Version 2.28.18

Last Revised

September 2026

Products:

This firmware version is intended for:

2 Series MSO: MSO22 and MSO24

4 Series B MSO: MSO44B and MSO46B

5 Series B MSO: MSO54B, MSO56B, MSO58B, and MSO58LP

6 Series B MSO: MSO64B, MSO66B, MSO68B, and LPD64

7 Series DPO: DPO714AX and DPO718AX

NOTE: Please be advised that this version of the software is not available for specific oscilloscope models. Prior Tektronix oscilloscope models that are not supported by this version include: MSO44, MSO46, MSO54, MSO56, MSO58, and MSO64. For further details or assistance, please contact your regional Tektronix support team.

New features

- Added the What's New feature to help increase visibility of added capabilities. The most recent release notes will display once upon the installation of any firmware version at or after 2.28.
- All previous release notes can be accessed from the About menu.
- Added a control in the Save As menu to allow the user to specify how clipped samples should be handled in CSV files. The toggle changes these samples to either the classic "INF"/"-INF" format or to a numerical value outside the vertical dynamic range of the instrument.
- Updated TekSecure to follow NIST definition for "clearing the partition" on which all user data is stored.
- Windows Firewall Enhancements for instruments with the X-WIN SSD option.
- Option 2-MSO enabled by default on the 2 Series MSO. Digital channels can be acquired with only P6316 Logic Probe; no additional software option is required.

High Speed Interface (TekHSI feature) Updates

- The TekHSI™ feature now supports FastFrame
- Secure communication is enabled for the TekHSI feature and now supports three different modes (Refer to Help document for more details)
  - Mode 1: Password OFF and Encryption OFF.
  - Mode 2: Password OFF and Encryption ON.
  - Mode 3: Password ON and Encryption ON.

NOTE: Default Mode is Mode 2, If the Password-protect this setting is not already checked by the user in Utility > Security panel for Network-enabled remote access.

NOTE: If the Password-protect this setting is already set, Client communication through the TekHSI feature without using the username and password is not possible unless the Client Script is modified to use username and password for authentication or the Password is disabled in Utility > Security panel

---

Custom Cursors

The Cursors system has been redesigned with significantly expanded capabilities. Traditional Cursors will still work as normal, turn them on in the UI or by pressing the Front Panel button to add a pair. However, user customization controls have been added. Change the Cursor Type to Custom in the Cursors menu (accessed by double-tapping a cursor).

- Supports an arbitrary number of cursors to mark, analyze, and annotate data.
- Supports any combination of Vertical and Horizontal cursors.
- Supports user-defined “Delta” relationships between any two cursors, with options for both Vertical (Voltage, by default) and Time relationships, as well as the ratio between the Deltas (sometimes called slew).
- New Cursor Readouts for output on the Waveform View (default) or as a Badge in the Results Bar. The readouts can be dragged anywhere on the display.
- Full integration of the new Cursors paradigm into existing analysis with automated measurements and other subsystems.
- Custom Cursors are only available for time domain traces.

Advanced Jitter plus Noise Analysis (Opt. DJAN) for 5 Series B MSO, 6 Series B MSO, and 7 Series DPO

New Advanced Jitter plus Noise Analysis (Opt. DJAN) extends Advanced Jitter Analysis (Opt. DJA) with integrated jitter and noise analysis, enabling deeper insight into the causes of eye closure, improved receiver margin analysis, and more accurate link performance prediction.

- New measurement capabilities: Noise Summary; TN@BER; RN, RN(h), RN(v); DN; DDN, DDN(0), DDN(1); PN, PN(h), PN(v); NPN; Unit Amplitude; RJ(h), RJ(v); and PJ(h), PJ(v).
- New plots: Correlated Eye, BER Eye, BER Eye Contour, PDF Eye, Noise Bathtub, and Composite Noise Histogram.

Signal Integrity Modeling (Opt. SIM and Opt. SIMA) for 5 Series B MSO, 6 Series B MSO, and 7 Series DPO

Signal Integrity Modeling – Base (Opt. SIM):

New SIM enhancements improve usability and accelerate S-parameter validation with interactive plot exploration, streamlined workflow productivity, and expanded file export capabilities.

