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messtechnik

YOKOGAWA 

THE NEW

signal  plorer™

Digital Oscilloscopes

DL9000 Series



High Resolution

8-13bit/ch (one shot and repetitive records),
dot density display (like analog scope)

Fast acquisition rate

Max. 2'500'000 Waveforms/sec into the
acquisition memory / history-memory

Compact and light weight

18 cm (7,1") depth, 6.5 kg (14.5 lbs.)

4 input channels: Bandwidth / Max. sampling rate
500 MHz // 1 GHz // 5 GS/s realtime Sampling /
2'500 GS/s equivalent Sampling (DL9040 / 9140 / DL9140L)
1.5 GHz // 10 GS/s realtime Sampling /
2'500 GS/s equivalent Sampling (DL9240 / DL9240L)
Max. record length
2.5 Mpoint / channel (DL9040 / DL9140 / DL9240)
6.25 Mpoint / channel (DL9040L / DL9140L / DL9240L)
History Replay / Automatic Search Function
Review & analyze up to 2000 of the most recent
waveforms after the acquisition is stopped

Enhanced Trigger / Math / Analysis

Edge, State, Width, Time out, TV, I²C, CAN, SPI (serial pattern) //
Waveform Math, FFT // Histogramm, Statistics, Mask Testing,
Trenddisplay of p-p values

Connectivity & Software

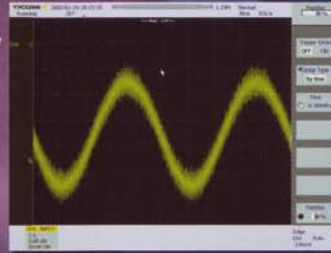
3x USB (Supports mouse, keyboard, printer, storage / memory),
2x PCMCIA / PC-Card-Slot (supports adaptercard GP-IB), LAN / Ethernet,
Go/NoGo in/out, Trig-in/out, Probe Power, Software Xviewer,
Matlab Control Tool Kit, DL Series Library

5th Generation

Affordable and Powerful 1 GHz/1.5 GHz Solutions

Affordable performance for full 1 GHz/1.5 GHz bandwidth measurements

The standard DL9000 series is equipped with 2.5 M word/ch record length, dot density display technology and a wide variety of analysis and trigger functions. For full 1 GHz/1.5 GHz BW measurements, optional 2.5 GHz active probes are available. This makes the DL9000 the most affordable 1 GHz/1.5 GHz measurement system available today.



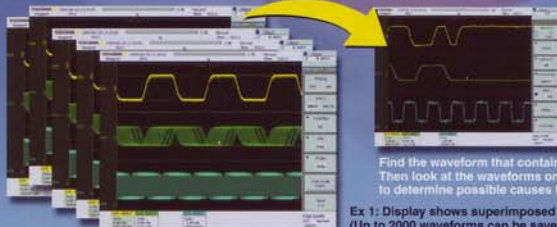
Advanced display technology (Dot density display)



Mask testing

History memory with fast signal acquisition

Fast signal acquisition helps you avoid missing anomalies. However, simple superimposed waveform displays only tell whether or not an anomaly occurred. Such displays do not provide information about when the anomaly occurred, what events occurred before the anomaly, nor what happened after the anomaly. The DL9000's History memory function allows you to view and analyze up to 2000 previously acquired waveforms, even after the acquisition stops. This offers unparalleled insight into waveform behavior and makes troubleshooting easier.



History memory advantage #1

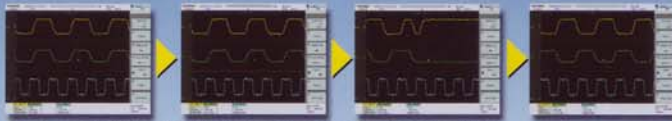
Correlate events from multiple channels

Find the waveform that contains the anomaly. Then look at the waveforms on the other channels to determine possible causes for the anomaly.

