DIGITAL OSCILLOSCOPE

UTD4000 SERIES LOGIC ANALYZER FUNCTION DUAL CHANNEL DIGITAL STORAGE OSCILLOSCOPE



UTD4000 series

UTD4000 series oscilloscopes are compact size with more advanced features, including logic analyzer function to measure mixed signals, both analog input and digital input can be displayed simultaneously. The independent built-in DMM and hardware frequency counter provide users more convenience. Also the dual time base and digital filter. With up to 2GS/s real-time sampling rate, 2000wfms/s high waveform update rate and advanced triggering functions, UTD4000 series are ideal for your education, design, manufacturing and service applications.

Features:

- 64K full color LCD display, LCD size: 5.7" 320x240 pixels
- Bandwidth: 40MHz/60MHz/80MHz/100MHz/150MHz/200MHz/300MHz
- Max sampling rate: 2GS/s(real-time) / 50GS/s(equivalent)
- Auto measurement of waveform parameters
- Cursor measurement functions
- Logic analyzer function
- Built-in independent digital multimeter
- Built-in independent frequency counter
- Dual time base
- Waveform persistence time adjustable
- Digital filter function

- FFT and 4 math functions
- High waveform capture rate up to 2000wfms/s
- Internal storage/recall of 10 waveforms and 10 settings
- Advanced triggering including edge(rise, fall, rise and fall), pulse width, slope, video, LA
- USB host and USB device, supplied with Windows software
- Pass/Fail test
- On-screen help system
- Waveform recording/playback function, max. 100 frames
- Automatic self-calibration
- Compact size, saving your desk top space

Specifications (UTD4000 series)

	UTD4042C	UTD4062C	UTD4082C	UTD4102C
Bandwidth	40MHz	60MHz	80MHz	100MHz
Rise Time	≤8.7ns	≤5.8ns	≤ 4.3ns	≤3.5ns
Sampling Rate	2GS/s (real-time)	2GS/s (real-time)	2GS/s (real-time)	2GS/s (real-time)
	-	-	-	-
Vertical Sensitivity	1mV~10V/div	1mV~10V/div	1mV~10V/div	1mV~10V/div
Time Base Range	5ns~50s/div(1-2-5 sequence)	5ns~50s/div(1-2-5 sequence)	5ns~50s/div(1-2-5 sequence)	5ns~50s/div(1-2-5 sequence)
	UTD4152C	UTD4202C	UTD4302C	
Bandwidth	150MHz	200MHz	300MHz	
Rise Time	≤2.3ns	≤1.8ns	≤ 1.2ns	
Sampling Rate	2GS/s (real-time)	2GS/s (real-time)	2GS/s (real-time)	
	50GS/s (equivalent)	50GS/s (equivalent)	50GS/s (equivalent)	
Vertical Sensitivity	2mV~5V/div	2mV~5V/div	2mV~5V/div	
Time Base Range	2ns~50s/div(1-2-5 sequence)	2ns~50s/div(1-2-5 sequence)	1ns~50s/div(1-2-5 sequence)	

General Technical Data (UTD4000 series)

