



TELEDYNE LECROY
Everywhere you look™

"SMART PRODUCTS" FOR YOU.

DETAIL -ORIENTED



OSCILLOSCOPE

DONHO
唐和股份有限公司

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LECROY

HIGHLIGHT

1. LeCroy 示波器的參數設置菜單中就給出了參數含義的文字說明，更有光標的幫助標志來解釋參數。
2. 示波器可同時測量 12 個參數，同等的其它品牌示波器最多只能同時測量 8 個參數。圖五中顯示出可同時測量 12 個參數，P1-P12。
3. LeCroy 是“測量統計”功能的發明者，LeCroy 示波器具有有一次性測量屏幕上所有脈沖參數的功能(AIM 測量功能)。
4. LeCroy 示波器可以同時給出 12 個測量參數的小直方圖，讓工程師快速查看參數的穩定性。(Hiticons 測量功能)。
5. LeCroy 示波器和競爭對手的同等示波器相比有最多的測量參數個數，總計多達 158 種測量參數。譬如 SDA760Zi 的標配測量參數達到 128 個，而同等的 T 公司的 DSA70804 只有 93 個，A 公司的 DSA90604 只有 59 個。
6. LeCroy 示波器除了可以對屏幕上所有的波形進行測量外，也可以自動對某一部分的波形進行測量。(Gate 測量功能)
7. LeCroy 示波器甚至可以測量出一定參數大小範圍內的結果。(RQM 測量功能)
8. LeCroy 示波器的很多型號如 WaveRunner MXi 系列，標配就具有參數之間的運算的功能。
9. LeCroy 示波器的很多型號如 WaveRunner MXi, SDA 系列標配就具有自定義參數的功能。
10. LeCroy 示波器具有最快的測量速度，達到了 750,000/s 的測量能力，比同等示波器快 50 倍以上。

ABOUT

TELEDYNE LECROY

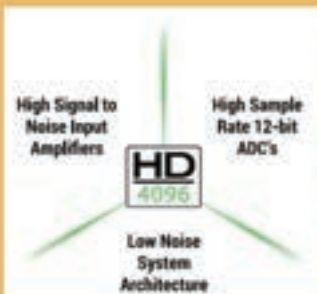


Teledyne LeCroy Inc. 幾十年來保持著驚人的創新能力，持續為工程師們創造“能解決問題”的示波器。當今數字示波器中的一些耳熟能詳的“術語”都是力科引入到示波器領域的，像“模擬余輝”功能、FFT 功能，“測量統計”、參數“直方圖”功能、“抖動追蹤”功能……。

Teledyne LeCroy 發布了 12 位 ADC 的 HDO 系列高精度示波器，是傳統 8 位示波器分辨率的 16 倍，集高精度、高分辨率、高采樣率於一身，能夠幫助工程師觀測到更小的信號、更多的信號細節、實現更加精確的測量，是射頻小信號測量、電源紋波噪聲測量、醫療電子信號測量、傳感器信號測量、生物電信號測量的理想選擇。12 位 HDO 的推出，是中低端示波器的又一次技術性革命，將引領中低端示波器的新發展方向，自此，數字示波器開始步入了 12 位時代！

高帶寬 (100GHz)、高采樣率 (240GS/s)、可分析存儲深度 (1536Mpts)、快數據處理速度、快操作反應速度和快離線數據傳輸速度的示波器是由 Teledyne LeCroy 提供的！

示波器為什麼要選 12bit(位元)



12bit 解析度示波器在 Y 軸電壓分辨率為 2^{12} 次方 (4096)，相較於 8bit 解析度示波器 Y 軸電壓分辨率 2^8 次方 (256)，相差了 16 倍的解析能力。

示波器一般用於量測分析短暫訊號的變化，訊號內部的微小雜訊與變動勢必是分析解決的重點。



LeCroy

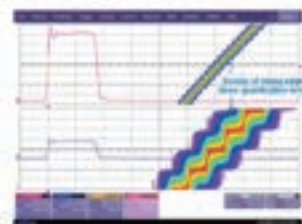
應用

電源雜訊測試

當今的電子產品，信號速度越來越快，集成電路芯片的供電電壓也越來越小，90年代，芯片的供電通常是 5V 和 3.3V，而現在，高速 IC 的供電通常為 2.5V, 1.8V 或 1.5V 等等。對於這類電壓較低直流電源的電壓測試（簡稱電源噪聲測試），本文將簡要討論和分析。

在電源噪聲測試中，通常有三個問題導致測量不準確

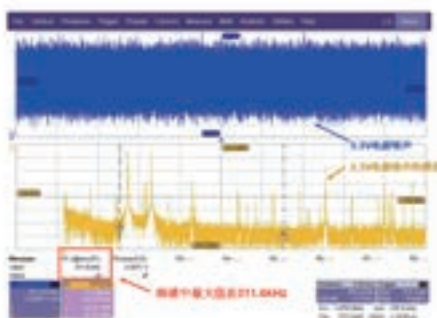
- 示波器的量化誤差
- 使用衰減因子大的探頭測量小電壓
- 探頭的 GND 和信號兩個探測點的距離過大



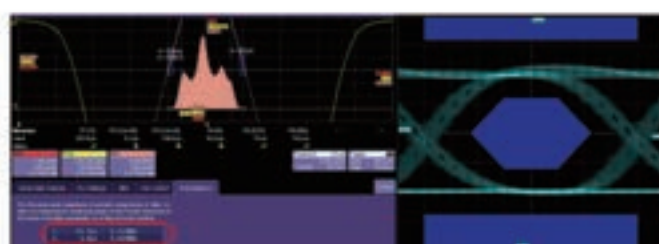
LeCroy PP066 探頭示意圖



測量某電腦主板 DDR2 的 1.8V 的電源噪聲



測量3.3V的電源雜訊



某 1.25Gbps 信號的抖動和眼圖測試結果

電動車用馬達特性



電氣/機械採集和計算

圖1的左側顯示了驅動器輸出線電壓和線電流波形。我們使用兩瓦特表方法進行了這些採集。請注意，綠色 (C4) 線路電流曲線似乎比藍色 (C3) 線路電流曲線有更多雜訊。這是由於使用了不同的電流傳感器，其中一個比另一個雜訊大。

抓取驅動器輸出和類比扭矩傳感器信號

圖1的右上方顯示了類比扭矩傳感器信號。軌跡C5是實際的輸出信號，而相關的縮放軌跡 (Z5) 提供了更多的細節。將類比轉速表輸出C6放大能顯示出相應的漣波成份。MDA800強大的分析功能之一是能夠繪製測量數據與時間的關係圖。經由這種方式，該儀器可以輕鬆分析數據的趨勢。圖的右下角是速度和效率的每週期波形，這兩個波形均來自類比扭矩傳感器和轉速計信號的每週期平均值。該圖顯示了每個週期的速度隨時間變化的曲線。扭矩隨時間變化的曲線與速度曲線具有很強的相關性。



每個週期的波形圖能觀察電力特性與其他信號之間的關係

每個週期的波形將很容易觀察「功率」與「其他信號」之間的相關性。例如，圖2顯示了每週期的速度波形，峰對峰值縮放為±1 RPM。在這種縮放比例下，波形的周期性相當明顯。經由移動游標，可以測量出頻率。在右下角，我們將圖1的每個週期效率波形圖 (粉紅色) 疊加到每個週期轉矩圖上，以顯示「轉矩」和「效率」之間的相關性。



顯示每個週期的速度波形與類比轉速表信號的相關性

同樣的，我們很容易將每週期「速度波形」與「類比轉速表信號」做關聯性分析 (圖3)。在這種情況下，MDA800的「縮放」功能會派上用場。開啟Zoom + Gate功能，以便測量對應到整個波形的縮放部分。在圖3中，C6是類比轉速表的輸出，Z6是C6的縮放軌跡。在對Z6 (F1) 使用低通濾波器以抑制高頻雜訊之後，我們清楚地看到，轉速表信號的形狀與右下角的每週期速度波形幾乎相同。此外，我們可以看到電流的漣波會產生速度的漣波。



測量和顯示每個週期的THD波形

分析電動車驅動馬達的另一個有用面向是測量和顯示每個週期的總諧波失真 (THD) 波形 (圖4)。MDA800可以「過濾」除了基波、基波 + N 諧波或一系列諧波以外的所有諧波 (它還可以過濾單個諧波)。將濾波濾波器設置為基波 + N或一定範圍的諧波。單擊該結果可打開THD與時間的關係圖。

與其他分析方法的比較

使用傳統的功率分析儀可以對電動車驅動馬達及其相關的驅動電路進行分析。但是，傳統的功率分析儀僅執行「靜態」分析，而不執行「動態」分析，也無法提供像MDA800的Zoom + Gate功能來隔離採集中的感興趣部分，以進行分析。功率分析儀也無法編譯統計數據，顯示每個週期的波形或進行長時間採集。但是，可以以0.25%的精度來量測電動機和驅動器的輸入/輸出效率。儘管在此應用中通常不需要這種精度。MDA800提供速度和扭矩分析以及THD測量，而功率分析儀在兩個方面的功能都非常有限。MDA800提供了強大的分析功能，可以繪製測量結果與時間的關係圖。通過這種方式，該儀器可以輔助您輕鬆發現數據趨勢。

WAVESURFER 4000HD

Teledyne LeCroy WaveSurfer 4000HD 高解析度示波器是採用 HD4096 技術的 12 位元振盪器。此 HD4096 技術包括具有採樣速率的 12 位元 ADC、高訊號至雜訊放大器，以及低雜訊系統架構。這些振盪器將多個器械整合，提高相容性。WaveSurfer 4000HD 振盪器可在 9 個類別中支援超過 30 個探頭，以及支援連 OneTouch 的 MAUI (Most Advanced User Interface)。這些振盪器可於 0°C 至 50°C 溫度範圍運作。