- Interactive S-parameter and test point plot zoom and pan
- Right-click duplication of blocks and SIMs
- Export global bandwidth filters as .flt files
- TDP7700 automatic probe modeling

Signal Integrity Modeling – Advanced (Opt. SIMA):

New SIMA enhancements accelerate receiver equalization (Rx EQ) analysis with standard-based Rx EQ presets, automatic CTLE optimization, and expanded equalization capabilities.

- Pre-defined Rx EQ selection for PCIe Gen 3/4, DisplayPort 1.4/2.1, eDP 1.4, Thunderbolt 2/3, and USB 3.1.
- Rx EQ Optimizer to automatically identify the optimal CTLE settings.
- Enhanced receiver equalization support, including FFE normalization and DFE gain.

Power Distribution Network (PDN) Analysis Solution (option 4/5/6-PDN) for 4 Series B MSO, 5 Series B MSO, 6 Series B MSO only

- Large Signal Analysis: Added d/dt measurement for transient analysis of dynamic power system behavior.
- All Frequency Response Analysis (FRA) measurements now support Math waveforms as inputs, enabling greater flexibility for custom analysis and signal processing.
- SEPIA Netlist Generation: Export SPICE-compatible netlist directly from measured data, enabling correlation between measurement and simulation and supporting faster design optimization.

New probe support for 7 Series DPO

Introduced support for the new 25 GHz P7725 Low Voltage Trimode™ Probe.

26.6 Gbps High Speed Serial Bit Error Rate Detector for 7 Series DPO only

Generic NRZ bit error detector for serial data testing of various PRBS and custom patterns, covering data rates from 1 Gbps to 26.6 Gbps and utilizing the trigger system hardware so that every incoming bit is detected and verified. No blind periods or missed bits during bit error analysis. When a bit error is detected, the oscilloscope triggers a waveform acquisition, resulting in a capture of the waveform containing the bit error.

This optional feature is not protocol aware and does not detect frame/symbol/character errors (requires 7-ERRDET and 7-ST1)

High Speed Serial Compliance

- HDMI 2.1 Tx: HDMI 2.1 Tx Compliance Test solution (7-CMHD21)
- HDMI 2.2 Tx: HDMI 2.2 Tx Compliance Test solution (7-CMHD22)
- DP 2.1 Tx: DisplayPort 2.1b Tx Compliance Test solution (7-CMDP21)
- MIPI APHY Tx: TekExpress MIPI A-PHY TX Automated Compliance Solution (6-CMAPHY, 7-CMAPHY)
  - Supports Gear 1 to Gear 5
  - Supports Gear 1,2 and 3 with NRZ signaling
  - Supports Gear 3,4 & 5 for PAM4 signals

Serial Protocol Decodes

- New 1000BT1 Decode and Search (5-SRAUTOEN1, 6-SRAUTOEN1 and 7-SRAUTOEN1)
- PCIe Custom Pattern and Errors enhancement (6-SRPCIE321 and 7-SRPCIE321)
- eSPI v1.6 spec upgrade (5-SRESPI, 6-SRESPI, 7-SRESPI)

Defects fixed

- Fixed issues that would cause session files with certain combinations of Waveform Views and Custom Mask to load improperly.
- Fixed an issue that caused Power Analysis d/dt readouts to report the wrong unit scale.
- FastFrame and History Mode Overlay Frame analysis operations can now be aborted by pressing Default Setup or Autoset, loading a setup, or turning off FastFrame.
- Fixed an issue that caused Logic Trigger with Timeout condition to trigger in the wrong location.
- Fixed an issue that could prevent IQ data from being recalled correctly in session files without an RFvT trace enabled.
- Fixed an issue that prevented automated RF measurements from displaying correct results in the Report Generator tool.
- Fixed boot recovery logic so that unexpected shutdowns of the Linux app/OS will recover more consistently.

Known issues

- Spectrum View data recalled as a Reference Waveform may have incorrect vertical scaling.
- Digital Reference Waveforms cannot be the target of DATA:SOURCE commands or queries.
- Setting Alternate Units to 100 µV/A or less on TICP, TIVP, THDP0100, and TDP1500 Series probes prevents the Vertical Scale knob from increasing pass 10 A/div. Set the scale manually to exceed 10 A/div.
- Some instruments do not display the MAC Address in the I/O Panel menu while the Ethernet cable is disconnected. If needed, the MAC Address can be found in the BIOS menu.
- Spectrum View traces do not set default scale correctly when using Alternate Units.