



PRISM MPI2-RACK-MD
Extended Touch Display with Rack Cabinet
Installation and Safety
Instructions



071-3641-00



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Instructions

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Table of Contents

Important safety information	iii
General safety summary	iii
Service safety summary	v
Terms in this manual	v
Symbols and terms on the product	v
Preface	vi
Product description	vi
Documentation	vi
Conventions used in this manual	vii
Installation	1
Initial product inspection	1
Accessories	2
Operating requirements	3
Rear panel connectors	5
Equipment rack installation	6
Power-on and power-off procedures	11
Operation	13
Extending the PRISM waveform monitor display	13
Compliance information	14
EMC compliance	14
Safety compliance	15
Environmental considerations	17

Important safety information

This manual contains information and warnings that must be followed by the user for safe operation and to keep the product in a safe condition.

To safely perform service on this product, additional information is provided at the end of this section. (See page v, *Service safety summary*.)

The MPI2-RACK-MD is designed only for use with the Tektronix MPI2, do not use this product for any other purpose.

General safety summary

Use the product only as specified. Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. Carefully read all instructions. Retain these instructions for future reference.

Comply with local and national safety codes.

For correct and safe operation of the product, it is essential that you follow generally accepted safety procedures in addition to the safety precautions specified in this manual.

The product is designed to be used by trained personnel only.

Only qualified personnel who are aware of the hazards involved should remove the cover for repair, maintenance, or adjustment.

Before use, always check the product with a known source to be sure it is operating correctly.

This product is not intended for detection of hazardous voltages.

While using this product, you may need to access other parts of a larger system. Read the safety sections of the other component manuals for warnings and cautions related to operating the system.

When incorporating this equipment into a system, the safety of that system is the responsibility of the assembler of the system.

To avoid fire or personal injury

Use proper power cord. Use only the power cord specified for this product and certified for the country of use.

Do not use the provided power cord for other products.

Ground the product. This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, make sure that the product is properly grounded.

Do not disable the power cord grounding connection.

Power disconnect. The power cord disconnects the product from the power source. See instructions for the location. Do not position the equipment so that it is difficult to operate the power cord; it must remain accessible to the user at all times to allow for quick disconnection if needed.

Observe all terminal ratings. To avoid fire or shock hazard, observe all ratings and markings on the product. Consult the product manual for further ratings information before making connections to the product.

Do not apply a potential to any terminal, including the common terminal, that exceeds the maximum rating of that terminal.

Do not operate without covers. Do not operate this product with covers or panels removed, or with the case open. Hazardous voltage exposure is possible.

Avoid exposed circuitry. Do not touch exposed connections and components when power is present.

Do not operate with suspected failures. If you suspect that there is damage to this product, have it inspected by qualified service personnel.

Disable the product if it is damaged. Do not use the product if it is damaged or operates incorrectly. If in doubt about safety of the product, turn it off and disconnect the power cord. Clearly mark the product to prevent its further operation.

Before use, inspect test leads and accessories for mechanical damage and replace when damaged. Do not use test leads if they are damaged, if there is exposed metal, or if a wear indicator shows.

Examine the exterior of the product before you use it. Look for cracks or missing pieces.

Use only specified replacement parts.

Do not operate in wet/damp conditions. Be aware that condensation may occur if a unit is moved from a cold to a warm environment.

Do not operate in an explosive atmosphere.

Keep product surfaces clean and dry. Remove the input signals before you clean the product.

Provide proper ventilation. Refer to the installation instructions in the manual for details on installing the product so it has proper ventilation.

Slots and openings are provided for ventilation and should never be covered or otherwise obstructed. Do not push objects into any of the openings.

Provide a safe working environment. Always place the product in a location convenient for viewing the display and indicators.

Avoid improper or prolonged use of keyboards, pointers, and button pads. Improper or prolonged keyboard or pointer use may result in serious injury.

Be sure your work area meets applicable ergonomic standards. Consult with an ergonomics professional to avoid stress injuries.

Use only the Tektronix rackmount hardware specified for this product.

Service safety summary

The *Service safety summary* section contains additional information required to safely perform service on the product. Only qualified personnel should perform service procedures. Read this *Service safety summary* and the *General safety summary* before performing any service procedures.

To avoid electric shock. Do not touch exposed connections.

Do not service alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect power. To avoid electric shock, switch off the product power and disconnect the power cord from the mains power before removing any covers or panels, or opening the case for servicing.

Use care when servicing with power on. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

Verify safety after repair. Always recheck ground continuity and mains dielectric strength after performing a repair.

Terms in this manual

These terms may appear in this manual:



WARNING. Warning statements identify conditions or practices that could result in injury or loss of life.



CAUTION. Caution statements identify conditions or practices that could result in damage to this product or other property.

Symbols and terms on the product

These terms may appear on the product:

- DANGER indicates an injury hazard immediately accessible as you read the marking.
- WARNING indicates an injury hazard not immediately accessible as you read the marking.
- CAUTION indicates a hazard to property including the product.



When this symbol is marked on the product, be sure to consult the manual to find out the nature of the potential hazards and any actions which have to be taken to avoid them. (This symbol may also be used to refer the user to ratings in the manual.)

