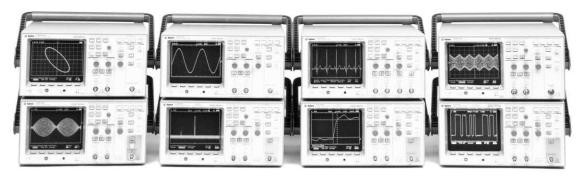


Agilent 54600-Series Oscilloscopes

Data Sheet

- 60/100/150/500 MHz bandwidth models with 2 or 4 channels
- · Easy-to-use analog front panel
- Fast, responsive display
- Automatic measurements
- Pretrigger viewing, trace storage
- Optional remote control/hard copy



Analog feel and digital power for precise, accurate troubleshooting at an affordable price

With many models to choose from, you will be able to pick the oscilloscope that best fits your measurement and troubleshooting needs while meeting your budget.

Displays you can trust

Agilent Technologies 54600-series oscilloscopes feature real-time vector displays that give you a clear and accurate picture of your waveforms. Like analog oscilloscope displays, these enhanced displays give you waveform slew rate information at a glance, with brighter traces representing more slowly changing waveforms and dimmer traces representing more rapidly changing waveforms.

The multiprocessor architecture of Agilent 54600-series oscilloscopes permits a display update rate of up to 3.0 million points per second. This fast display update means the oscilloscope screen reflects changes in the waveform instantaneously, giving you the display responsiveness you need to make adjustments quickly and see complex waveforms accurately.

Powerful digital features

The digital architecture of Agilent 54600-series oscilloscopes gives you a multitude of features that help you get your job done easier and faster:

- Pretrigger viewing capability lets you view events that you'd miss with an analog scope.
 This feature lets you see what happened before the trigger event, so you can troubleshoot more effectively.
- Autoscale frees you from resetting the scope every time you move the probe from test point to test point. You simply hit the autoscale button and it sets voltage, time and trigger parameters for you.
- With autostore, the waveform displays at full brightness while all previously acquired waveforms remain on the scope's screen at half brightness. You see a history of waveform activity while simultaneously viewing the live waveform.
- Automatic measurements of voltage, frequency and time, plus user-defined cursor measurements, make waveform characterization fast and easy.
- With peak detect, you won't have to worry about missing narrow glitches.



The Agilent 54600 series includes eight models designed to meet your needs and your budget:

54600B 100 MHz oscilloscope

With 100 MHz bandwidth, two input channels, and sweep speeds from 2 ns/div to 5 ns/div, the 54600B is ideal for benchtop troubleshooting, production test, field service, and education—or anywhere else you need a dependable scope with solid performance.

54645A MegaZoom oscilloscope

The 54645A is a dual-channel 100 MHz oscilloscope with 200 MSa/s and a full 1 MB of memory behind each of its channels. Through the application of MegaZoom technology, accessing this deep-memory is as easy as turning a knob—pan and zoom through the deep captured waveform to search for other troubleshooting clues.

54602B 4 (2 + 2)-channel oscilloscope

When you need more than 100 MHz of bandwidth, take a closer look at the 54602B scope. You get the same capabilities as the 54600B but with the added advantage of a 150 MHz bandwidth, 4 (2+2) channels, and 1 mV/div sensitivity.

54603B 60 MHz oscilloscope

The 54603B was designed with the tight budgets of colleges and universities in mind. Students can use the 60 MHz, 2-channel 54603B to understand circuit operation and learn standard measurement techniques on the same type of equipment they are likely to use when they graduate.

54610B 500 MHz oscilloscope

This lowest-cost, 2-channel 500 MHz scope offers a viewable external trigger and horizontal accuracy of 0.001%. The 54610B capabilities are well-suited for production test applications as well as general purpose troubleshooting.

54615B 1 GSa/s oscilloscope

With the 54615B you can capture narrow glitches and subtle details of your signal. This 2-channel scope combines 500 MHz bandwidth, 1 GSa/s sample rate and 1 nanosecond peak detection on both channels. The 54615B peak detection allows the scope to maintain the 1 GSa/s sample rate at all sweep speeds. A horizontal accuracy of 0.005% means you can make critical timing measurements with confidence.

