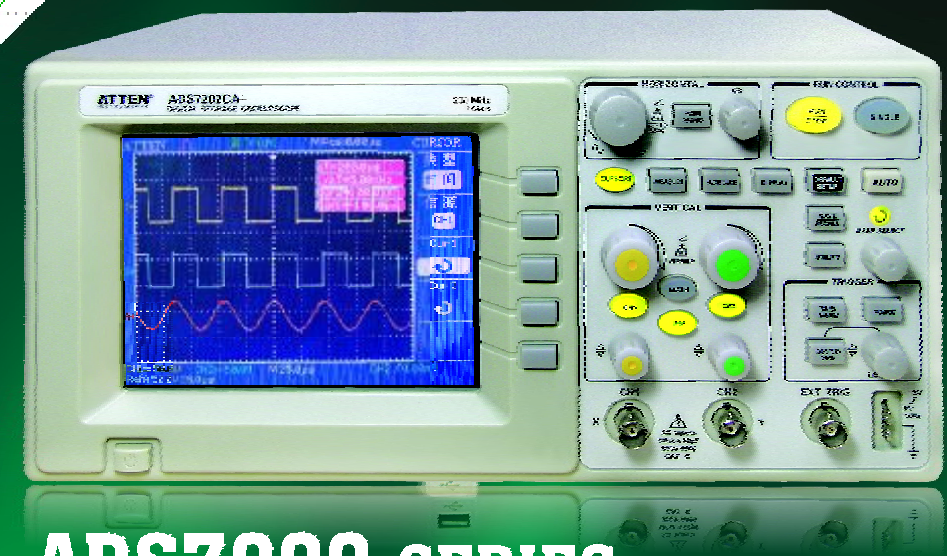


ATTEN[®]
INSTRUMENTS

ADS7000 Series
Digital Storage Oscilloscope



ADS7000 SERIES

DIGITAL STORAGE OSCILLOSCOPE

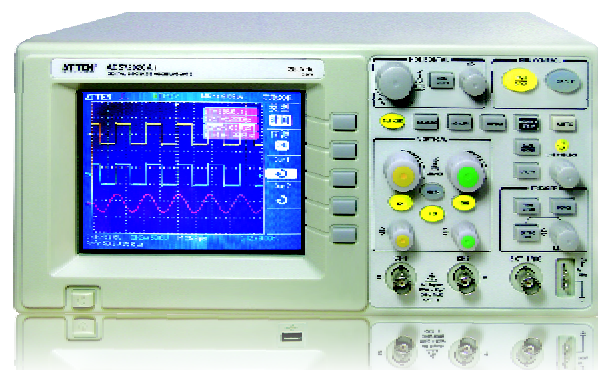
Continued innovation inspire products of excellence

- ☐ Ultra Stability and Performance
- ☐ Outstanding Functionality
- ☐ User-friendly functions and interface

SHENZHEN ATTEN ELECTRONICS CO., LTD.

Building A29, TangLang Industrial Zone, Xili, Nanshan, Shenzhen
Tel: +86-755-8602 1372 Fax: +86-755-8602 1337
Http: www.atten.com.cn Postcode: 518055


The life of the products
comes from regular innovation



SUMMARY

The digital storage oscilloscope is unlike any other electronic consumer product, as intended clients of digital storage oscilloscopes are professional electronic engineers. Therefore, ultra stability and top performance are much more important than an attractive interface. Many years of experience make the design of the ADS7000 series attuned to the most tactual and original needs of users. At the roots of its design, the ADS7000 series digital storage oscilloscopes combine mature and steady hardware configuration, high-powered digital signal processing technology and functionality concepts with a mainstream display interface and the operation panel. In our design we did not attempt to match the specifications and usability of other comparable products currently on the market, but rather to exceed them in every respect, often outperforming same level products internationally. The ADS7000 series, with its intuitive logical and convenient user interface and attractive price is very affordable and well received by customers worldwide.

The ADS7000 series product matrix is comprehensive and is designed to satisfy all customers' needs regardless of the application.