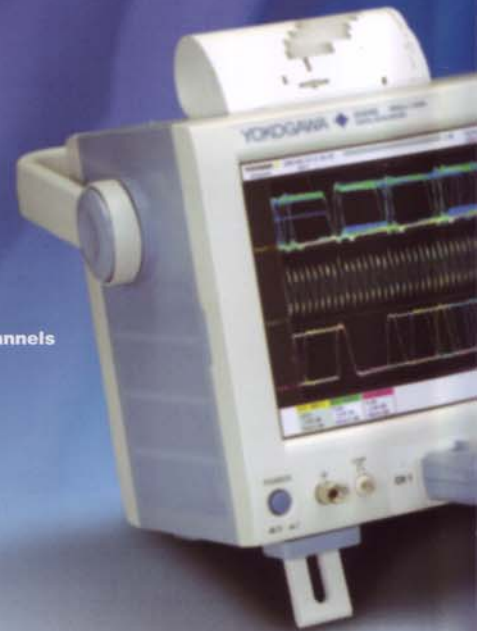
Ex 1: Display shows superimposed history waveforms (Up to 2000 waveforms can be saved in history memory)

Determine sequence of events

History memory advantage #2



History memory captures and saves waveforms before and after the anomaly; thus providing insight into the cause and effect of the anomaly.

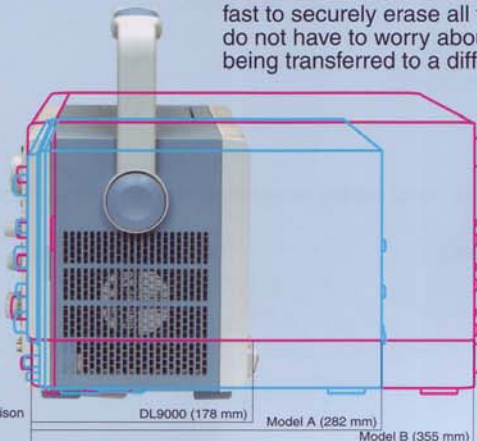


Security for confidential tests

The DL9000 series can be configured without the optional internal HDD. For units without the HDD, it is both easy and fast to securely erase all the data in the unit. Therefore, you do not have to worry about your confidential test results being transferred to a different location, along with the unit.

A small footprint means more room on your bench for the DUT

The DL9000 is only 35 cm wide and 18 cm deep so it does not take up all your valuable bench space. And it weighs only 6.5 kg so it is easy to move from one bench to another.



