BK2540C series

Digital Storage and Mixed Signal Oscilloscopes

Overview

- Large 8" widescreen display with 256-level color gradient

- Bandwidth up to 200 MHz

- 1 GSa/s sample rate

- 14 Mpts maximum record length

- 16 digital channels with logic analyzer (MSO models)

- Serial bus decoding supporting I2C, SPI, UART/RS232, CAN, and LIN protocols (Decode upgrade)

- Built-in Function and Arbitrary Waveform Generator comes standard on all models

- 60,000 wfms/s maximum waveform capture rate

- FFT including seven other math functions: Addition, Subtraction, Multiplication, Division, Integration, Differential, and Square Root

- 36 automatic measurements

- Standard LAN and USBTMC-compliant USB device port

- 3 Year Warranty

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Front Panel

Serial Decoding
Decode and analyze I²C, SPI, UART/RS232, CAN, and LIN protocols and display results in binary, decimal, hex, or ASCII in real-time. Enabled with decode upgrade or try 30 times for free with each unit.

8-inch TFT-LCD display
8-inch high resolution TFT-LCD display lets you see more details in your signal.

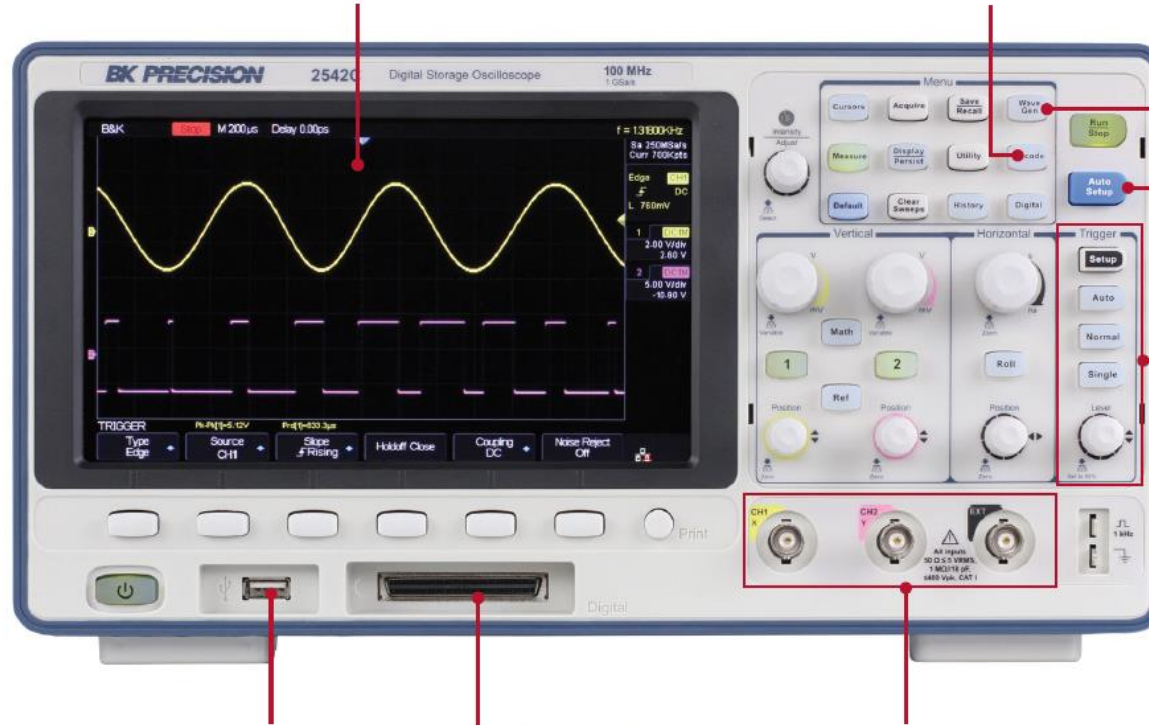**Arbitrary Waveform Generator (AWG)**
Built-in 25 MHz AWG comes standard in all models.