54616B/C 2 GSa/s oscilloscope

The top-of-the-line 54616B offers the same benefits as the 54615B but with twice the sample rate— 2 GSa/s sampling rate, 500 MHz bandwidth, and 1 nanosecond peak detection. Plus, if you prefer a color display for waveform viewing, the 54616C color version is available.

Expandable features to meet your changing needs

The Agilent 54600-series oscilloscopes can be easily and inexpensively upgraded with add-on modules and software to provide advanced capabilities:

- Interface modules give you remote control and hard-copy output to RS-232, GPIB, and parallel printers and plotters.
- Measurement Storage modules offer interfacing and printing plus advanced features like FFT, mask testing, and additional memory.
- Agilent BenchLink XL 54600 free software captures screen images, gathers waveform data, and stores instrument setups, all from the familiar environment of MS Excel or Word. Ships free with each module.
- Optional Agilent BenchLink Scope is a standalone software package for bringing waveform images and points into your PC. Use it when you need Windows 3.1 compatibility, don't have Excel or Word, or need to access trace memory from your PC.

Enhanced TV/video trigger

With Option 005 you gain the ability to trigger and perform highly detailed measurements on the video components of your system. For more information see Agilent publication number 5968-2611. Not available on the 54600B, 54603B, or 54645D scopes.

Technical Specifications

	54603B	54600B	54645A	54602B	54610B	54615B/16B/16C
Bandwidth CH 1 and 2 ac coupled CH 3 and 4	dc-60 MHz 10 Hz-60 MHz NA	dc-100 MHz 10 Hz-100 MHz NA	dc-100 MHz ⁺⁺ dc-150 MHz ⁺ 1.5 Hz-100 MHz ⁺⁺ 10 Hz-150 MHz ⁺ NA dc-250 MHz		dc-500 MHz 10 Hz-500 MHz NA	dc-500 MHz 10 Hz-500 MHz NA
Single shot bandwidth	dc-2 MHz	dc-2 MHz	dc-50 MHz	dc-2 MHz	dc-2 MHz	54615B 250 MHz 54616B/C 500 MHz
Number of channels	2	2	2	4 (2+2)	2	2
Sensitivity CH 1 and 2 CH 3 and 4	2 mV/div to 5 V/div NA	2 mV/div to 5 V/div NA	1 mV/div to 5 V/div NA	1 mV/div to 5 V/div 0.1 and 0.5 V/div	2 mV/div to 5 V/div NA	2 mV/div to 5 V/div NA
dc gain accuracy	± 2%	± 1.5%	± 1.5%	± 1.5%	± 2%	± 2%
Rise time (calculated) CH 1 and 2 CH 3 and 4	<5.83 ns NA	<3.5 ns NA	<3.5 ns NA	<2.33 ns <1.4 ns	<700 ps NA	<700 ps NA
Input impedance	1 MΩ, ~ 13 pF	1 MΩ, ~ 18 pF	1 MΩ, ~ 13 pF	1 MΩ, ~ 13 pF	1 M Ω , ~ 9 pF or 50 Ω selectable	1 M Ω , ~ 9 pF or 50 Ω selectable
Input coupling CH 1 and 2 CH 3 and 4	dc, ac or ground NA	dc, ac or ground NA	dc, ac or ground NA	dc, ac or ground dc or ground	dc, ac or ground NA	dc, ac or ground NA
Maximum input (dc + peak ac)	400 V	400 V	400 V	400 V	250 V or 5 Vrms in 50 Ω mode	250 V or 5 Vrms in 50 Ω mode
Timebase range (main and delayed)	5 s/div to 5 ns/div	5 s/div to 2 ns/div	5 s/div to 2 ns/div	5 s/div to 2 ns/div	5 s/div to 1 ns/div	5 s/div to 1 ns/div
Trigger sources	CH 1, 2, line, or ext.	CH 1, 2, line, or ext.	CH 1, 2, line, or ext.	CH 1, 2, 3, 4, line	CH 1, 2, line, or ext.	CH 1, 2, line, or ext.
Horizontal accuracy	± 0.01%	± 0.01%	± 0.01%	± 0.01%	± 0.01%	±0.005%
Horizontal resolution	100 ps	100 ps	40 ps	100 ps	100 ps	20 ps
Trigger sensitivity dc to 25 MHz 25 MHz to max. bandwidth	0.35 div or 3.5 mV 1 div or 10 mV	0.35 div or 3.5 mV 1 div or 10 mV	0.35 div or 3.5 mV 1 div or 10 mV	0.35 div or 3.5 mV 1 div or 2 mV**	0.35 div or 3.5 mV 1 div or 10 mV ¹	0.5 div or 5.0 mV*** 1 div or 10 mV [†]
Maximum sample rate single shot	20 MSa/s	20 MSa/s	200 MSa/s	20 MSa/s	20 MSa/s	54615 1 GSa/s 54616 2 GSa/s
repetitive	10 GSa/s	10 GSa/s	>10 GSa/s	10 GSa/s	10 GSa/s	>10 GSa/s
Record length	4,000 points 2,000 points	4,000 points 2,000 points	1M points 1M points	4,000 points 2,000 points	4,000 points 2,000 points	5,000 points 5,000 points
Max. display update rate	1,500,000 points/sec	1,500,000 points/sec	3,000,000 points/sec	1,500,000 points/sec	1,500,000 points/sec	500,000 points/sec
Resolution	8 bits					
Power	Voltage: 100-240 Vac, 45 to 440 Hz, 220 VA maximum					
Net weight	Approx. 6.2 kg (14 lbs)					
Size (excl. handle)	172 mm H x 322 mm	W x 317 mm D (6.8	x 12.7 x 12.5 in)			
Warranty	3 years					