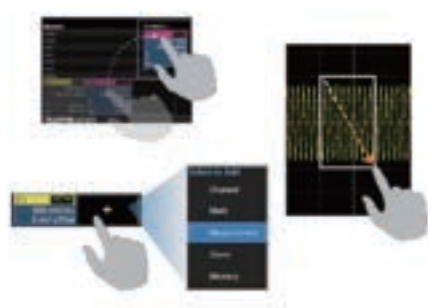
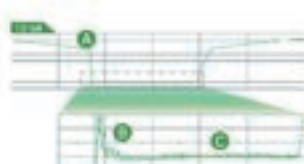
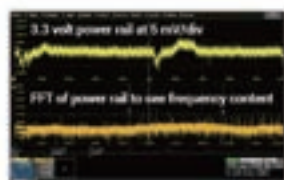
頻寬
200MHz-1GHz

最大記憶體
25Mpts

輸入通道
4

最大取樣率
5 GS/s

解析率
12-bits



振盪器包含 9 種類別中的 30 多個探頭

- 有源電軌探頭
- 電流探頭
- 高電壓差分 and 光纖探頭
- TekProbe 適配器

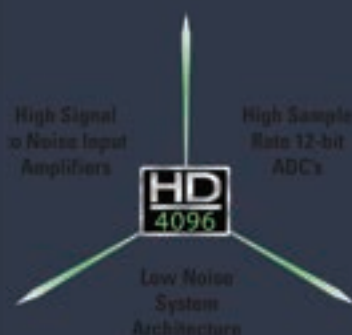
連 ONETOUCH 的 MAUI

- 於所有振盪器上配備獨有觸控螢幕功能
- 拖放功能可顯著節省設定時間
- 所有普通操作均可一鍵執行

HD
4096

12 BITS ALL THE TIME

HD4096 - 12 bit, 16 x 接近完美 Teledyne LeCroy 高清晰度 12 位示波器使用獨特的 HD4096 技術來提供卓越而無懈可擊的測量性能。HD4096 技術在全帶寬下提供最高分辨率和最低噪聲 - 始終保持 12 位不變。



- 使用串行觸發器進行協議分析和解碼
- 支援 16 通道混合訊號的邏輯分析
- 光譜分析儀
- 內建波形生成器
- DVM 及頻率計數器

Product Description **Product Code**

WaveSurfer 4000HD Oscilloscopes

200 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch High Definition Oscilloscope with 12.1" capacitive touch screen	WaveSurfer 4024HD
350 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch High Definition Oscilloscope with 12.1" capacitive touch screen	WaveSurfer 4034HD
500 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch High Definition Oscilloscope with 12.1" capacitive touch screen	WaveSurfer 4054HD
1 GHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch High Definition Oscilloscope with 12.1" capacitive touch screen	WaveSurfer 4104HD

Included with Standard Configurations

±10 passive probes (Qty. 4), Micro SD card (installed), Micro SD card adapter, protective cover, Getting Started Guide, commercial NIST traceable calibration with certificate, power cable for the destination country, 3-year warranty

Multi-Instrument Options

Mixed-Signal Oscilloscope (incl. 16-channel digital leadset, 22 extra large gripper probes, 20 ground extenders, 5 flexible ground leads and license)	WS4KHD-MSO
MSO License (without accessories)	WS4KHD-MSO-LICENSE
Spectrum Analyzer (2020 release)	
WaveSource Arbitrary Waveform Generator	WS4KHD-FG

Serial Trigger and Decode Options

AudioBus Trigger and Decode	WS4KHD-AUDIOBUS TD
Automotive Bundle: CAN, CAN FD, LIN, FlexRay Trigger and Decode	WS4KHD-AUTO TD
Embedded Bundle: I2C, SPI, UART-RS232 Trigger and Decode	WS4KHD-EMB TD

Power Analysis Options

Power Analysis	WS4KHD-PWR
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General Accessories

Softcase	WS4KHD-SOFTCASE
Rackmount Kit	WS4KHD-RACK

Product Description **Product Code**

Probes

250 MHz Passive Probe – 5 mm, 10:1, 10 M Ω	PP019
500 MHz Passive Probe – 5 mm, 10:1, 10 M Ω	PP026
1 GHz 5 K Ω 100:1 Passive Probe	PP065
Power/Voltage Rail Probe with 4 GHz bandwidth, 1.2x attenuation, ±30 V offset, ±800 mV	RP4030
RP4030 Browser Tip Accessory	RP4000-BROWSER
30 A, 50 MHz Current Probe – AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP030
30 A, 10 MHz Current Probe – AC/DC, 30 Arms, 50 A peak pulse, 3-meter cable	CP030-3M
30 A, 50 MHz High Sensitivity Current Probe – AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP030A
30 A, 100 MHz Current Probe – AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP031
30A, 100 MHz High Sensitivity Current Probe – AC/DC, 30 Arms, 50 A peak pulse, 1.5-meter cable	CP031A
150 A, 10 MHz Current Probe – AC/DC; 150 Arms; 500 A peak pulse, 2-meter cable	CP150
150 A, 5 MHz Current Probe – AC/DC, 150 Arms, 500 A peak pulse, 6-meter cable	CP150-6M
500 A, 2 MHz Current Probe – AC/DC, 500 Arms, 700 A peak pulse, 6-meter cable	CP500
Deskew Calibration Source	DCS025
700 V, 25 MHz High Voltage Differential Probe (±10, ±100)	AP031
1 kV, 25 MHz High Voltage Differential Probe	HVD3102A
1 kV, 25 MHz High Voltage Differential Probe (without tip accessories)	HVD3102A-NOACC
1 kV, 120 MHz High Voltage Differential Probe (without tip accessories)	HVD3106A
1 kV, 80 MHz High Voltage Differential Probe with 6-meter Cable	HVD3106A-6M
1 kV, 120 MHz High Voltage Differential Probe (without tip accessories)	HVD3106A-NOACC
2 kV, 120 MHz High Voltage Differential Probe	HVD3206A
2 kV, 80 MHz High Voltage Differential Probe with 6-meter Cable	HVD3206A-6M
6 kV, 100 MHz High Voltage Differential Probe	HVD3605A
High Voltage Fiber Optic Probe, 60 MHz bandwidth	HVFO103
HVFO100 Universal ±1 V Tip Accessory	HVFO100-1X-TIP-U
HVFO100 Universal ±5 V Tip Accessory	HVFO100-5X-TIP-U
HVFO100 Universal ±10 V Tip Accessory	HVFO100-10X-TIP-U
HVFO100 Universal ±20 V Tip Accessory	HVFO100-20X-TIP-U
HVFO100 Universal ±40 V Tip Accessory	HVFO100-40X-TIP-U
HVFO 1 m Optical Cable Accessory	HVFO-1M-FIBER
HVFO 2 m Optical Cable Accessory	HVFO-2M-FIBER
HVFO 6 m Optical Cable Accessory	HVFO-6M-FIBER
100:1 400 MHz 50 M Ω 1 kV High Voltage Probe	HVP120
100:1 400 MHz 50 M Ω 4 kV High Voltage Probe	PPE4KV
1000:1 400 MHz 50 M Ω 5 kV High Voltage Probe	PPE5KV
1000:1 400 MHz 5 M Ω 50 M Ω 6 kV High Voltage Probe	PPE6KV
200 MHz, 3.5 pF, 1 M Ω Active Differential Probe, ±20 V	ZD200
500 MHz, 1.0 pF Active Differential Probe, ±8 V	ZD500
500 MHz Active Differential Probe (±1, ±10, ±100)	AP033
1 GHz, 1.0 pF Active Differential Probe, ±8 V	ZD1000
1.5 GHz, 1.0 pF Active Differential Probe, ±8 V	ZD1500
1 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1000
1.5 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1500

Probe Adapters

Tek Probe to ProBus Probe Adapter	TPA10
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HDO4000

LeCroy HDO4000 高解析度示波器 HDO4000 高解析度示波器應用Teledyne LeCroy 的HD4096 技術，結合長存儲深度、緊湊輕巧的結構設計、12.1"多點觸摸顯示幕和強大的調試軟體工具，提供給使用者精確測量和快速調試的理想示波器。力科示波器說明您確認和隔離問題信號，為快速解決電路故障提供最佳解決方案。



頻寬:
200MHz-1GHz

最大記憶體:
25Mpts

輸入通道:
4

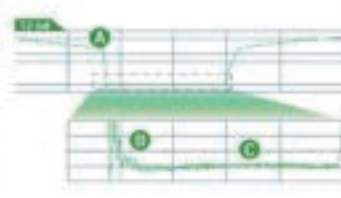
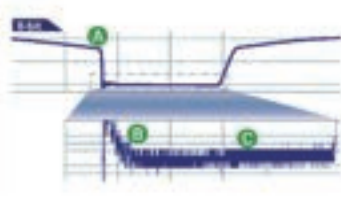
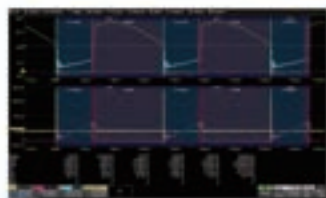
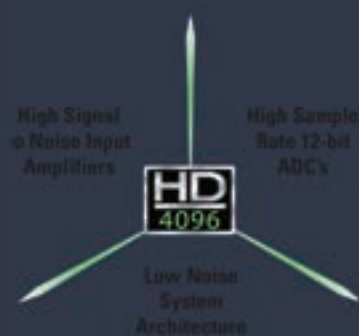
最大取樣率:
10 GS/s

解析率:
12-bits

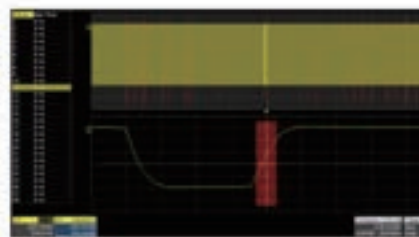
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- 光譜分析儀
- 內建波形生成器
- DVM 及頻率計數器



