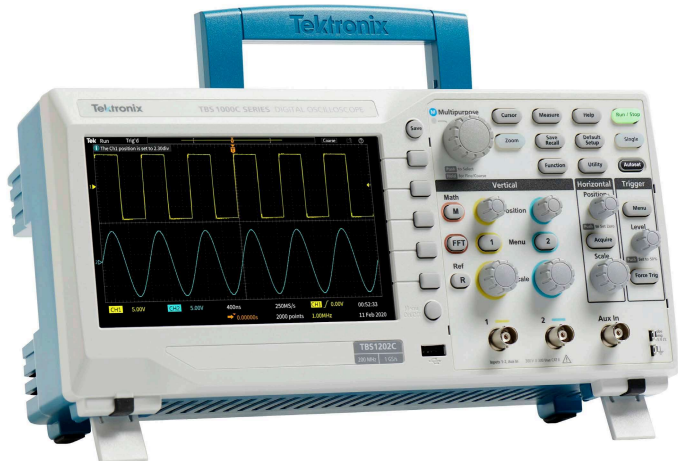


Digital Storage Oscilloscope

TBS1000C Series Datasheet



The TBS1000C Series Digital Storage Oscilloscope offers affordable performance in a compact design. It is designed to meet the needs of today's educational institutions, embedded design engineers, and maker community. The instrument includes a 7-inch WVGA color display with up to 1 GS/s sample rate, bandwidths from 50 MHz to 200 MHz and a five-year warranty. The instrument comes with an innovative courseware system that integrates the lab exercises with step-by-step instructions for use, by the students. HelpEverywhere® system provides useful tips and hints throughout the user interface, to make the instrument more approachable to a new user.

Key performance specifications

- 200 MHz, 100 MHz, 70 MHz, and 50 MHz bandwidth models
- 2-channel models
- 1 GS/s sample rate on all channels
- 20k point record length on all channels
- Advanced triggers include pulse, runt, and line triggers
- Five-year warranty

Key features

- 7-inch WVGA color display with 15 horizontal divisions that shows 50% more signal

- 32 automated measurements
- Dual window FFT with simultaneous time and frequency domain views
- Trigger frequency counter
- Pan and Zoom capability
- Multi-language user interface with support for 10 languages in the user interface and front panel overlay
- Small footprint and light weight
- Fanless design contributes to low noise operation

Connectivity

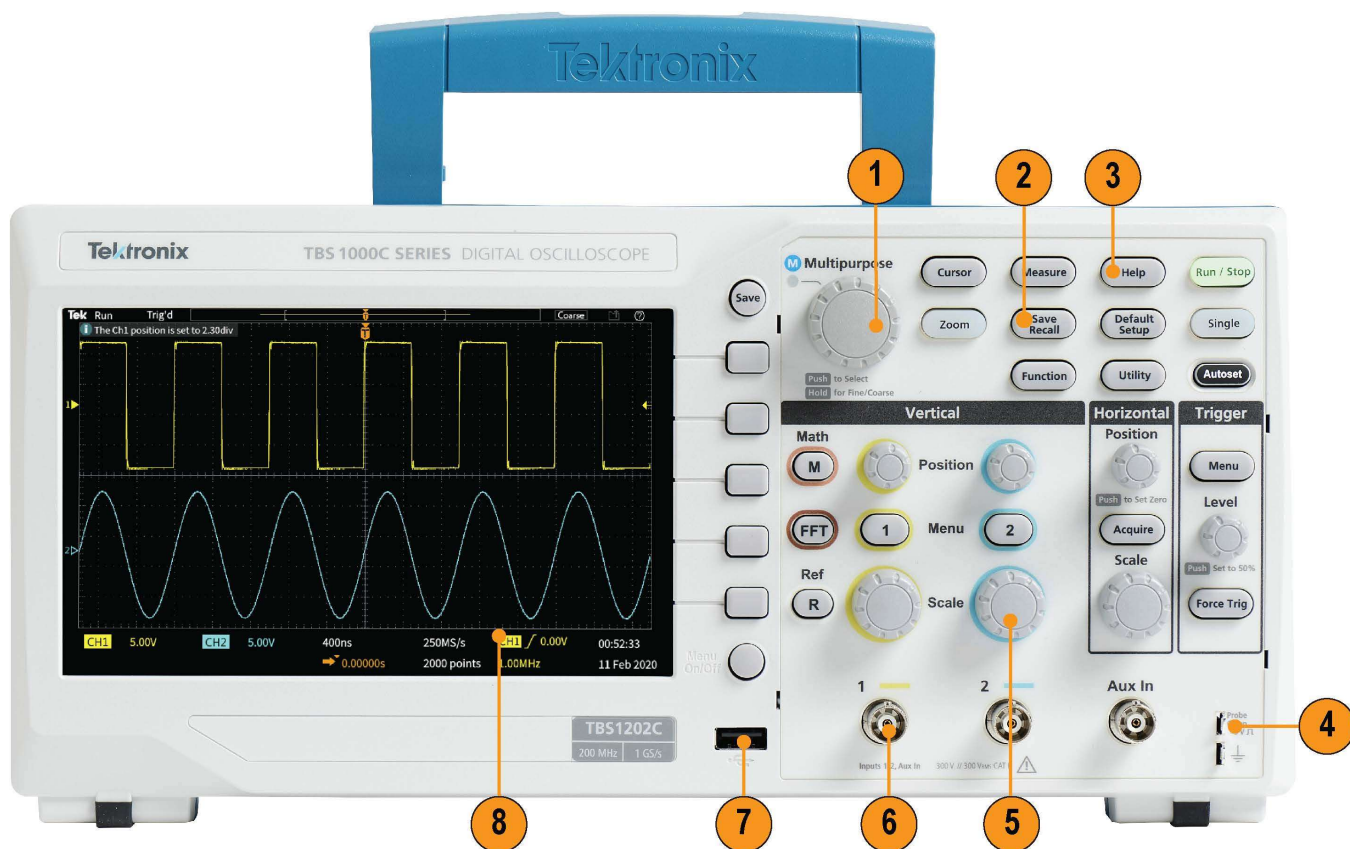
- USB 2.0 host port on the front panel for quick and easy data storage.
- USB 2.0 device port on rear panel to connect to a PC and remotely control the instrument.