^{*} Maximum bandwidth on CH 1 and 2 is 100 MHz at 1, 2, and 5 mV/div.

** 64602B, for ranges 1, 2, and 5 mV/div, sensitivity between
25 MHz and 100 MHz on CH 1 and 2 is 2 div or 4 mV.

*** Trigger sensitivity from dc to 100 MHz.

† Trigger sensitivity from 100 MHz to max. bandwidth.

†† Maximum bandwidth on CH 1 and 2 is 75 MHz at 1, 2 and 5 mV/div.

Vertical System (Agilent 54600B, 54646B, 54602B, 54603B)

Bandwidth Limit ~ 20 MHz
Inversion CH 1 and CH 2
CMRR ~ 20 dB at 50 MHz
Dynamic Range ± 8 div from center screen
Input R and C 1 MΩ, ~ 13 pf
Maximum Input 400 V (dc + peak ac)

Math Functions CH 1 + or - CH 2

Cursor Accuracy [1][2]

Single Cursor Vert. Acc. \pm 1.2% of full scale, \pm 0.5% of

position value

Dual Cursor Vert. Acc. ± 0.4% of full scale

Vertical System (Agilent 54610B, 54615B, 54616B/C)

Bandwidth Limit ~ 30 MHz CH 1 and CH 2 Inversion **CMRR** ~ 20dB at 50 MHz **Dynamic Range** ± 12 div from center screen Input R and C 1 M Ω , ~ 9 pf or 50 Ω selectable 250 V (dc + peak ac) or 5 Vrms in 50Ω mode Maximum Input 50Ω Protection Protects 50Ω load from excessive voltage Time Skew Adjustable over a range of ±25ns to remove effects of cabling Automatic readout of 1X, 10X, 20X, 50X Probe Sense and 100X probes

Cursor Accuracy [1][2]