Auto setup
Vertical, horizontal, and trigger controls are automatically adjusted for fast signal display.

Advanced Triggering
9 standard and 5 serial protocol triggering modes.

USB host port
Connect your USB flash drive to conveniently store and recall waveform data, setups, and screenshots.

16-Channel Digital Ports
Connect a logic analyzer probe to access 16 digital channels enabled with MSO upgrade or try 30 times for free with each unit.

Intuitive channel operation
Both channels in the 2540C Series are clearly indicated by their own color, labeled on the input, knobs, and display.

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Rear Panel

LAN and USB ports enable remote control from a PC.

Pass/Fail or Trig Out Output

AWG Output

Input fuse holder

AC line input

Kensington security slot
Helps to secure your oscilloscope and prevent theft.

BK2540C series
**Digital Storage and Mixed Signal Oscilloscopes**

The tools you need

**Waveform History and Recording, Function and Arbitrary Waveform Generator**

Waveform History and Recording

Quickly scroll through millions of points with History Mode's playback functionality to find difficult to capture events. Eliminate unnecessary idle signals and dead-time by selectivity capturing up to 80,000 segments.
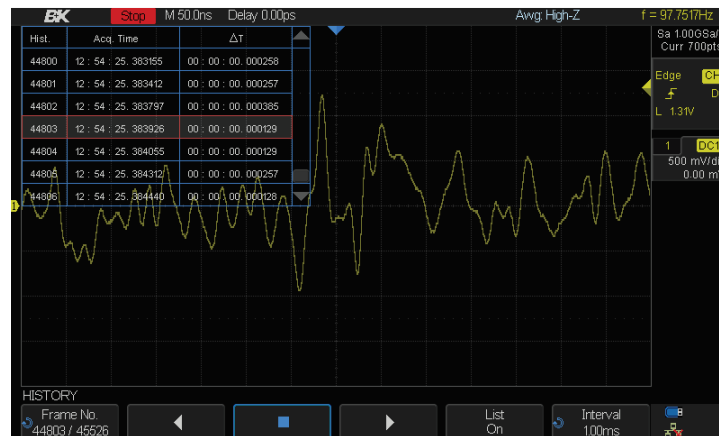
Function and Arbitrary Waveform Generator

A powerful 25 MHz function/arbitrary waveform generator comes standard in the 2540C Series. Use complimentary software to generate waveforms and load up to 4 arbitrary waveforms into the instrument. Built-in functions are sine, square, ramp, pulse, DC, noise, cardiac, Gaussian pulse, and exponential rise/fall.
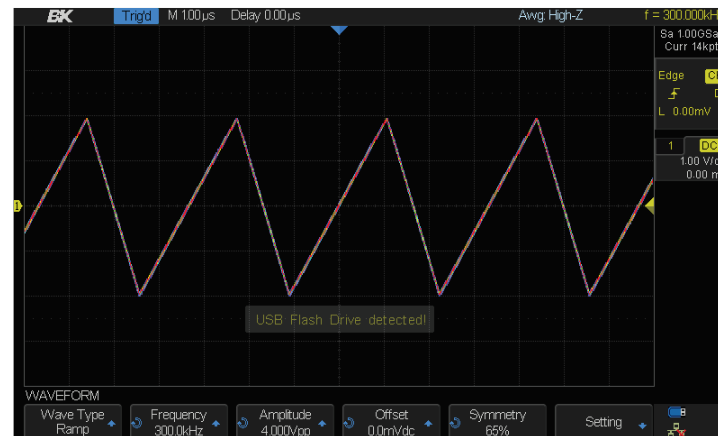
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The tools you need

Automatic Waveform Math and Measurement, Color Grading

Automatic Waveform Math and Measurement

Display 36 automated measurements that include voltage, time, and statistics. Arithmetic and FFT functions can be performed on analog channels and two reference signals.

Color Grading

With 256 levels of color grading, the most common occurrences are represented in red and the least common are represented in purple. Easily spot outliers as they will persist for a user specified time.