1 GHz oscilloscope depth comparison

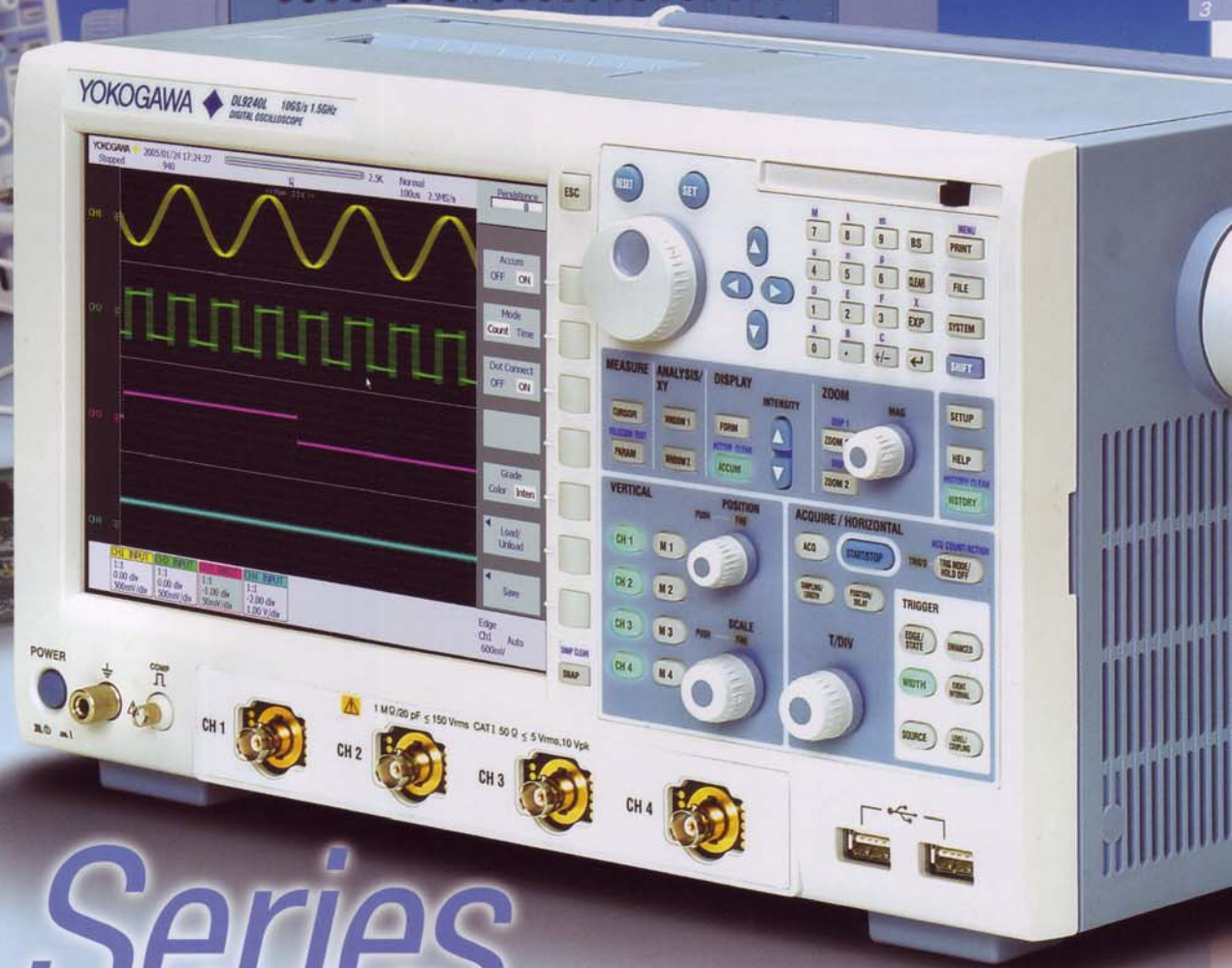
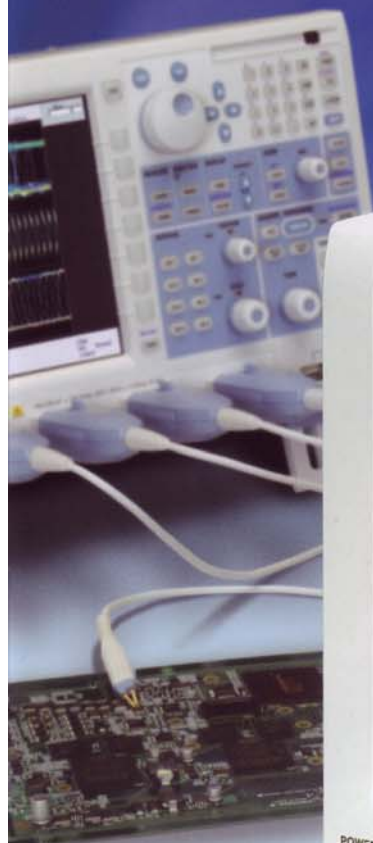
DL9000 (178 mm) Model A (282 mm) Model B (355 mm)

A new digital oscilloscope with 1 GHz/1.5 GHz frequency bandwidth






DL9000

- EDGE/STATE**
 - Edge triggers
 - Edge
 - Edge (Qualified)
 - Edge OR
 - State
 - ENHANCED**
 - Enhanced triggers
 - TV
 - IC
 - SPI
 - Serial Pattern
 - WIDTH**
 - Width triggers
 - Pulse Width
 - Pulse (Qualified)
 - State Width
 - EVENT INTERVAL**
 - Event triggers
 - Event Cycle
 - Event Delay
 - Event Sequence
- DL9000 Trigger Types