Single Cursor Vert. Acc. \pm 1.2% of full scale, \pm 0.5% of

position value

Horizontal System

 $\begin{array}{lll} \textbf{Cursor Accuracy} & \pm 0.01\% \pm 0.2\% \text{ of full scale} \pm 200 \text{ ps} \\ & (\Delta t \text{ and } 1/\Delta t)^{(3)} & \\ \textbf{Delay Jitter} & 10 \text{ ppm ppm } (54615B, 54616B/C) \\ \textbf{Pretrigger Delay} & \geq 10 \text{ div} \\ & (\text{Negative time}) & \\ \textbf{Posttrigger Delay} & \text{at least } 2,560 \text{ div or } 50 \text{ ms.} \\ & (\text{Trigger to start} & \text{Not to exceed } 100 \text{ s.} \\ & \text{of sweep}) & \\ \end{array}$

Delayed Sweep

Main Sweep	Delayed Sweep
5 s/div to 10 ms/div	up to 200X main
5 ms/div and faster	up to 2 ns/div
54610B, 15B/16B/16C	up to 1ns/div

Trigger System

Coupling	ac, dc, LF reject, HF reject, and noise reject. LF and HF: -3db at ~ 50 kHz
Modes	Auto, Autolevel, Normal, Single, and TV
54645A Glitch triggering	Minimum width 8 ns, Operators: <, >, or range
TV Triggering	TV line and field. 0.5 div of composite sync
	for stable display (Ch 1 and Ch 2)
TV Functions	
Line Counting	Delay time calibrated in NTSC and PAL line numbers
All Field Trigger (both fields selected, 54602B and 54610B)	Oscilloscope triggers on the vertical sync pulse in both fields, allowing use with noninterlaced video.
Holdoff	Adjustable from 200 ns to \sim 13 s

External Trigger (54600B, 54603B, 54645A)

Range Sensitivity ±18\

Coupling

dc to 25 MHz: < 50mV 25 MHz to 100 MHz: < 100mV dc, HF reject and noise reject

 $\begin{array}{ll} \mbox{Input R and C} & 1M\Omega, \sim 13 \mbox{pf} \\ \mbox{Maximum Input} & 400 \ V \ (dc \ + \ peak \ ac) \\ \end{array}$

External Trigger (54610B, 54615B, 54616B/C)

Range Sensitivity ±18V (54610B)

 $\pm~2~V~(54615B,~54616B/C)$ dc to 100 MHz: <75mV 100 MHz to 500 MHz: <150mV

Coupling dc and ground

 $\mbox{Input R and C} \qquad \qquad \mbox{1M}\Omega, \sim 12 \mbox{pf or } 50\Omega \mbox{ selectable}$

 $\textbf{Maximum Input} \hspace{1.5cm} 250 \; \text{V (dc + peak ac) or} \\$

5 Vrms in 50Ω mode

Trigger View External trigger is viewable. (54610B only) Bandwidth is > 350MHz

(not available on 54615B)

X-Y Operation

Z-Blanking TTL high blanks trace

(not available on 54615B, 54616B/C)

Bandwidth X and Y same as vertical system

Phase Difference ± 3 degrees at 100 kHz

± 3 degrees at 10 MHz (54615B, 54616B/C)

[1] Temperature ± 10°C from calibration

[2] Use full scale at 80mV for 2mV/div and 5 mV/div ranges

[3] Use full scale of 50 ns for 2 ns/div

Display System

Display 7-inch Raster CRT

Resolution 255 vertical by 500 horizontal points **Controls** Front-panel intensity control

8 X 10 grid or frame Graticule

Autostore Autostore saves previous sweeps in

half bright display and the most recent sweep

in full bright display.

Display (54616C) 5.8 inch Active Matrix Color LCD Display

Acquisition System

Simultaneous Channels

54600B/54610B. Channels 1 and 2

54615B, 54616B

54602B Channels 1 and 2 or 3 and 4 4,000 points Vectors off

Record Length 2,000 points Vectors on and/or single shot

54615B, 54616B/C 5,000 points

54645A 1 million points

Max Update Rate Vectors off: 1,500,000 points/sec

Vectors on: 60 full screens/sec, independent

of number of waveforms being displayed

54615B, 54616B/C 500,000 points/sec 54645A 3.000.000 points/sec **Usable Single-Shot** 2 MHz, single channel 1 MHz, dual channel **Bandwidth**