LABNOTEBOOK

- 一鍵快速保存波型和示波器設置
- 一鍵快速重現所有波型和測量參數值
- 對重現的波形進行再測量和分析

強大的搜索工具WAVESCAN

- 自動分析波型的異常
- 可以搜索已捕獲的靜態波型或掃描動態的波型

Product Description

Product Code

HDO4000 Oscilloscopes

200 MHz, 2.5 GS/s, 2 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4022
200 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4024
350 MHz, 2.5 GS/s, 2 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4032
350 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4034
500 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4054
1 GHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" WXGA Touch Display	HDO4104

HDO4000-MS Mixed Signal Oscilloscopes

200 MHz, 2.5 GS/s, 2+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4022-MS
200 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4024-MS
350 MHz, 2.5 GS/s, 2+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4032-MS
350 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4034-MS
500 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4054-MS
1 GHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" WXGA Color Display	HDO4104-MS

Included with Standard Configurations (HDO4000 and HDO4000-MS)

±10 Passive Probe (Total of 1 Per Channel), Getting Started Guide, Anti-virus Software (Trial Version), Microsoft Windows Embedded Standard 7 P 64-Bit License, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, Protective Front Cover, 3-year Warranty

Included with HDO4000-MS

16 Channel Digital Leadset, Extra Large Gripper Probe Set (Qty. 22), Ground Extenders (Qty. 20), Flexible Ground Leads (Qty. 5)

Memory Option

25 Mpts/ch (50 Mpts interleaved) memory	HDO4K-L
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Hardware Options

Removable Hard Drive Package (includes removable hard drive kit and two hard drives)	HDO4K-RHD
Additional Removable Hard Drive	HDO4K-RHD-02

General Accessories

External GPIB Accessory	USB2-GPIB
Soft Carrying Case	HDO4K-SOFTCASE
Rack Mount Accessory	HDO4K-RACK
Accessory Pouch	HDO4K-POUCH

Local Language Overlays

German Front Panel Overlay	HDO4K-FP-GERMAN
French Front Panel Overlay	HDO4K-FP-FRENCH
Italian Front Panel Overlay	HDO4K-FP-ITALIAN
Spanish Front Panel Overlay	HDO4K-FP-SPANISH
Japanese Front Panel Overlay	HDO4K-FP-JAPANESE
Korean Front Panel Overlay	HDO4K-FP-KOREAN
Chinese (Tr) Front Panel Overlay	HDO4K-FP-CHNES-TR
Chinese (Simp) Front Panel Overlay	HDO4K-FP-CHNES-SI
Russian Front Panel Overlay	HDO4K-FP-RUSSIAN

Software Options

Electrical Telecom Mask Test Package	HDO4K-ET-PMT
Spectrum Analysis Option	HDO4K-SPECTRUM
Power Analysis Option	HDO4K-PWR

Product Description

Product Code

Serial Data Options

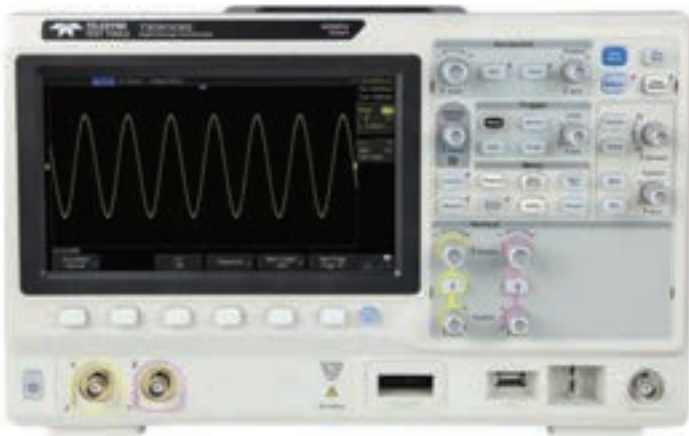
ARINC 429 Symbolic Decode Option	HDO4K-ARINC429bus	DSymbolic
Audiobus Trigger and Decode Option for I ² S, I ² C, L ² J, R ² J, and TDM	HDO4K-Audiobus	TD
CAN, LIN and FlexRay Trigger and Decode Option	HDO4K-AUTO	TD
CAN FD Trigger and Decode Option	HDO4K-CAN	FDbus TD
CAN Trigger and Decode Option	HDO4K-CANbus	TD
D-PHY Decode Option	HDO4K-DPHY	bus D
DigRF 3G Decode Option	HDO4K-DigRF3G	bus D
DigRF v4 Decode Option	HDO4K-DigRFv4	bus D
ENET Decode Option	HDO4K-ENET	bus D
FlexRay Trigger and Decode Option	HDO4K-FlexRay	bus TD
I ² C, SPI and UART Trigger and Decode Option	HDO4K-EMB	TD
I ² C Bus Trigger and Decode Option	HDO4K-I2C	bus TD
LIN Trigger and Decode Option	HDO4K-LIN	bus TD
Manchester Decode Option	HDO4K-Manchester	bus D
MIL-STD-1553 Trigger and Decode Option	HDO4K-1553	TD
NRZ Decode Option	HDO4K-NRZ	bus D
SENT Decode Option	HDO4K-SENT	bus D
SPI Bus Trigger and Decode Option	HDO4K-SPI	bus TD
SpaceWire Decode Option	HDO4K-SpaceWire	bus D
UART and RS-232 Trigger and Decode Option	HDO4K-UART-RS232	bus TD
USB 2.0 Trigger and Decode Option	HDO4K-USB2	bus TD
USB2-HSIC Decode Option	HDO4K-USB2-HSIC	bus D

Probes and Amplifiers

250 MHz Passive Probe 10:1, 10 M Ω	PP017
500 MHz Passive Probe 10:1, 10 M Ω	PP018
Set of 4 ZS1500, 1.5 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1500-QUADPAK
Set of 4 ZS1000, 1 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1000-QUADPAK
200 MHz, 3.5 pF, 1 M Ω Active Differential Probe	ZD200
1 GHz, 1.0 pF Active Differential Probe, ±8 V	ZD1000
1.5 GHz, 1.0 pF Active Differential Probe, ±8 V	ZD1500
1kV, 25 MHz High Voltage Differential Probe	HVD3102
1kV, 120 MHz High Voltage Differential Probe	HVD3106
1kV, 80 MHz High Voltage Differential Probe with 6m cable	HVD3106-6M
1 kV, 25 MHz High Voltage Differential Probe with 2 m cable without tip Accessories	HVD3102-NOACC
1 kV, 120 MHz High Voltage Differential Probe with 2 m cable without tip Accessories	HVD3106-NOACC
2kV, 120 MHz High Voltage Differential Probe	HVD3206
6kV, 100 MHz High Voltage Differential Probe	HVD3605
1,400 V, 100 MHz High-Voltage Differential Probe	ADP305
1,400 V, 20 MHz High-Voltage Differential Probe	ADP300
1 Ch, 100 MHz Differential Amplifier with Precision Voltage Source	DA1855A
30 A, 100 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP031
30 A, 50 MHz High Sensitivity Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP031A
30 A, 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP030
30 A, 50 MHz High Sensitivity Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP030A
30 A, 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	AP015
150 A, 10 MHz Current Probe – AC/DC; 150 A _{rms} ; 500 A _{peak} Pulse	CP150
500 A, 2 MHz Current Probe – AC/DC; 500 A _{rms} ; 700 A _{peak} Pulse	CP500
Deskew Calibration Source for CP031, CP030 and AP015	DCS015
100:1 400 MHz 50 M Ω 1 kV High-voltage Probe	HVP120
10:1/100:1 200/300 MHz, 50 M Ω High-voltage Probe	PPE1.2KV
600 V/1.2 kV Max. Volt. DC	
100:1 400 MHz 50 M Ω 2 kV High-voltage Probe	PPE2KV
100:1 400 MHz 50 M Ω 4 kV High-voltage Probe	PPE4KV
1000:1 400 MHz 50 M Ω 5 kV High-voltage Probe	PPE5KV
1000:1 400 MHz 50 M Ω 6 kV High-voltage Probe	PPE6KV

T3DSO3000

Teledyne LeCroy T3DSO3000示波器具有四通道模組，包括200MHz、350MHz、500MHz及1GHz頻寬。所有型號均採用兩個5GSa/s ADC及兩個250Mpts記憶體模組，並採用256級強度分級顯示功能與色溫顯示模式，可補充高速更新速率。T3DSO3000示波器包括用於I2C、SPI、UART、CAN、LIN、CAN FD、I2S、MIL-STD-1553B、FlexRay、SENT與Manchester的串聯匯流排解碼器。Teledyne LeCroy T3DSO3000示波器標配功率分析軟件、波特圖及功能生成器軟體，並配備大型10.1"彩色TFT LCD顯示屏。



頻寬
200MHz-1GHz

最大記憶體
250Mpts

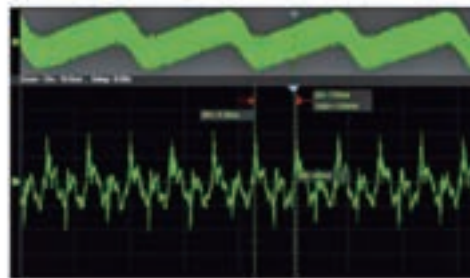
輸入通道
4

最大取樣率
5 GS/s

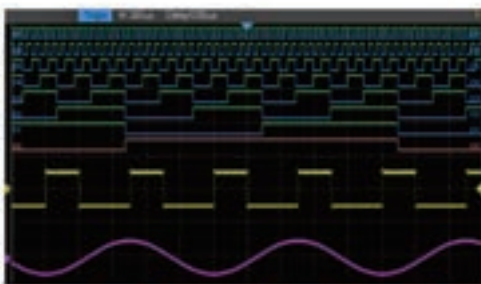
解析率
8-bits



多種類觸發功能



紀錄長度可達250MPTS



可選配數位邏輯16通道

特點

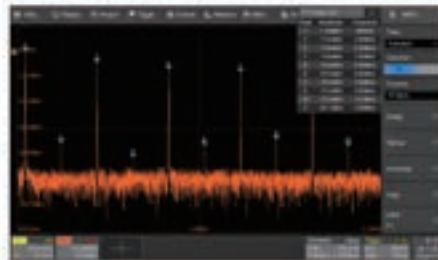
- 200 MHz、350 MHz、500 MHz、1 GHz 頻寬型號
- 即時取樣率高達 5 GSa/s
- 標配混合訊號分析
- 標配功率分析軟體
- 標配序列匯流排觸發和解碼選項：I2C、SPI、UART、CAN、LIN、CAN FD、I2S、MIL-1553B、FlexRay
- 標配 SENT 和曼徹斯特解碼
- 標配函數產生器軟體
- 標配波特圖
- 長擷取：每通道 125 Mpts 或 250 Mpts 交錯
- 大型 10.1" 彩色 TFT LCD 顯示器
- 新一代的高速顯示技術
- 波形擷取率高達 120,000 wfms (正常模式) 及 500,000 wfms (循序模式)
- 支援 256 級強度分級和彩色顯示模式
- 數位智慧型觸發系統：邊緣、斜率、脈衝、寬度、窗口、矮波、間隔、斷開、樣式、合格、序列和視訊
- 區域觸發：最多兩個具有使用者定義的交叉/非交叉事件的區域
- 支援 HDTV 的視訊觸發
- 搜尋、導航、數位伏特計、計數器、量測、波形直方圖等豐富的數據分析功能
- 分段採集 (序列) 模式，將最大記錄長度分成多個區段 (最多 100,000)，根據使用者設定的觸發條件，在區段之間使用非常小的失效時間來擷取符合條件的事件
- 歷程波形記錄 (歷程) 功能；最大錄製波形長度為 100,000 波形