ADS7000SERIES TYPES

	COLOR (VGA DISPLAY)		MONOCHROME DISPLAY	
Real time sampling / bandwidth	1GSa/s	250MSa/s	1GSa/s	250MSa/s
200MHz	ADS7202CA	ADS7202C	ADS7202SA	ADS7202S
150MHz	ADS7152CA	ADS7152C	ADS7152SA	ADS7152S
100MHz	ADS7102CA	ADS7102C	ADS7102SA	ADS7102S
60MHz	ADS7062CA	ADS7062C	ADS7062SA	ADS7062S
40MHz	—	ADS7042C	—	ADS7042S
25MHz	—	ADS7022C	—	ADS7022S

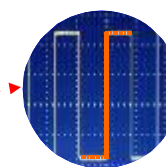
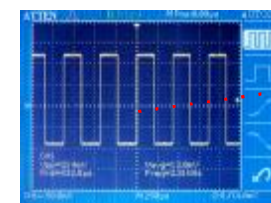
CHARACTERISTIC SUMMARY:

- The highest single real time sampling rate is 1GSa/s, equivalent time sampling rate is 50GSa/s
- Dual channel - channel bandwidth: 25MHz - 200MHz
- The memory depth of single channel :4K
- The highest successive waveform capture rate exceed 1000 times/sec
- Vertical Sensitivity: 2mV - 5V/div; time base range: 2.5ns - 50s/div
- Waveform Math functions: +, -, *, /
- FFT function
- Various selectable parameters can be displayed in the menu area. An additional quick measure function displays all the waveform parameters on the screen area.
- XY function.
- Trigger Modes: Edge, video (odd field, even field, all lines, line number) pulse and delay trigger modes
- Communication: USB Host/Device, GPIB.
- Large menu language selection

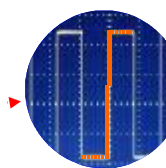
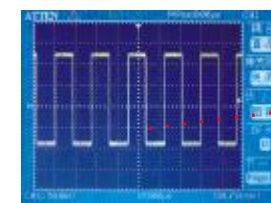
EASYHUNTING™ PATENT TECHNOLOGY

All ADS7000 series products employ EasyHunting™ patented technology when capturing waveforms. EasyHunting™ was invented and patented by our own engineers and employs a unique hardware design and software algorithm. In essence, it enables our oscilloscopes to capture waveforms with higher precision than other competitive products globally. Comparative testing proved that the ADS7000 series were able to capture and display waveforms more steady and accurate than other products of the same specifications. EasyHunting™ takes full advantage of hardware capabilities to give the user the ability to observe fast changing signals with less sampling jitter.

Input a steady square signal, displayed waveform as follows



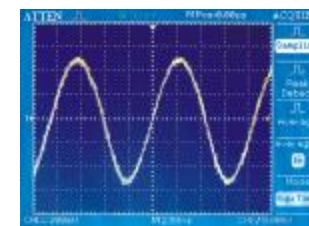
Displayed waveform for a steady square wave signal using EasyHunting™ technology



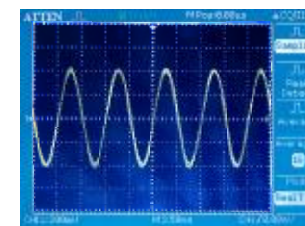
The captured and displayed waveform for a steady square wave signal without EasyHunting™ patented technology

SAMPLING RATE ENHANCEMENT

A Real time sampling rate up to 1GSa/s is available in the ADS7000 series of digital storage oscilloscopes. The Equivalent sampling rate goes up to 50GSa/s, which represent the highest level presently available worldwide in comparable digital storage oscilloscopes. Equivalent and Real time sampling are selectable the ADS7000 series products, providing users with options when observing either periodic or non-periodic waveforms.



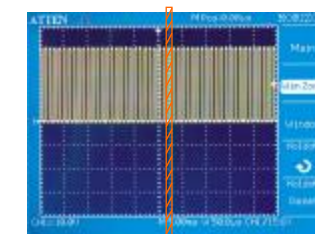
Equivalent sampling



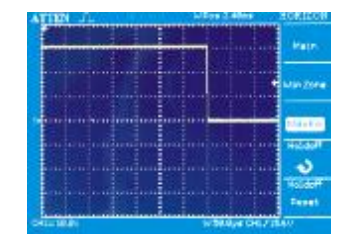
Real time sampling

EASYZOOM WINDOW TECHNOLOGY

The ADS7000 series have EasyZoom technology based on a double time base, making the products comparable with other mainstream digital oscilloscopes available for time base zooming. EasyZoom technology is able to enlarge partial waveforms horizontally more than one million times and can enlarge saved and reference waveforms. This technology also enables easy viewing of the detail of both periodic waveforms or captured data of sampled waveforms.



