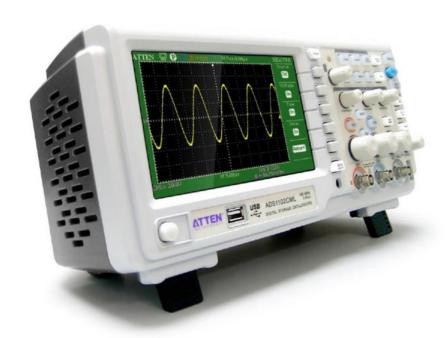


# **NEW PRODUCT ANNOUCEMENT**

# ADS1000CL+ / CML DSO Series



We are glad to introduce to our global customers our new series of Digital Storage Oscilloscope under ADS1000 CL+ & CML Series. Based on the same platform of our ADS1000C & CM series, the new oscilloscope is a general purpose portable, affordable and easy to use oscilloscope designed to meet the requirement in the educational, research labs and industry.

The series is available in 6 selective bandwidths ranging from 25MHz to upto 200MHz. With sampling rate of 500MSa/s and 1GSa/s and memory depth upto 2Mpts, customer will have a total measuring experience.

ADS-1000 series offers dual sampling mode, giving users two options for 500MS/s and 1GSa/s Real-Time sampling or 50GS/s high-speed Equivalent sampling rate. With high-speed wave handling capability, more advanced triggering functions, 7" Widescreen Display and Compact and light-weight design makes it the most powerful oscilloscope with the best price than ever.

The ADS-1000 is considered for the replacement of analog oscilloscope and further promoted as a personal DSO affordable to any situation such as each student in educational labs, service technicians, or industrial field needing big quantity. With the easy to use user interface available in 12 different languages, its truly a global player

#### **Key Features**

- 25MHz, 40MHz, 60 MHz, 100 MHz, 150MHz and 200MHz bandwidths
- Realtime Sample rates of 500MSa/s and 1GS/s
- Equivalent Sampling rate of 50Gsa/s
- Long Waveform Memory upto 2Mpts
- Advanced Triggering-Edge, Pulse Width, Video, Slope (Rise Time)
- 7" widescreen color display on all models
- · 32 automatic measurements
- Large internal waveform and setup storage
- · 4 math functions plus FFT
- USB host and device connections for printers, memory sticks and PC remote control
- Multi-language User Interface and Context Sensitive Help

#### **Product Series Description**



ADS1022CL+, 25MHz, 500MSa/s, 2 Ch, 7" Widescreen Color LCD ADS1042CL+, 40MHz, 500MSa/s, 2 Ch, 7" Widescreen Color LCD ADS1042CML, 40MHz, 1GSa/s, 2 Ch, 7" Widescreen Color LCD ADS1062CML, 60MHz, 1GSa/s, 2 Ch, 7" Widescreen Color LCD ADS1102CML, 100MHz, 1GSa/s, 2 Ch, 7" Widescreen Color LCD ADS1152CML, 150MHz, 1GSa/s, 2 Ch, 7" Widescreen Color LCD ADS1202CML, 200MHz, 1GSa/s, 2 Ch, 7" Widescreen Color LCD

CL+, 32Kpts Memory Depth CML: 2Mpts Memory Depth

MODEL INDEX	ADS1202CML	ADS1152CML	ADS1102CML	ADS1062CML	ADS1042CML	ADS1042CL+	ADS1022CL+	
Bandwidth	200MHz	150MHz	100MHz	60MHz	40MHz	40MHz	25MHz	
Sampling Rate		1GSa/s					500MSa/s	
Equivalent Sampling Rate	50GSa/s				25GSa/s	10GSa/s		
Memory Depth	5Kpts/CH Single Channel: 2Mpts; Double Channels: 1Mpts				32Kpts			
Rise Time	< 1.8ns	<2.3ns	<3.5ns	<5.8ns	<8	.8ns	<14ns	
Input Impedance		1MΩ  14pF						
	2.5ns/div-50s/div			5ns/div-50s/div	10ns/div-50s/div		25ns/div-50s/div	
Sec/div Range	Scan: 100ms-50s/div							
Display	7" LCD Color (480*234)							

