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MicroTouch DT-170P-M1 Touch Monitor User Manual

Contents

MicroTouch DT-170P-M1 Touch Monitor

About This Document

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Compliance Information

FCC

For FCC (USA)

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference,

2. this device must accept any interference received, including interference that may cause undesired operation.

For IC (Canada)
CAN ICES-3(B)/NMB-3(B)
For CE (EU)
The device complies with the EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU
Disposal Information
Waste Electrical and Electronic Equipment

- This symbol on the product indicates that, under the European Directive 2012/19/EU governing waste from electrical and electronic equipment, this product must not be disposed of with other municipal waste. Please dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.
- For more information about recycling of this product, please contact your local city office or your municipal waste disposal service.

Important Safety Instructions

- Before using this monitor, please read the user manual thoroughly to help protect against property damage and to ensure your personal safety and the safety of others.
- Be sure to observe the following instructions.
- For installation or adjustment, please follow the instructions in this manual and refer all servicing to qualified service personnel.

Usage Notice

Warning

- To prevent the risk of fire or shock hazards, do not expose the product to moisture.

Warning

- Please do not open or disassemble the product, as this may cause an electric shock.

Warning

- The AC power cord must be connected to an outlet with a ground connection.

Precautions

- Please follow all warnings, precautions, and maintenance as recommended in this user's manual to maximize the life of your unit.
- **Do** Disconnect the power plug from the AC outlet if the product is not going to be used for an extended period of time.

- **Don't** Do not operate the product under the following conditions:
- Extremely hot, cold, or humid environment.
- Areas were susceptible to excessive dust and dirt.
- Near any appliance generates a strong magnetic field.

Warnings

- To turn off monitor power, press "Power" on the OSD (On-Screen Display) keypad on the right rear side of the monitor or on the optional wired remote if it is connected.
- When turning off the monitor by pressing the POWER button, the main power of the monitor is not turned off completely.
- To disconnect the power completely, remove the power plug from the outlet.
- If any of the following occur, remove the power plug from the outlet immediately: the monitor is dropped; the housing is damaged; water is spilled onto or objects dropped inside the monitor.
- Failure to immediately remove the power plug may result in fire or electrical shock. Contact qualified service personnel for inspection.
- If the power cord or plug is damaged or becomes hot, turn the monitor off, make sure the power plug has cooled down, and remove the power plug from the outlet.
- If the monitor is still used in this condition, it may cause fire or electrical shock.
- Contact your dealer for replacement.
- **Warning** This product can expose the user to chemicals, including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to **www.P65Warnings.ca.gov**

Installation Tips

- No Touch Screen Drivers Required
- MicroTouch Touch Monitors are plug-and-play when connected to Windows 7 or later Windows devices; Kernel 3.2 for most builds of Linux; Android 1.0 and most other modern Operating Systems. If you have a non-plug and Play operating system, please refer to the Technical Support Section of **www.microtouch.com** or contact MicroTouch Technical Support to inquire about driver support for your particular operating system.

Things to avoid

- Don't install in a high-temperature environment. Operating temperature: 0˚C to 40˚C (0˚F to 104˚F), storage temperature -20C – 60C (-4˚F to 140˚F). If the monitor is used in a high-temperature environment or near any heat sources, the case and other
- parts may become distorted or damaged, resulting in overheating or electrical shock.
- Don't install in a high-humidity environment.
- **Operating humidity:** 20-90%
- Don't insert the power plug into anything other than a grounded 100-240V AC outlet.
- Don't use a damaged power plug or worn outlet.
- The use of extension cords is not recommended.
- The use of the power supply that comes with the MicroTouch product is strongly recommended.

- Don't place the monitor on an unstable shelf or surface.
- Don't place objects on the monitor.
- If the monitor is covered or the vents are blocked, the monitor could overheat and cause a fire.
- Please keep a 10 cm minimum distance between the monitor and the surrounding structures to allow sufficient ventilation.
- Don't move the monitor when it is connected to the power cord and AV cables.
- When moving the monitor, make sure to remove the power plug and cables from the outlet or source.
- If you encounter a problem during installation, please contact your dealer for assistance. Do not attempt to repair or open the monitor.