Education

- HelpEverywhere® provides helpful on-screen tips for users
- Built-in oscilloscope handbook provides operating instructions and oscilloscope fundamentals
- Integrated courseware feature provides lab exercise guidance on the display
- Autoset, Cursors, and Automated measurements can be disabled to help educators to teach basic concepts to students

Performance you can count on

Tektronix has industry-leading service and support, and every TBS1000C Series Oscilloscope is backed with a standard five-year warranty.



TBS1000C front panel

Image Reference	Description
1	Multipurpose knob for waveform navigation, zoom, and cursors
2	Save Recall
3	HelpEverywhere®

Image Reference	Description
4	Probe Compensation
5	Dedicated control knobs per channel
6	BNC probe interface
7	USB Host port for save/recall
8	7-inch display



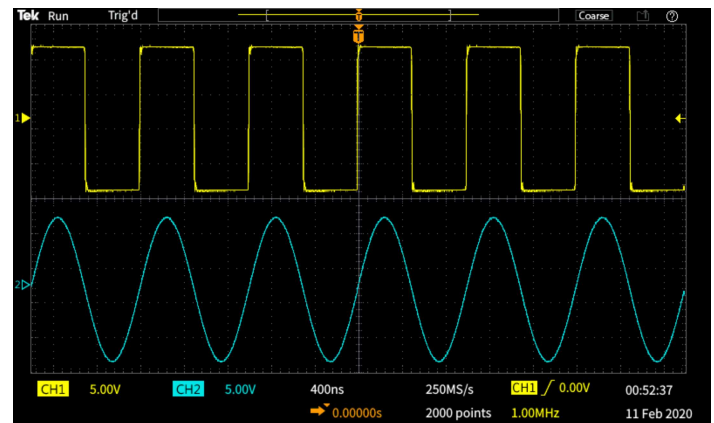
TBS1000C rear panel

Image Reference	Description
1	IEC power connector
2	USB device port for remote control
3	Kensington Lock

Designed to make you learn and work faster

The TBS1000C Series Oscilloscope is designed for quick hands-on learning and easy operation with just the right combination of features and capabilities. Dedicated front panel controls provide easy access to all the important settings. The graticule with 10 vertical divisions and 15 horizontal divisions enables you to see more signals per screen.

The large menus with clearly labeled and colored information on the screen make it easy to navigate and find information of interest. The zoom function lets you to quickly pan through the record and zoom in to see the signal details in areas of interest.



In Zoom mode, an overview of the entire record is shown in the upper part of the display and the lower part displays the detailed Zoomed view.

Versatile triggering and acquisition modes

The trigger system is designed for troubleshooting today's mixed signal designs. Beyond a basic edge trigger, it also includes pulse width and runt triggering, which are especially useful for troubleshooting digital sections of your designs.

Pulse width triggering is perfect for hunting narrow glitches or time out conditions. Runt trigger is designed to capture signals that are shorter in amplitude than expected.