規格表

Description	1 GHz, 4 Ch, 5 GSa/s (Max.), 125 Mpts/Ch, 250 Mpts Interleaved	T3DSO31004
	500 MHz, 4 Ch, 5GSa/s (Max.),125 Mpts/Ch, 250 Mpts Interleaved	T3DSO3504
	350 MHz, 4 Ch, 5GSa/s (Max.),125 Mpts/Ch, 250 Mpts Interleaved	T3DSO3354
	200 MHz, 4 Ch, 5GSa/s (Max.),125 Mpts/Ch, 250 Mpts Interleaved	T3DSO3204
Standard Accessories	Passive Probe x4	
	USB Cable	
	Power Cord	
	Quick Start Guide	
	Certificate of Calibration	
Optional Accessories	16 Channel MSD Probe	T3DSO2000-LS
	25 MHz Function/Arbitrary Waveform Module	T3DSO1000-FGMOD-A
	500 MHz Passive Probe, 10:1, 10 MO	PP020-1



波形數值運算統計



FTT傅立葉轉換



瀏覽器遠端控制

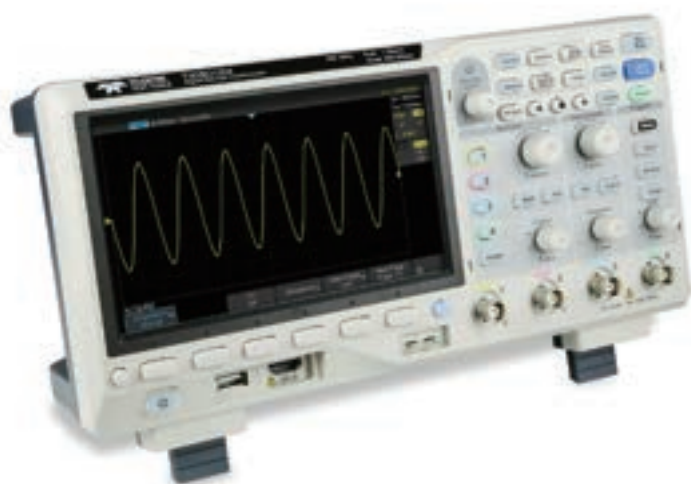


完整連接口

CONNECTIVITY INCLUDES EXTERNAL TRIGGER INPUT, PASS/FAIL AND TRIGGER OUT, USB DEVICE (USBTMC) AND LAN FOR REMOTE CONTROL, AND A KENSINGTON LOCK SECURITY POINT.

T3DSO 2000/1000

Teledyne 測試工具 T3DSO2000/2000A 示波器系列具有兩通道和四通道型號，模擬帶寬選項為 100 MHz 至 500 MHz。每個示波器系列在 T3DSO2000 和 T3DSO2000A 系列上的半通道模式下提供 2 GSa/s 的最大採樣率和 140 Mpts 的最大存儲深度。



頻寬:
100MHz-500MHz

最大記憶體:
200Mpts

輸入通道:
2-4

最大取樣率:
2 GS/s

解析率:
8-bits

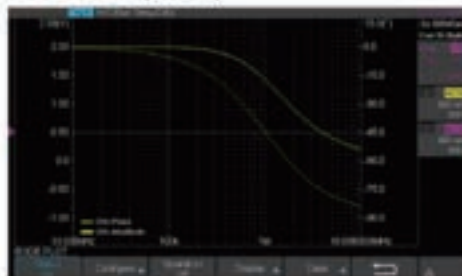
USB WiFi Adapter
(Option not available on the T3DSO1102)



Back panel of
T3DSO1104,
T3DSO1202A,
T3DSO1204,
T3DSO1302A

Back panel of
T3DSO1102

BODE PLOT(波德圖)



特點

2000

- 100 MHz、200 MHz、300 MHz、350 MHz 和 500 MHz 帶寬。
- 採樣率高達 2 GS/s。
- 長內存 – 在 T3DSO2000 系列上高達 70 Mpts/Ch (140 Mpts 交錯) 和在 T3DSO2000A 系列上高達 100 Mpts/Ch (200 Mpts 交錯)。
- T3DSO2000 上的 8" 明亮 TFT LCD (800 x 480) 和 T3DSO2000A 系列上的 10.1" 電容式彩色 TFT-LCD 觸摸屏 (1024 x 600)。
- 可選的串行總線觸發和解碼選項——I2C、SPI、UART、RS232、CAN、LIN，使用戶能夠直接調試 T3DSO2000 系列示波器上的串行總線。在 T3DSO2000A 系列上，I2C、SPI、UART、CAN、LIN 串行總線觸發和解碼選項是標準配置，可選 CAN FD、FlexRay、I2S 和 MIL-STD-1553B 也可在 T3DSO2000A 系列上使用。

1000

- 波形擷取率在正常模式下高達 100,000 wfms 而在序列模式下為 400,000 wfms
- 200 MHz 和 350 MHz 的頻寬
- 所有頻寬型號上皆有兩個通道
- 即時取樣率高達 2 GSa/s
- 高達 28 Mpts 的記錄長度
- 7" TFT LCD 彩色顯示器，內有 10 個一鍵式選單
- 波特圖標準
- 序列式觸發和解碼標準 (I2C、SPI、UART、CAN、LIN)

T3DSO 2000

Description	500 MHz, 2 Channel / 350 MHz, 4 Channel, 4 x 500 MHz PP020-1 Passive Probes	T3DSO2502A
	350 MHz, 4 Channels, 4 x 350 MHz T3PP350A Passive Probes	T3DSO2354A
	200 MHz, 4 Channels, 4 x 200 MHz Passive Probes	T3DSO2204A
	100 MHz, 4 Channels, 4 x 100 MHz Passive Probes	T3DSO2104A
Standard Accessories	USB Cable -1	
	Standard Passive Probe appropriate to the oscilloscope bandwidth - 4	
	Power Cord -1	
	Quick Start -1	
	Certificate of Calibration -1	
Optional Accessories	FlexRay trigger & decode (software)	T3DSO2000A-FLEXRAY
	MIL-STD-1553B trigger & decode (software)	T3DSO2000A-MIL-1553
	CAN FD trigger & decode (software)	T3DSO2000A-CANFD
	I ² S trigger & decode (software)	T3DSO2000A-I2S
	16 Digital Channels (Software, requires T3DSO2000-LS)	T3DSO2000A-MSO
	16 Channel Logic Probe, requires T3DSO2000A-MSO	T3DSO2000-LS

T3DSO 1000

Product Name	T3DSO1102 100 MHz Two Channels, 2 x 100 MHz Passive Probes	
	T3DSO1104 100 MHz Four Channels, 4 x 100 MHz Passive Probes	
	T3DSO1202A 200 MHz Two Channels, 2 x 200 MHz Passive Probes	
	T3DSO1204 200 MHz Four Channels, 4 x 200 MHz Passive Probes	
	T3DSO1302A 350 MHz Two Channels, 2 x 350 MHz T3PP350 Passive Probes	
Standard Accessories	USB Cable -1	
	Quick Start -1	
	Standard Passive Probe appropriate to the oscilloscope bandwidth - 4 / 2	
	Certification -1	
	Power Cord -1	
Optional Accessories	16 Channel MSO Software (Not available for T3DSO1102)	T3DSO1000-MSO or T3DSO1000A-MSO
	16 Channel Logic Analyzer Lead (Not available for T3DSO1102)	T3DSO1000-LS (Requires T3DSO1000-MSO or T3DSO1000A-MSO Software)
	AWG Software (Not available for T3DSO1102)	T3DSO1000-FG or T3DSO1000A-FG
	USB AWG Module Hardware (Not available for T3DSO1102)	T3DSO1000-FGMOD-A (Requires T3DSO1000-FG or T3DSO1000A-FG)
	WiFi Software (Not available for T3DSO1102)	T3DSO1000-WIFI or T3DSO1000A-WIFI
	Does not include the TP-Link TL-WN725N, see below	

WAVESURFER 3000Z

Teledyne LeCroy 的 WaveSurfer 3000z 是先進的示波器，具有 10.1" 電容式觸控顯示器、長期記憶，以及先進的除錯工具箱，頻寬介於 100 MHz 至高達 1 GHz。WaveSurfer 3000z 促進真正的多用途，具有 20 Mpts 記憶、萬用儀表功能，以及快速更新率，會提供使用者最現代、多功能且先進的除錯示波器解決方案，並且價格實惠。