Product Overview

- This medical-grade desktop monitor is a standard format medical-grade monitor perfect for a wide range of healthcare applications.
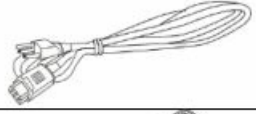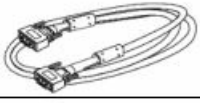
Key Features

- **Size:** 17" TFT LCD
- **Resolution:** 1280 x 1024
- **Contrast Ratio:** 1000:1
- **Brightness:** 297 cd/m2
- **View Angle:** H: 170, V: 160
- **Video Port**: 1 VGA (DB15), 1 HDMI, 1 DP 100 mm x 100 mm VESA mount
- P-cap touch with up to 10 simultaneous touches
- Plug and Play: no touch driver installation required for most modern operating systems
- **Warranty:** 3 years

Unpacking

- When unpacking please ensure that all the items in the following Accessories section are included. If any are missing or damaged, please contact the place of purchase for a replacement.

Package Contents

No.	Part	Picture	Qty
1	LCD Monitor		1
2	AC Power Cord IEC C15/C16 (1.8m)		1
3	AC- DC Converter		1
4	HDMI Cable (1.8 m)		1
5	VGA Cable (1.8 m)		1
6	USB A-B CABLE (1.8 m)		1
7	Stand		1
8	Cable Cover and Screw		1

Product Setup and Use
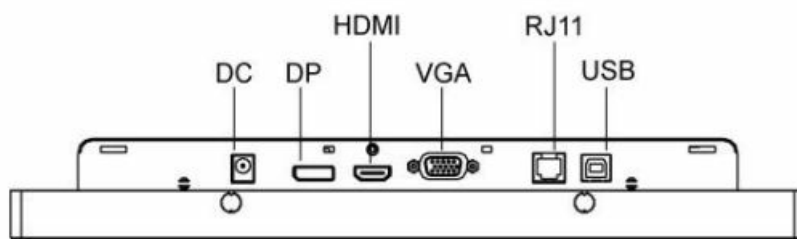
Input and Output Connectors

Power Connector

- 12 **VDC:** Power connector (Center pin: + 12 volts DC; Barrel: ground).
- **Video** Signal Input Connectors
- **DP (Display Port):** Digital video input.
  HDMI: Digital video input.
- **VGA:** Analog video input.

Optional OSD Remote Connector

- **RJ11:** Connector for the on-screen display (OSD) remote controller, which is used to access the on-screen display menu to select the various options, and to turn the monitor on/off.

**Touch Output Connector**

- USB 2.0 is the touch function output.

Configuration and Cable Options

- Power is supplied by the included AC-to-DC power supply's fixed 12-volt DC cable connector. The included 1.8 m long power cord is used to connect the monitor's AC to DC converter to an AC wall outlet.
- Plug the DC barrel connector into the DC jack on the monitor. Plug the AC power cable connector into the receptacle on the power converter, then plug the male connector of the AC cable into a wall outlet.
- Connect the included USB cable from the monitor's touch output to the computer.
- DP, HDMI, and VGA video cables are included, and any of the three may be used to connect the video signal. Either DP or HDMI is preferred, as they are digital video signals.
- VGA may, in some cases, require some video setting adjustments.

Turning the Monitor On and Off

- Turning the monitor On
- Connect the monitor to DC power.
- If the monitor does not come on within a few seconds, press the power button on the OSD keypad, outlined in red below, or the optional OSD wired remote.
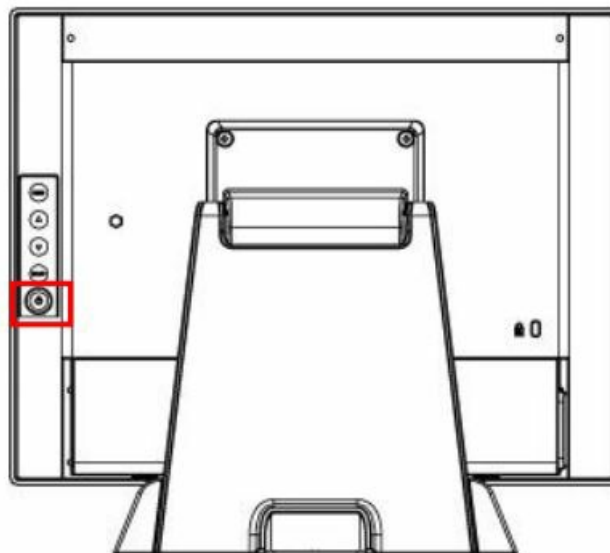
- When the monitor is on, pressing the Power button will open a pop-up that asks if the monitor is to be turned off. If yes, press the Power button again.
- Press the Power button one more time in response to the final popup to turn the monitor off.
- **Note:** If there is no video input signal for a preset period, the monitor will automatically go into standby mode.