The following symbol(s) may appear on the product:



CAUTION
Refer to Manual



Protective Ground
(Earth) Terminal

Preface

This manual describes how to install the PRISM MPI2-RACK-MD extended touch display with rack cabinet and provides basic safety and operating information. Detailed operating information of the PRISM MPI2 product is available in the User Manual. A complete list of PRISM documentation is provided in this manual. (See page vi, *Documentation*.)

Product description

The PRISM MPI2-RACK-MD provides a 3RU rack cabinet with an extended touch display for MPI2 applications that require additional monitoring workspace. The touch display extends the functionality of the MPI2 product by providing an additional full HD application tile. The additional tile supports several different monitoring applications, including picture, trace, audio, and status. The PRISM MPI2-RACK-MD rack cabinet is 19 inches wide and comes with a USB/Headphone connector on the rack ear.



Figure i: PRISM MPI2 (left; not included) mounted in the MPI2-RACK-MD

Documentation

Table i: Product documentation

Document	Manual type	Tektronix part number	Description	Availability	
				Print	Web
PRISM MPI2 Installation and Safety Instructions	User	071-3628-xx	Describes how to install the PRISM waveform monitor and provides basic safety and operating information	√	√
PRISM MPI2 and MPX2 User Manual	Primary User	077-1522-xx	Provides detailed operating information for the PRISM waveform monitor		√

Searching for documents on www.tek.com/downloads

The fastest way to find a document on tek.com is through filtering. Using the filtering options on the left side of the Web page will help narrow down your choices until you find the correct documentation.

The following example lists six steps on searching for the latest User Manual:

1. Go to www.tek.com/downloads and search for PRISM.
2. Filter by **Manual** in the **Filter by Type** menu.
3. Filter by **Primary User** in the **Filter by Manual Type** menu.

NOTE. The Manual Type for each document is in the second column of the product documentation table. (See Table i.)

4. Sort by **Date** above the search bar.
5. The first manual in the list should be the latest PRISM User Manual. Click the link to the manual for additional information and to download.
6. To confirm that you have the correct manual, look at the **P/N** and the **Last Update** date. This information is found below the **Download this manual** link. See the image below for an example of the location.

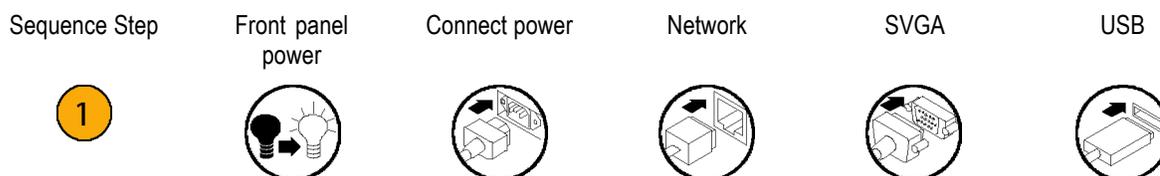
NOTE. The first seven numbers of the P/N are the Tektronix part number from the product documentation table. The last two numbers are the revision level number.



Figure ii: Location of the document part number and the date it was last updated.

Conventions used in this manual

The following icons may be used throughout this manual.



Installation

Initial product inspection

Perform the following product inspection procedure when you receive your extended touch display with rack cabinet:

1. Inspect the two shipping cartons for external damage, which may indicate damage to the rack cabinet and extended touch display.
2. Verify that the one shipping carton contains the rack cabinet and the other shipping carton contains the extended touch display, the standard accessories, and any optional accessories that you ordered. (See page 2, *Accessories*.)
3. Remove the PRISM MPI2-RACK-MD from the shipping cartons, and then check that the extended touch display with rack cabinet has not been damaged in transit. Prior to shipment the items are thoroughly inspected for mechanical defects. The exterior should not have any scratches or impact marks.

NOTE. Save the shipping cartons and packaging materials for module repackaging in case shipment becomes necessary.

Exterior cleaning

The extended touch display with rack cabinet exteriors were inspected for debris when shipped. If necessary, you can clean the exterior of the items as follows.



WARNING. To prevent injury or death, power off the display and disconnect it from line voltage before cleaning.

Clean the exterior surfaces of display with a dry lint-free cloth or a soft-bristle brush. If any dirt remains, use a cloth or swab dipped in a 75% isopropyl alcohol solution. Use a swab to clean narrow spaces around controls and connectors. Do not use abrasive compounds on any part of the extended touch display that may be damaged by it.



CAUTION. Avoid the use of chemical cleaning agents that might damage the plastics used in the items. Use a 75% isopropyl alcohol solution as a cleaner and rinse with deionized water. Before using any other type of cleaner, consult your Tektronix Service Center or representative.

Accessories

International power cords. Your module was shipped with one of the following power cord options. Power cords for use in North America are UL listed and CSA certified. Cords for use in areas other than North America are approved by at least one authority acceptable in the country to which the product is shipped.

- Opt. A0 – North America power cord
- Opt. A1 – Universal EUR power cord
- Opt. A2 – United Kingdom power cord
- Opt. A3 – Australia power cord
- Opt. A4 – 240 V, North America power cord
- Opt. A5 – Switzerland power cord
- Opt. A6 – Japan power cord
- Opt. A10 – China power cord
- Opt. A11 – India power cord
- Opt. A12 – Brazil power cord
- Opt. A99¹ – No power cord

¹ When ordering the A99 option, it is the responsibility of the end user to ensure that a certified power cord, for the country or region it is installed, is used with this module.



