

Version: [3.20]

Last Revised: [11/18/2015]

Products: This firmware supports all DPO/MSO4000B series oscilloscopes.

## History

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v3.20 11/18/2015

### Enhancement:

- Updated Linux kernel, resulting in improved network connectivity, network printing, and instrument responsiveness
- Moved acquire menu "Set Horizontal Position to" control to a side bezel sub-menu and enabled setting horizontal position control via front panel keypad
- Added control for readout transparency

### Defects Fixed:

- Fixed an issue with CAN bus and zoom with large numbers of packets resulting in slow performance for pan across record
- Fixed a rare instrument crash on power-up with TPP probes attached
- Fixed an issue with file save time stamps
- Fixed an issue with channel 4 waveforms saving to Reference when saving after a single sequence acquisition
- Fixed an issue with saved References not allowing very small vertical scales
- Fixed a case where completing an acquisition with Roll Mode on Long Records could result in the first portion of the waveform being overwritten
- Fixed an issue with RMS measurement with vertical position moved away from center screen
- Fixed an issue where measurements would not complete after undoing an autoset
- Fixed an issue with NPULSECOUNT measurement type not counting correctly
- Fixed an issue with immediate measurement on math when stopped
- Fixed a case where math units for absolute value were being cleared
- Fixed an issue with mounted network drives using static IP addresses
- Fixed an issue with mounted network drives using a DFS mount point
- Fixed an issue with mounted network drives using a router
- Fixed an issue with attachments for ePrint
- Fixed an issue with AC Coupled Trigger losing trigger with vertical position changes
- Fixed an issue with a legacy command 'HARDCOPY START'
- Fixed an issue where an Application Error could appear with Roll Mode, 5M records, and HiRes acquisition modes. Under these conditions, acquisition trigger mode is forced to Normal
- Fixed incorrect value displayed for digital sample rate

### Known Issues:

- Autozero is not required for TPP0500B and TPP1000 voltage probes. Using the PI command :CH<1-4>|AUXin:PRObe:AUTOZero EXECute with a TPP probe attached may result in instrument instability.

v3.18 11/20/2014

New Features:

- Support for DPO4BND module

Defects Fixed:

- Fixed color scheme for XY cursor readout
- Fixed an instrument crash in certain cases with RS232 packet decode
- Fixed readout for application module license transfer when module license was already transferred to another scope
- Fixed printer list refresh when saving screen or network printing with Ink Saver On
- Fixed Acquisition self-test failures when scope record length was previously set larger than 10k

v3.16 7/23/2014

Defects Fixed:

- Fixed TekVPI probe power on AUX IN for two channel models

v3.10 6/19/2014

New Features:

- New user interface look
- FastAcq(TM) high-speed waveform capture rate and color- and intensity-graded display
- Act-on-Event added in the Test menu
- Edge trigger now available on rising, falling or either edge
- Search mark table
- Added total overshoot measurement
- Support for e-print
- Display auto dim
- Math autoscale on/off control added to Math menu
- Improved autoset time
- Network mounting of Mac hard drives on OS/X 10.7 and later
- Video picture mode (requires DPO4VID application module)
- Digital channel activity monitor on MSO models

Defects Fixed:

- DPO4LMT: fixed bad mask created when negative going signal at left edge of waveform
- DPO4EMBD: fixed SPI 32-bit word trigger
- Fixed CSV channel label issue
- Fixed probe menu usage when probe installed in AUX IN
- Fixed TCP0020 bandwidth issue
- Fixed Curve Query on digital data when 100k record length used
- DPO4COMP: Improved decode time and extended packet count on RS-232 busforms

v2.96 7/10/2013

Defects Fixed:

- Fixed a roll mode timing error when measurements are enabled which result in the posting of "Application Error" message.

v2.90 11/15/2012

Defects Fixed:

- Add firmware update notifiers specifically for Signal Path Compensation (SPC) when required
- Ethernet: fixed DHCP and IP Address settings such that they persist thru power cycles
- Corrected cursor behavior for recall from setup file.
- Improved performance of e\*Scope PI queries

Other:

- Read Install.txt file for notes regarding Signal Path Calibration (SPC) after performing software upgrade

v2.82 09/20/2012

Defects Fixed:

- Enhanced MSS trigger calibration.

v2.78 07/13/2012

New Features:

- New models supported: DPO4014B and MSO4014B.

Defects Fixed:

- Ethernet: fixed DHCP modes and IP Address problems
- Updated two German translation strings
- Fixed problem with cursors not recalling correctly from setup file
- Fixed FFT linear mode display following channel scale change
- Fixed problem with e\*Scope PI queries not returning data

v2.52 04/16/2012

New Features:

- New models supported are DPO4102B and MSO4102B.

v2.50 03/19/2012

New Features:

- All models now include 5 M as a record length setting.
- New models supported are DPO4102B-L, MSO4102B-L, DPO4104B-L, and MSO4104B-L.