C: 1MCu+2*%    17pF st-3pF							
Timpedance	Input Coupling	AC, DC, GND					
100.1 at 100MHz (ADS11202CML), > 100:1 at 70MHz (ADS1152CML)	Input Impedance	AC: 1.2MΩ+/-2%    17pF +/-3pF, <=100mV/div					
2	Maximum Input Voltage						
System	Ch to Ch Isolation (Both channels in same V/div setting)	> 100: 1 at 50MHz (ADS1102CML), > 100: 1 at 30MHz (ADS1062CML)					
Single Channel 1GSa/s; Double Channels 1GSa/s (ADS1202CML)   Single Channel 1GSa/s; Double Channels 500MSa/s (ADS1000CML Series)   Single Channel 500MSa/s; Double Channels 500MSa/s (ADS1000CML Series)   Single Channel 500MSa/s; Double Channels 550MSa/s (ADS1000CML Series)   Single Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series)   Single Channel 500MSa/s; Double Channels 550MSa/s (ADS1000CML ADS102CML AD	Probe attenuator	1X, 10X					
Single Channel 1GSa/s; Double Channels 1GSa/s (ADS1202CML) Single Channel 1GSa/s; Double Channels 500MSa/s (ADS1000CML Series) Single Channel 1GSa/s (Double Channels 500MSa/s (ADS1000CML Series) Single Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series) Single Channel 500MSa/s (ADS1000CML ADS102CML ADS102C	Probe attenuator						
Single Channel 1GSa/s; Double Channels 500MSa/s (ADS1000CML Series) Single Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series) Single Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series)  Bigge Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series)  Single Channel 500MSa/s; Double Channels 250MSa/s (ADS1000CML Series)  MAIN, WINDOW, WINDOW ZOOM, Scan, X-Y  ### *********************************	ontal System						
### ADS1022CML   ADS1152CML   ADS1102CML   ADS1062CML   ADS1042CL+	Real Time Sampling Rate	Single Channel 1GSa/s; Double Channels 500MSa/s (ADS1000CML Series)					
### ##################################	Equivalent Sampling Rate	50GSa/s					
### Window   18 Divisions	Measure Display Modes	MAIN, WINDOW	, WINDOW ZOO	M, Scan, X-Y			
ADS1202CML ADS1152CML ADS1102CML ADS1062CML ADS1042CL+ /CML 2.5ns/div -50s/div 2.5ns/div -50s/div 5.0 ns/div -50s/div 10 ns/div -50s/div 25ns/div - 50s/div -50s/div 25ns/div - 50s/div -50s/div 25ns/div - 50s/div - 50s/div 25ns/div - 50s/div - 50s	Timebase Accuracy	±100ppm measi	ured over 10ms in	terval			
ADS1202CML ADS1152CML ADS1102CML ADS1062CML /CML ADS102CM  2.5ns/div -50s/div 2.5ns/div -50s/div 5.0 ns/div -50s/div 10 ns/div -50s/div 25ns/div - 50s/div	Time Window	18 Divisions					
Scan: 100ms/div -50s/div (1-2.5-5 sequence)		ADS1202CML	ADS1152CML	ADS1102CML	ADS1062CML		ADS1022CL
trical Sensitivity  2mV-10V/div at input BNC (1-2-5 order) 2mV-5V/div (ADS1202CML / 1022CL+) 2mV-200mV: ±1.6V 206mV-10V: ±40V in Fixed Gain Ranges & Variable Gain Ranges  8 bit  4DS1202CML ADS1152CML ADS1102CML ADS1102CML ADS1062CML ADS1062CM	Horizontal Scan Range	2.5ns/div -50s/d	liv 2.5ns/div -5	0s/div 5.0 ns/di	v -50s/div 10 ns	s/div -50s/div 2	5ns/div - 50s/d
2mV-10V/div at input BNC (1-2-5 order) 2mV-5V/div (ADS1202CML / 1022CL+) 2mV-200mV: ±1.6V 206mV-10V: ±40V in Fixed Gain Ranges & Variable Gain Ranges  ### Variable Gain Rang			Scar	n: 100ms/div -50s	div (1-2.5-5 seque	ence)	
2mV-10V/div at input BNC (1-2-5 order) 2mV-5V/div (ADS1202CML / 1022CL+) 2mV-200mV: ±1.6V 206mV-10V: ±40V in Fixed Gain Ranges & Variable Gain Ranges  ### Variable Gain Rang						<i>///</i>	