CAUTION. To reduce risk of fire and shock, use the certified power cord provided with the product.

Operating requirements

This section provides the environmental and power operating requirements for the module.

Environmental operating requirements

Check that the location of your installation has the proper operating environment as listed in the following table.



CAUTION. *Damage to the module can occur if this module is powered on at temperatures outside the specified temperature range.*

Table 1: Environmental requirements

Parameter		Description
Temperature	Operating	0 °C to +40 °C
	Non Operating	-20 °C to +60 °C
Humidity	Operating	20% to 80% relative humidity (% RH) at up to +40 °C, non-condensing
	Non Operating	5% to 90% relative humidity (% RH) at up to 40 °C and derated linearly to 45% RH at 60 °C, non-condensing
Altitude	Operating	To 3,000 m (10,000 feet) Maximum operating temperature decreases 1 °C each 300 m above 1.5 km
	Non Operating	To 12,000 m (40,000 feet)
Cooling		Internal fans provide forced air circulation. Do not block ventilation openings.
	Bare Instrument	To ensure proper airflow, there must be at least 2 inches of clearance on both sides of the instrument, at least 2 inches of clearance from the rear of the instrument, and at least a 1/2 inch of clearance from the top of the instrument.

Electrical power requirements

The extended touch display operates from an AC power input. Check that your location provides the proper electrical power requirements as listed in the following tables.

AC line power. Use the proper power cord with the module. (See page 2, *International power cords*.) The following table lists the power requirements for the module.

Table 2: Extended touch display AC line power requirements

Parameter	Description
Line voltage range	100 - 240 VAC
	 WARNING. To reduce the risk of fire and shock, ensure that the mains supply voltage fluctuations do not exceed 10% of the operating voltage range.
Line frequency	50/60 Hz
Maximum power	0.75 A



WARNING. In the module, only the line conductor is fused for over-current protection. The fuse is internal and not user replaceable. Do not attempt to replace the fuse. If you suspect the fuse has blown, return the unit to an authorized service center for repair.

Physical characteristics

The following table lists the physical characteristics of a module.

Table 3: Extended touch display physical characteristics

Parameter	Description
Dimensions	
Height	13.72 cm (5.4 in.)
Width	21.84 cm (8.6 in.), includes bezel
Depth	11.18 cm (4.4 in.), includes bezel
Weight	
Net	1.59 kg (3.5 lbs.)
Shipping	3.57 (7.87 lbs.)

Rear panel connectors

The following figure shows the connections to the rear panel of the display.



Figure 1: PRISM MPX2-RACK-MD extended touch display rear panel

Item number (See Figure 1.)	Description
1	AC power input. Connector for AC power source.
2	DisplayPort (DP). DisplayPort input for the display. The maximum resolution of the display is 1920x1080.
3	USB B port. A USB 3.0 port for connecting to a PRISM waveform monitor for touchscreen operation.
4	USB A ports. Currently not enabled. Do not make connections to these ports.
5	Headphone jack. Currently not enabled. Do not make connections to this port.

Equipment rack installation

The rackmount kit is a collection of parts that, once installed, configures the MPI2 PRISM monitor (not included) and extended touch display for mounting into a standard 19-inch equipment rack.

Rack cabinet cooling and clearance requirements



CAUTION. To prevent risk of fire, adequate airflow to instrument(s) and rack adapter must be maintained. Failure to provide adequate airflow to instrument(s) could cause an instrument to shut down.

Inadequate airflow includes placing instrument(s) and rack adapter in any small, enclosed room that lacks a ventilation system, such as a closet. If the airflow is restricted or blocked and the instrument(s) do not shut down, the risk of fire is increased and the instrument(s) could be permanently damaged.

The instrument has specific cooling and clearance requirements. Make sure that the clearance requirements for proper airflow are met for both the rack cabinet and the instrument. See the *PRISM MPI2 Installation and Safety Instructions* manual for information about the environmental operating requirements for the instrument.

Table 4: Clearance requirements for the rack cabinet

Instrument side	Clearance requirement
Top and bottom	None
Left and right sides	2 in (51 mm)
Front	None
Rear	3 in (76 mm)

