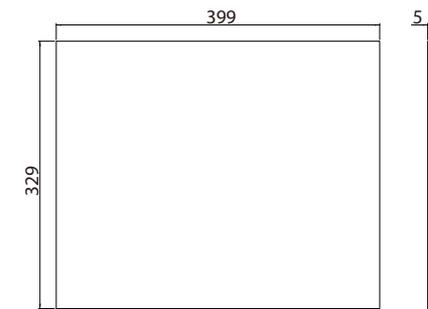
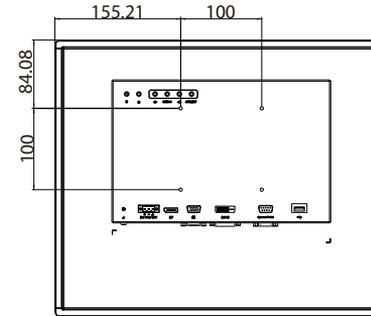
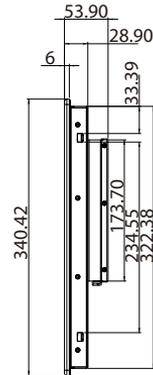
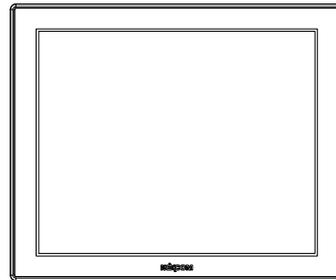
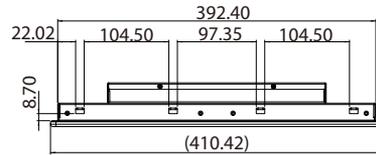
CUT OUT SIZE T=5mm (MAX)

APPD 1501T



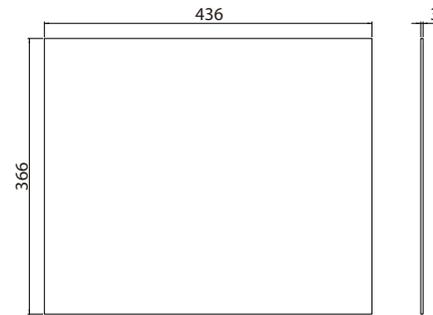
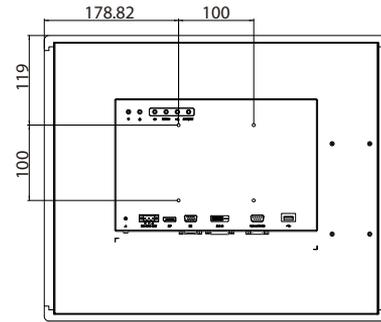
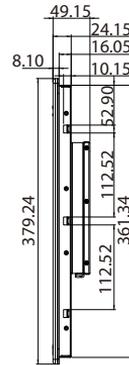
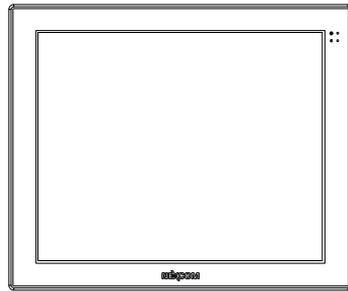
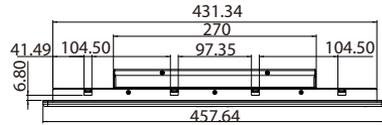
CUT OUT SIZE T=5mm (MAX)

APPD 1701T



CUT OUT SIZE T=5mm (MAX)

APPD 1901T



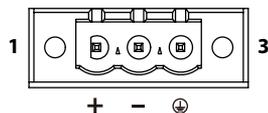
CUT OUT SIZE T=3mm (MAX)

CHAPTER 2: CONNECTOR PIN DEFINITIONS

External I/O Interfaces

12V-24V DC Power Input

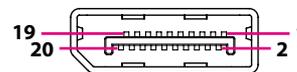
Connector type: Phoenix Contact 1x3 3-pin terminal block



Pin	Definition
1	+
2	-
3	GND

DisplayPort

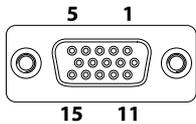
Connector type: DisplayPort



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	CONFIG1	14	CONFIG2
15	AUX_CH_P	16	GND
17	AUX_CH_N	18	HPD
19	RETURN	20	DP_PWR