annel voltage offset range  2mV-5V/div (ADS1202CML / 1022CL+)  2mV-200mV: ±1.6V 206mV-10V: ±40V in Fixed Gain Ranges & Variable Gain Ranges  8 bit  2  ADS1152CML ADS1152CML ADS1102CML ADS1062CML CML ADS1042CL+/ CML 200MHz 150MHz 100MHz 60MHz 25MHz  7 Flatness  DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  wer frequency limit (AC - 3)  ise: Pk-Pk for 3K record ≤0.6Div for average of 10 Pk-Pk readings in fixed gain settings ≤0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  PR including harmonics ≥40dB  Reasurement Accuracy ≤±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges ≤±4.0%:typical for 2mV/div and Variable Gain Ranges  ±43.0%: 5mV/div to 5V/div in Fixed Gain Ranges ≤±4.0%:typical for 2mV/div and Variable Gain Ranges ≤±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges ≤±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges ≤±3.0%: typical for 2mV/div and Variable Gain Ranges ≤±3.0%: t	al System						
annel voltage offset range  tical Resolution  8 bit  2  ADS1202CML ADS1152CML ADS1102CML ADS1062CML CML ADS1042CL+/ CML 40MHz ADS1022C  200MHz 150MHz 100MHz 60MHz 40MHz 25MHz  / Flatness DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  wer frequency limit (AC - 3)  Sise: Pk-Pk for 3K record ≤0.6Div for average of 10Pk-Pk readings in fixed gain settings.  <-0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  DR including harmonics ≥40dB  Gain Accuracy <±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges  <±4.0%:typical for 2mV/div and Variable Gain Ranges  ±4.0%:typical for 2mV/div and Variable Gain Ranges  ±13%X ( reading + offset ) +1% of  offset  +0.2div+2mV   ±13%X ( reading + offset ) +1% of  offset  +0.2div+100mV   te time, Typical (using 500ps ADS1202CML ADS1152CML ADS1102CML ADS1062CML ADS1042CL+/ CML ADS104CL+/ CML AD	The second secon						
ADS1202CML ADS1152CML ADS1102CML ADS1062CML CML ADS1062CML CML ADS102CML 25MHz  DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  wer frequency limit (AC - 3)  Size: Pk-Pk for 3K record ≤0.6Dix for average of 10Pk-Pk readings in fixed gain settings. <=0.7 Dix for average of 10 Pk-Pk readings, Variable gain settings  DR including harmonics ≥40dB  Gain Accuracy < ±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges < ±4.0%:typical for 2mV/div and Variable Gain Ranges  EMeasurement Accuracy: Gain settings >100mV/div +0.2div+2mV]  -1.2div+2mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+2mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  #Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]	Vertical Sensitivity						
ADS1202CML 200MHz 150MHz 100MHz 60MHz 40MHz 25MHz  DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  ver frequency limit (AC - 3)  ise: Pk-Pk for 3K record ≤0.6Div for average of 10Pk-Pk readings in fixed gain settings. <=0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  DR including harmonics ≥40dB  Gain Accuracy < ±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges < ±4.0%-typical for 2mV/div and Variable Gain Ranges  ### Measurement Accuracy: Gain settings >100mV/div	Vertical Sensitivity  Channel voltage offset range	2mV-5V/div (AE 2mV-200mV: ±1	0S1202CML / 102 .6V	2CL+)	e Gain Ranges		
ADS1202CML 200MHz 150MHz 100MHz 60MHz 40MHz 25MHz  DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  ver frequency limit (AC - 3)  ise: Pk-Pk for 3K record ≤0.6Div for average of 10Pk-Pk readings in fixed gain settings. <=0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  DR including harmonics ≥40dB  Gain Accuracy < ±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges <±4.0%:typical for 2mV/div and Variable Gain Ranges <±4.0%:typical for 2mV/div and Variable Gain Ranges    ### Measurement Accuracy:		2mV-5V/div (AL 2mV-200mV: ±1 206mV-10V: ±4	0S1202CML / 102 .6V	2CL+)	e Gain Ranges		