Recommended tool list

Table 5: Recommended tool list

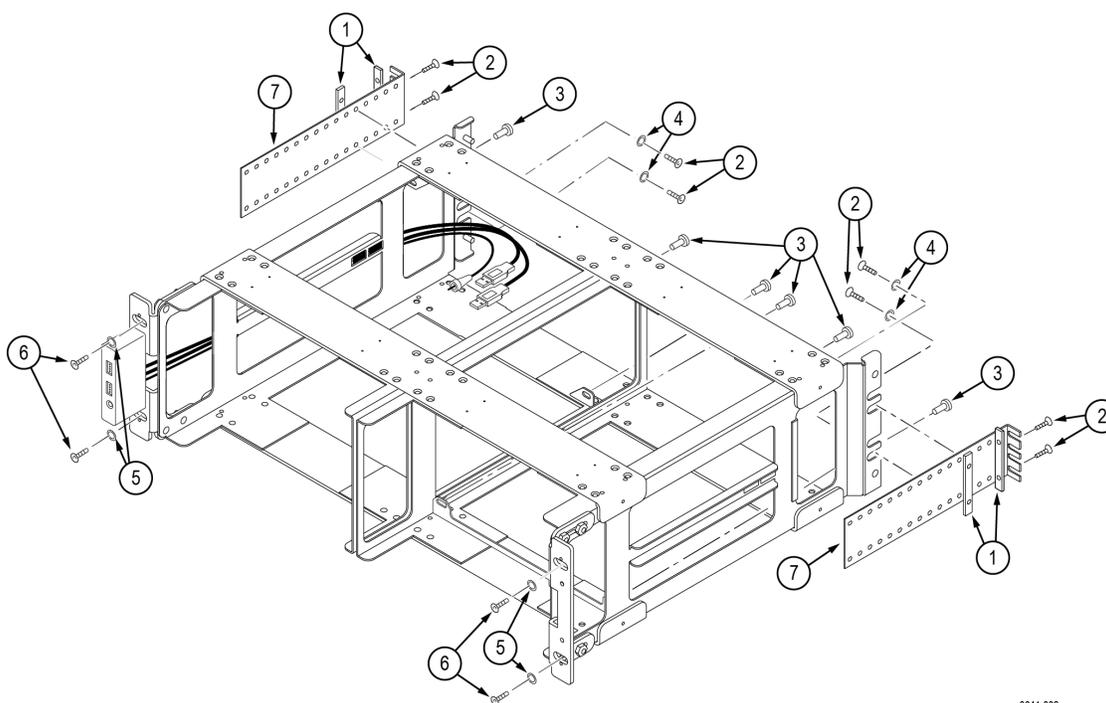
Name	Description
Screwdriver handle	Torque driver handle. Accepts 1/4-in. hex-head driver tips
#2 Phillips tips or PoziDriv tip	Phillips or PoziDriv-driver tip for #2 size screw heads
T-10 TORX tip	Used for removing instrument screws. TORX-driver bit for T-10 size screw heads.
T-15 TORX tip	Used for removing instrument screws. TORX-driver bit for T-10 size screw heads.

Supplied hardware

The following table lists the hardware supplied with the rack cabinet. The installation instructions includes references to these parts by the item numbers to help in selecting the correct parts.

Table 6: Supplied hardware

Item number	Tektronix part number	Description	Quantity
Hardware kit 016-1133-XX			
1	381-0251-XX	NUT BAR; 10-32 X 3.0 X 0.375 X 0.120	4
2	212-0577-XX	SCREW, MACHINE; 10-32 X 0.625, TRH, ZINC PLATED STEEL, PHIL	8
3	211-0511-XX	SCREW, MACHINE; 6-32 X 0.5, PNH, STEEL, ZINC PLATED, T15 TORX	8
4	210-1061-XX	WASHER, FLAT; 0.203 ID X 0.625 OD X 0.062, ZINC PLATED STEEL	4
5	210-1298-XX	WASHER; SHOULDER & RETAINER, 0.195 ID X 0.195 THK, PLASTIC, TV GRAY, 6.575 OD	4
6	212-0591-XX	SCREW, MACHINE; 10-32 X 0.750 OVAL HEAD, POZI	4
Guide bracket			
7	407-3752-XX	BRACKET, EXT; 2.5 X 8.06 X 0.06, STEEL; SAFETY CONTROLLED	2



3641-002

Figure 2: MPI2-RACK-MD parts diagram

Install the rack cabinet in the equipment rack

Before you install an instrument into the rack adapter, install the adapter into the rack using the following steps:

1. Position the rack cabinet so that the headphone jack(s) on the front of the cabinet is on the bottom.
2. If desired, you can adjust the position of the handle brackets to mount the adapter flush with other equipment in the rack. To do this, loosen the nuts that attach the handle brackets to the rack adapter, adjust the position of the handle brackets as desired, and then tighten the nuts securely. (See Figure 3.)
3. Use a screwdriver with a PosiDriv tip to attach the rack adapter assembly to the front frame of the rack with four 10-32 X 0.750 screws (item 6 in Table 4) and four shoulder washers (item 5 in Table 4).
4. Use a screwdriver with a Phillips tip to install one guide bracket (item 7 in Table 4) to one side of the rear frame of the rack with two 10-32 X 0.625 screws (item 2 in Table 4) and one nut bar (item 1 in Table 4) as shown. (See Figure 3.)
5. Use a screwdriver with a Phillips tip to attach the guide bracket to the cabinet with two 10-32 X 0.625 screws (item 2 in Table 4), two washers (item 4 in Table 4) and one nut bar (item 1 in Table 4). Use the holes in the bracket that will accommodate the depth of the instrument rack frame being used. Leave the screws loose.
6. Repeat steps 5 and 6 to install the second guide bracket to the other side of the cabinet.
7. Tighten all of the attaching screws that were left loose in the previous steps.