54615B 250 MHz 54616B/C 500 MHz 54645A 50 MHz

Peak Detect 50 ns glitch capture (100 ns dual channel) at

sweep speeds of 50 µs/div and greater

54615B, 54616B/C 1 ns glitch capture

54645A 5 ns

Average Number of averages selectable at 8, 64, 256

Advanced Functions

Automatic Measurements Measurements are continuously updated Voltage Vavg, Vrms, Vpp, Vtop, Vbase, Vmin, and Vmax Time Frequency, Period, + Width, - Width, Duty Cycle, Rise Time, and Fall Time Cursors Manually or automatically placed **Setup Functions** Autoscale Sets the vertical and horizontal deflection and the trigger level

10 front-panel setups Save/Recall Trace Memory Two volatile pixel memories

General

Power Line Requirements

Line Voltage Range 100 Vac to 240 Vac Line Voltage Selection Automatic Line Frequency 45 Hz to 440 Hz Max Power 220 VA

Consumption 300 VA (54615B, 54616B/C)

Environmental The instrument meets the requirements of Characteristics MIL-T-28800D for Type III, Class 3,

Style D equipment as described below.

Ambient Temperature

Operating -10°C to +55°C Nonoperating -51°C to + 71°C

Humidity [1]

Operating 95% RH at 40°C for 24 Hrs Nonoperating 90% RH at 65°C for 24 Hrs

Altitude

Vibration

Operating to 4,500 m (15,000 ft) to 15,000 m (50,000 ft) Nonoperating **EMI (Commercial)** Meets FTZ 1046 Class B

EMI (MIL-T-28800D) Meets requirements in accordance with Paragraph 3.8.3, EMI Type III, and

MIL-STD-461C as modified by Table XII.

CE01.CE03 Full limits CS01, CS02, CS06 Full limits

15 dB relaxation to 20 kHz; exceptioned from RE01

20 kHz to 50 kHz

RE02 (With Opt 002) Full limits of class A1c and A1f

10 dB relaxation from 14 kHz to 100 kHz (Without Opt 002)

RS02 Exceptioned

Slight trace shift from 80 MHz to 200 MHz RS03 (With Opt 001)

> Operating: 15 minutes along each of the 3 major axes; 0.025 inch p-p displacement, 10 Hz to 55 Hz in one-minute cycles. Held for

10 minutes at 55 Hz (4 g at 55 Hz).

Operating: 30 g, 1/2 sine, 11 ms duration, Shock

3 shocks per axis along major axis.

Total of 18 shocks

Size (excluding handle) Height: 172 mm (6.8 in)

> Width: 322 mm (12.7 in) Depth: 317 mm (12.5 in)

Weight 6.2 kg (14 lbs) Safety CSA Certification,

IEC 348

UL 1244 listed

Warranty 3 years

^[1] Tested to Agilent Environmental Specification Section 758 for Class B-1 products

Optional Add-on Modules

Agilent 54650A GPIB Interface Module

Description Full GPIB remote control

Direct printing to GPIB printers and plotters

Converts scope's 2 trace memories to

non-volatile memory IEEE-488.2 compatible

Printer Support HP ThinkJet, HP QuietJet, HP PaintJet,

HP LaserJet; HP-GL compatible plotters

Agilent 54652B RS-232 Parallel Interface Module

Description Full RS-232 remote control

Direct printing to RS-232 and parallel printers

Converts scope's 2 trace memories to

non-volatile memory

RS-232 Specifications

Connector Type 9 pin (m) DTE Port
Cable 34398A (provided)
Protocols X0n/Xoff, hardwire

Data Bits 8
Parity None

Baud Rates 1200, 2400, 9600, 19200

Printer Support HP ThinkJet, HP QuietJet, HP PaintJet, HP

LaserJet; HP-GL compatible plotters

Parallel Specifications

Connector Type 25 pin (f) Cable C2950A

Printer Support Epson FX-80 or HP PCL compatible printers

Agilent 54657A (GPIB) and 54659B (RS-232)

Measurement Storage Modules

These modules incorporate the relevant GPIB or RS-232 control and printing capabilities specified above, as well as the following features.

