

# TPS2000 Series

## Powerful Productivity from Bench to Field



As an engineer or technician, you must often make floating, or differential measurements. You face faster edges and clocks due to the migration of higher performance technologies to widely implemented systems and subsystems, with the pressure to conform to customer or industry requirements. You may also need to develop and test your designs in a variety of challenging environments that demand versatility.

You can quickly tackle these tough challenges to speed the design and test of components and systems with the world's first 4-isolated-channel, full-featured, battery-powered oscilloscope — the TPS2000 Series.

### Applications

- ▶ Industrial Power Design, Troubleshooting, Installation and Maintenance
- ▶ Advanced Electronics Design, Troubleshooting, Installation and Maintenance
- ▶ Automotive Design and Test
- ▶ Education

### Features & Benefits

- ▶ **100 MHz and 200 MHz bandwidths**
- ▶ **Digital real-time sampling technology** with up to 2 GS/s real-time sample rate
- ▶ **IsolatedChannel™ Technology:** Make multi-channel floating and differential measurements much more quickly, accurately and affordably with up to 4 fully isolated and floating channels and isolated external trigger input
- ▶ **8+ hours of continuous battery operation** with hot-swappable batteries for virtually unlimited freedom from an AC power source
- ▶ **Power measurement and analysis software** offers the broadest range of power measurements at its price point, including instantaneous power waveform analysis, waveform analysis, harmonics analysis, switching loss, phase angles, and  $dv/dt$  and  $di/dt$  cursors
- ▶ **OpenChoice® software and Integrated CompactFlash®** mass storage to speed storage, documentation and analysis of measurement results
- ▶ **Ease-of-Use:** Traditional oscilloscope user interface with analog-style knobs per channel, autose menu, autorange, automatic measurements, 10X to 1000X vertical position control, probe check wizard, and built-in context-sensitive help.

To find out how the TPS2000 Series oscilloscopes can speed your product development, please contact your local authorized Tektronix representative or visit [www.tektronix.com/tps2000](http://www.tektronix.com/tps2000)

# 4 Isolated Channels. 8 hours. 8 lbs. Incredible Accuracy. Boundless Productivity.

## Make Floating Measurements — Accurately, Quickly, Affordably

Make floating and differential measurements much more accurately, quickly and affordably with the TPS2000 Series' uncompromised, full-featured oscilloscope functionality, coupled with 4 IsolatedChannel™ inputs and external trigger input. Evaluate voltages up to 30  $V_{RMS}$  floating on four channels simultaneously when using the standard P2220 passive probe, and up to 600  $V_{RMS}$  CAT II (or 300  $V_{RMS}$  CAT III) floating when employing the optional P5120 passive, high-voltage probe.

## Speed the Design and Test of Industrial Power Systems and Subsystems

Easily confront the unique challenges of industrial power design, such as high voltages and high currents, with the TPS2000 Series' power bundle (TPS2PBNB), which includes P5120 passive, high-voltage probes and TPS2PWR1 power analysis software. Use a single instrument to easily evaluate these high voltages and currents, or debug power electronics control circuits, with differential voltages up to 600  $V_{RMS}$  CAT II (or 300  $V_{RMS}$  CAT III) floating. Accurately measure three-phase power and circuits with different low levels or ground references. Quickly perform the industry's broadest range of power measurements at its price point with the TPS2PWR1 software package.

## Quickly Debug and Characterize Signals with DRT Sampling Technology

Characterize single-shot and non-repetitive rise times as fast as 2.1 nanoseconds on four channels simultaneously with the TPS2000 Series' unique digital real-time (DRT) sampling technology. This technology makes it possible to capture high-frequency information, such as glitches and edge anomalies, that eludes other oscilloscopes in its class, so that you can be sure to get a complete view of your signal to speed debug and characterization.

## Easily Analyze and Document Your Measurement Results

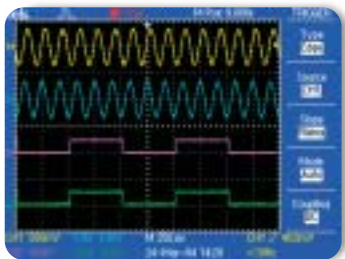
Quickly reveal signal interference, cross-talk and the effects of vibration with frequency domain analysis using the TPS2000 Series' standard FFT function. Easily document and analyze your measurement results with the oscilloscope's OpenChoice toolset.

## Optimize Your Productivity with Versatility

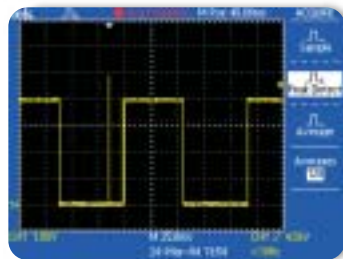
Intuitively operate the oscilloscope with familiar, analog-style knobs per channel and multi-language user interface. Simplify setup and operation with features like autoset, autorange, automatic measurements, 10X to 1000X vertical position control, probe check wizard, and context-sensitive help. Effectively work in a variety of challenging environments—from bright daylight to dimly lit areas—using the brightness and contrast controls.