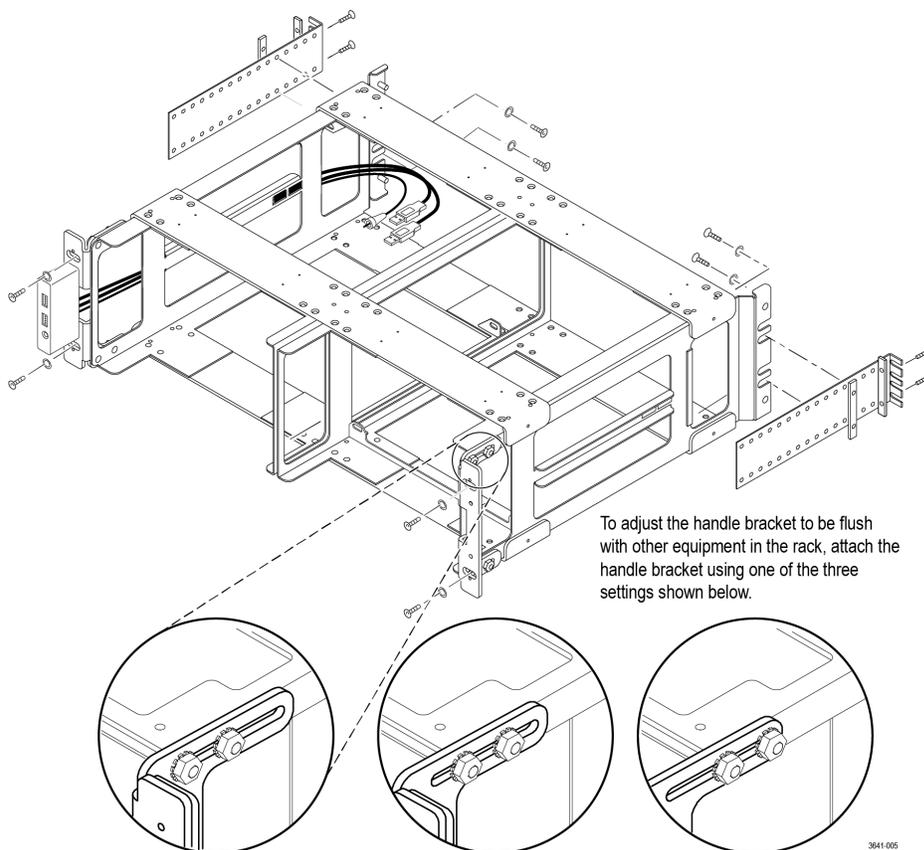


Figure 3: Adjusting the handle brackets and installing the guide brackets

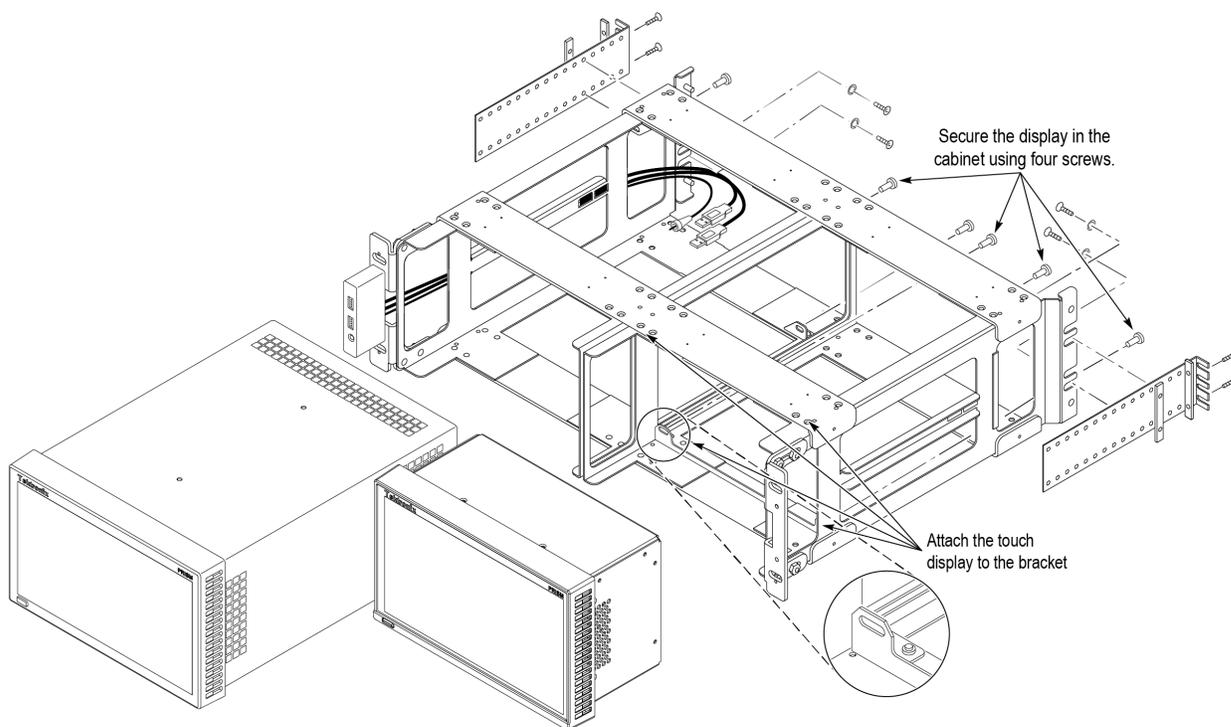


Figure 4: Installing the PRISM waveform monitor (not included) and extended touch display into the rack cabinet

Install instrument(s) in the rack cabinet

After you install the rack cabinet in the equipment rack, perform the following steps to install instrument(s) in the cabinet:



CAUTION. To prevent the USB and headphone cables from being damaged, make sure the cables are not in the way as you slide the instrument into the rack cabinet.