C) 200MHz 150MHz 100MHz 60MHz 40MHz 25MHz  DC-10% of rated BW: ±1DB 10%-50% of rated BW: ±2DB 50%-100% of rated BW: ±3DB  ver frequency limit (AC - 3) ≤10Hz (at input BNC)  ≤0.6Div for average of 10Pk-Pk readings in fixed gain settings. <=0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  DR including harmonics ≥40dB  Gain Accuracy <±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges <±4.0%:typical for 2mV/div and Variable Gain Ranges  ±[3%X ( reading + offset ) +1% of  offset  +0.2div+2mV]  Measurement Accuracy: f(3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  Measurement Accuracy: ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  ADS1022CML ADS102CML ADS102CML ADS102CML ADS1062CML ADS1022CML ADS102CML ADS1	Channel voltage offset range	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±4 8 bit	0S1202CML / 102 .6V	2CL+)	e Gain Ranges		
Flatness   10%-50% of rated BW: ±2DB   50%-100% of rated BW: ±3DB     Wer frequency limit (AC -	Channel voltage offset range  Vertical Resolution  Channels	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±4/ 8 bit 2	0S1202CML / 102 .6V 0V in Fixed Gain F	2CL+) Ranges & Variable	1		ADS1022CL
ise: Pk-Pk for 3K record  ≤0.6Div for average of 10Pk-Pk readings in fixed gain settings. <=0.7 Div for average of 10 Pk-Pk readings, Variable gain settings  ≥40dB  Gain Accuracy  <±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges <±4.0%:typical for 2mV/div and Variable Gain Ranges  ½[3%X ( reading + offset ) +1% of  offset  +0.2div+2mV]  Measurement Accuracy:  Gain settings >100mV/div  Measurement Accuracy:  Gain settings >100mV/div  ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  ### details   4DS1042CL   4	Channel voltage offset range Vertical Resolution	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±4 8 bit 2 ADS1202CML	DS1202CML / 102 .6V DV in Fixed Gain F ADS1152CML	ADS1102CML	ADS1062CML	CML	
	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2 ADS1202CML 200MHz DC-10% of rate 10%-50% of rate	DS1202CML / 102 .6V DV in Fixed Gain F ADS1152CML 150MHz d BW: ±1DB ed BW: ±2DB	ADS1102CML	ADS1062CML	CML	
Gain Accuracy  < ±3.0%: 5mV/div to 5V/div in Fixed Gain Ranges  < ±4.0%:typical for 2mV/div and Variable Gain Ranges  ±[3%X ( reading + offset ) +1% of  offset  +0.2div+2mV]  +0.2div+2mV]  Measurement Accuracy: Gain settings >100mV/div  ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  et time, Typical (using 500ps  ADS1202CML ADS1152CML ADS1102CML ADS1062CML ADS1042CL+/CML ADS1022C	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±40 8 bit 2 ADS1202CML 200MHz DC-10% of rate 10%-50% of rate 50%-100% of rate	ADS1152CML  ADS1152CML  150MHz  BW: ±1DB  ad BW: ±2DB  ted BW: ±3DB	ADS1102CML	ADS1062CML	CML	
< ±4.0%:typical for 2mV/div and Variable Gain Ranges	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC -	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2 ADS1202CML 200MHz DC-10% of rate 10%-50% of rate 50%-100% of rate ≤10Hz (at input ≤0.6Div for aver	ADS1152CML / 102 ADS1152CML / 150MHz BW: ±1DB ad BW: ±2DB ted BW: ±3DB	ADS1102CML 100MHz	ADS1062CML 60MHz	CML	
Gain settings ≤100mV/div +0.2div+2mV]  Measurement Accuracy: Gain settings >100mV/div ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  The time, Typical (using 500ps ADS1202CML ADS1152CML ADS1102CML ADS1062CML ADS1042CL+/CML ADS1022CML ADS102	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2  ADS1202CML 200MHz DC-10% of rate 10%-50% of rate 50%-100% of ra ≤10Hz (at input ≤0.6Div for aver <=0.7 Div for av	ADS1152CML / 102 ADS1152CML / 150MHz BW: ±1DB ad BW: ±2DB ted BW: ±3DB	ADS1102CML 100MHz	ADS1062CML 60MHz	CML	
Gain settings >100mV/div ±[3%X ( reading + offset ) +1% of  offset  +0.2div+100mV]  et time, Typical (using 500ps ADS1202CML ADS1152CML ADS1102CML ADS1062CML ADS1042CL+/CML ADS1022C	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)  Noise: Pk-Pk for 3K record	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2  ADS1202CML 200MHz DC-10% of rate 10%-50% of rate 50%-100% of rate ≤10Hz (at input ≤0.6Div for av ≥40dB <±3.0%: 5mV/div	ADS1152CML / 102  ADS1152CML  150MHz  BW: ±1DB  Bd BW: ±2DB  ted BW: ±3DB  BNC)  age of 10Pk-Pk  erage of 10 Pk-Pk	ADS1102CML 100MHz addings in fixed gas readings, Variabled Gain Ranges	ADS1062CML 60MHz sin settings. le gain settings	CML	