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The tools you need

Hardware Pass/Fail and Masking, PC connectivity

Hardware Pass/Fail and Masking

Perform up to 60,000 pass/fail decisions a second. Easy to generate masking templates help capture anomalies even with complicated waveforms..

PC connectivity

PC software is provided (free download at www.bkprecision.com) for seamless integration between the oscilloscope and PC. Capture and transfer waveforms, screen images, setups and measurement results to a Windows PC via the USB device port on the back of the instrument. A USB host port on the front allows for quick and easy screen saving.

BK2540C series
## Digital Storage and Mixed Signal Oscilloscopes

The tools you need

Included in all MSO models : MSO license - LA2540C, 16 channel logic probe - LP2540C

MSO license - LA2540C

The 16 integrated digital channels are displayed along-side analog channels allowing users to view up to 18 time-correlated channels with shared triggering and acquisition on one screen. The LA2540C license enables the 16 digital channels of the 2540C Series and is included with MSO models.
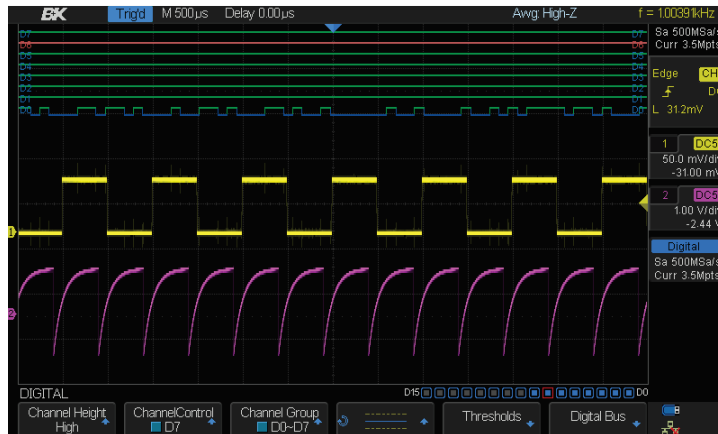
16 channel logic probe - LP2540C

The 16-channel color-coded logic probe consists of two eight-channel pods. To make contact with the DUT, the probe connects directly to square pins or clips to test points using the included grabbers. With an input capacitance of only 8 pF and 100 kΩ input impedance, the probe protects the integrity of your signal. The probe is included with MSO models.

BK2540C series
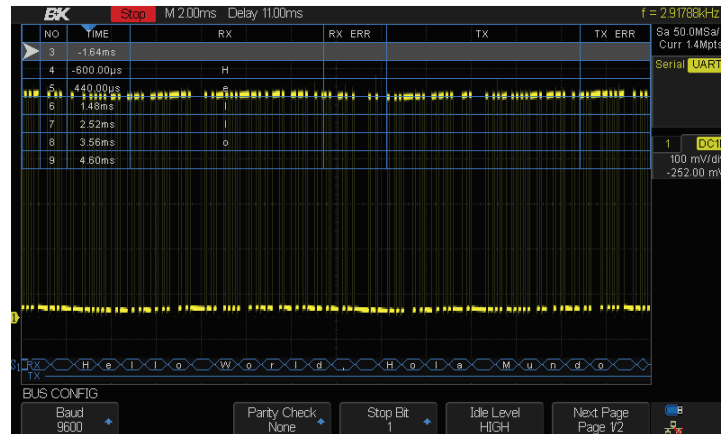**Digital Storage and Mixed Signal Oscilloscopes**

The tools you need

Decode license - DC2540C

Decode license - DC2540C

Select up to 2 serial bus protocols I2C, SPI, UART/RS232, CAN, and LIN and decode concurrently from analog and MSO channels. Decode information in real-time and display in binary, decimal, hex, or ASCII.

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Buy now, upgrade later

Install the MSO and decode licenses at any time or try before you buy with the 30 trial license on each model. Any DSO model in the 2540C Series can be upgraded to an MSO. Installation is quick and easily done within the oscilloscope menu.

