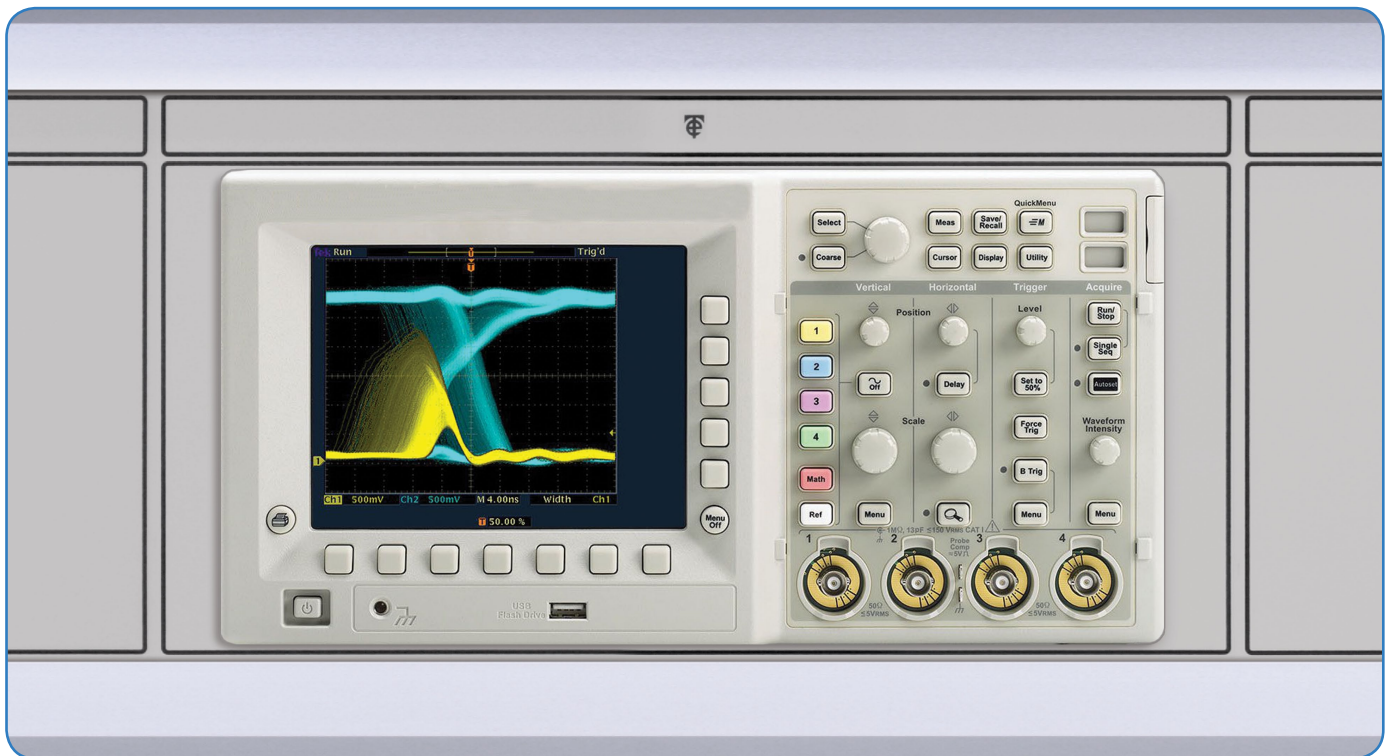




# Time Electronics

## 7026 Oscilloscope Module



### DESCRIPTION

The 7026 is a high performance digital phosphor oscilloscope (DPO). It is the highest specification standard scope module for the Time Electronics CalBench with 500MHz bandwidth, 4 channels, and a wide range of features and functions for various applications across industries.

### Features:

- **500 MHz bandwidth**
- **4 channels**
- **5.0 GS/s Sample rate**
- **10 k standard record length on all channels**
- **3,600 wfms/s continuous waveform capture rate**
- **Suite of advanced triggers**
- **25 automatic measurements**
- **Front panel USB host port for easy storage and transfer of measurement data**

# 7026 Basic Specifications

## TECHNICAL SPECIFICATIONS

Bandwidth .....	500 MHz
Channels .....	4
Sample rate on each channel.....	5 GS/s
Maximum record length.....	10 K points on all models
Vertical resolution.....	9 Bits on all models
Vertical sensitivity (/div).....	1 mV - 10 V on all models
Vertical accuracy.....	±2% on all models*1
.....	*1Derated at 0.025%/°C for temperatures above +30°C and below +18°C.
Max input voltage (1 Megaohm).....	150 VRMS CAT I on all models (300 V CAT II with standard 10X probe)
Position range .....	± 5 div on all models
BW limit .....	20, 150 MHz
Input coupling .....	AC, DC, GND on all models
Input impedance selections.....	1 Megaohm in parallel with 13 pF or 50 Ohm