On-Screen Display (OSD)

This monitor series provides OSD controls on the right rear side of the monitor, as viewed from the front, as

outlined in red below. An optional wired OSD remote is also available.
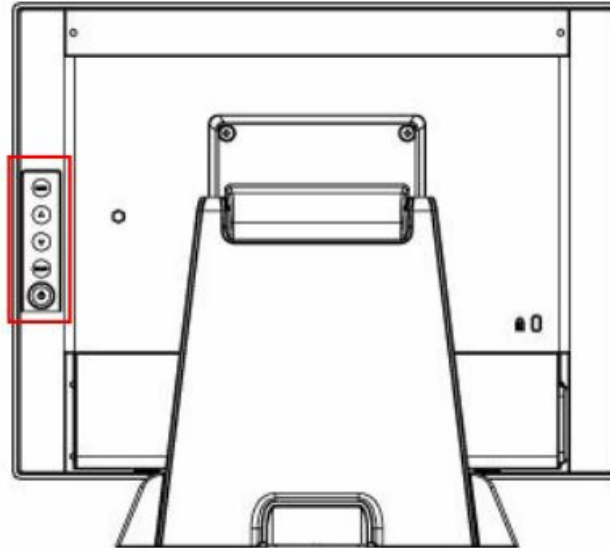
Button	Normal Video Display	When OSD Menu is Displayed
MENU	Activate the main menu	Exit selection / Exit OSD
▲	Brightness Adjust	Menu Up / Adjust Up
▼	Mute Audio	Menu Down / Adjust Down
SELECT	Select Video Source	Select the highlighted item
⏻	Power on / Power off	

Locking the OSD and Power button functions

- **Lock OSD:** prevents all the monitor settings from being changed. When this function is activated, all OSD controls and hotkey operations will be disabled except for the Power button.
- **Lock Power button:** Prevents monitor from being turned off by the Power button. The monitor will power on automatically when power is applied.
- Either or both functions may be locked.

To Lock/Unlock the OSD/Power buttons:

1. Press and hold Select for 5 seconds until the Lock menu appears, showing OSD "Active" (not locked) or "Inactive" (locked) and Power Active or Inactive.
2. Use the UP/Down buttons to highlight OSD or Power.
3. Press Select.
4. Use the Up/Down buttons to select Yes or No (to change the setting).
5. Press Select.
6. The menu will go away after a few seconds and the selected item will lock if unlocked or unlock if locked, or Menu can be pressed to exit and take effect immediately.

- Using the OSD Menus
- Navigating through the Menu System
- With the power on, press MENU, and the on-screen menu will pop up.

- Within the menu, use ▲, ▼ SELECT to navigate through the menus and adjust options. Press MENU to return to the previous menu or exit the OSD menu
- The OSD menu will automatically close if left idle for a pre-set time.

Picture Menu

- This menu is used for making common image adjustments. Note that some of the adjustments may be grayed out, indicating that they are not selectable. This indicates the use of a digital video input signal (DP, HDMI, or USB Type-C).
- These selections are fixed/not adjustable for digital video signals. The VGA video signal (because it is analog) may require all adjustments, so they are all selectable when VGA is being used.

Contrast	
	Increases or decreases the contrast of the picture. Press ◄ or ►, select the desired level, and then press **SELECT**. **Range:** 0-100
Brightness	
	Increases or decreases the brightness of the picture. Press ◄ or ►, select the desired level, and then press **SELECT**. **Range:** 0-100
H-Position	
	Adjust the horizontal position of the picture. Press ◄ or ► to select the desired level, and then press **SELECT**. Selectable only when VGA input is in use. **Range:** 0-100

V-Position	
	Adjust the vertical position of the picture. Press ◀ or ▶ to select the desired level, and then press **SELECT**. Selectable only when VGA input is in use. **Range:** 0-100
Phase	
	Adjust the pixel phase of the picture. Press ◀ or ▶ to select the desired level, and then press **SELECT**. Selectable only when VGA input is in use. **Range:** 0-100
Clock	
	Adjust the horizontal dot of the picture. Press ◀ or ▶ to select the desired level, and then press **SELECT**. Selectable only when VGA input is in use. **Range:** 0-100
Auto Adjust	
	Adjust and fine-tune the image to full screen automatically. Selectable only when VGA input is in use.

Advanced Menu

- This menu is used to adjust color temperature, image sharpness, and Gamma (not shown in the image below).