VGA Port

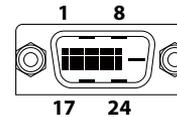
Connector type: DB-15 port, 15-pin D-Sub



Pin	Definition	Pin	Definition
1	RED	2	GREEN
3	BLUE	4	ID2
5	GND	6	RGND
7	GGND	8	BGND
9	KEY	10	SGND
11	ID0	12	SDA
13	HSYNC or CSYNC	14	VSYNC
15	SCL		

DVI Port (DVI-D)

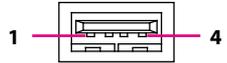
Connector type: 24-pin D-Sub, 2.0mm-M-180 (DVI)



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	Reserved
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-
C1	NC	C2	NC
C3	NC	C4	NC
C5	NC		

USB Port

Connector type: USB port



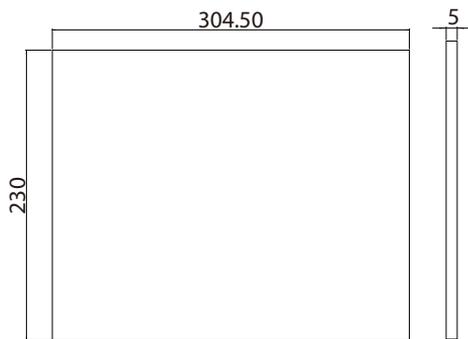
Pin	Definition
1	VCC5
2	DATA_N
3	DATA_P
4	GND

CHAPTER 3: SYSTEM SETUP

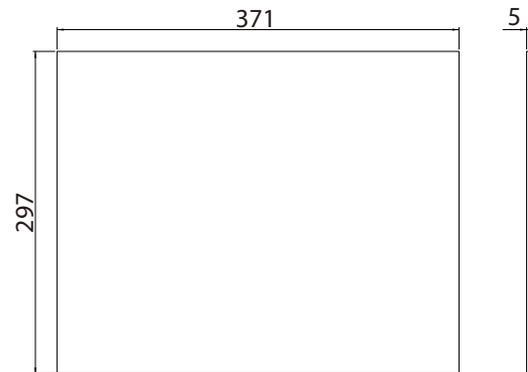
Panel Mounting

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.

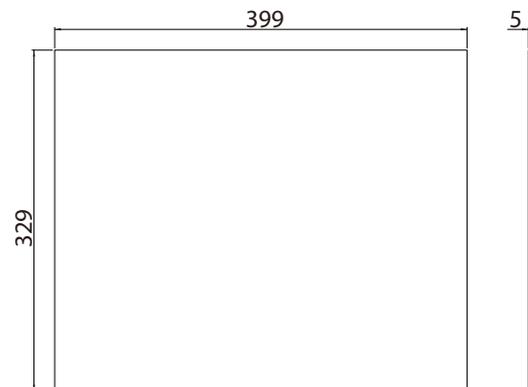
The thickness of the panel (e.g. steel board, plank, acrylic board, wall, etc.) where you will mount the Industrial Touch Monitor must not exceed 12mm. If the distance between the front bezel and panel mount hole is too wide, it will not fit the panel mount kit.



APPD 1206T



APPD 1501T

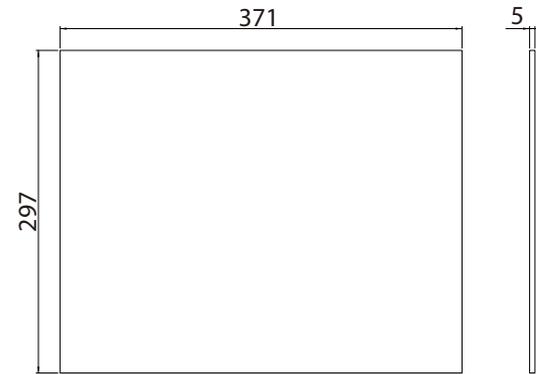


APPD 1701T

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



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



APPD 1901T

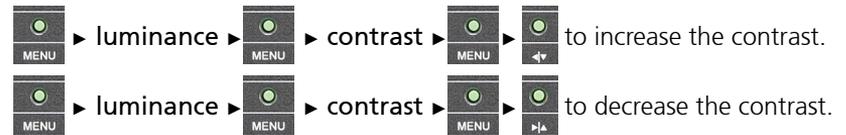
CHAPTER 4: ADJUSTING THE DISPLAY

OSD Menu Functions

The On Screen Display (OSD) menu provides options to adjust the display. Press the MENU button on the back of the display panel to open the OSD menu. Refer to the images below for each OSD menu option.