1. Install the PRISM waveform monitor in the rack cabinet. (See Figure 4.)
 - a. Slide an PRISM waveform monitor into the left slot in the rack cabinet as viewed from the front.
 - b. Use a screwdriver with a TORX T-15 tip to secure the instrument in the rack cabinet with two 10-32 X 0.625 screws (item 3 in Table 4). The screws attach to the top right and bottom left holes in the instrument chassis as viewed from the rear.
 - c. Connect the cable from the USB port and headphone jack on the rack cabinet to the rear of the instrument. (See Figure 5.)
 - d. Connect signal and Ethernet cables to the instrument as needed. See the *PRISM MPI2 Installation and Safety Instructions* manual for information about making signal connections to the instrument.
 - e. Connect the power cable to the instrument. (See page 11, *Power cord installation*.)

2. Install the extended touch display in the right slot of the rack cabinet as viewed from the front. (See Figure 4.)
 - a. Slide the extended display into the right slot in the rack cabinet as viewed from the front.
 - b. Use a screwdriver with a TORX T-15 tip to secure the extended display in the rack cabinet with four 10-32 X 0.625 screws (item 3 in Table 4). The screws attach to all four rear corners of the instrument.
 - c. Connect the display and USB cable (included) from the rear panel of the PRISM waveform monitor to the rear panel of the extended touch display. The display cable must be connected from DisplayPort2 (bottom port) on the PRISM waveform monitor to the DisplayPort on the extended touch display. The USB cable can be connected to any USB port on the PRISM waveform monitor. (See Figure 6.)
 - d. Connect the power cable to the extended touch display. (See page 11, *Power cord installation*.)

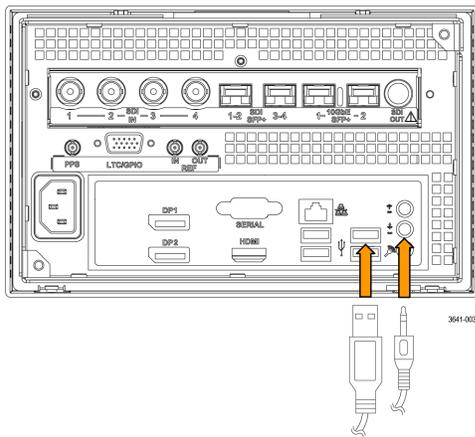


Figure 5: Connecting the cabinet USB and audio cables (use any USB port)