Color Temp	
	Select the color temperature
	Options: 5500K, 6500K, 7500K, 9300K, User
Red	
	Adjust the amount of red in color content
	Range: 0-100
Green	
	Adjust the amount of green in color content
	Range: 0-100
Blue	
	Adjust the amount of blue in color content
	Range: 0-100
Sharpness	
	Adjusts the definition of the picture. Press ◄ or ►, select the desired level, and then press **SELECT**. Selectable only when VGA input is in use.
	Range: 0-50
Gamma	
	Adjusts the gamma setting (mainly for reading X-rays). Press ◄ or ►, select the desired level, and then press **SELECT**.
	Range: Native, 1.8, 2.2, or DICOM

OSD Menu

- This menu is used to make set-up adjustments to the OSD itself, as well as other on-screen messages.

| OSD Timeout	
	Adjusts the time in seconds before the OSD menu disappears after no usage.
	Range: 0-60 sec
OSD Position	
	Selects the OSD Position (center or corners). Press ◄ ► to select the rotation.
	Options: Top Left, Bottom Left, Top Right, Bottom Right, Center
OSD H-Position	
	Adjusts the horizontal position of the OSD menu. Press ◄ or ► to select the desired horizontal position, then press **SELECT**.
	Range: 0-100
OSD V-Position	
	Adjust the vertical position of the OSD menu. Press ◄ or ► to select the desired vertical position, then press **SELECT**.
	Range: 0-100

Option Menu

- This menu is used to select or display various functions.
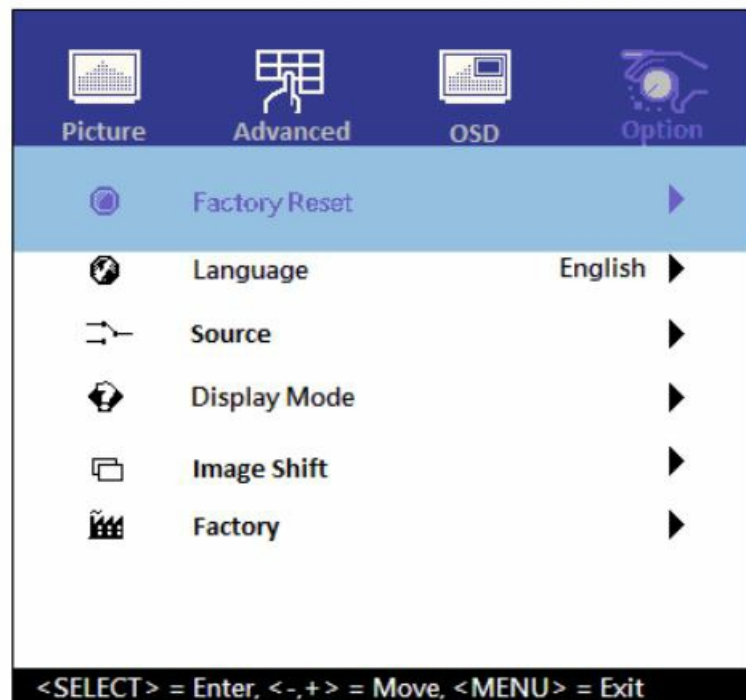
Reset
Restore the factory default settings. **Options:** Yes, No
Language
Select the OSD language **Options:** English, French, Deutsch, Italian, Spanish, Japanese, Traditional Chinese and Simplified Chinese
Source Select
Select the Video Input Source **Options:** Auto, VGA, HDMI, DP
Display Mode
Display the current video source and resolution information.
Factory
Enter factory mode **This is only for maintenance service only. Do not use this function.**

OSD Default Settings

Note: N/A applies when a digital video input (DP or HDMI) is in use

| Menu	Parameter	Default Settings
Picture	Contrast	50
	Brightness	100
	H-Positon	N/A
	V-Positon	N/A
	Phase	N/A
	Clock	N/A
	Auto Adjust	N/A
Advanced	Color Temp	User
	Sharpness	50
	Gamma	Native
OSD	OSD Timeout	15
	OSD Position	User
	OSD H-Positon	50
	OSD V-Positon	50
Option	Reset	N/A
	OSD Language	English
	Source Select	Auto
	Display Mode	N/A
	Factory	N/A

Mounting options

- The monitor may be mounted to a stand or other device that has a 100mm x 100mm standard VESA mount hole pattern.