1. Luminance

Contrast



Brightness

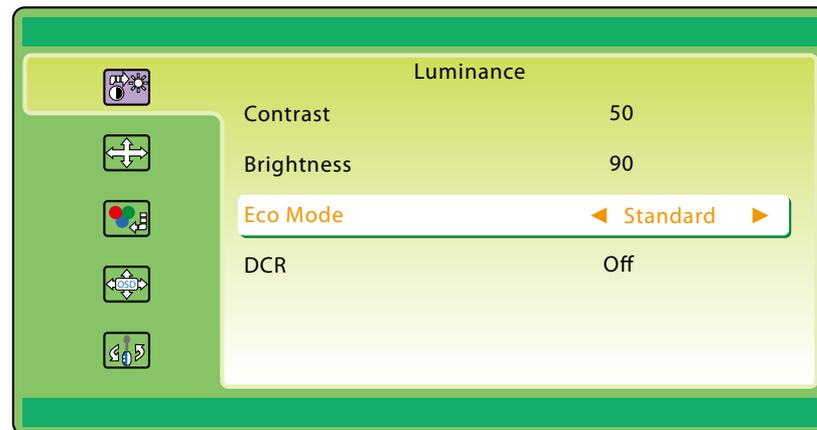
► luminance ► ► ► Brightness ► ► to increase the brightness.

► luminance ► ► ► Brightness ► ► to decrease the brightness.

Eco Mode

► luminance ► ► ► Eco Mode ► ► to scroll left to change between the Eco Mode settings.

► luminance ► ► ► Eco Mode ► ► to scroll right to change between the Eco Mode settings.

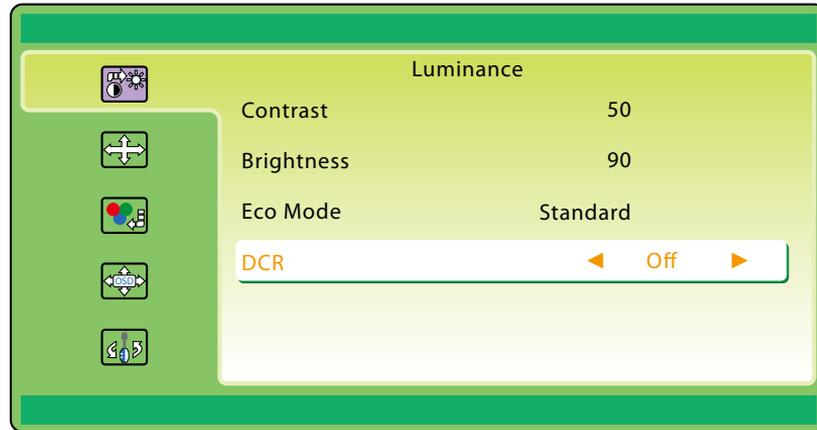


The following Eco Mode options are available: Text, Standard, Sports, Movie, Game and Internet.

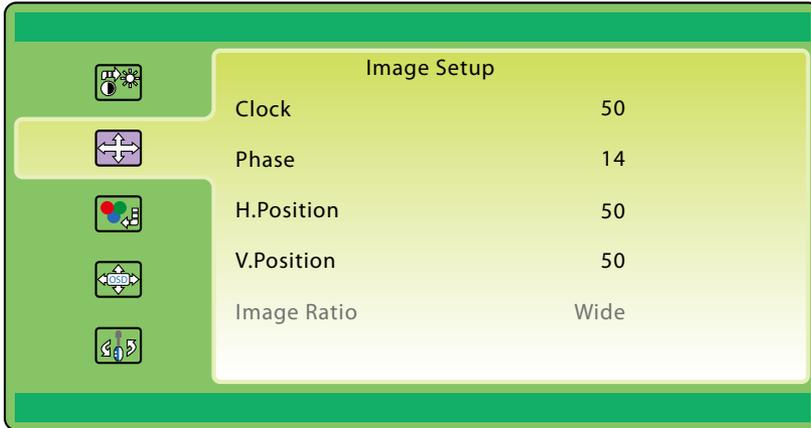
DCR

► luminance ► ► ► DCR ► ► to scroll left to turn DCR On or Off.