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ACQUISITION MODE		Normal, peak detect, average(average numbers selectable: 2,4,8,16,32,64,128,256), envelope
SAMPLING MODE		Real-time / equivalent (equivalent mode only for UTD4152C, UTD4202C, UTD4302C)
INPUT	Input Coupling	DC AC GND
	Input locaping	1100 hm $1/15\%$ in parallel with 24 nE $\pm 1/2$ nE
	Probe Attenuation	1X, 10X, 100X
	Max. Input Voltage	400V(DC+ACpeak, 1MOhm input impedance)
	Time delay between channels	150ps (typical)
HORIZONTAL SYSTEM	Waveform Interpolation	Sin(x)/x
	Memory Depth	
		I/ Danme
	Time Base Accuracy	+/- Suppm
VERTICAL SYSTEM	Vertical Resolution	8 bit, two channels sampled simultaneously
	Vertical Sensitivity	1mV/div ~ 10V/div at input BNC
	Position Range	≥ 10 div
	Bandwidth limit filter	2014
		CFL at DNC (AC coupling, 2dD)
	Low Frequency Response	
	DC Gain Accuracy	1mV/div: +/-5% (normal or average acquisition mode); 2mV/div: +/-4% (normal or average acquisition mode)
		5mV/div~10V/div: +/-3% (normal or average acquisition mode)
	DC Measurement Accuracy	When vertical position is zero and average number≥16:
	(average acquisition mode)	1mV/div: +/-(5% x reading + 0 1div + 1mV): 2mV/div. 5mV/div: +/-(4% x reading + 0 1div + 1mV)
	()	10 mV/div = 10 V/div + 1/3% y reading + 0.1 div + 1 mV
		When the level is a deceder of a second and a
		when vertical position is not zero and average number 216:
		+/-(5% x (reading + vertical shift reading) + (1% x vertical shift reading) + 0.2div),
		setting from 1mV/div to 200mV/div plus 2mV, setting > 200mV/div to 10V/div plus 50mV
	Voltage Difference(△V)	Under identical setup and environmental conditions, the voltage difference (ΔV) between two points
	Measurement Accuracy	of the waveform after average number ≥ 16 waveforms are acquired.
	(average acquisition mode)	
IKIGGERSYSTEM	inggerwode	Auto, normai, single, eage, pulse wiath, siope, video, LA
	Trigger Sensitivity	+/-1div
	Trigger Level Range	Internal: +/-8div from the center of the screen
	66 6	EXT: +/-3V
	Tringer Level Accuracy/humical	EXT[J, 1] = 100
	Trigger Level Accuracy(typical) internal: +/-(0.3div x v/div) (within +/-4div from the center of the screen)
	Applied on signals of ≥ 20 ns	EXT: +/-(6% default value + 40mV)
	rise or fall time	EXT/5: +/-(6% default value + 200mV)
	Trigger Capability	Normal mode/scanning mode, pre-trigger/delayed trigger, pre-trigger depth adjustable
	Hold off range	100ng~15g
	Set lovel to E0% (typical)	
	Edge Trigger	Edge type: Rise, Fall, Rise and Fall
	Pulse Width Trigger	Trigger mode: (less than, greater than or equal to)positive pulse; (less than, greater than or equal to)negative pulse
		Pulse width: 20ns~10s
	Video Trigger	Trigger sensitivity(typical): Internal: 2diy peak to peak
	11400 1119901	EXT: 400mV
		EX1/5:2V
		Signal format and line/field frequency: supports standard NTSC and PAL. Line range: 1-525(NTSC) and 1-625(PAL)
	Alternate Trigger	CH1 trigger: edge, pulse, slope, video, LA
		CH2 triager: edge, pulse, slope, video, LA
MEASUREMENT SYSTEM	Cursor	Manual mode: AV AT 1/AT
	Guisei	Tracking mode: Voltage of time value of waveform point
		Tracking mode. Voltage of time value of wave of the point
		Auto measurement mode: Allows cursor display during auto measurement
	Auto Measurement	Vpp, Vamp, Vmax, Vmin, Vtop, Vbase, Vmid, Vrms, Vavg, Cavg, Crms, area, Cycle area, overshoot, preshoot, frequency,
		period, rise time, fall time, positive width, negative width, positive duty cycle, negative duty cycle, burst pulse, phase,
		delay $1 \rightarrow 2 \uparrow$ delay $1 \rightarrow 2 \uparrow$
	Math Functions	+ - y / invert
	Wayafarm Staraga	-, -, , , , , mont
	EET	To wave comis and to itorit parties settings save recail
	FFI	Window: Hanning, Hamming, Blackman, Rectangle
		Sampling points: 1024 points
	X-Y Operation	Phase difference: +/- 3 °
FREQUENCY COUNTER		6 digit
DMM	DC Voltage	4000
		4001/
	<u>AC voltage</u>	
	DC Current	4mA/40mA/400mA/4A
	Resistance	40MOhm
	Diode and Continuity Check	Yes (buzzer)
LOGICANALYZER	Input	16 data channels, divided in two groups; D7-D0, D15-D8
	Max Sampling Rate	250MS/s
	Memory Denth	510k
	Merriory Deptil	
	Max. Input voltage	+/-400 ββ
	Max. Voltage Swing	1.2Vpp
	Trigger Type	Edge, pattern, duration
	Threshold	TTL, CMOS, ECL, or user definable
DISPLAY	Туре	64k full color 5.7" LCD
	Resolution	320 x 240 nixels
	Wayoform Intensity	
	Displayers	
	Display Language	Simplified Chinese, Traditional Chinese, English
INTERFACE	Standard	USB device, USB host
		Pass/Fail module, DMM module, logic analyzer module
	Optional	LAN, GPIB
POWER SOURCE	Mains Voltage	100~240Vac 45~440Hz
I OWEN DOUNDE	Dowor Consumption	
	Power Consumption	
MECHANICAL SPECS	-	Dimension: 336 x 177 x 174mm; Weight: approx. 3.8Kgs
STANDARD ACCESSORIES	S	1X/10X passive probe x 2, DMM current to voltage converter x 2, DMM test leads x 1 set.
		logic analyzer probes and leads x 1 set USB cable x 1, nower cord x 1. Windows software, operation manual