VESA Mount

- The monitor has an integral VESA standard mount pattern that conforms to the "VESA Flat Display Mounting Interface Standard" which defines a physical mounting interface and corresponds to the standards for monitor

mounting devices.
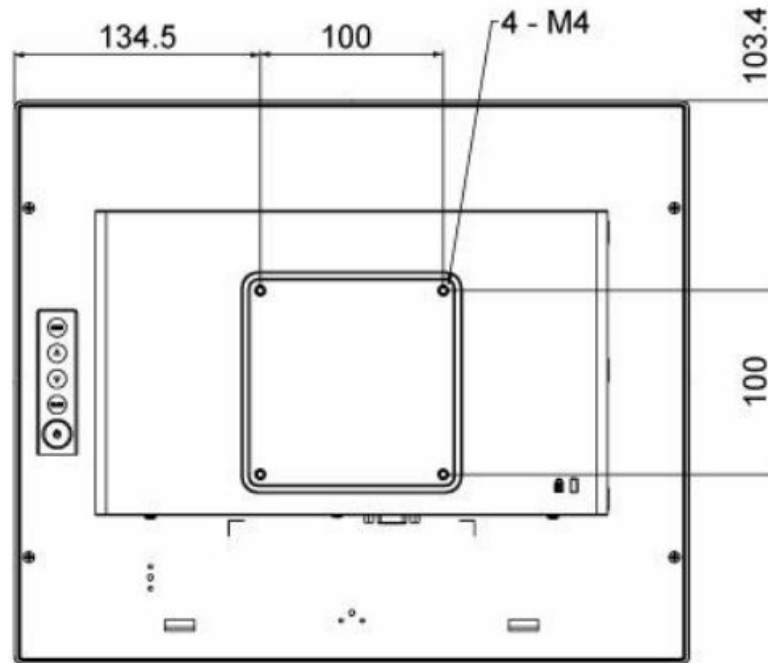
Warning

- Please use the correct screws! The distance between the back cover surface and the bottom of the screw hole is 8 mm. Please use four M4 diameter screws with 8 mm length to mount the monitor.

Stand Mount

- This monitor may be mounted to a stand using the VESA mount pattern. A MicroTouch optional stand is recommended – see the Accessories section of the MicroTouch website.
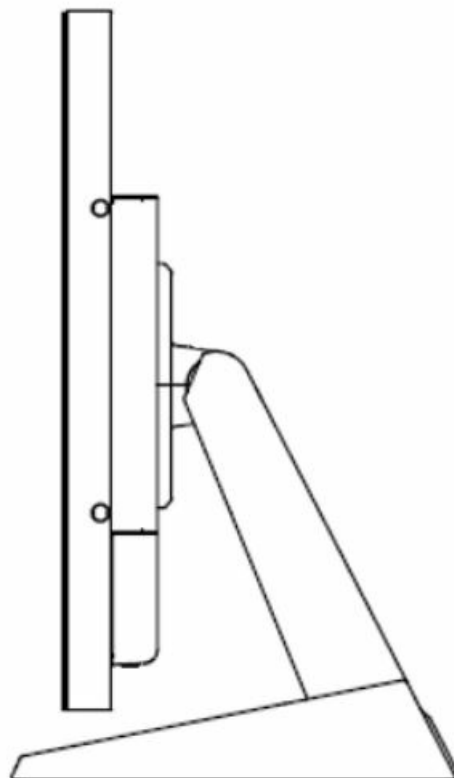
Specifications and Dimensions

Specifications

Item	Category	Specifications
LCD Panel	Size	17" TFT LCD
	Resolution	1280 x 1024
	Brightness (typical)	297 cd/m2
	Contrast Ratio (typical)	1000
	Number of Colors	16.7 million
	Viewing Angle (typical)	Horizontal: 170 degrees; Vertical: 160 degrees
Touch Screen	Touch Type	P-CAP
	Simultaneous touch points	Up to 10
Video	Type	DisplayPort 1.2a HDMI 1.3 (Compatible with HDMI 1.4) VGA
Power	AC Adapter Input	AC 100V – 240V (50/60Hz), 60W max
	AC Adapter Output	12VDC, 5A max
	Monitor On	15W typical, 20W max (1.25A typ, 1.66A max)
	Power Saving	Sleep mode: ≤ 1W; Off: ≤ 0.5W
Size and Weight	Dimensions (W x H x D) Without Stand	369 mm x 307 mm x 47.3 mm
		14.53 in x 12.09 in x 1.87 in
	Dimensions (W x H x D) With IS-000-A1 Stand	369 mm x 334.9 mm x 202 mm
		14.53 in x 13.19 in x 7.96 in
	Net Weight	3.0 kg without stand, 5.3 kg with IS-000-A1 stand 6.61 lb without stand, 11.68 lb with IS-000-A1 stand
	VESA Mount	100 mm x 100 mm
Environment	Compliance	CE, FCC, LVD, RoHS
	Front seal	IP65
	Operating Temperature	0°C – 40°C
	Storage Temperature	-20°C – 60°C
	Operating Humidity	20% – 90% RH, non-condensing