► luminance ► ► ► DCR ► ► to scroll right to turn DCR On or Off.



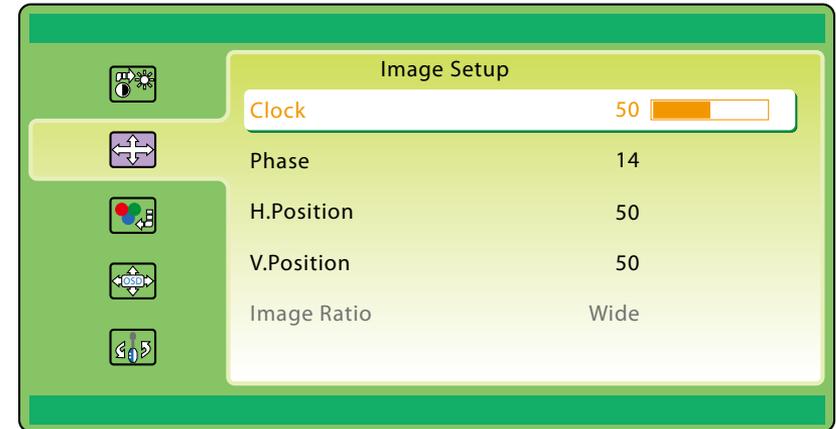
2. Image Setup



Clock

► ► ► ► ► ► stretch
 the screen towards right.

► ► ► ► ► ► stretch
 the screen towards left.



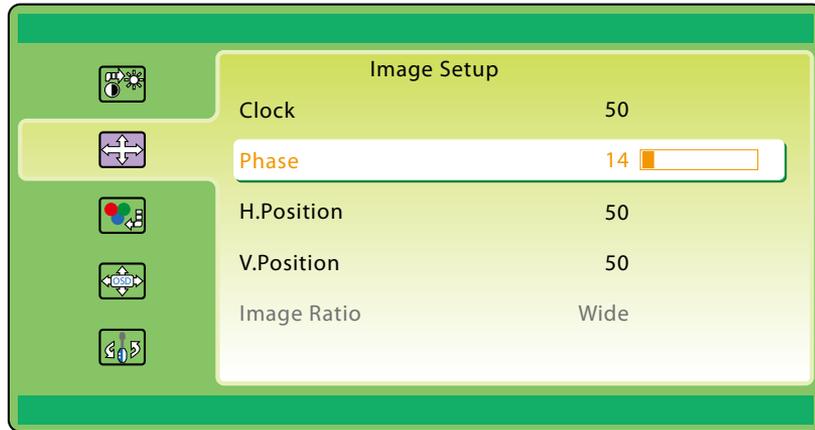
Phase



to increase the phase value.



to decrease the phase value.



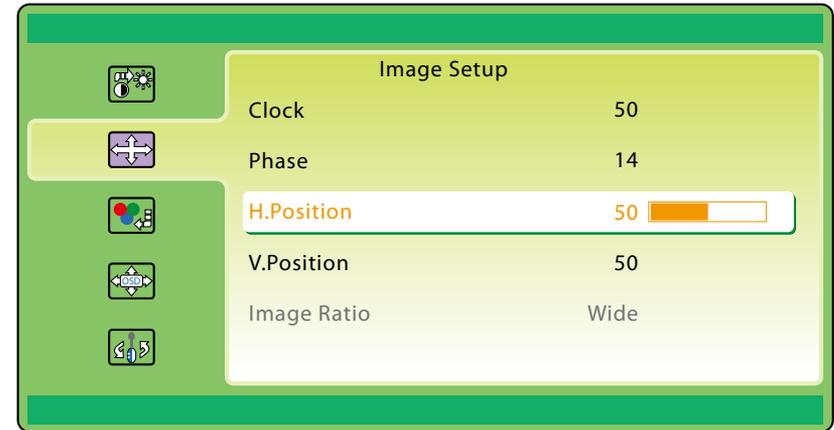
H. Position



to move the screen towards right.



to move the screen towards left.