頻寬:
100MHz-1GHz

最大記憶體:
20Mpts

輸入通道:
4

最大取樣率:
4 GS/s

解析率:
8-bits

特點

- 頻寬從 100 MHz, 200 MHz, 350 MHz, 500 MHz 到 1 GHz
- 高達 4 GS/s 的採樣率
- 儲存較長記憶體-高達 20 Mpts
- 10.1" 電容式觸摸屏顯示螢幕
- 16 數位通道含 MSO 功能表
- MAUI - 最先進的用戶界面
- -專為觸控而設計
- -專為簡單而生
- -專為解決
- 高級異常檢測
- -快速波形更新
- -歷史模式-波形回放功能
- -WaveScan-搜索和查找功能
- 更多儀器功能
- -協議分析-串行觸發和解碼
- -波形生成-內置函數發生器
- -數字電壓表和頻率計數器
- 未來證明
- -可升級頻寬
- -可升級現場的軟體與硬體選項

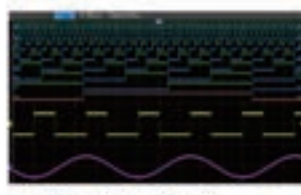
30% Larger



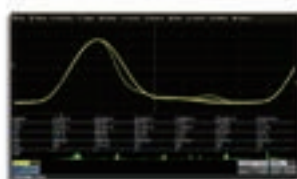
螢幕尺寸加大 30%



高精度數位電壓量測



可選配數位邏輯 16 通道



高速波形更新



PASS/FAIL 光罩測試



WAVESCAN 運算搜尋



LABNOTEBOOK 文件工具

- 透過儲存按鈕 儲存全部波形，設定資料與畫面
- 示波器可讀取 LABNOTEBOOK 檔案
- WAVESTUDIO 電腦軟體可讀取 LABNOTEBOOK 檔案

Digital Voltmeter Logic Analysis with 16 Mixed Signal Capabilities
20 Mpts Powerful Triggering Superior Measurement Tools
 History Mode Anomaly Detection WaveScan LabNotebook Waveform Generator (AFG)
 Multi-Instrument Capabilities Protocol Analysis with Serial Trigger and Decode
Powerful, Deep Toolbox
 Pass/Fail Mask Testing Advanced Math Fast Waveform Update

規格表

Product Description Product Code

WaveSurfer 3000z Oscilloscopes

100 MHz, 2 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode	WaveSurfer 3014z
200 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode	WaveSurfer 3024z
350 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode	WaveSurfer 3034z
500 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode	WaveSurfer 3054z
1 GHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Capacitive Touch Screen Display 20 Mpts /Ch in interleaved mode	WaveSurfer 3104z

Included with Standard Configurations

±10 Passive Probe (Total of 1 Per Channel), 1 Micro SD card (Installed), Micro SD card adapter, Protective Front Cover, Getting Started Guide, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, 3-year Warranty

General Accessories

External GPIB Accessory	USB2-GPIB
Soft Carrying Case	WS3K-SOFTCASE
Rack Mount Accessory	WS3K-RACK

Local Language Overlays

German Front Panel Overlay	WS3K-FP-GERMAN
French Front Panel Overlay	WS3K-FP-FRENCH
Italian Front Panel Overlay	WS3K-FP-ITALIAN
Spanish Front Panel Overlay	WS3K-FP-SPANISH
Japanese Front Panel Overlay	WS3K-FP-JAPANESE
Korean Front Panel Overlay	WS3K-FP-KOREAN
Chinese (Tr) Front Panel Overlay	WS3K-FP-CHNES-TR
Chinese (Simp) Front Panel Overlay	WS3K-FP-CHNES-SI
Russian Front Panel Overlay	WS3K-FP-RUSSIAN

Multi-Instrument Options

MSO software option and 16 Channel Digital probe leadset	WS3K-MSO
MSO License (MS Probe Not Included)	WS3K-MSO-LICENSE
Function Generator Option	WS3K-FG
Audiobus Trigger and Decode Option for I ² S, LJ, RJ, and TDM	WS3K-Audiobus TD
CAN and LIN Trigger and Decode Option	WS3K-AUTO
CAN FD Trigger and Decode Option	WS3K-CAN FDbus TD
I ² C, SPI, UART and RS-232 Trigger and Decode Option	WS3K-EMB
FlexRay Trigger and Decode Option	WS3K-FlexRaybus TD
Power Analysis Option	WS3K-PWR

Probes

250 MHz Passive Probe 10:1, 10 M Ω	PP019
500 MHz Passive Probe 10:1, 10 M Ω	PP020
700 V, 15 MHz High-Voltage Differential Probe	AP031

Product Description Product Code

Probes (Cont'd)

Power/Voltage Rail Probe. 4 GHz bandwidth, 1.2x attenuation, ±30V offset, ±800mV	RP4030
Browser for use with RP4030	RP4000-BROWSER
1,500 V, 120 MHz High-Voltage Differential Probe	HVD3106A
1kV, 80 MHz High Voltage Differential Probe with 6m cable	HVD3106A-6M
1kV, 120 MHz High Voltage Differential Probe without tip Accessories	HVD3106A-NOACC
1,500 V, 25 MHz High-Voltage Differential Probe	HVD3102A
1kV, 25 MHz High Voltage Differential Probe without tip Accessories	HVD3102A-NOACC
2kV, 120 MHz High Voltage Differential Probe	HVD3206A
2kV, 80 MHz High Voltage Differential Probe with 6m cable	HVD3206A-6M
6kV, 100 MHz High Voltage Differential Probe	HVD3605A
High Voltage Fiber Optic Probe, 60 MHz (requires accessory tip)	HVFO103
±1V (1x) Tip Accessory for HVFO103	HVFO100-1X-TIP
±5V (5x) Tip Accessory for HVFO103	HVFO100-5X-TIP
±20V (20x) Tip Accessory for HVFO103	HVFO100-20X-TIP
30 A; 100 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP031
30 A; 100 MHz High Sensitivity Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP031A
30 A; 50 MHz Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP030
30 A; 50 MHz High Sensitivity Current Probe – AC/DC; 30 A _{rms} ; 50 A _{peak} Pulse	CP030A
150 A; 10 MHz Current Probe – AC/DC; 150 A _{rms} ; 500 A _{peak} Pulse	CP150
500 A; 2 MHz Current Probe – AC/DC; 500 A _{rms} ; 700 A _{peak} Pulse	CP500
Deskew Calibration Source for CP031, CP030 and AP015	DCS025
500 MHz Differential Probe	AP033
200 MHz, 3.5 pF, 1 M Ω Active Differential Probe, ±20 V, 60V common-mode	ZD200
1 GHz, 1.0 pF, 1 M Ω Active Differential Probe, ±8 V, 10V common-mode	ZD1000
1.5 GHz, 1.0 pF, 1 M Ω Active Differential Probe, ±8 V, 10V common-mode	ZD1500
1 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1000
Set of 4 ZS1000	ZS1000-QUADPAK
1.5 GHz, 0.9 pF, 1 M Ω High Impedance Active Probe	ZS1500
Set of 4 ZS1500	ZS1500-QUADPAK
100:1 400 MHz 50 M Ω 1 kV High-voltage Probe	HVP120
100:1 400 MHz 50 M Ω 4 kV High-voltage Probe	PPE4KV
1000:1 400 MHz 50 M Ω 5 kV High-voltage Probe	PPE5KV
1000:1 400 MHz 50 M Ω 6 kV High-voltage Probe	PPE6KV

Probe Adapters

TekProbe to ProBus Probe Adapter	TPA10
Set of 4 TPA10 TekProbe to ProBus Probe Adapters. Includes soft carrying case.	TPA10-QUADPAK

HDO6000B

HDO6000B 示波器具有4個模擬輸入通道，12位分辨率，採用Teledyne LeCroy的HD4096高清技術，帶寬高達7 GHz，外形小巧，配有12.1英寸多點觸控顯示屏。它們非常適用於電力電子設計，數字電源管理或電源完整性分析，汽車電子系統以及深度嵌入式或機電一體化設計的調試，故障排除和深入分析。



頻寬:
350MHz-1GHz

最大記憶體:
250Mpts

輸入通道:
4

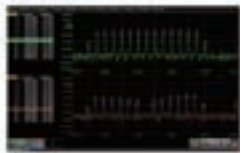
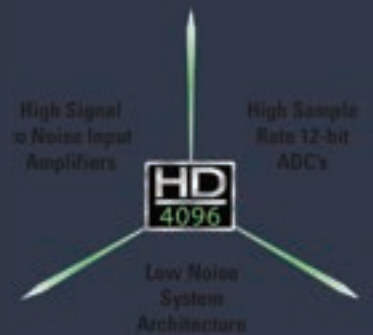
最大取樣率:
10 GS/s

解析率:
12 -bits

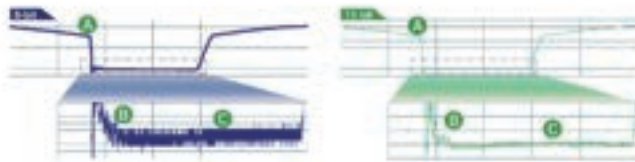


12 BITS ALL THE TIME

HD4096 - 12 bit, 16 x 接近完美Teledyne LeCroy高清晰度12位示波器使用獨特的HD4096技術來提供卓越而無懈可擊的測量性能。HD4096技術在全帶寬下提供最高分辨率和最低噪聲 - 始終保持12位不變。



協議分析功能(選配)



協議分析功能簡化波形分析頻率響應



電力分析功能(選配)



- 使用串行觸發器進行協議分析和解碼
- 支援 16 通道混合訊號的邏輯分析
- 光譜分析儀
- 內建波形生成器
- DVM 及頻率計數器

LABNOTEBOOK 文件工具

- 透過儲存按鈕儲存全部波形，設定資料與畫面
- 示波器可讀取LABNOTEBOOK 檔案
- WAVESTUDIO電腦軟體可讀取LABNOTEBOOK 檔案



Product Description Product Code

HDO6000B Oscilloscopes	
350 MHz, 4 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 4K extended desktop	HDO6034B
500 MHz, 4 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 4K extended desktop	HDO6054B
1 GHz, 4 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 4K extended desktop	HDO6104B

