Tektronix®

High Performance Computing

Expanded Solutions

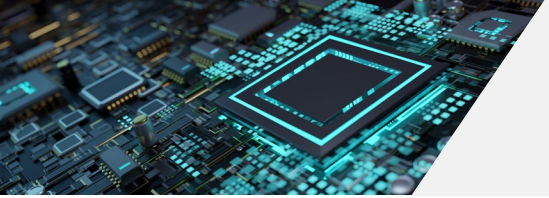
Expanded Solutions for High Performance Computing

Unlock exceptional performance and reliability with Tektronix in the Era of High Performance Computing (HPC).

Today's engineers face unprecedented complexity and rapid innovation in high performance computing. Reliable, high-speed designs must meet demanding requirements for signal integrity, timing and interoperability across increasingly dense architectures and evolving application domains. Advanced analysis platforms and deep technical expertise enable teams to validate, optimize and deliver next-generation systems with confidence. Tektronix solutions support the latest high-speed serial technologies and compliance needs, while robust signal analysis and innovative probing solutions help overcome challenges in power rail noise, thermal variability and multi-rail power delivery.

From verifying physical layer performance to ensuring multi-vendor compatibility and silicon yield, you gain clarity and assurance at every stage of HPC development, empowering progress in AI, automotive, data center and research environments.

Experience greater efficiency and reliability as you tackle tomorrow's most complex computing challenges.



High-Speed I/O

High-speed interfaces demand precise validation and streamlined workflows. Tektronix delivers industry-leading solutions for multi-gigabit signals across PCIe, DDR, USB, LPDDR and emerging SerDes standards. Our advanced oscilloscopes and analysis tools enable seamless transitions between exploration and automated compliance verification and troubleshooting. With comprehensive Tx / Rx capabilities and expert DSP analysis, engineers can confidently characterize, debug and optimize next-generation systems. Rely on Tektronix for future-ready tools that address evolving standards and accelerate time to market.

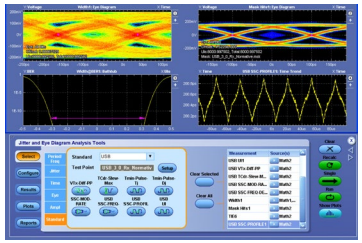
Tektronix Advantage:

- Industry-leading signal analysis including jitter, noise and de-embedding
- Automated testing of transmitter and receiver compliance for key standards such as PCIe, USB and DDR
- Oscilloscopes, software and probes work together throughout your workflow - from compliance testing to margin testing to troubleshooting
- Representation in standards bodies
- Global service and support

Recommended Equipment & Analysis Tools

DPO70000SX ATI Performance Oscilloscope

Capture high-speed signal behavior to verify, validate and characterize your next-generation designs.



DPOJET, PAMJET, TEKExpress and TekRXTest Analysis Tools

Automated jitter, eye and compliance analysis across serial standards with unmatched precision.

7 Series DPO Performance Oscilloscope

Accelerate high-speed I/O validation with up to 25 GHz bandwidth, industry-best signal fidelity, protocol support and advanced analysis tools.

Signal Integrity Modeling Software

Model signal paths and embed/de-embed channels to expose true behavior in high-speed serial validation.

AWG70000B Arbitrary Waveform Generator

Generate compliant high-speed I/O signals —validate and debug faster, accelerate development and meet evolving standards.

High-Speed Differential Probes

Deliver ultra-low noise measurements for accurate validation of low-amplitude, high-speed differential signals.

Network

Modern networks require high-speed, low-latency performance and robust signal integrity. Tektronix provides advanced test solutions for both electrical and optical links, supporting seamless adaptation to new standards and multi-generation compatibility. Our software-defined oscilloscopes and deep waveform analysis capabilities deliver precise insights into jitter, crosstalk and bit error rate (BER). With dedicated technical expertise and proven leadership, Tektronix empowers network designers to optimize throughput and meet the demands of AI-driven data centers and complex enterprise environments.

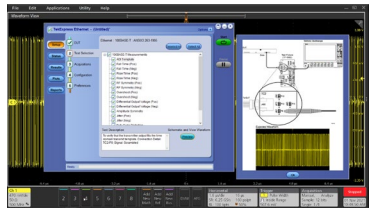
Tektronix Advantage:

- Proven algorithms for jitter and noise analysis of both NRZ and PAM signals
- Validation of both electrical and optical links
- Automated compliance testing for a wide range of Ethernet implementations (electrical / optical)
- Proven reliability in high-throughput environments
- Comprehensive ecosystem and technical support

Recommended Equipment & Analysis Tools

7 Series DPO Performance Oscilloscope

Validate high-speed Ethernet links with precision jitter, BER and PAM4 analysis.

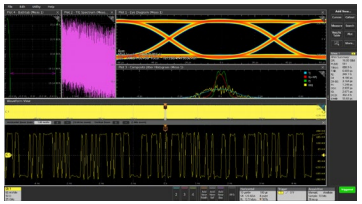


Ethernet Compliance and Validation

High-speed Ethernet validation delivering automated compliance, deep signal integrity analysis and reliable electrical link performance.