V. Position



to move the screen up.



to move the screen down.

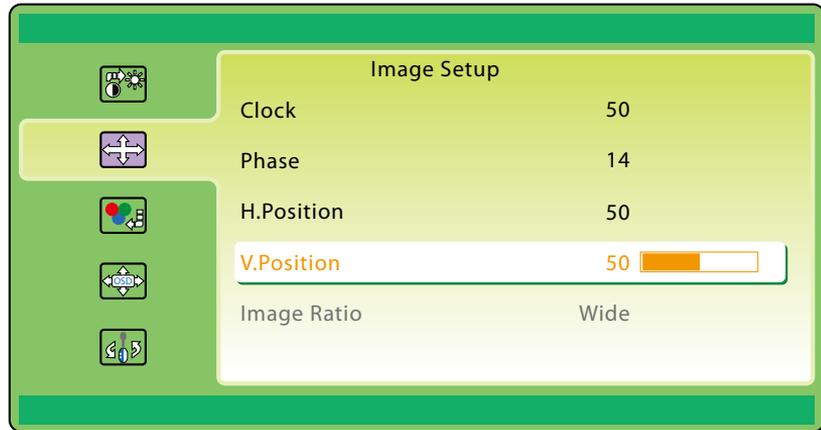
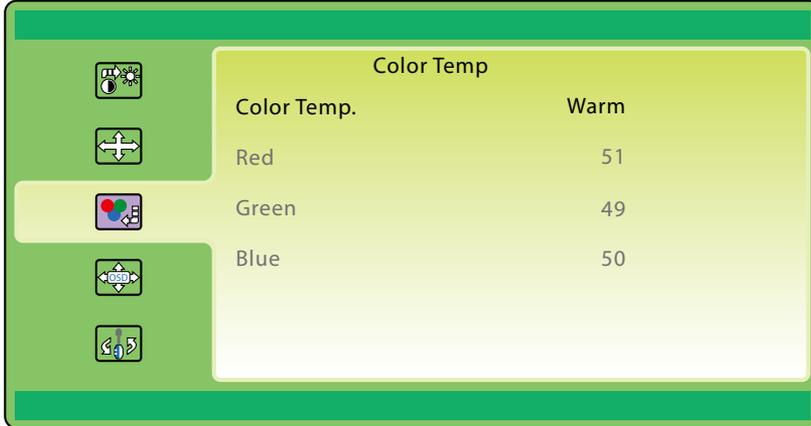


Image Ratio

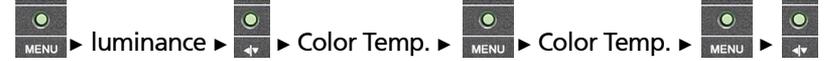
Displays the current image ratio.



3. Color Temperature



Color Temperature



to scroll right to change between the Color Temp. settings.



to scroll left to change between the Color Temp. settings.



The following color temperature options are available: Warm, Normal, Cool, User and sRGB. To configure the RGB values manually, select **User** from the Color Temp. options.

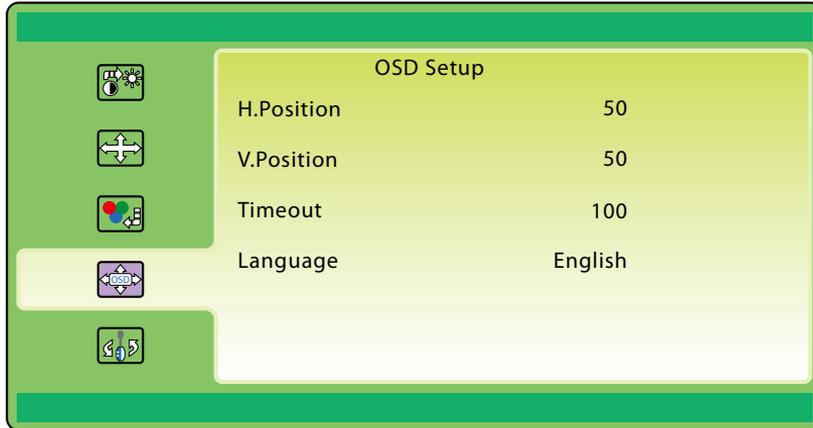
Color Temperature (User Defined)

► luminance ► ► ► ► Red ► ► to increase the value.