e time, Typical (using 500ps ADS1202CML ADS1152CML ADS1102CML ADS1062CML CML ADS1022C	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)  Noise: Pk-Pk for 3K record  SFDR including harmonics  DC Gain Accuracy  DC Measurement Accuracy:  All Gain settings ≤100mV/div	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2  ADS1202CML 200MHz  DC-10% of rate 10%-50% of rate 50%-100% of ra ≤10Hz (at input ≤0.6Div for aver <=0.7 Div for av ≥40dB < ±3.0%: 5mV/d < ±4.0%:typical ±[3%X ( reading	ADS1152CML / 102  ADS1152CML  150MHz  BW: ±1DB  Bd BW: ±2DB  ted BW: ±3DB  BNC)  age of 10Pk-Pk  erage of 10 Pk-Pk  iv to 5V/div in Fixe for 2mV/div and V	ADS1102CML 100MHz addings in fixed gas readings, Variabled Gain Ranges ariable Gain Ranges	ADS1062CML 60MHz sin settings. le gain settings	CML	
1 8ne 2 2ne 2 5ne 5 0ne 14ne	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)  Noise: Pk-Pk for 3K record  SFDR including harmonics  DC Gain Accuracy  DC Measurement Accuracy:	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2  ADS1202CML 200MHz  DC-10% of rate 10%-50% of rate 50%-100% of rate ≤10Hz (at input ≤0.6Div for ave <=0.7 Div for av ≥40dB < ±3.0%: 5mV/d < ±4.0%:typical ±[3%X ( reading +0.2div+2mV]	ADS1152CML / 102 .6V DV in Fixed Gain F ADS1152CML 150MHz 150MHz BW: ±1DB ad BW: ±2DB ted BW: ±3DB BNC) age of 10Pk-Pk regrage of 10 Pk-Pk iv to 5V/div in Fixe for 2mV/div and V  + offset ) +1% of	ADS1102CML 100MHz  addings in fixed gas readings, Variable Gain Ranges (ariable Gain Range)	ADS1062CML 60MHz sin settings. le gain settings ges mV]	CML 40MHz	
2000	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)  Noise: Pk-Pk for 3K record  SFDR including harmonics  DC Gain Accuracy  DC Measurement Accuracy:  All Gain settings ≤100mV/div  DC Measurement Accuracy:	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±4i 8 bit 2  ADS1202CML 200MHz  DC-10% of rate 10%-50% of rate 50%-100% of rate ≤10Hz (at input ≤0.6Div for ave <=0.7 Div for av ≥40dB < ±3.0%: 5mV/d < ±4.0%:typical ±[3%X ( reading +0.2div+2mV] ±[3%X ( reading ADS1202CML	ADS1152CML / 102 .6V OV in Fixed Gain F ADS1152CML 150MHz d BW: ±1DB ed BW: ±2DB ted BW: ±3DB BNC) age of 10Pk-Pk reerage of 10 Pk-Pk iv to 5V/div in Fixe for 2mV/div and V  + offset ) +1% of ADS1152CML	ADS1102CML 100MHz  addings in fixed gas readings, Variable Gain Ranges (ariable Gain Range) [offset] +0.2div+2  ADS1102CML	ADS1062CML 60MHz  sin settings. le gain settings ges mV] 100mV] ADS1062CML	CML 40MHz ADS1042CL+/ CML	ADS1022CL
**************************************	Channel voltage offset range  Vertical Resolution  Channels  Analog Bandwidth (at input BNC)  BW Flatness  Lower frequency limit (AC - 3dB)  Noise: Pk-Pk for 3K record  SFDR including harmonics  DC Gain Accuracy  DC Measurement Accuracy:  All Gain settings ≤100mV/div  DC Measurement Accuracy:	2mV-5V/div (AI 2mV-200mV: ±1 206mV-10V: ±44 8 bit 2  ADS1202CML 200MHz  DC-10% of rate 10%-50% of rate 50%-100% of rate ≤10Hz (at input ≤0.6Div for ave <=0.7 Div for av ≥40dB < ±3.0%: 5mV/d < ±4.0%:typical ±[3%X ( reading +0.2div+2mV]	ADS1152CML / 102 .6V DV in Fixed Gain F ADS1152CML 150MHz 150MHz BW: ±1DB ad BW: ±2DB ted BW: ±3DB BNC) age of 10Pk-Pk regrage of 10 Pk-Pk iv to 5V/div in Fixe for 2mV/div and V  + offset ) +1% of	ADS1102CML 100MHz  addings in fixed gas readings, Variable Gain Ranges (ariable Gain Range)	ADS1062CML 60MHz sin settings. le gain settings ges mV]	CML	