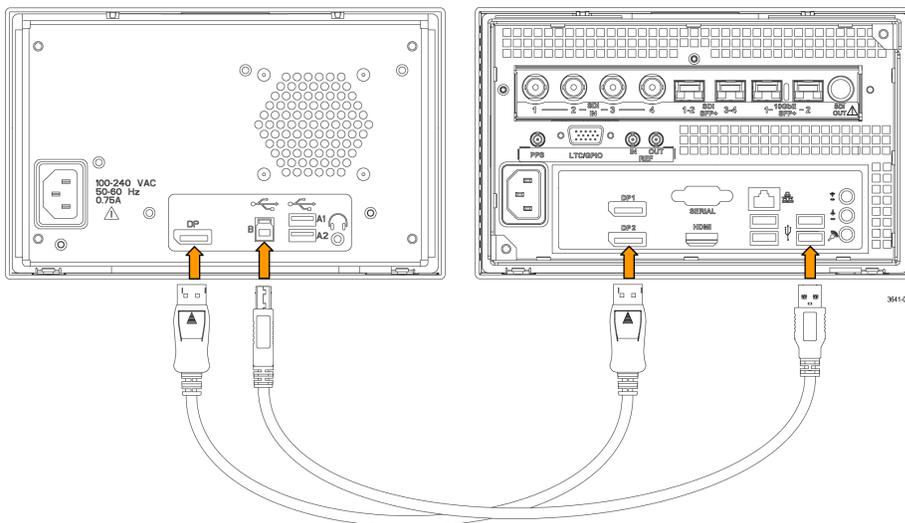


Figure 6: Connect the PRISM waveform monitor to the extended touch display

Power-on and power-off procedures

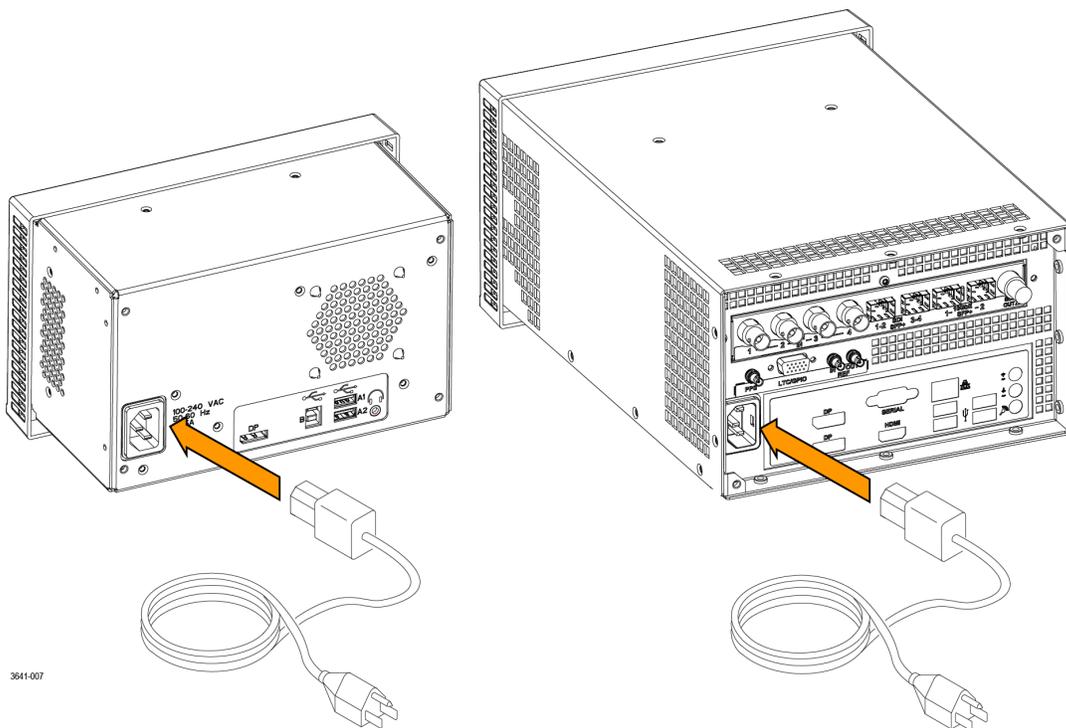
This section describes how to apply power-on and power-off the PRISM waveform monitor and extended touch display.

Power cord installation

This module is powered by an AC power source. Connect the power cord to the power connector on the rear panel of each module. The power connector is keyed to be directional, with the flat portion of the power cord housing facing the left of the module (as viewed from the rear). When fully inserted, the power cord housing latches onto each module power connector.



CAUTION. To minimize the risk of damage to the module, it is strongly recommended that the power cord be connected to the module before the power cord is connected to the AC power source.



Power-on procedure

1. Apply power to the modules. (See page 11, *Power cord installation*.)

NOTE. If the PRISM monitor was previously powered off by a power interruption or by removing the power cord from the rear of the instrument, the instrument will power on when power is reapplied.

2. Press the **Power/Standby** button on the front of each display.

NOTE. The Power/Standby button on the MPI2 instrument illuminates during the power-on sequence and then turns off during normal instrument operation. The Power/Standby button on the extended touch display does not illuminate.



Power-off procedure

1. Press the **Power/Standby** button on the front panel of both modules to turn each instrument off.



CAUTION. To prevent data loss on the MPI2, it is strongly recommended that you first shut down the instrument using the power button or the Settings > Utilities > Power submenu before disconnecting the power cord.

2. To completely remove power from the module, disconnect the power cord from each module. The power cord has a locking mechanism to keep it attached to each module. Push the button on the cord housing to release the locking mechanism.

Operation

Extending the PRISM waveform monitor display

When the extended touch display is connected to a MPI2 instrument, you have the option to extend the MPI2 display. Extending the display requires software option MP2-EXTNDSP, otherwise the extended touch display will mirror the MPI2 display.

1. Connect the PRISM MPI2 waveform monitor to the extended touch display. (See Figure 6.)
2. When software option MP2-EXTNDSP is present, go to the **Settings > Display** menu.
3. In the **EXTENDED DISPLAY** setting, enable **Extended Display Mode**. If the Extended Display Mode setting is turned off, then the second display will mirror the Primary display.

NOTE. When Extended Display Mode is turned on, the HDMI video port on the MPI2 will not be available.

4. When you first configure the extended display, you must run a short process to identify the two touchscreens to use. To identify the touchscreens, press the **Start** button in the **Identify Touchscreen** setting.
5. Follow the on-screen instructions. When instructed to touch the **Primary** and **Extended** displays, make sure to use a touch gesture on the touchscreens and not with a mouse. The touchscreens will not be properly identified if you use a mouse or if you configure remotely, such as with VNC.

NOTE. The process to identify the touchscreens can be performed again at any time. When the process completes successfully, it is not necessary to perform it again unless you change the touchscreen configuration. For example, if you change the USB port connections on the back of the MPI2 instrument.

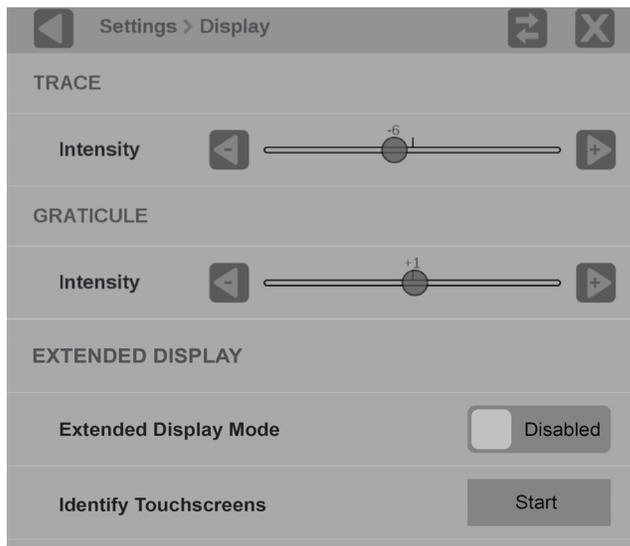


Figure 7: Extended display mode configuration

Compliance information

This section lists the EMC (electromagnetic compliance), safety, and environmental standards with which the instrument complies. This product is intended for use by professionals and trained personnel only; it is not designed for use in households or by children.