Supported Timings

| Mode	Resolution	H-Freq. (KHz)	Bandwidth (MHz)	Polarity	
				H	V
1	720 x 400 @ 70 Hz	31.47	28.322		
2	640 x 480 @ 60 Hz	31.47	25.175		
3	640 x 480 @ 66 Hz	35	30.24		
4	640 x 480 @ 72 H)	37.86	31.5		
5	640 x 480 @ 75 Hz	37.5	31.5		
6	800 x 600 @ 56 Hz	35.16	36		
7	800 x 600 @ 60 Hz	37.88	40		
8	800 x 600 @ 72 Hz	48.077	50		
9	800 x 600 @ 75 Hz	46.875	49.5		
10	832 x 624 @ 74.55 Hz	49.722	57.28		
11	1024 x 768 @ 60 Hz	48.363	65		
12	1024 x 768 @ 70 Hz	56.476	75		
13	1024 x 768 @ 75 Hz	60.02	78.75		
14	1280 x 1024 @ 60Hz	64	108	+	+
15	1280 x 1024 @ 75Hz	80	135	+	+
16	1152 x 864 @ 75Hz	67.5	108	+	+
17	1280 x 960 @ 60Hz	60	108	+	+

Dimensions

Front view
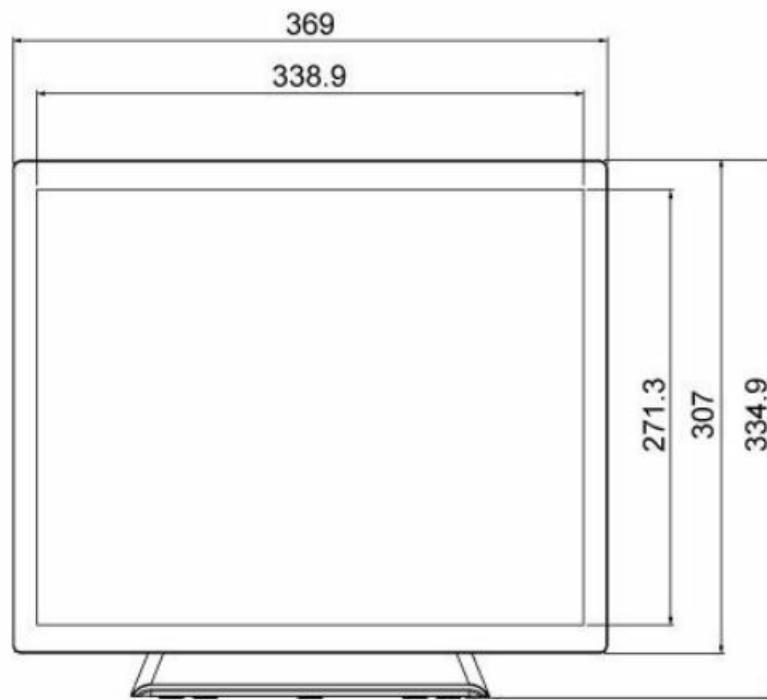
Side View
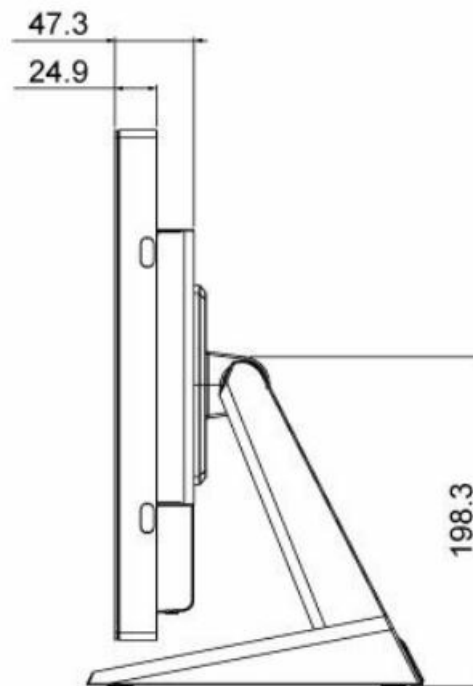
Rear View
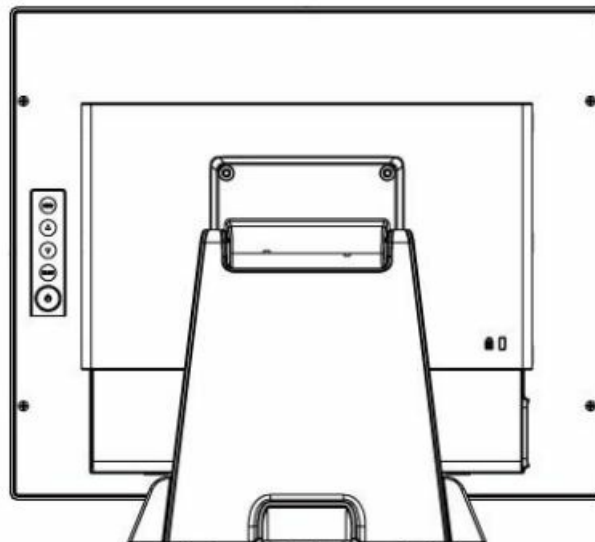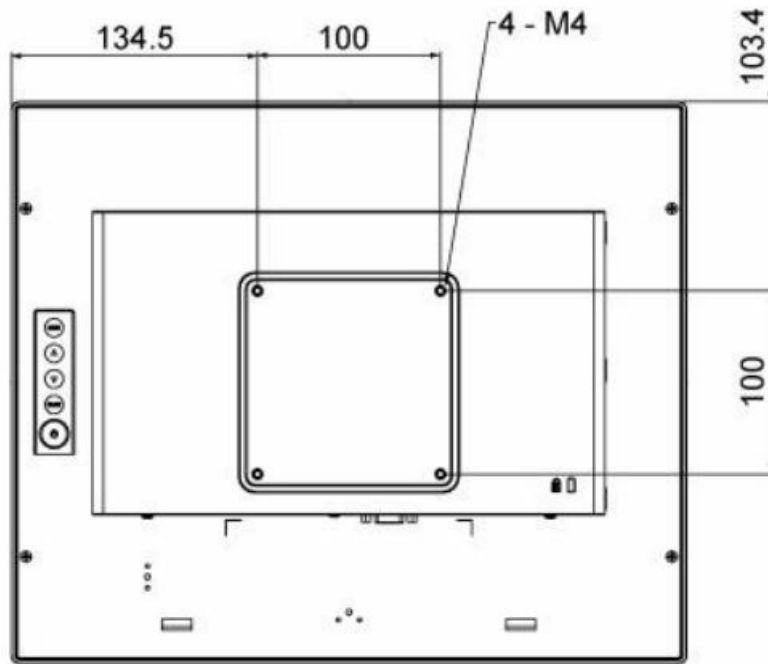
Appendix