► luminance ► ► ► ► Red ► ► to decrease the value.



4. OSD Setup



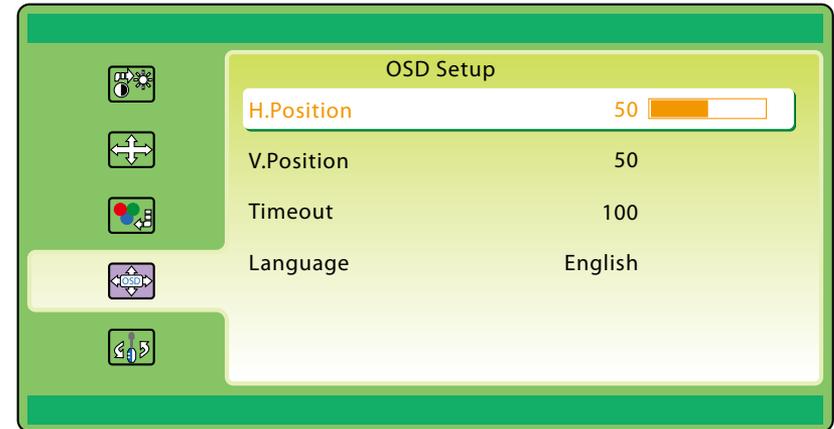
H. Position



to move the OSD screen towards right.



to move the OSD screen towards left.



V. Position



to move the OSD screen up.



to move the OSD screen down.

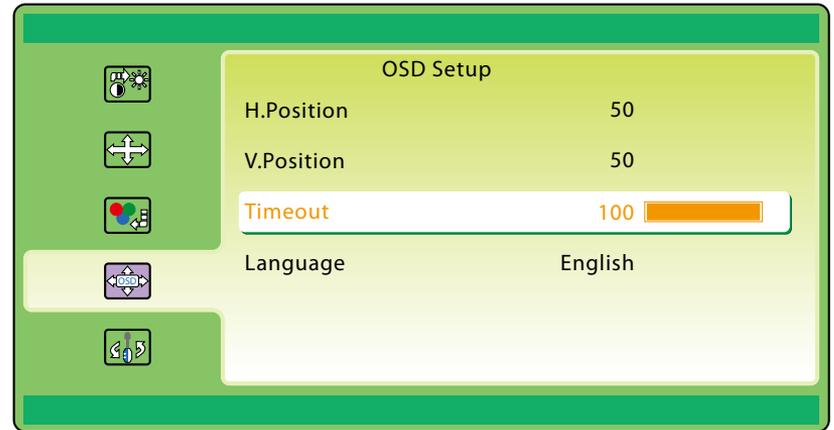
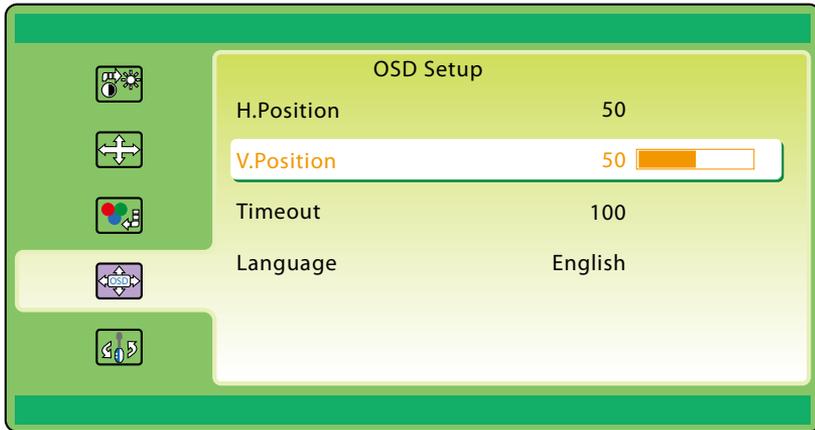
Timeout



to increase the OSD screen timeout value.



to decrease the OSD screen timeout value.