Waveform Math Functions

Function 1 Addition, subtraction, and multiplication Function 2 Differentiation, integration, and FFT

FFT

Windows Exponential, flat top, Hanning and rectangular

Samples 1024 points

Trace Memory up to 100 nonvolatile memories

Memories 1-3 High speed storage without compression. Memories 4-100 Storage with compression. Storage time is

approximately 7 seconds. Number of traces that can be stored is a function of complexity, with the minimum being 4 highly complex

traces and the maximum being 96.

Memory Labeling An onscreen text editor is provided for creating

labels up to 20 characters. Each label contains

the date and time it was saved.

Real Time Clock 24-hour format with battery back-up. Can be

set from front panel.

Unattended Waveform Monitoring

Testing Method Comparison to waveform mask.

Number of Masks 2

Mask Generation Automask, controlled from the front panel, and Operation generates mask from displayed waveform w

generates mask from displayed waveform with selectable tolerance. Mask editor function allows pixel-by-pixel editing and line drawing. Smoothing function performs a running average

of 3 pixels.

Action on Failure Save failed trace to memory with date and time

of the failure

Print failed trace with date and time of the

failure

Count the failure and maintain pass/fail statistics while continuing the test

Specifications for Agilent 54600-series Scope Probes

Probe Model Number	Bandwidth	Division Ratio	Approx. length	Input R	Approx. Input C	Rise-time	Max input dc + peak ac	Scope Compatibility
10070B	20 MHz	1:1	1.5m	1 ΜΩ	70 pF	<17.5 ns	400 V	54600 series
10071B	150 MHz	10:1	1.5m	10 M Ω	15 pF	<2.33 ns	500 V	54600/02/03/45B
10073B	500 MHz	1:1	1.5m	$2.2~\mathrm{M}\Omega$	12 pF	<0.7 ns	500 V	54610/15/16B
10074B	150 MHz	10:1	1.5m	10 M Ω	12 pF	<2.33 ns	500 V	54645A
10442B	1 GHz	10:1	2.0m	$500~\Omega$	1.2 pF	<0.35 ns	10 V	scopes with 50 Ω inputs

Probe Accessories

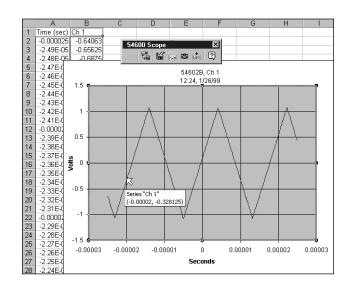
10072A	SMT Probe tips for 1007X probes				
	This accessory kit contains 2 dual-lead				
	adapters and 8 IC clips, so connecting to ICs				
	and standard board headers is easy.				
5081-7705	BNC Adapter for 1007X probes This accessory clips on the end of the probe				
	and allows the probe to mate with BNC (f)				
	connectors.				
5081-7690	Replacement Accessory Kit for 1007X probes				
	This kit contains replacement Hook Tip, IC Tip,				
	Ground Bayonet, Ground Lead, Adjustment				
	Tool, and Probe Identification Tags.				
Additional Measuremo	ent Accessories				
10100C	50 Ω ± 1% Feedthrough Termination				
	BNC (f) to BNC (m), Frequency range				
	dc-300 MHz, Max. VSWR 1.1:1				
11094B	75 Ω ± 0.2% Feedthrough Termination				
	BNC (f) to BNC (m), maximum power 1 Watt				
E9637A	Dual Banana(m) to BNC (f) Adapter				
10110B	Dual Banana(m) to BNC (m) Adapter				
Additional Accessorie	s				
10098A	Front Panel Cover and Pouch Kit				
	This kit will add the Option 101 front panel				
	cover and pouch to any 54600-series				
	oscilloscope				
	озстозорс				
1183A	Testmobile Scope				



Agilent BenchLink XL 54600 Software PC Connectivity Made Easy

Receive Agilent BenchLink XL 54600 software FREE with the purchase of

any module listed above. Use it to retrieve waveform images, waveform data—even automatic measurements—directly into MicroSoft Excel and Word without programming. Additionally, an ActiveX control simplifies programming in Visual Basic, VBA, Visual C++, Agilent VEE, and National Instruments LabVIEW.