Defects Fixed:

- Added support for SCPI STATus abbreviation.
- Fixed e\*Scope Command tab malfunction.
- Searching on digital channels no longer permanently disables roll mode.
- Fixed incorrect display of FFT units that occurred after power cycling

the instrument.

- Display of waveform data no longer disappear when switching Delay between On and Off while in roll mode.
- Fixed "Copy Search Settings To Trigger" for CAN serial bus.
- Fixed incorrect time correlation between CH1 and CH2 after a single sequence acquisition that occurred with a large delay and  $\geq 1$  M record length.
- Fixed incorrectly displayed trigger position that occurred with 10 M record length, large horizontal delay and 40x zoom.
- Display of channel 1 and channel 3 waveforms no longer disappear after single sequence acquisition and record length is  $\geq 10$  M.

v1.38 11/09/2011

New Features:

- Enhanced Menu Off functionality to allow manipulation of cursors with readouts turned off.
- Improved y-axis cross hair alignment with waveform when cursors are on.
- Added support for Apple USB Keyboard.

Defects Fixed:

- Correction to single shot waveform display.
- Correction to harmonics graph in Power Application.
- Fixed e\*Scope Get Waveform function.

v1.32 9/16/2011

Defects Fixed:

- Fixed erroneous waveforms on a MSO4054B in 20M Record length and 100ms Time-scale.
- Fixed a performance issue (excessive request for acknowledgement) with the USBTMC interface.

v1.26 5/06/2011

Defects Fixed:

- Some non-volatile memory settings, including number of power-ups and operating time, were not correctly restored after a firmware update with v1.24 or v1.22. After a v1.24 or v1.22 update, these settings will not represent accurate data and cannot be restored.

With v1.26, non-volatile settings are correctly restored if the user has not already upgraded to v1.24, or to v1.22. If a unit was updated to v1.24 or to v1.22, this version is unable to restore the original settings.

- Recalling a setup from a file with a Probe attached no longer generates an Error.

v1.24 4/14/2011

## New features:

- 4 digit vertical cursor readout.
- Improvements to MIL-STD-1553 decode and trigger.

## Defects fixed:

- Fix for PictBridge printer enumeration handling problem.

v1.22 3/29/2011

## New Features:

- Serial trigger and bus decode for MIL-STD-1553 standard.  
(Requires DPO4AERO application module.)

Includes the following:

- triggering, decode and search.
- Application Modules have licenses that can be transferred between an Application Module and an oscilloscope.
- Permits the use of more than 4 applications simultaneously.
- Enables usage of an application on the oscilloscope while the physical application module can be removed and stored in a secure location.
- Event table length increased by five times for all buses.

## Defects Fixed:

- Fixed probed recognition issues after power cycle.
- Fixed issue with Single-sequence operation causing the bus timing waveform (not the decoded trace) to be out of synchronization with the Analog channel.
- Fixed lockup issues with the USBTMC interface.

v1.12 11/22/2010

## Defects Fixed:

- Video Out has excessive jitter.
- Waveform Abnormalities in Normal Trigger mode at very slow time-scales.

v1.08 11/16/2010

## Defects Fixed:

- Bandwidth enhancement on MSO4054B, DPO4054B, MSO4034B and DPO4034B.

v1.06 11/11/2010

## New features:

(Only features that are not available on existing DPO4000 and MSO4000 Series are listed)

- 20 M Sample standard record length
  - Conforms to LXI Class C Standard
  - Limit and Mask testing Application  
(Requires the DPO4LMT application module)
- Includes the following:
- Limit Testing, Telecommunication and computer Standard Masks, Custom Masks.
  - Serial trigger and bus decode for Ethernet 10BASE-T and 100BASE-TX standards.  
(Requires DPO4ENET application module.)
- Includes the following:
- Triggering, decode and search;
  - High-speed USB Trigger (1 GHz models only)
  - SPI Trigger increased to 50 Mb/s
  - FlexRay Trigger increased to 100 Mb/s
  - Timeout Trigger
  - AC Coupled Edge Trigger
  - DPO OFF (zero persistence)
  - Solid Line Graticule
  - Mounting of external network drives
  - External REF-in and REF-out
  - 100 mm VESA mount
  - European keyboard support
  - Firmware upgrade from a USB CDROM or HDD Drive.
  - Socket Server and Network File Systems Support.
  - Recall of waveforms in CSV file format.