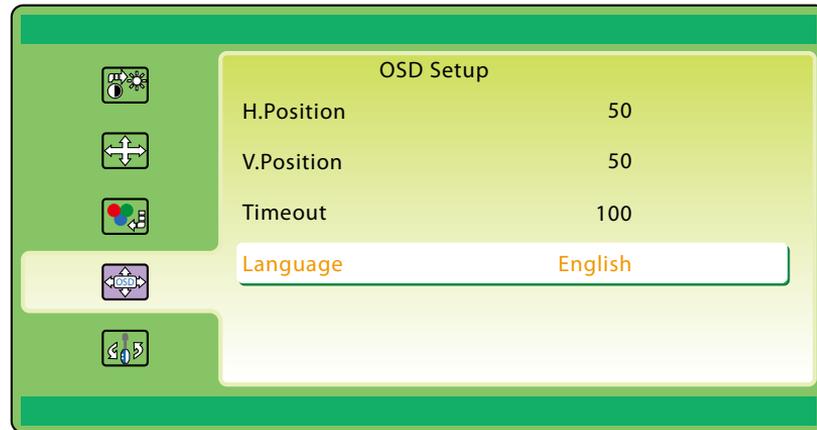
Language



to scroll right to change between the language settings.

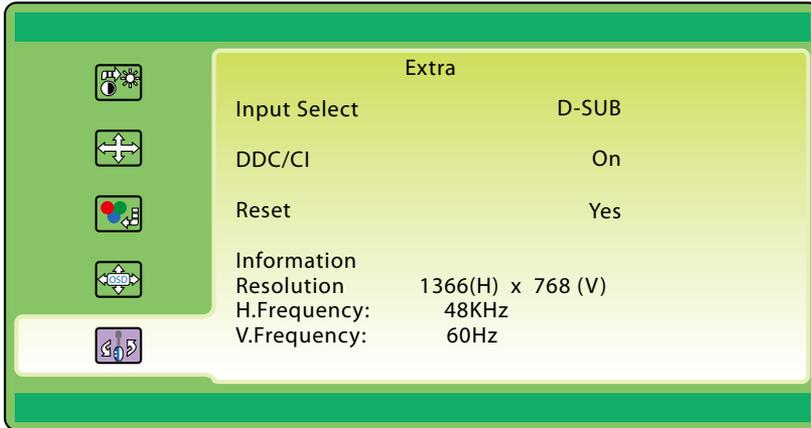


to scroll left to change between the language settings.



The following languages are available: English, Simplified Chinese, Traditional Chinese, Korean, Russian, Portuguese, French and Spanish.