Available Upgrades		
	DSO Models	**MSO Models**
16-channel logic probe (LP2540C)	Optional	Standard
MSO license (LA2540C)	Optional*	Standard
Decode license (DC2540C)	Optional*	Optional*

*Licenses LA2540C and DC2540C will not be offered through distribution for the time being. End users can purchase licenses directly from B&K Precision through the website.

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Price information

Oscilloscopes

	BK2540C	BK2540C-MSO	BK2542C	BK2542C-MSO	BK2544C	BK2544C-MSO
Bandwidth	70 MHz		100 MHz		200 MHz	
Channels	2		2		2	
Digital Channels	0	16	0	16	0	16
Price	**990 €**	**1 390 €**	**1 090 €**	**1 550 €**	**1 250 €**	**1650 €**

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Price information

Accessories

MSO license* - LA2540C → License request

Decode license* - DC2540C → License request

16-channel logic probe - LP2540C → 300 €

16-channel logic probe (LP2540C)

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Competitive Comparison

BK2540C Series DSO and MSO Comparison Guide
1 GSa/s, 2 Channel, MSO Upgradable

	2540B Series B&K Precision	New 2540C Series B&K Precision		Tektronix		Rohde & Schwarz
	DSO	DSO	MSO	DSO	MSO	DSO[2]
Model	2540B-GEN / 2542B-GEN	2540C / 2542C / 2544C	2540C-MSO / 2542C-MSO /2544C-MSO	DPO2002B / DPO2012B / DPO2022B	MSO2002B / MSO2012B / MSO2022B	HMO1072 / HMO1102
Price	1 439 € / 1 542 €	990 €/ 1 090 €/1 250 €	1 390 € / 1 550 € / 1 650 €	1 270 € / 1 580 € / 2 230 €	1 990 € / 2 330 € / 2 970 €	896 € / 996 €
Bandwidth	60 MHz / 100 MHz	70 MHz / 100 MHz / 200 MHz	70 MHz / 100 MHz / 200 MHz	70 MHz / 100 MHz / 200 MHz	70 MHz / 100 MHz / 200 MHz	70 MHz / 100 MHz
Channels	2	2		2		2
MSO Digital Channels	None	Upgradable (16)	16	None	16	8
Sample Rate	1 GSa/s	1 GSa/s (interleaved)		1 GSa/s		1Gsa/s (interleaved)
Record Length	2,4 Mpts	14 Mpts		1 Mpts		1MPts
Waveform Capture Rate	1,000 waveforms	60,000 wfms/s		5,000 wfms/s		10,000 wfms/s
Display	5,7" widescreen display	8" widescreen display		7" widescreen display		6,5" widescreen display
Measurements	32	36		29		22
Function Generator	✓	✓ 25 MHz function generator, 5 MHz AWG		✗		✓ 50 kHz function, 50 Mbit/s pattern generator
FFT		✓				✓
Math Functions	Addition, Subtraction, Multiplication	Addition, Subtraction, Multiplication, Division, Integration, Differential, Square Root		Addition, Subtraction, Multiplication		Addition, Substraction, Multiplication, Division
LAN	✓	✓		Upgradable (500 €)		✓
USB	✓	✓		✓		✓
Decoding and Serial Triggering Option	✗	Decoding: I2C, SPI, UART/RS232, CAN, LIN (Upgradable) Triggering: I2C, SPI, UART/RS232, CAN, LIN (included in base model)		Decoding & Triggering: I2C, SPI, UART/RS232, CAN, LIN (DPO2BND - 750 €)		Decoding: I2C, SPI, UART/RS232 (HOO10 - 357,50 €) Decoding: CAN and LIN (HOO12 - 597,60 €)
MSO Software Option[1]	✗	Upgradable	Included	✗	Included	Included
MSO Probe	✗	LP2540C - 300 €	Included	✗	Included	HO3508 -390 €
Warranty	3 year	3 year		5 year		3 year

*1 Base BK2540C models can be upgrade at anytime to a MSO model

*2 HMO1002 MSO software comes standard but required probe is not included

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