HDO6000B-MS Mixed Signal Oscilloscopes	
500 MHz, 4 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 4K extended desktop	HDO6054B-MS
1 GHz, 4 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" 1920x1080 capacitive touch screen and 4K extended desktop	HDO6104B-MS

Included with Standard Configurations (HDO6000B and HDO6000B-MS)
 +10 Passive Probe (Qty. 4), Getting Started Guide, Anti-virus Software (Trial Version), Microsoft Windows® 10, Removable Solid State Drive, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, Protective Front Cover, 3-year Warranty

Included with HDO6000B-MS
 16 Channel Digital Leadset, Extra Large Gripper Probe Set (Qty. 22), Ground Extenders (Qty. 20), Flexible Ground Leads (Qty. 5)

Memory Options	
100 Mpts/ch memory Option	HDO6KB-L
250 Mpts/ch Memory Option	HDO6KB-XL

CPU, Computer, and Other Hardware Options	
Additional Removable Solid State Drive	HDO6KB-SSD-02
WaveSource Arbitrary Function Generator	HDO6KB-AFG

Serial Trigger and Decode Options	
100Base-T1 Trigger & Decode	HDO6K-100Base-T1bus TD
100Base-T1 Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-100Base-T1bus TDME
MIL-STD-1553 Trigger & Decode	HDO6K-1553 TD
MIL-STD-1553 Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-1553 TDME
ARINC 429 Bus Symbolic Decode, Measure/Graph, and Eye Diagram	HDO6K-ARINC429BUS DME SYMBOLIC
ARINC 429 Symbolic Decode	HDO6K-ARINC429bus DSymbolic
Audiobus Trigger and Decode	HDO6K-Audiobus TD
Audiobus Trigger, Decode, And Graph	HDO6K-Audiobus TDG
CAN FD Trigger & Decode	HDO6K-CAN FDbus TD
CAN FD Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-CAN FDBUS TDME
CAN FD Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram	HDO6K-CAN FDBUS TDME SYMBOLIC
CAN Trigger and Decode Option	HDO6K-CANbus TD
CAN Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-CANBUS TDME
CAN Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram	HDO6K-CANBUS TDME SYMBOLIC
DigRF 3G Decode	HDO6K-DigRF3Gbus D
DigRF v4 Decode	HDO6K-DigRFv4bus D

Product Description Product Code

Serial Trigger and Decode Options (cont'd)	
D-PHY Decode	HDO6K-DPHYbus D
I ² C, SPI and UART-RS232 Trigger & Decode	HDO6K-EMB TD
I ² C, SPI, UART-RS232 Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-EMB TDME
ENET Decode	HDO6K-ENETbus D
FlexRay Trigger & Decode	HDO6K-FlexRaybus TD
FlexRay Trigger, Decode, Measure/Graph and Physical Layer	HDO6K-FLEXRAYBUS TDMP
I ² C Bus Trigger & Decode	HDO6K-I2Cbus TD
I ² C Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-I2CBUS TDME
I ³ C Bus Trigger & Decode	HDO6K-I3Cbus TD
I ³ C Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-I3CBUS TDME
LIN Trigger & Decode	HDO6K-LINbus TD
LIN Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-LINBUS TDME
Manchester Decode	HDO6K-Manchesterbus D
MDIO Decode	HDO6K-MDIObus D
NRZ Decode	HDO6K-NRZbus D
PMBus Trigger & Decode	HDO6K-PMBUS TD
PMBus Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-PMBUS TDME
SENT Trigger & Decode	HDO6K-SENTbus TD
SENT Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-SENTbus TDME
SpaceWire Decode	HDO6K-SpaceWirebus D
SPI Bus Trigger and Decode	HDO6K-SPIbus TD
SPI Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-SPIBUS TDME
SMBus Trigger & Decode	HDO6K-SMBUS TD
SMBus Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-SMBUS TDME
UART and RS-232 Trigger & Decode	HDO6K-UART-RS232bus TD
UART-RS232 Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-UART-RS232BUS TDME
USB2-HSIC Decode	HDO6K-USB2-HSICbus D
USB 2.0 Trigger and Decode	HDO6K-USB2bus TD
USB 2.0 Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-USB2BUS TDME
USB Power Delivery Trigger & Decode	HDO6K-USBPD TD
USB Power Delivery Trigger, Decode, Measure/Graph, and Eye Diagram	HDO6K-USBPD TDME

Serial Data Compliance Test Options	
QualiPHY 10Base-T1L Compliance Software	QPHY-10Base-T1L
QualiPHY 10Base-T1S Compliance Software	QPHY-10Base-T1S
QualiPHY 100Base-T1 Compliance Software	QPHY-100Base-T1
QualiPHY Ethernet 10/100/1000BT Software	QPHY-ENET
QualiPHY MOST50 ePHY Compliance Software	QPHY-MOST50
QualiPHY USB 2.0 Compliance Software for Low Speed and Full Speed data rates	QPHY-USB

Serial Data Analysis Options	
Serial Data Mask Option	HDO6K-SDM

Power Analysis Options	
Power Analyzer Software	HDO6K-PWR
Digital Power Management Analysis Software	HDO6K-DIG-PWR-MGMT
3-Phase Power Analysis Software	HDO6K-THREEPHASEPOWER
3-Phase Power Harmonics Calculation Software (requires HDO6K-THREEPHASEPOWER)	HDO6K-THREEPHASEHARMONICS
3-Phase Power Vector Display	HDO6K-THREEPHASEVECTOR

Jitter Analysis Options	
Clock and Clock-Data Timing Jitter Analysis Package	HDO6K-JITKIT

WAVERUNNER 8000HD

WaveRunner 8000HD是業內唯一的8通道，12位分辨率，2 GHz示波器，採用了Teledyne LeCroy的HD4096高分辨率技術，採用15.6英寸觸摸屏、高通道數以及5 Gpts採集存儲器，是大功率/三相功率轉換、汽車電子、電源完整性和電源時序以及嵌入式控制系統調試分析的理想選擇。



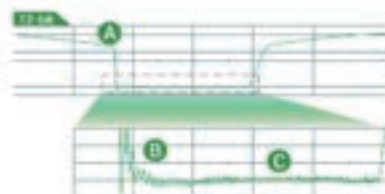
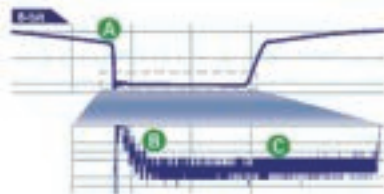
頻寬:
350MHz-2GHz

最大記憶體:
5Gpts

輸入通道:
8

最大取樣率:
10 GS/s

解析率:
12-bits



更多渠道，更多靈活性

WaveRunner 8000HD是唯一提供8個模擬通道和16個數字通道，允許兩個8通道系統同步的示波器，並且不會因使用數字通道而受到損害。其他示波器要求您交換寶貴的模擬通道，以換取數字輸入。



三相功率轉換測試

WaveRunner 8000HD 12位示波器提供8個模擬通道（其中16個帶有OscilloSYNC）。三相功率分析軟件以及用於逆變器、電源系統和控制測試的高性能探頭。



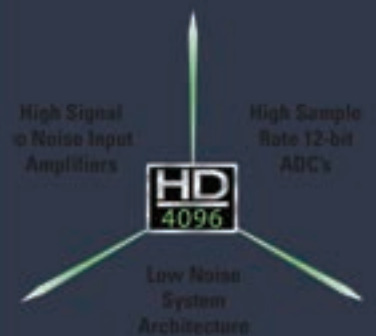
汽車電子測試

WaveRunner 8000HD 12位示波器結合了高通道數、長存儲空間以及廣泛的軌道和調試軟件，可以最好地滿足汽車行業的特定測試需求。

HD
4096

12 BITS ALL THE TIME

HD4096 - 12 bit, 16 x 接近完美Teledyne LeCroy高清晰度12位示波器使用獨特的HD4096技術來提供卓越而無懈可擊的測量性能。HD4096技術在全帶寬下提供最高分辨率和最低噪聲 - 始終保持12位不變。



- 使用串行觸發器進行協議分析和解碼
- 支援 16 通道混合訊號的邏輯分析
- 光譜分析儀
- 內建波形生成器
- DVM 及頻率計數器

Product Description **Product Code**

WaveRunner 8000HD Oscilloscopes

350 MHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and UHD (4K) extended desktop	WaveRunner 8038HD
500 MHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and UHD (4K) extended desktop	WaveRunner 8058HD
1 GHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and UHD (4K) extended desktop	WaveRunner 8108HD
2 GHz, 8 Ch, 12 Bits, 10 GS/s, 50 Mpts/Ch High Definition Oscilloscope with 15.6" 1920x1080 capacitive touch screen and UHD (4K) extended desktop	WaveRunner 8208HD

Included with Standard Configurations

±10, 500 MHz passive probe (Qty. 4), protective cover, Getting Started Guide, Microsoft Windows® 10, commercial NIST traceable calibration with certificate, power cable for the destination country, 3-year warranty

Mixed Signal Solutions

Mixed Signal Option (incl. 16-channel digital leadset, 22 extra large gripper probes, 20 ground extenders, 5 flexible ground leads and license)	WR8KHD-MSO
MSO License (without accessories)	WR8KHD-MSO-LICENSE

Memory Upgrade Options

500 Mpt/2 Ch (250 Mpt/4 Ch, 125 Mpt/8 Ch)	WR8KHD-500MPT
1 Gpt/2 Ch (500 Mpt/4 Ch, 250 Mpt/8 Ch)	WR8KHD-1000MPT
2 Gpt/2 Ch (1 Gpt/4 Ch, 500 Mpt/8 Ch)	WR8KHD-2000MPT
5 Gpt/2 Ch (2.5 Gpt/4 Ch, 1.25 Gpt/8 Ch)	WR8KHD-5000MPT

CPU, Computer and Other Hardware Options

Additional Standard Solid State Drive	WR8KHD-RSSD-02
16 GB to 32 GB CPU RAM Upgrade*	WR8KHD-UPG-32GBRAM

* 32 GB RAM upgrade is included with all memory upgrade options.