5. Extra



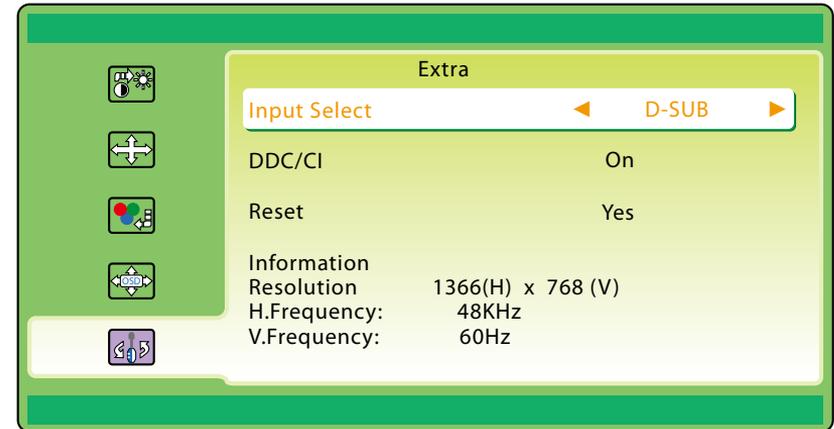
Input Select



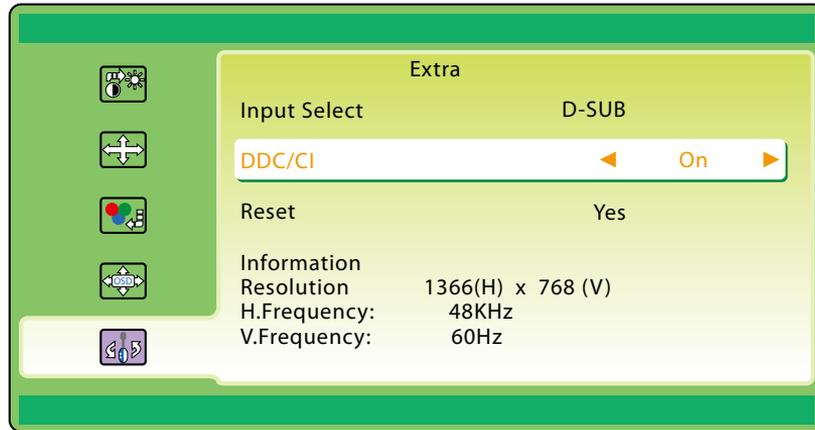
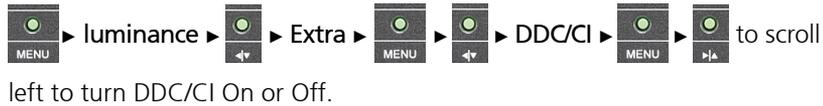
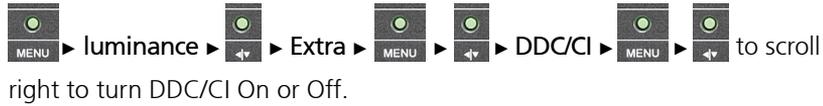
to scroll right to change between D-SUB, DisplayPort or DVI as input.



to scroll left to change between D-SUB, DisplayPort or DVI as input.



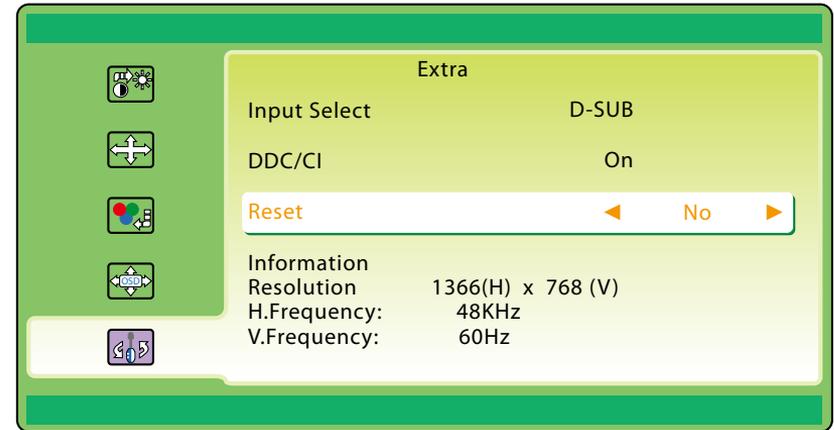
DDC/CI



Reset



to scroll to YES to restore factory default settings, or NO to abort it.



APPENDIX A: EXTENDED DISPLAY IDENTIFICATION DATA TIMING SUPPORT

IPPD 1600P/1800P

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
720 x 400	70Hz	720 x 400	70Hz	720 x 400	70Hz
800 x 600	56Hz	800 x 600	56Hz	800 x 600	56Hz
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
1152 x 864	60Hz	1152 x 864	60Hz	1152 x 864	60Hz
1280 x 960	60Hz	1280 x 960	60Hz	1280 x 960	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
1366 x 768	60Hz	1366 x 768	60Hz	1366 x 768	60Hz

IPPD 2100P

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
720 x 400	70Hz	720 x 400	70Hz	720 x 400	70Hz
800 x 600	56Hz	800 x 600	56Hz	800 x 600	56Hz
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
1152 x 864	60Hz	1152 x 864	60Hz	1152 x 864	60Hz
1280 x 960	60Hz	1280 x 960	60Hz	1280 x 960	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
1366 x 768	60Hz	1366 x 768	60Hz	1366 x 768	60Hz
1600 x 900	60Hz	1600 x 900	60Hz	1600 x 900	60Hz
1920 x 1080	60Hz	1920 x 1080	60Hz	1920 x 1080	60Hz

APPENDIX B: POWER CONSUMPTION

APPD1206T

Input V DC	+ 24V
Total (W) (Max.)	9.12W

APPD1501T

Input V DC	+ 24V
Total (W) (Max.)	13.68W

APPD1701T

Input V DC	+ 24V
Total (W) (Max.)	18.96W

APPD1901T

Input V DC	+ 24V
Total (W) (Max.)	13.92W