With 178 mm depth



DL9000 Series

	DL9140(L)/DL9240(L)	DL7440/DL7480	DL1720E/DL1740E(L)	DL1620/DL1640(S,L)	DL750 Modular
Model					
Input Channels	4	4 / 8 analog + 16 digital	2 / 4	2 / 4	2-16 analog + 2x 8 digital
Bandwith	1 / 1.5 GHz / 500 MHz	500 MHz	500 MHz	200 MHz	300 kHz / 3 MHz
Samplerate Resolution	5/10 GS/s // 2'500 GS/s 8-13 bit	2 GS/s // 100 GS/s 8-12 bit	1 GS/s // 100 GS/s 8-12 bit	200 MS/s // 50 GS/s 8-13 bit	10 MS/s / 12bit // 1 MS/s / 16bit
Rec-Memory (Megapoints)	2.5 / 6.25	4 / 16	1 / 2 / 8	0.1 / 8 / 32	50, optional steps up to 1'000 and online-HDD (opt.)
Input Coupling / Impedance	1 MΩ AC / DC, GND, DC 50 Ω, unbalanced, not isolated	1 MΩ AC / DC, GND, DC 50 Ω, unbalanced, not isolated	1 MΩ AC / DC, GND, DC 50 Ω, unbalanced, not isolated	1 MΩ AC / DC, GND, unbalanced, not isolated	1 MΩ DC / AC, GND, not or isolated, un- or balanced (depend on module)
Max. Input Voltage	150 Vrms	400 Vp / 282 Vrms	400 Vp / 282 Vrms	300 VDC / 300 Vrms	Direct 850 Vp (high voltage module)
Sensitivity/div	0.25 / 2 mV to 5 V	0.25 / 2 mV to 10 V	0.25 / 2 mV to 10 V	0.1 / 2 mV to 10 V	1 uV/5 mV to 200 V
Sweep Time	500 ps to 50 s/div	1 ns to 50 s/div	1 ns to 50 s/div	2 ns to 800 s/div	500 ns to 3 days/div
Trigger - Types	State Width, TV, I ² C, CAN, SPI, Serial pattern, Event, cycle, Event delay, Event sequence	Edge, A -> B(N), A Delay B, OR, Pattern, Pulse Width, TV, Logic	Edge, A -> B(N), A Delay B, OR, Pattern, Pulse Width, TV, I ² C + SPI (opt.)	Edge, A -> B(N), A Delay B, OR, Pattern, Pulse Width, TV, I ² C (opt.)	Enhanced Trigger, Trigger on Math-Channel (opt.)
Display: color TFT LCD	8.4" XGA, up to 24 online-traces, 2x X-Y	8.4", up to 78 online-traces, 2x X-Y	6.4", up to 18 online-traces, 2x X-Y	6.4", up to 18 online-traces, 2x X-Y	10.4", up to 138 online-Traces, 4x X-Y
Storages	PC-card, Flash ROM, USB, I/F, internal HDD (opt.)	PC-card, select on from FDD and ZIP	Select on from FDD and PC-card (PCMCIA)	Select on from FDD, PC-card (PCMCIA) and ZIP	Realtime-HDD (opt.), select one from: FDD, PC-card and ZIP
Interfaces	GP-IB (opt.), USB, LAN/Ethernet (opt.), PC-card	SCSI (opt.), USB, GP-IB, LAN/Ethernet (opt.)	GP-IB, USB, LAN/Ethernet (opt.)	RS-232, GP-IB + USB (opt.), LAN/Ethernet + USB (opt.)	LAN/Ethernet (opt.), 3x USB, GP-IB, RS-232, SCSI (opt.)
Other Features	I ² C+SPI (bus analysis) (opt.), support USB storage new: CAN bus analysis	Opt.: Power supply analysis, user defined math, CAN- / I ² C-bus / SPI-analysis	support USB storage, I ² C- / SPI-analysis (opt.)	I ² C- / SPI-analysis (opt.), 2 MB Internal flash memory drive, DC-power model (opt.)	Dual Capture (slow-trend + fast-triggered simultaneous)
CHF excl VAT	12'800.-- / 30'000.--	23'000.-- / 50'000.--	9'700.-- / 17'400.--	6'000.-- / 15'700.--	13'600.-- / 30'000.--

FAX ANTWORT 044 493 50 32

Ich möchte mehr wissen. Schicken Sie mir Informationen zu folgenden Produkten:

(Zutreffendes ankreuzen)

- DL9140/DL9240(L) 
 DL7440/DL7480
 DL1720E/DL1740E(L)
- DL1620/DL1640(S,L)
 DL750 Modular
 nbn Übersichtskatalog

Firma		Telefon	
Name, Vorname		Telefon direkt	
Abteilung		Telefax	
Strasse		e-mail	
PLZ / Ort			

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