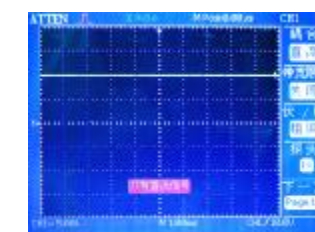
Waveform needs to be expanded



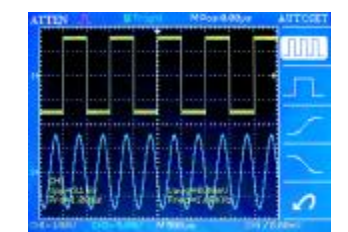
Waveform expanded after zoom

EASYAUTO AUTO SETUP

The ADS7000 series of oscilloscopes use the EasyAuto algorithm, which not only enables the AUTOSET function to be sensitive to AC signals on CH1 and CH2, but also analyzes the voltage scales, horizontal scale, trigger position and waveform distribution get optimal setup. EasyAuto can also set up pure DC signals optimally, which distinguishes the ADS7000 series from many other competing products.



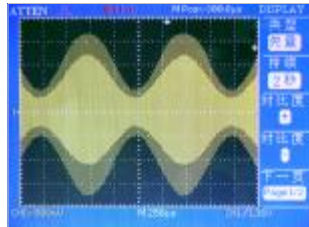
Only DC signal



Two AC signals

PERSISTENCE OPTIONS

When analyzing special waveforms, for instance amplitude-modulated waves, the ADS7000 series of digital storage oscilloscopes offer selectable persistence options. Persistence can be selected as 1 sec, 2sec, 5sec, or infinity.



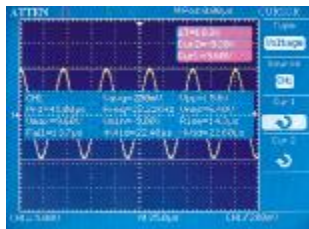
Amplitude modulated wave displayed using persistence options

XY MODE

The XY mode of ADS7000 series support settable sampling rates of 5Ksa/s~200MSa/s. The range of settable sampling frequencies exceeds other same-level digital storage oscilloscopes worldwide. This settable range will be appreciated by users as it allows the selection of appropriate sample rates to analyze Lissajou and vector modulation patterns.

DISPLAY

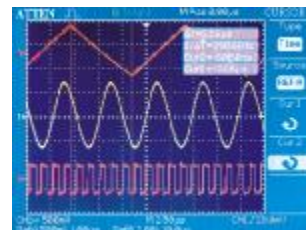
Whether monochrome or color, the ADS7000 series all uses a 5.7 inch digital LCD. In comparison with other digital oscilloscopes using an analog LCD, the ADS7000 series products can display parameter values and waveforms more clearly. The screen display has no flicker, no uncomfortable glare and it is more stable than analog LCD displays, which contribute to alleviate tiredness of users using the instrument for extended periods at a time.



Quick Parameter value display

SAVE/RECALL

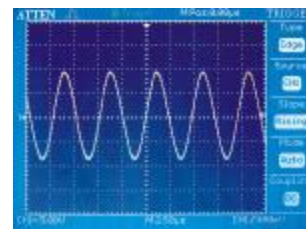
ADS7000 series can save two reference waveforms, ten captured waveforms and ten setups, providing more save options than any other same level digital storage oscilloscope. Two reference waveforms can be displayed on corresponding time base and voltage scales. Both can be displayed simultaneously while capturing waveforms and all the voltage and time base measurements can be made using the cursors. The ADS7000 series products should be able to satisfy all the waveform and setup save demands, independent of the application.



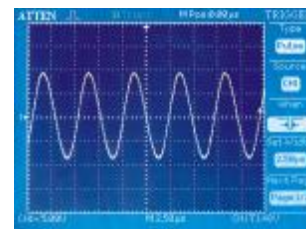
Recall reference waveforms

TRIGGER

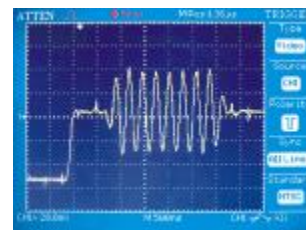
Standard trigger modes are: edge, pulse, video, auto and normal, with the options for single and delayed trigger selectable independently on both channels and the trigger input.