Oscilloscope Synchronization Options

16-Channel OscilloSYNC Software (combine two WaveRunner/MDA 8000HD oscilloscopes)	WR8KHD-16CH-SYNCH
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Serial Trigger and Decode Options

MIL-STD-1553 Trigger & Decode	WR8KHD-1553 TD
MIL-STD-1553 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-1553 TDME
8b10b Decode	WR8KHD-8B10B D
ARINC 429 Symbolic Decode	WR8KHD-ARINC429BUS D SYMBOLIC
ARINC 429 Symbolic Decode, Measure/Graph & Eye Diagram	WR8KHD-ARINC429BUS DME SYMBOLIC
AudioBus Trigger & Decode	WR8KHD-AUDIOBUS TD
AudioBus Trigger, Decode & Graph	WR8KHD-AUDIOBUS TDG
CAN FD Trigger & Decode	WR8KHD-CAN FDBUS TD
CAN FD Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-CAN FDBUS TDME
CAN FD Symbolic Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-CAN FDBUS TDME SYMBOLIC

Product Description **Product Code**

Serial Trigger and Decode Options (cont'd)

CAN Trigger & Decode	WR8KHD-CANBUS TD
CAN Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-CANBUS TDME
CAN Symbolic Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-CANBUS TDME SYMBOLIC
DigRF 3G Decode	WR8KHD-DIGRF3GBUS D
DigRF V4 Decode	WR8KHD-DIGRFV4BUS D
MIPI D-PHY CSI-2 & DSI Decode	WR8KHD-DPHYBUS D
Embedded Bundle: I2C, SPI, UART-RS232 Trigger & Decode	WR8KHD-EMB TD
Embedded Bundle: I2C, SPI, UART-RS232 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-EMB TDME
ENET Decode	WR8KHD-ENETBUS D
FlexRay Trigger & Decode	WR8KHD-FLEXRAYBUS TD
FlexRay Trigger, Decode, Measure/Graph & Physical Layer Tests	WR8KHD-FLEXRAYBUS TDMP
I2C Trigger & Decode	WR8KHD-I2CBUS TD
I2C Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-I2CBUS TDME
I3C Trigger & Decode	WR8KHD-I3CBUS TD
I3C Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-I3CBUS TDME
LIN Trigger & Decode	WR8KHD-LINBUS TD
LIN Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-LINBUS TDME
Manchester Decode	WR8KHD-MANCHESTERBUS D
MDIO Decode	WR8KHD-MDIOBUS D
NRZ Decode	WR8KHD-NRZBUS D
SENT Trigger & Decode	WR8KHD-SENTBUS TD
SENT Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SENTBUS TDME
SpaceWire Decode	WR8KHD-SPACEWIREBUS D
SPI Trigger & Decode	WR8KHD-SPIBUS TD
SPI Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SPIBUS TDME
SPMI Decode	WR8KHD-SPMIBUS D
SPMI Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-SPMIBUS TDME
UART-RS232 Trigger & Decode	WR8KHD-UART-RS232BUS TD
UART-RS232 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-UART-RS232BUS TDME
USB 2.0 Trigger & Decode	WR8KHD-USB2BUS TD
USB 2.0 Trigger, Decode, Measure/Graph & Eye Diagram	WR8KHD-USB2BUS TDME
USB 2.0 HSIC Decode	WR8vKHD-USB2-HSICBUS D

Serial Data Compliance Test Options

QualiPHY 1000Base-T1 Compliance Software	QPHY-1000BASE-T1 *
QualiPHY BroadR-Reach Software	QPHY-BROADR-REACH*
QualiPHY Ethernet 10/100/1000BT Software	QPHY-ENET*
QualiPHY MOST150 Software	QPHY-MOST150
QualiPHY MOST50 Software	QPHY-MOST50
QualiPHY USB 2.0 Software	QPHY-USB‡
10/100/1000Base-T Ethernet Test Fixture	TF-ENET-B**
USB 2.0 Compliance Test Fixture	TF-USB-B

* TF-ENET-B required ‡ TF-USB-B required

** Includes ENET-2CAB-SMA018 and ENET-2ADA-BNCSMA

Debug Toolkit Options

100Base-T1 and 1000Base-T1 Debug Toolkit	WR8KHD-AUTO-ENET-TOOLKIT
Automotive Ethernet Breakout Test Fixture 100Base-T1 and 1000Base-T1 Debug Toolkit	TF-AUTO-ENET

WAVERUNNER 9000

WaveRunner 9000 示波器擁有業界最廣泛、最深的工具集合, 使其功能強大令人難以置信, 使用 *OneTouch maui* 使測量設置變得非常簡單, 從而提供了更快的洞察時間。



頻寬:
500MHz-4GHz

最大記憶體:
128Mpts

輸入通道:
4

最大取樣率:
40 GS/s

解析率:
8-bits

特點

- 500 MHz - 4 GHz 帶寬
- 高達 40 GS/s 的採樣率
- 15.4" 電容式觸摸屏
- 帶有 OneTouch 的 MAUI
- 強大、深入的工具箱
- 出色的串行數據工具
- 16 個數字通道, 1.25 GS/s
- 巨大的應用偏移範圍
- 可選的應用程序包

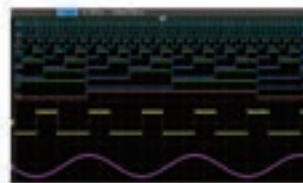
30% Larger



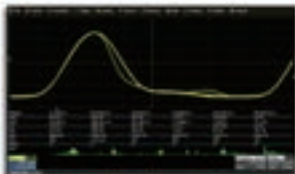
螢幕尺寸加大30%



高精度數位電壓量測



可選配數位邏輯16通道



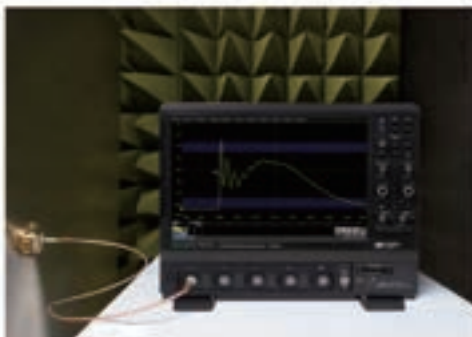
高速波形更新



PASS/FAIL 光罩測試



WAVESCAN 運算搜尋



Faster
Time to
Insight

規格表

Product Description Product Code

WaveRunner 9000 Oscilloscopes

500 MHz, 20 GS/s, 4ch, 16 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9054
1 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9104
2.5 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9254
4 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9404
2.5 GHz, 40 GS/s, 4ch, 64 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 128 Mpts/Ch in interleaved mode.	WaveRunner 9254M
4 GHz, 40 GS/s, 4ch, 64 Mpts/Ch Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 128 Mpts/Ch in interleaved mode.	WaveRunner 9404M
500 MHz, 20 GS/s, 4ch, 16 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9054-MS
1 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9104-MS
2.5 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9254-MS
4 GHz, 20 GS/s, 4ch, 16 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 32 Mpts/Ch in interleaved mode.	WaveRunner 9404-MS
2.5 GHz, 40 GS/s, 4ch, 64 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 128 Mpts/Ch in interleaved mode.	WaveRunner 9254M-MS
4 GHz, 40 GS/s, 4ch, 64 Mpts/Ch Mixed Signal Oscilloscope with 15.4" WXGA widescreen capacitive touch screen. 128 Mpts/Ch in interleaved mode.	WaveRunner 9404M-MS

Included with Standard Configurations (WaveRunner 9000 and WaveRunner 9000-MS)

+10, 500 MHz Passive Probe (Qty. 4), Protective Cover, Getting Started Guide, Anti-virus Software (Trial Version), Microsoft Windows® 10, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, 3-year Warranty

Included with WaveRunner 9000-MS

16-Channel Digital Leadset, Extra Large Gripper Probe Set (Qty. 22), Ground Extenders (Qty. 20), Flexible Ground Leads (Qty. 5)

Computer Upgrade

256 GB Removable Solid State Drive Option	WR9K-256GB-RSSD
Additional 256 GB Solid State Drive for use with RSSD option. Includes Windows 10, LeCroy Oscilloscope Software and Critical Scope Operational File Duplicates.	WR9K-256GB-RSD-02
Upgrade from 8 GB RAM to 16 GB RAM	WR9K-UPG-16GBRAM

Product Description Product Code

WaveRunner 8000-R Oscilloscopes

1 GHz, 10 GS/s, 4ch, 16 Mpts/Ch, 2U form factor Oscilloscope. 20 GS/s, 32 Mpts/Ch in interleaved mode.	WaveRunner 8104-R
2.5 GHz, 20 GS/s, 4ch, 64 Mpts/Ch, 2U form factor Oscilloscope. 40 GS/s, 128 Mpts/Ch in interleaved mode.	WaveRunner 8254M-R
4 GHz, 20 GS/s, 4ch, 64 Mpts/Ch, 2U form factor Oscilloscope. 40 GS/s, 128 Mpts/Ch in interleaved mode.	WaveRunner 8404M-R