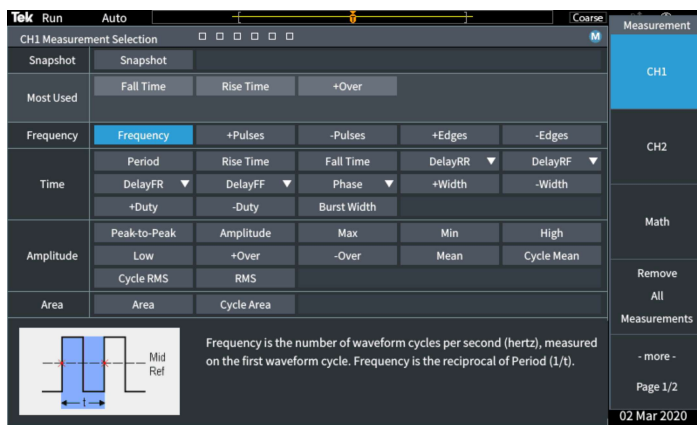
The TBS1000C Series Oscilloscope offers several acquisition modes. The default acquisition mode is Sample Mode which works well for most applications. The Peak Detect Mode is useful for hunting spikes, and Average Mode can help to reduce noise on the repetitive signals.

Automated measurements and analysis

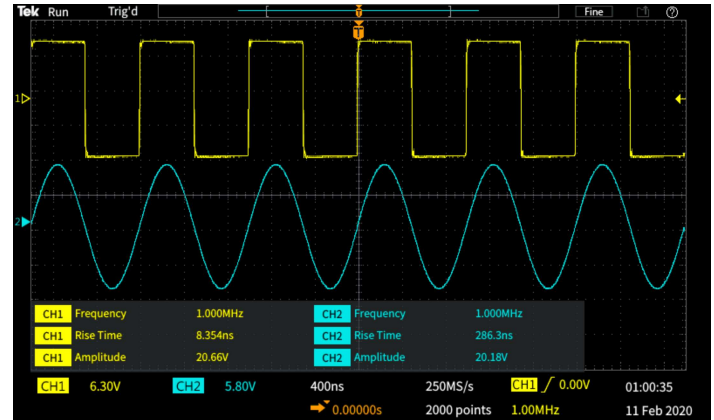
A comprehensive set of automated measurements enable fast and convenient testing of a wide variety of signal conditions for different applications.

Measurements are displayed on a single screen. They are grouped into four categories: Frequency, Time, Amplitude, and Area. All measurements are displayed on a single measurement selection screen making it easy to choose from 32 automated measurements; no more hunting through various menus.

Measurements are color coded by the source and are presented on a transparent background; so waveforms are not obscured by the readouts.



Measurements are all listed and selected on a single screen

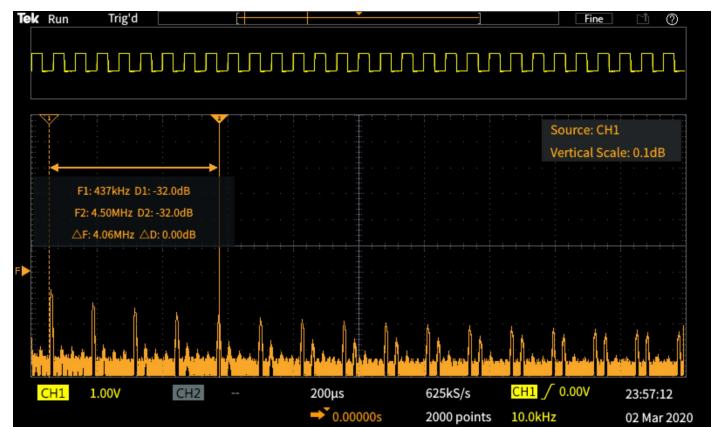


Measurements are transparent so waveforms are not obscured

FFT function

You can understand the frequency content of your signals with the FFT function by pressing FFT button in the front-panel.

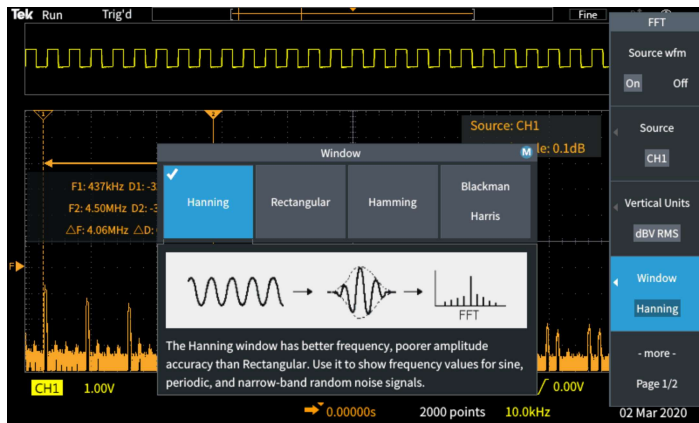
Display only the FFT or turn on the source waveform display to see both the frequency and the time domain waveform. A transparent readout shows important settings without blocking the FFT display.