DPO70000SX ATI Performance Oscilloscope

Accelerate ultra-high-bandwidth PAM4 and BER debugging with precision analysis.



Jitter Analysis and Debug

Precise jitter analysis and decomposition to isolate timing issues, improve signal integrity and ensure reliable high-speed performance.

DP070E Series Optical Probes

Advanced debug capabilities to fully troubleshoot 400G Ethernet signals, up to 56 GBaud PAM4 signals and speed time to market.

Communication and Control Interfaces

Complex embedded designs demand precise visibility and control. Tektronix delivers advanced analysis and testing solutions for general-purpose input and output (GPIO) performance, supporting up to 64 digital channels and multi-domain signal analysis. Our tools enable rapid debugging with advanced protocol decoding and flexible triggering for microcontroller interfaces and timing-critical logic, including I^2C, SPI, UART and GPIO. With integrated mixed-signal capture and synchronized power sequencing, Tektronix empowers embedded system designers to optimize performance from prototyping to production in edge AI, automotive and highly integrated SoC environments.

Tektronix Advantage:

- Comprehensive signal timing measurements and statistics
- Decoding and analysis for over 40 protocols, including ubiquitous control buses such as I^2C and SPI
- Fully integrated multi-domain (analog, digital and RF) signal analysis
- Accurate power rail noise measurements and power sequencing
- Arbitrary signal generation and bench power supplies for prototyping and margin testing

Recommended Equipment & Analysis Tools

Serial Bus Decoding

Automated serial decode and analysis options for UART, I^2C, SPI and over 40 more.

AFG31000 Arbitrary Function Generator

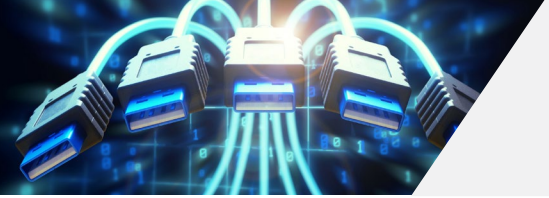
Generate arbitrary or standard functions on up to 2 channels.

TDP1500 Low Voltage Differential Probe

Measure differential low-voltage signals with high common-mode rejection ratio, low loading and precise timing.

TPP1000 Passive Probe

Capture fast GPIO edges with low-capacitance 10:1 passive probing for minimal loading and accurate timing.



Power Delivery Network

Ensuring robust power integrity is critical for HPC, AI and automotive applications with dynamic high-current loads. Tektronix provides comprehensive PDN testing and analysis tools to address voltage ripple, transient response and impedance across multi-rail systems for CPUs, GPUs and ASICs. Our high-resolution oscilloscopes, low-noise probes and spectral analysis capabilities enable engineers to characterize noise and converter efficiency, including SiC, GaN and other wide bandgap devices. With integrated waveform capture and intelligent load emulation, Tektronix empowers you to optimize power delivery in complex, fast-evolving environments.

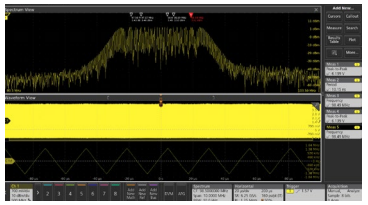
Tektronix Advantage:

- High-resolution voltage ripple and transient analysis
- Multi-rail validation for CPUs, GPUs and ASICs
- SiC, GaN and WBG device testing
- Simulation of dynamic, real-world power conditions
- Optimized power integrity for complex systems
- Versatile spectrum analysis for identifying noise and EMI sources
- Analysis software for impedance and response measurements

Recommended Equipment & Analysis Tools

6 Series B MSO Oscilloscope

Lowest noise, most comprehensive probe set, Digital Down Converter (DDC) spectrum analysis and industry leading UI.

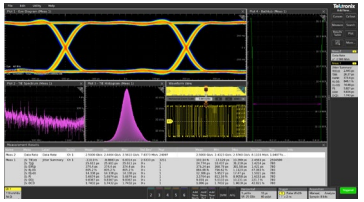


Frequency Domain Analysis

Easily see each analog channel as a time domain waveform, a spectrum or both.

High Power and Precision Supplies

Test power inverters, simulate batteries, and validate PDNs with EA high-current sources and Keithley SMU precision.



Power Supply Induced Jitter Testing

Correlate rail noise to signal jitter for confident power integrity validation in high-speed systems.

IsoVu™ Isolated Current Probes – High bandwidth, low noise current measurements.

IsoVu Isolated Voltage Probes – Accurate measurements on challenging high-side gate drive signals.

Oscilloscope Current Probes – AC/DC probes measure hundredths or hundreds of amps.

High-voltage Differential Probes – Confidently and accurately measure floating voltages up to 1500 V.

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