## Correlate Your Measurements from Bench to Lab to Field

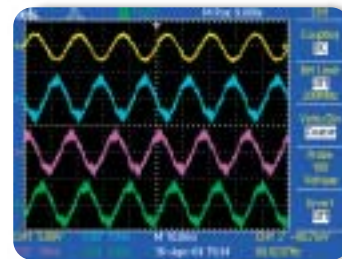
Use the TPS2000 Series on your bench, in the lab, or in the field, with the industry's longest continuous battery life, up to 8 hours and beyond, in a highly mobile package. Harness the power of virtually unlimited freedom from an AC power source with hot-swappable batteries. Easily correlate measurements between bench, lab and field with its portability.



- ▶ 4 IsolatedChannel™ inputs and isolated external trigger input to make floating and differential measurements accurately and quickly



- ▶ Capture elusive glitches—the first time—with digital real-time (DRT) sampling technology



- ▶ Perform 3-phase power measurements of variable frequency drives using TPS2PWR1 software



- ▶ Quickly correlate your measurements between bench, lab and field with the TPS2000 Series' portability

# Use a Single Instrument from Bench to Lab to Field.

Features	TPS2012	TPS2014	TPS2024
Price			
Channels (Isolated)	2	4	4
Bandwidth (MHz)	100	100	200
Sample Rate (GS/s) per Channel	1.0	1.0	2.0
Record Length	2.5K		
Battery Operation	8 hours of continuous battery operation with 2 batteries installed, hot-swappable for virtually unlimited freedom from an AC power source		
Display (1/4 VGA LCD)	Color		
Automatic Measurements	11		
Isolated External Trigger Input	Yes		
PC Connectivity	Standard		
Integrated CompactFlash Mass Storage	Standard		
Power Measurements	Optional TPS2PWR1 software package offers instantaneous power waveform analysis, waveform analysis, harmonics analysis, switching loss, phase angles, dv/dt and di/dt cursors		



## Standard Accessories

- ▶ P2220 Probes (one per channel)
- ▶ TPSBAT Battery (1)
- ▶ TDSPCS1 OpenChoice software
- ▶ AC adapter with power cord
- ▶ NIM/NIST traceable certificate of calibration
- ▶ Front protective cover
- ▶ Instruction manuals (1 set)



▶ P5120 probe



▶ Continuous battery operation



▶ Soft carrying case



▶ Versatile hanger

# TPS2000 Series Recommended Accessories and Probes

Contact Tektronix: ASEAN /Australasia / Pakistan (65) 6356 3900

Austria +41 52 675 3777

Balkan, Israel, South Africa and other ISE Countries +41 52 675 3777

Belgium 07 81 60166

Brazil & South America 55 (11) 3741-8360

Canada 1 (800) 661-5625

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Central Europe & Greece +41 52 675 3777

Denmark 80 88 1401

Finland +41 52 675 3777

France & North Africa +33 (0) 1 69 81 81

Germany +49 (221) 94 77 400

Hong Kong (852) 2585-6688

India (91) 80-22275577

Italy +39 (02) 25086 1

Japan 81 (3) 6714-3010

Luxembourg +44 (0) 1344 392400

Mexico, Central America & Caribbean 52 (55) 56666-333

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The Netherlands 090 02 021797

Norway 800 16098

People's Republic of China 86 (10) 6235 1230

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Republic of Korea 82 (2) 528-5299

Russia, CIS & The Baltics 7 095 775 1064

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Sweden 020 08 80371

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For other areas contact Tektronix, Inc. at: 1 (503) 627-7111

Last Updated 3 November 2004

## Recommended Accessories

- ▶ **TPS2PBND:** Power bundle. Includes (4) P5120 probes and TPS2PWR1 power measurement and analysis software
- ▶ **TPS2PWR1:** Power measurement and analysis software. Instantaneous power waveform analysis, harmonics analysis, switching loss, phase angles, dv/dt and di/dt cursors
- ▶ **WSTRO:** WaveStar software for waveform capture, analysis, documentation and control from your PC
- ▶ **TPSBAT:** Additional Lithium-Ion battery
- ▶ **TPSCHG:** Battery charger
- ▶ **AC2100:** Soft carrying case
- ▶ **HCTEK321:** Hard carrying case
- ▶ **343-1689-00:** Versatile hanger

## Recommended Probes

- ▶ **A621:** 2000 A, 5-50 kHz AC current probe/BNC
- ▶ **A622:** 100 A, 100 kHz AC/DC current probe/BNC
- ▶ **P5120:** 20X passive high-voltage probe
- ▶ **P5205:** High-voltage active differential probe (1300 Vpk-pk, 25 MHz), (1103 power supply required)
- ▶ **P5210:** High-voltage active differential probe (5600 Vpk-pk, 50 MHz), (1103 power supply required)
- ▶ **CT2:** 2.5 A, 200 MHz AC/DC current probe
- ▶ **CT4:** AC current probe up to 2000 A pk-pk (TCP202 and 1103 power supply required)
- ▶ **TCP202:** 15 A, 50 MHz AC/DC (1103 power supply required)
- ▶ **TCP303/TCPA300:** 15 A, 15 MHz AC/DC current probe/amplifier
- ▶ **TCP305/TCPA300:** 50 A, 50 MHz AC/DC current probe/amplifier
- ▶ **TCP312/TCPA300:** 30 A, 100 MHz, AC/DC current probe/amplifier
- ▶ **TCP404XL/TCPA400:** 500 A, 2MHz AC/DC current probe/amplifier

## For Further Information

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Enabling Innovation