The time domain source waveform can be displayed above the FFT frequency spectrum

HelpEverywhere®

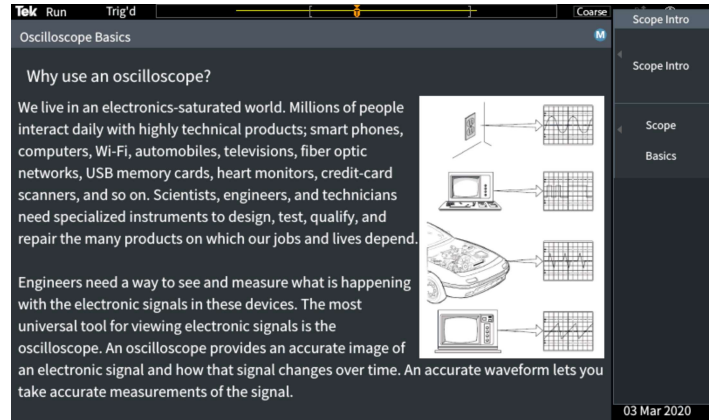
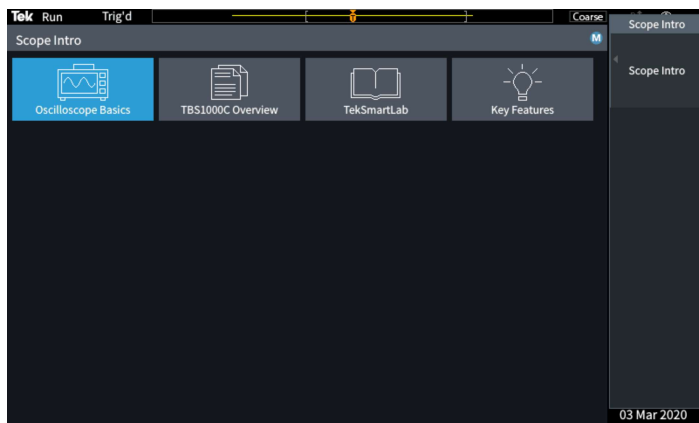
The HelpEverywhere® system provides help text with graphics to explain the different settings on the instrument, making it easier for new users to know which measurement to use and interpret the results. Help is provided in the same language as the user interface.



HelpEverywhere® tips explain important settings.

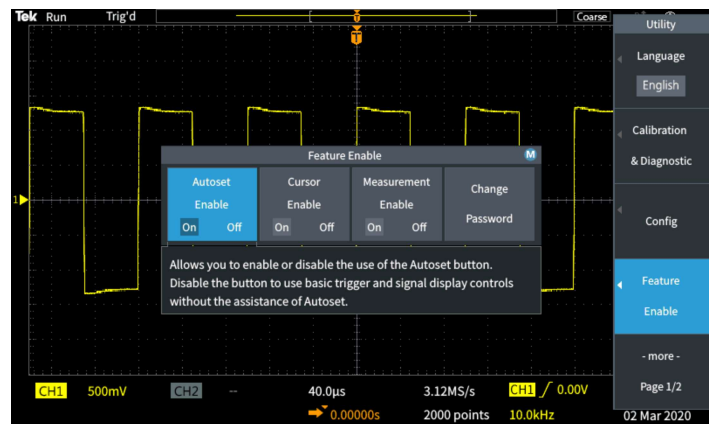
Innovative new education solutions

The TBS1000C Series Oscilloscope offers several features that enable the educator to devote more time to teach fundamental concepts. The Scope Intro handbook is embedded into the TBS1000C help system. Pressing the help button in the front panel gives you access to information on oscilloscope basic operations, as well as an overview of the TBS1000C oscilloscope, controls, and tips to use it.



Scope Intro covers basic oscilloscope and TBS1000C usage

Features such as Autoset, Cursors, and automated measurements can be disabled on the instruments. By disabling features, students can learn the basic concepts and understand how to use the horizontal and vertical controls to get the waveform, use the graticule to measure time, voltage, and manually plot/calculate the signal characteristics.



Features with menus

The integrated Courseware function allows professors to load lab exercises on the instrument to give guidance to the students at each station and provides a structured framework into which students can capture data to incorporate into their reports. Over 100 sample lab exercises are available for download from the [Tektronix Courseware Resource Center](#).