Serial Trigger and Decode

MIL-STD-1553 Trigger and Decode Option	WR9K-1553 TD
MIL-STD-1553 Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-1553 TDME
8b10b Decode Option - Includes 80 bit 3.125 Gb/s serial trigger	WR9K-80B-8b10b TD
ARINC 429 Bus Symbolic Decode, Measure/Graph, and Eye Diagram Option	WR9K-ARINC429BUS DME SYMBOLIC
ARINC 429 Bus Symbolic Decode Option	WR9K-ARINC429BUS DS SYMBOLIC
AudioBus Trigger and Decode Option	WR9K-Audiobus TD
AudioBus trigger, decode, and graph Option	WR9K-Audiobus TDG
CAN FD Trigger and Decode Option	WR9K-CAN FDBUS TD
CAN FD Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-CAN FDBUS TDME
CAN FD Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram Option	WR9K-CAN FDBUS TDME SYMBOLIC
CAN Trigger & Decode Option	WR9K-CANBUS TD
CAN Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-CANBUS TDME
CAN Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram Option	WR9K-CANBUS TDME SYMBOLIC
DigRF 3G Bus Decode Option	WR9K-DigRF3Gbus D
DigRF V4 Bus Decode Option	WR9K-DigRFV4bus D
MIPI D-PHY CSI-2, DSI Bus Decode Option	WR9K-DPHYbus D
MIPI D-PHY CSI-2, DSI Bus Decode and Physical Layer Test Option	WR9K-DPHYbus DP
Bundle: includes I2C, SPI, UART-RS232 Trigger and Decode Option	WR9K-EMB TD
Bundle: includes I2C, SPI, UART-RS232 Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-EMB TDME
ENET Bus Decode Option	WR9K-ENETbus D
FibreChannel decode annotation Option	WR9K-FCbus D
FlexRay Trigger and Decode Option	WR9K-FLEXRAYBUS TD
FlexRay Trigger, Decode, Measure/Graph and Physical Layer Option	WR9K-FLEXRAYBUS TDMP
I2C Trigger and Decode Option	WR9K-I2CBUS TD
I2C Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-I2CBUS TDME
LIN Trigger and Decode Option	WR9K-LINBUS TD
LIN Trigger, Decode, Measure/Graph, and Eye Diagram Option	WR9K-LINBUS TDME
Manchester Bus Decode Option	WR9K-MANCHESTERbus D
MDIO Decode Option	WR9K-MDIOBUS D
MIPI M-PHY Bus Decode Option	WR9K-MPHYbus D
MIPI M-PHY Bus Decode and Physical Layer Test Option	WR9K-MPHYbus DP
NRZ Bus Decode Option	WR9K-NRZbus D
PCIe Gen 1 Decode Option	WR9K-PCIEbus D
Serial Debug Toolkit - Measure Analyze Graph Option	WR9K-PROTOBUS MAG

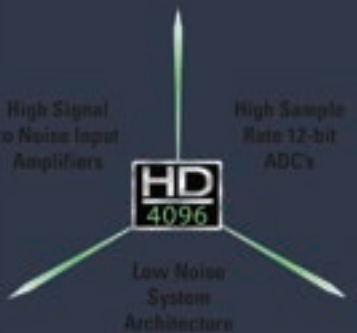
WAVEPRO HD

WavePro HD高精度示波器，結合了HD4096 12位高精度技術和8 GHz帶寬，實現了低噪音和高信號保真度，具有高達5 Gpts的採集存儲器，可以長時間捕獲精細的波形細節，深入而強大的分析工具包可以快速洞察系統的行為。

**HD
4096**

12 BITS ALL THE TIME

HD4096 - 12 bit, 16 x 接近完美Teledyne LeCroy高清晰度12位示波器使用獨特的HD4096技術來提供卓越而無懈可擊的測量性能。HD4096技術在全帶寬下提供最高分辨率和最低噪音 - 始終保持12位不變。



- 使用串行觸發器進行協議分析和解碼
- 支援 16 通道混合訊號的邏輯分析
- 光譜分析儀
- 內建波形生成器
- DVM 及頻率計數器



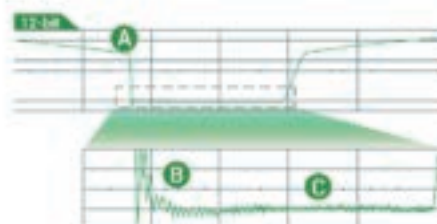
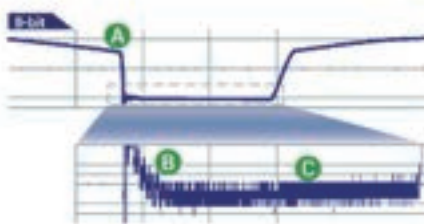
頻寬:
2.5GHz-8GHz

最大記憶體:
5Gpts

輸入通道:
4

最大取樣率:
20 GS/s

解析率:
12 -bits



深度嵌入式計算系統測試

WavePro HD具有無與倫比的功能，可以為最全面的深度嵌入式計算系統（模擬、數字、串行數據和傳感器）測試獲得最高分辨率的最長記錄。全面的低速串行數據觸發器和解碼器，以及測量、圖形和附圖測試提供了最佳的因果分析。



串行數據抖動和噪聲分析

12位分辨率，極低的噪聲和60 fs的時基抖動意味著低抖動測量底限，可實現最精確的串行數據抖動和噪聲測量。SDA/LL CompleteLinQ提供最完整的串行數據分析工具集，用戶友好的QualiPHY選項大大簡化了複雜的一致性測試。



電源完整性測試

WavePro HD結合了高帶寬和高分辨率，可以驗證和調試電源。高帶寬意味著精確表面電路板上效應（如接地反彈），而極低的噪聲可實現低電平噪聲源的識別和根本原因分析。由於WavePro HD具有高動態範圍和0.5%的增益精度，因此可以完全放心地進行軌道折疊表徵等敏感測量。

Product Description **Product Code**

WavePro HD Oscilloscopes

2.5 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 254HD
4 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 404HD
6 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 604HD
8 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 804HD
2.5 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 254HD-MS
4 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 404HD-MS
6 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 604HD-MS
8 GHz, 20 GS/s, 4 Ch, 100 Mpts/Ch High Definition Mixed Signal Oscilloscope with 15.6" Full HD capacitive touch screen	WavePro 804HD-MS

**Included with Standard Configurations
(WavePro HD and WavePro HD-MS)**

±10, 500 MHz Passive Probe (Qty. 4), Protective Cover, Getting Started Guide, Microsoft Windows® 10, Commercial NIST Traceable Calibration with Certificate, Power Cable for the Destination Country, 3-year Warranty

Included with WavePro HD-MS

16-Channel Digital Leadset, Extra Large Gripper Probe Set (Qty. 22), Ground Extenders (Qty. 20), Flexible Ground Leads (Qty. 5)

Memory Options

200 Mpt/2 Ch (100 Mpt/4 Ch) Memory Option	WPHD-200MPT*
500 Mpt/2 Ch (250 Mpt/4 Ch) Memory Option	WPHD-500MPT*
1000 Mpt/2 Ch (500 Mpt/4 Ch) Memory Option	WPHD-1000MPT*
2 Gpt/2 Ch (1 Gpt/4 Ch) Memory Option	WPHD-2000MPT*
5 Gpt/2 Ch (2.5 Gpt/4 Ch) Memory Option	WPHD-5000MPT*

CPU, Computer and Other Hardware Options

32 GB RAM Upgrade for WPHD	WPHD-UPG-32GBRAM*
Additional Standard Solid State Drive	WPHD-RSSD-02

* 32 GB RAM upgrade is included with all Memory Options

Product Description **Product Code**

Serial Trigger and Decode

MIL-STD-1553 Trigger and Decode Option	WPHD-1553 TD
MIL-STD-1553 Trigger, Decode, Measure/Graph, and Eye Diagram Option	WPHD-1553 TDME
8b10b Decode Option	WPHD-8b10b D
ARINC 429 Bus Symbolic Decode, Measure/Graph, and Eye Diagram Option	WPHD-ARINC429BUS DME SYMBOLIC
ARINC 429 Bus Symbolic Decode Option	WPHD-ARINC429BUS D SYMBOLIC
AudioBus Trigger and Decode Option	WPHD-Audiobus TD
AudioBus trigger, decode, and graph Option	WPHD-Audiobus TDG
CAN FD Trigger and Decode Option	WPHD-CAN FDBUS TD
CAN FD Trigger, Decode, Measure/Graph, and Eye Diagram Option	WPHD-CAN FDBUS TDME
CAN FD Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram Option	WPHD-CAN FDBUS TDME SYMBOLIC
CAN Trigger & Decode Option	WPHD-CANBUS TD
CAN Trigger, Decode, Measure/Graph, and Eye Diagram Option	WPHD-CANBUS TDME
CAN Symbolic Trigger, Decode, and Measure/Graph, and Eye Diagram Option	WPHD-CANBUS TDME SYMBOLIC
DigRF 3G Bus Decode Option	WPHD-DigRF3Gbus D
DigRF V4 Bus Decode Option	WPHD-DigRFV4bus D
MIPI D-PHY CSI-2, DSI Bus Decode Option	WPHD-DPHYbus D
MIPI D-PHY CSI-2, DSI Bus Decode and Physical Layer Test Option	WPHD-DPHYbus DP
Bundle: includes I2C, SPI, UART-RS232 Trigger and Decode Option	WPHD-EMB TD
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FlexRay Trigger, Decode, Measure/Graph and Physical Layer Option	WPHD-FLEXRAYBUS TDMP
I2C Trigger and Decode Option	WPHD-I2CBUS TD
I2C Trigger, Decode, Measure/Graph, and Eye Diagram Option	WPHD-I2CBUS TDME
LIN Trigger and Decode Option	WPHD-LINBUS TD
LIN Trigger, Decode, Measure/Graph, and Eye Diagram Option	WPHD-LINBUS TDME
Manchester Bus Decode Option	WPHD-MANCHESTERbus D
MDIO Decode Option	WPHD-MDIOBUS D
MIPI M-PHY Bus Decode Option	WPHD-MPHYbus D
MIPI M-PHY Bus Decode and Physical Layer Test Option	WPHD-MPHYbus DP
NRZ Bus Decode Option	WPHD-NRZbus D
PCIe Gen 1 Decode Option	WPHD-PClebus D
Serial Debug Toolkit - Measure Analyze Graph Option	WPHD-PROTOBUS MAG
Decode Annotation and Protocol Analyzer Synchronization Option	WPHD-ProtoSync
Decode Annotation and Protocol Analyzer+Bit Tracer Synchronization Option	WPHD-ProtoSync-BT
SAS Decode annotation Option	WPHD-SASbus D
SATA Decode Option	WPHD-SATAbus D
SENT Bus Decode Option	WPHD-SENTbus D
SpaceWire Decode Option	WPHD-SPACEWIREbus D

Test Solutions that Accelerate Design



TELEDYNE LECROY
Everywhere you look™

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