Cleaning

- Turn off the product and disconnect from AC power before cleaning. Turning the product off protects against accidental touch selections that could cause problems or hazardous results. Disconnecting power protects against hazardous interaction between accidental liquid entry and electricity.
- To clean the case, dampen a clean cloth lightly with water and a mild detergent and wipe gently. Use a soft, dry cloth to clean areas that have ventilation openings to avoid getting any liquid or moisture inside. If liquid does get inside, do not use the product until it has been inspected and tested by a qualified service technician.
- To clean the touch screen, apply a glass cleaning solution to a soft cloth and wipe the screen clean.
- To ensure that liquid does not enter the product, do not spray the cleaning solution directly onto the touch screen or any other part.
- Do not use volatile solvents, waxes, or any abrasive cleaners on any part of the product.

Solutions to Common Problems

No image on the monitor

- Check that the video signal source device is turned on.
- Check that the selected video input signal matches the video connection.
- The monitor or computer may be in SLEEP mode. Press any key/move the mouse/touch the touchscreen and wait a few seconds to see if the image appears.
- Check that the DC power connector is fully seated.
- Check that the AC cable is securely connected to the wall outlet and to the AC to DC converter. Make sure the MicroTouch power converter is being used.
- Try another MicroTouch-approved power converter if possible.

The monitor display is dim

- Use the OSD controls to increase the brightness.
- Use the OSD controls to increase the contrast.
- The monitor displays the "Out of Range" message.

The monitor displays the "Out of Range" message.

- This message will only occur when using the VGA video signal input; use either the HDMI or Display Port video signal input if your signal source equipment supports either of those.
- Reduce the resolution to a resolution the monitor supports – see the Supported Timings chart in the Specifications and Dimensions section of this manual.

The monitor display image looks strange

- Try the Auto Adjust function in the OSD (only available when using the VGA video signal input.
- Adjust your computer's resolution/timing mode to be within the allowable timing ranges specified for your touch monitor (see section above).

Touch functionality doesn't work or works incorrectly

- Make sure the USB cable is properly connected.
- Fully remove any protective sheets from the screen, then cycle the power Off/On.
- Ensure that the monitor is in an upright position with nothing touching the screen, then cycle power Off/On.
- Legacy operatic systems, prior to circa 2007, may require drivers to support Touch Devices. Please contact MicroTouch Technical Support.
- Neither the OSD nor power buttons respond when pressed.
- If the wired OSD remote is in use, make sure it is securely connected.