Edge trigger



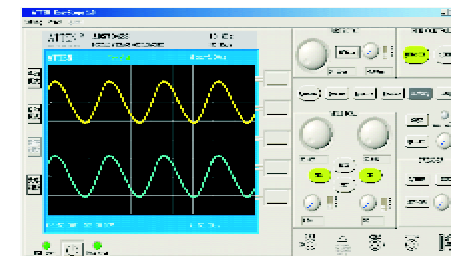
Pulse trigger



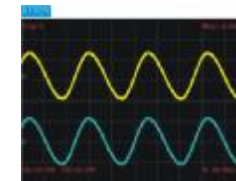
Video trigger

EASYSCOPE SYSTEM SOFTWARE (OPTIONAL)

ADS7000 can be interfaced using EasyScope software that is able to display waveforms remotely on a PC in real-time. The exchange of waveforms between the ADS7000 and a PC is in the millisecond range. EasyScope enables the user to control the instrument remotely and analyze data in numerical or graphic format, and to take advantage of the unlimited printing options the computer environment offers. This optional software runs on Windows® XP and Windows® 2000.



EasyScope software interface



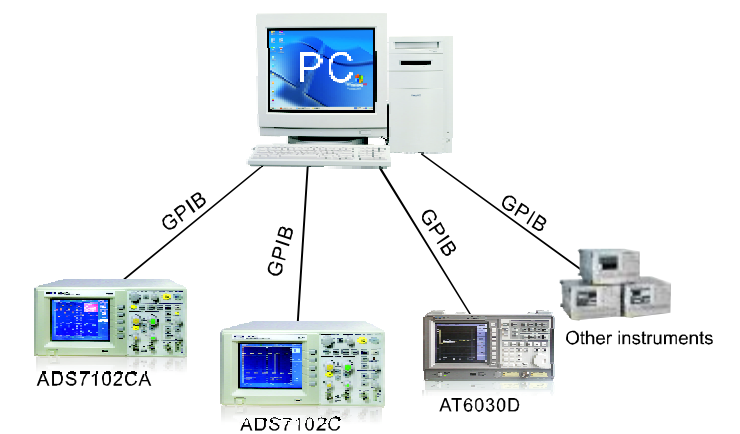
Print picture

PASS/FAIL MODULE (OPTIONAL)

When testing products in a production environment, the Pass/Fail module can eliminate user error and save testing time by providing go-no-go results instantly.

GPIB COMMUNICATIONS MODULE (OPTIONAL)

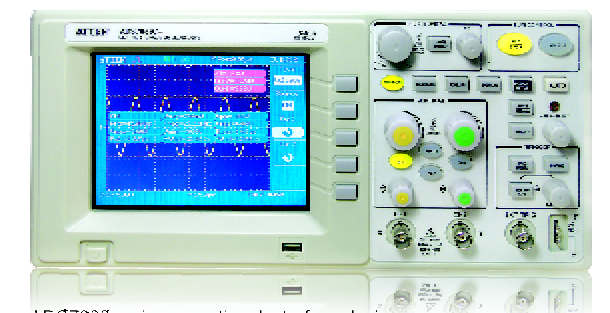
A GPIB interface module is available for the ADS7000 series of digital storage oscilloscopes. The module offer comprehensive control ability over the instrument and will enable customers to interface using standard C language. Customers can code their own setup and measurement procedures, taking advantage of the ADS7000 series flexibility, functionality and performance.



Auto test system sketch-map

FRIENDLY INTERFACE AND EASY OPERATION

The interface design of the ADS7000 series is similar to most mainstream digital oscilloscopes. Customers familiar with mainstream products will therefore find instrument operation familiar and logical. ADS7000 series have an uncluttered and useful operational panel, for instance to capture a single pulse; only one button needs to be pressed. Instant recovery to default settings is also done by pressing one button, saving valuable setup time after advanced settings were changed.



ADS7000 series operational interface design



Specifications

Model / Index	ADS7202CA	ADS7152CA	ADS7102CA	ADS7062CA
Bandwidth	200MHz	150MHz	100MHz	60MHz
Real time sampling	The highest sampling rate of each channel is 1GSa/s			
Display	Color (320*240) 5.7" LCD			
Rise time	<1.8ns	<2.3ns	<3.5ns	<5.8ns
Input impedance	1MΩ 13Pf, 50Ω	1MΩ 13Pf, 50Ω	1MΩ 13Pf	1MΩ 13Pf
Sec/div Range	2.5nS/div-50S/div	2.5nS/div-50S/div	2.5nS/div-50S/div	5nS/div~50S/div
	Roll: 100mS/DIV ~ 50S/DIV (in 1-2-5 step sequences)			