Ordering Information

Agilent 54600-Series Oscilloscopes

54600B Two-channel, 100 MHz Oscilloscope

54602B Four-channel, 150 MHz Oscilloscope

54603B Two-channel, 60 MHz Oscilloscope

Each of the above oscilloscopes comes with two 1.5 meter 10X probes (10071A), a user and service guide, and power cord.

54610B Two-channel, 500 MHz, 20 MSa/s Oscilloscope

54615B Two-channel, 500 MHz, 1 GSa/s Oscilloscope

54616B Two-channel, 500 MHz, 2 GSa/s Oscilloscope

 $\textbf{54616C} \,\, \textbf{Color two-channel}, \textbf{500} \,\, \textbf{MHz}, \textbf{2} \,\, \textbf{GSa/s}, \textbf{0scilloscope}$

54645A Two-channel, 100 MHz, 200 MSa/s Oscilloscope

54645D Two-channel and 16 timing channel

100 MHz MSO Oscilloscope

Each of the above oscilloscopes comes with two 1.5 meter 10X probes, a user and service guide, and power cord.

Options

Opt. 001 RS-03 Magnetic interface shielding added to CR Opt. 002 RE-02 Display shield added to CRT to reduce radiated interface

Opt. 005 Enhanced TV/video triggering (not 54600/03B/645D)

Opt. 090 Delete probes (for 54600/02/03B)

Opt. 090 Delete probes (for 54610B, 54615B, and 54616B/C)

Opt. 090 Delete probe (for 54645A)

Opt. 101 Accessory pouch and front panel cover (10098A)

Opt. 102 Two additional 10071B probes (54602B only)

Opt. 103 Operator training kit

(includes training signal board and lab workbook)

Opt. 104 Carrying case

(protects scope for shipping or baggage checking)

Opt. 106 HP BenchLink Scope software for Windows (HP 34810B)

Opt. 1CM Rack Mount Kit (P/N 5062-7345)

Opt. W50 Additional 2-year warranty (5-year total), starting at

Manual options (please specify one)

ABA US English ABF French ABJ Japanese ABD German ABZ Italian AB1 Korean

ABE Spanish ABO Taiwan Chinese

Agilent 54650-series enhancement modules

(each includes HP BenchLink XL 54600 Software)

54650A GPIB interface module

54652B RS-232 and parallel interface module

(includes RS-232 cable)

54657A GPIB measurement/storage module

54659B RS-232 and parallel measurement/storage module

(includes RS-232 cable)

*E2657A GPIB Connectivity Kit

*E2658A RS-232 Connectivity Kit

* Kit includes Measurement Storage Module, HP 34810B BenchLink Scope Software and cable

Additional oscilloscope accessories, probes and terminations

10070B 1:1 probe

10071B 10:1 probe

10072B SMT probing kit

10073B 10:1 500 MHz probe with readout

10074B 10:1 150 MHz probe with readout

10442B 10:1 Resistive divider probe for 50 Ω inputs.

10100C 50 Ω feedthrough termination

11094B 75 Ω ±2% Feedthrough Termination

 $\mathsf{BNC}(\mathsf{f})$ to BNC (m)

5081-7690 1007X probe accessory kit

5081-7705 1007X probe-to-BNC (m) adapter

34397A Inverter, 12 Volt dc to 115 V ac

HP 34810-Series BenchLink Software

HP 34810B BenchLink Scope Software

Includes software on 3.5" disk, user's guide (all languages). GPIB or RS-232 module needed for connection to scope.

Agilent Technologies' Test and Measurement Support, Services, and Assistance

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

Our Promise

"Our Promise" means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available

Your Advantage

"Your Advantage" means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

Get assistance with all your test and measurement needs at: www.agilent.com/find/assist

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