Warranty Information

- Except as otherwise stated herein, or in an order acknowledgment delivered to Buyer, Seller warrants to Buyer that the Product shall be free of defects in materials and workmanship. The warranty for the touchscreen display and its components is three years. Seller makes no warranty regarding the model life of components. Seller's suppliers may at any time and from time to time make changes in the components delivered as Products or components. Buyer shall notify Seller in writing promptly (and in no case later than 30 days after discovery) of the failure of any Product to conform to the warranty set forth above; shall describe in commercially reasonable detail in such notice the symptoms associated with such failure; and shall provide to Seller the opportunity to inspect such Products as installed, if possible. The notice must be received by the Seller during the Warranty Period for such product unless otherwise directed in writing by the Seller. Within thirty days after submitting such notice, Buyer shall package the allegedly defective Product in its original shipping carton(s) or a functional equivalent and shall ship to Seller at Buyer's expense and risk. Within a reasonable time after receipt of the allegedly defective Product and verification by Seller that the

- Product fails to meet the warranty set forth above, Seller shall correct such failure by, at Seller's options, either (i)modifying or repairing the Product or (ii) replacing the Product. Such modification, repair, or replacement and the return shipment of the Product with minimum insurance to Buyer shall be at Seller's expense. Buyer shall bear the risk of loss or damage in transit and may insure the Product. Buyer shall reimburse Seller for transportation cost incurred for Product returned but not found by Seller to be defective. Modification or repair, of Products may, at Seller's option, take place either at Seller's facilities or at Buyer's premises. If Seller is unable to modify, repair, or replace a Product to conform to the warranty set forth above, then Seller shall, at

- Seller's option, either refund to Buyer or credit to Buyer's account the purchase price of the Product less depreciation calculated on a straight-line basis over Seller's stated Warranty Period. These remedies shall be the buyer's exclusive remedies for breach of warranty. Except for the express warranty set forth above, the seller grants no other warranties, express or implied by statute or otherwise, regarding the products, their fitness for any purpose, their quality, their merchantability, their non-infringement, or otherwise. No employee of Seller or any other party is authorized to make any warranty for the goods other than the warranty set forth herein. Seller's liability under the warranty shall be limited to a refund of the purchase price of the product. In no event shall Seller be liable for the cost of procurement or installation of substitute goods by Buyer or for any special, consequential, indirect, or incidental damages. Buyer assumes the risk and agrees to indemnify Seller against and hold Seller harmless from all liability relating to (i) assessing the suitability for Buyer's intended use of the Products and of any system design or drawing and (ii) determining the compliance of Buyer's use of the Products with applicable laws, regulations, codes, and standards.

- Buyer retains and accepts full responsibility for all warranty and other claims relating to or arising from Buyer's products, which include or incorporate Products or components manufactured or supplied by Seller. Buyer is solely responsible for any and all representations and warranties regarding the Products made or authorized by Buyer. Buyer will indemnify Seller and hold Seller harmless from any liability, claims, loss, cost, or expenses (including reasonable attorney's fees) attributable to Buyer's products or representations or warranties concerning same.

RoHS Declaration

Equipment name	Touch LCD Monitor		Type designation (Type)	DT-170P-M1		
Component	Restricted substances and their chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr+6)	Polybrominated b iphenyls (PBB)	Polybrominated dip henyl ethers (PBDE)
Plastic Parts	○	○	○	○	○	○
Metal Parts		○	○	○	○	○
Cable components		○	○	○	○	○
LCD Panel		○	○	○	○	○
Touch Panel		○	○	○	○	○
PCBA		○	○	○	○	○
Software	○	○	○	○	○	○

Notes

Indicates that the percentage of the restricted substance does not exceed the permissible limit.

Indicates that the restricted substance is exempt.

- **www.MicroTouch.com**
- **www.usorders@microtouch.com**
- TES AMERICA LLC
- 215 Central Avenue, Holland, MI 49423 | (616) 786-5353
- The information presented in this user manual is intended as general information about MicroTouch products and is subject to change. Product specifications and warranties will be governed by TES America, LLC. Standard terms and conditions of sale.
- Products are subject to availability. Copyright © 2022 TES America, LLC. All rights reserved. Android is a trademark of Google LLC. Windows is a trademark of Microsoft Corporation in the United States and other countries.

Documents / Resources

MicroTouch DT-170P-M1 Touch Monitor [pdf] User Manual
DT-170P-M1 Touch Monitor, DT-170P-M1, Touch Monitor, Monitor

References

- **User Manual**