### Time base

Range (/div).....	1 ns - 10 s/div
Accuracy .....	20 ppm
Display monitor .....	Color LCD

### Acquisition Modes

DPO.....	Captures and displays complex waveforms, random events and subtle patterns in actual signal behavior. DPOs are able to provide 3 dimensions of signal information in real time: Amplitude, time and the distribution of amplitude over time.
Peak Detect.....	High frequency and random glitch capture. Captures glitches as narrow as 1 ns.
WaveAlert .....	Monitors the incoming signals on all channels and alerts the user to any waveform that deviates from the normal waveform being acquired.
Sample .....	Sample data only.
Envelope .....	Max/min values acquired over one or more acquisitions.
Average .....	Waveform data from 2 to 512 (selectable) acquisitions is averaged.
Single Sequence.....	Use the Single Sequence button to capture a single triggered acquisition sequence at a time.

### Trigger System

Main Trigger Modes .....	Auto (supports Roll Mode for 40 ms/div and slower), Normal.
B Trigger.....	Trigger after time or events.
Trigger After Time Range .....	13.2 ns to 50 s.
Trigger After Events Range .....	1 to 9,999,999 events.
External Trigger Input.....	>1 Megaohm in parallel with 17 pF; Max input voltage is 150 VRMS.

### Trigger Types

Edge.....	Conventional level-driven trigger. Positive or negative slope on any channel. Coupling selections: DC, noise reject, HF reject, LF reject.
Video .....	Trigger on all lines or individual line, odd/even or all fields or analog HDTV formats (1080i, 1080p, 720p, 480p). See optional TDS3VID and TDS3SDI application modules for extended video triggering and measurement features.
Logic (requires TDS3TRG).....	PATTERN: Specifies AND, OR, NAND, NOR when true or false for a specific time. STATE: Any logic state. Triggerable on rising or falling edge of a clock. Logic triggers can be used on combinations of 2 inputs (not 4).

# 7026 Basic Specifications

## TECHNICAL SPECIFICATIONS

### Trigger Types (continued)

- Pulse (requires TDS3TRG) ..... WIDTH (or GLITCH): Trigger on pulse width less than, greater than, equal to or not equal to a selectable time limit ranging from 39.6 ns to 50 s.  
..... RUNT: Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again.  
..... SLEW RATE: Trigger on pulse edge rates that are either faster or slower than a set rate.  
..... Edges can be rising, falling or either.
- Comm (requires TDS3TMT)..... Provides isolated pulse triggering required to perform DS1/DS3 telecommunications mask testing per ANSI T1.102 standard.
- Alternate ..... Sequentially uses each active channel as a trigger source.

### Measurement System

- Automatic Waveform Measurements .... Period, Frequency, +Width, -Width, Rise Time, Fall Time, +Duty Cycle, -Duty Cycle, +Over shoot, -Overshoot, High, Low, Max, Min, P-P, Amplitude, Mean, Cycle Mean, RMS, Cycle RMS, Burst Width, Delay, Phase, Area\*1, Cycle Area\*1. Display any four measurements from any combination of waveforms. \*1Requires additional module.
- Thresholds ..... Settable in percentage or voltage.
- Gating ..... Measurements can be gated using the screen or vertical cursors.

### Waveform Processing

- Deskew ..... Channel-to-channel deskew  $\pm 10$  ns may be manually entered for better timing measurements and more accurate math waveforms.
- Arithmetic Operators ..... Add, subtract, multiply, divide.
- Autoset ..... Single-button, automatic setup on selected input signal for vertical, horizontal & trigger systems.

### Display Characteristics

- Waveform Style ..... Dots, vectors and variable persistence.
- Graticules ..... Full, grid, cross-hair, frame, NTSC, PAL, SECAM
- Format ..... YT, XY and Gated XYZ

### Environmental & Safety

- Temperature ..... +5 to +50°C (operating), -20 to +60°C (nonoperating).
- Humidity ..... 20% to 80% RH below 32°C, derate to 30% RH at 45°C (operating), 5% to 90% RH below 41°C, derate to 30% RH at 60°C (nonoperating).
- Altitude ..... to 3,000 m (operating), 15,000 m (nonoperating).
- Electromagnetic Compatibility ..... Meets or exceeds EN55011 Class A radiated and conducted emissions; EN50082-1; FCC 47 CFR, Part 15, Subpart B, Class A; Australian EMC framework; Russian GOST EMC regulations.
- Safety ..... UL3111-1, CSA1010.1, EN61010-1, IEC61010-1.

## ORDERING INFORMATION

**7026 ..... Digital Phosphor Oscilloscope Module - 500MHz, 4 channel, LCD Display**

*Optional extras available upon request.*

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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