Questions about the following compliance information may be directed to the following address:

Tektronix, Inc.
PO Box 500, MS 19-045
Beaverton, OR 97077, USA
www.tek.com

EMC compliance

EU EMC Directive

Meets intent of Directive 2014/30/EU for Electromagnetic Compatibility. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities:

EN 55032. Electromagnetic compatibility of multimedia equipment - Emission requirements ^{1 2}

Class A radiated and conducted emissions

EN 55103-2. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2 Immunity. ²

Environment E2 – commercial and light industrial

- IEC 61000-4-2. Electrostatic discharge immunity
- IEC 61000-4-3. RF electromagnetic field immunity
- IEC 61000-4-4. Electrical fast transient / burst immunity
- IEC 61000-4-5. Power line surge immunity
- IEC 61000-4-6. Conducted RF Immunity
- IEC 61000-4-11. Voltage dips and interruptions immunity
- EN 55103-2 Annex A. Radiated magnetic field immunity

EN 61000-3-2. AC power line harmonic emissions

EN 61000-3-3. Voltage changes, fluctuations, and flicker

¹ This product is intended for use in nonresidential areas only. Use in residential areas may cause electromagnetic interference.

² For compliance with the EMC standards listed here, high quality shielded interface cables that incorporate low impedance connection between the cable shield and the connector shell should be used.

Australia / New Zealand EMC

Complies with the EMC provision of the Radiocommunications Act per the following standard, in accordance with ACMA:

- EN 55032. Radiated and conducted emissions, Class A.

Safety compliance

This section lists the safety standards with which the product complies and other safety compliance information.

EU low voltage directive

Compliance was demonstrated to the following specification as listed in the Official Journal of the European Union:

Low Voltage Directive 2014/35/EU.

- EN 61010-1. Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements.

U.S. nationally recognized testing laboratory listing

- UL 61010-1. Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements.

Canadian certification

- CAN/CSA-C22.2 No. 61010-1. Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements.

Additional compliances

- IEC 61010-1. Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements.

Equipment type

Test and measuring equipment.

Safety class

Class I – grounded product.

Pollution degree descriptions

A measure of the contaminants that could occur in the environment around and within a product. Typically the internal environment inside a product is considered to be the same as the external. Products should be used only in the environment for which they are rated.

- Pollution degree 1. No pollution or only dry, nonconductive pollution occurs. Products in this category are generally encapsulated, hermetically sealed, or located in clean rooms.
- Pollution degree 2. Normally only dry, nonconductive pollution occurs. Occasionally a temporary conductivity that is caused by condensation must be expected. This location is a typical office/home environment. Temporary condensation occurs only when the product is out of service.
- Pollution degree 3. Conductive pollution, or dry, nonconductive pollution that becomes conductive due to condensation. These are sheltered locations where neither temperature nor humidity is controlled. The area is protected from direct sunshine, rain, or direct wind.
- Pollution degree 4. Pollution that generates persistent conductivity through conductive dust, rain, or snow. Typical outdoor locations.

Pollution degree rating

Pollution degree 2 (as defined in IEC 61010-1). Rated for indoor, dry location use only.

IP rating

IP20 (as defined in IEC 60529).

Measurement and overvoltage category descriptions

Measurement terminals on this product may be rated for measuring mains voltages from one or more of the following categories (see specific ratings marked on the product and in the manual).

- Category II. Circuits directly connected to the building wiring at utilization points (socket outlets and similar points).
- Category III. In the building wiring and distribution system.
- Category IV. At the source of the electrical supply to the building.

NOTE. Only mains power supply circuits have an overvoltage category rating. Only measurement circuits have a measurement category rating. Other circuits within the product do not have either rating.

Mains overvoltage category rating

Overvoltage category II (as defined in IEC 61010-1).

Environmental considerations

This section provides information about the environmental impact of the product.

Restriction of hazardous substances

Complies with RoHS2 Directive 2011/65/EU.

Product end-of-life handling

Observe the following guidelines when recycling an instrument or component:

Equipment recycling. Production of this equipment required the extraction and use of natural resources. The equipment may contain substances that could be harmful to the environment or human health if improperly handled at the product's end of life. To avoid release of such substances into the environment and to reduce the use of natural resources, we encourage you to recycle this product in an appropriate system that will ensure that most of the materials are reused or recycled appropriately.



This symbol indicates that this product complies with the applicable European Union requirements according to Directives 2012/19/EU and 2006/66/EC on waste electrical and electronic equipment (WEEE) and batteries. For information about recycling options, check the Tektronix Web site (www.tek.com/productrecycling).