Model / Index	ADS7202SA	ADS7152SA	ADS7102SA	ADS7062SA
Bandwidth	200MHz	150MHz	100MHz	60MHz
Real time sampling	The highest sampling rate of each channel is 1GSa/s			
Display	Monochrome (320*240) 5.7" LCD			
Rise time	<1.8ns	<2.3ns	<3.5ns	<5.8ns
Input impedance	1MΩ 13Pf, 50Ω	1MΩ 13Pf, 50Ω	1MΩ 13Pf	1MΩ 13Pf
Sec/div Range	2.5nS/div-50S/div	2.5nS/div-50S/div	2.5nS/div-50S/div	5nS/div~50S/div
	Roll: 100mS/DIV ~ 50S/DIV (in 1-2-5 sequence)			

Model / Index	ADS7202C	ADS7152C	ADS7102C	ADS7062C	ADS7042C	ADS7022C
Bandwidth	200MHz	150MHz	100MHz	60MHz	40MHz	25MHz
Real time sampling	The highest sampling rate of each channel is 250MSa/s					
Display	Color (320*240) 5.7" LCD					
Rise time	<1.8ns	<2.3ns	<3.5ns	<5.8ns	<8.8ns	<14ns
Input impedance	1MΩ 13Pf, 50Ω	1MΩ 13Pf, 50Ω	1MΩ 13Pf	1MΩ 13Pf	1MΩ 13Pf	1MΩ 13Pf
Sec/div Range	2.5nS/div-50S/div	2.5nS/div-50S/div	2.5nS/div-50S/div	5nS/div~50S/div	10nS/div~50S/div	25nS/div~50S/div
	Roll: 100mS/DIV ~ 50S/DIV (in 1-2-5 sequence)					

Model / Index	ADS7202S	ADS7152S	ADS7102S	ADS7062S	ADS7042S	ADS7022S
Bandwidth	200MHz	150MHz	100MHz	60MHz	40MHz	25MHz
Real time sampling	The highest sampling rate of each channel is 250MSa/s					
Display	Monochrome (320*240) 5.7" LCD					
Rise time	<1.8ns	<2.3ns	<3.5ns	<5.8ns	<8.8ns	<14ns
Input impedance	1MΩ 13Pf, 50Ω	1MΩ 13Pf, 50Ω	1MΩ 13Pf	1MΩ 13Pf	1MΩ 13Pf	1MΩ 13Pf
Sec/div Range	2.5nS/div-50S/div	2.5nS/div-50S/div	2.5nS/div-50S/div	5nS/div~50S/div	10nS/div~50S/div	25nS/div~50S/div
	Roll: 100mS/DIV ~ 50S/DIV (in 1-2-5 sequence)					

Model / Index	THE COMMON SPECIFICATIONS OF ALL ADS7000 SERIES PRODUCTS	
Channels	2	
Vertical Sensitivity	2mV—5V/div(1-2-5 Sequence)	
Vertical Resolution	8 bit	
Equivalent Sampling Rate	The highest sampling rate of each channel is 50GSa/s	
Memory Depth	Each channel : at least 4k/ CH	
Waveform capture rate	The highest capture rate exceed 1000 times/sec	
Save/Recall	Provide two groups ref waveforms、ten groups ordinary waveforms and ten groups setup save/recall function	
Display model	MAIN, WINDOW, WINDOW ZOOM, ROLL, X-Y	
Trigger Types	Edge, Pulse Width, Video	
Trigger Modes	Auto, normal, Single	
Math operation	+, -, *, /, Invert	
	FFT	Window: Hanning, Hamming, Blackman, Rectangular
		Sampling points: 1024points
Auto Voltage Measure types	Vmax, Vmin, Vpp, Vavg, Vrms	
Auto time Measure types	Rise Time, Fall Time, Frequency, Period, Positive Width, Negative Width	
Sample Types	Real time , equivalent time	
Averages	4, 16, 32, 64, 128, 256	
Display language	Manifold languages	
XY mode	Phase Error: ± 3 degrees Support the sampling rate : 5KSa/s—200MSa/s (in a 1-2-5 sequence)	
Input Voltage	100—240 VAC, 47Hz—440Hz, 50VA Max	
Size and weight	300mm x 150mm x 290mm, about4.6kg	
Accessories	(1:1、10:1)probex2, USB interface, power cord, KIT SET, User Manual	
Options	GPIB Communication Module, Pass/Fail Interface Module ,EasyScope computer software system USB Host: Support Flash Drive Storage and drive printer(ADS7000+) USB Device: Support PC Remote control	