	FFT	Window mode: Hanning, Hamming, Blackman, Rectangular Sampling points: 1024					
	Bandwidth limiter	20MHz ±40% Typical (Note: BW limited below 20MHZ±40% when using probe X1;25MHz BW don't have this function)					
rigge	er System						
	Trigger Types	Edge, Pulse Width, Video, Slope, Alternative					
	Trigger Modes	Auto, Normal, Single					
	Trigger Sources	Ch1-2, EXT, EXT/5, AC Line					
	Trigger Coupling	AC, DC, LF rej, HF rej					
	Trigger Level Range	CH1, CH2: ±6divisions from center of screen EXT: ±1.2V EXT/5: ±6V					
	Trigger Level Accuracy (typical) applicable for the signal of rising and falling time ≥20ns	Internal: ±(0.2 div x V/div)( within±4 divisions from center of screen)  EXT: ±(6% of setting + 40 mV)  EXT/5: ±(6% of setting + 200 mV)					
	Edge Trigger	Edge type: Rising, Falling, Rising a	nd Falling				
	Pulse Width Trigger	Trigger Modes: (>, <,=) Positive Pulse Width, (>,<,=) Negative Pulse Width Pulse Width Range: 20ns-10s					
	Video Trigger	Support signal Formats: PAL/SECAM, NTSC					
	Slope Trigger	Trigger condition: odd field, even field, all lines, line Num (>,<,=) Positive slope, (>,<,=) Negative Slope Time: 20ns-10s					
	Alternative Trigger	CH1 trigger type: Edge, Pulse, Video, Slope CH2 trigger type: Edge, Pulse, Video, Slope					
ontr	ol Panel Function						
	Auto Set	Auto adjusting the Vertical, Horizontal system and Trigger Position					
	Auto Set	Auto adjusting the Vertical, Horizonta	system and Trigger Position	n:			
	Save/Recall	Support 2 Group referenced Wavefor Storage/Recall function and USB flas	ms, 20 Group setups, 20 Gr		internal		
cqui		Support 2 Group referenced Wavefor	ms, 20 Group setups, 20 Gr		internal		
cqui	Save/Recall	Support 2 Group referenced Wavefor	ms, 20 Group setups, 20 Gr		internal		
cqui	Save/Recall sition System	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML:5Kpts/CH	ms, 20 Group setups, 20 Gr h driver storage function.	oup captured Waveforms			
cqui	Save/Recall sition System	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time	ms, 20 Group setups, 20 Gr h driver storage function.	roup captured Waveforms			
cqui	Save/Recall sition System	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML:5Kpts/CH	ms, 20 Group setups, 20 Gr h driver storage function.	roup captured Waveforms	ots		
cqui	Save/Recall sition System Sample Types	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML :5Kpts / CH ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s  500MSa/s or lower	ries: Single Channel 2Mp	Long Memor No Support 2Mpts #		
cqui	Save/Recall  sition System  Sample Types  Memory Depth	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML :5Kpts / CH  ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel  Double Channels	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts ; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s	ries: Single Channel 2Mp	Long Memor No Support		
cqui	Save/Recall  sition System  Sample Types  Memory Depth  Sample Mode	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML:5Kpts/CH ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel  Double Channels  Sample, Peak Measure, Average	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s  500MSa/s or lower	ries: Single Channel 2Mp	Long Memor No Support 2Mpts #		
cqui	Save/Recall  sition System  Sample Types  Memory Depth	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML :5Kpts / CH  ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel  Double Channels	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s  500MSa/s or lower	ries: Single Channel 2Mp	Long Memor No Support 2Mpts #		
	Save/Recall  sition System  Sample Types  Memory Depth  Sample Mode	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML:5Kpts/CH ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel  Double Channels  Sample, Peak Measure, Average	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s  500MSa/s or lower	ries: Single Channel 2Mp	Long Memor No Support 2Mpts #		
	Save/Recall  sition System  Sample Types  Memory Depth  Sample Mode  Averages	Support 2 Group referenced Wavefor Storage/Recall function and USB flas  Real time, Equivalent time  ADS1202CML:5Kpts/CH ADS1000CL+ Series: Single Channel  Channel Mode  Single Channel  Single Channel  Double Channels  Sample, Peak Measure, Average	ms, 20 Group setups, 20 Gr h driver storage function.  If 4Kpts; ADS1000CML Series  ADS1000CML Series  Sampling Rate  1Gsa/s  500MSa/s or lower  500MSa/s or lower	ries: Single Channel 2Mp es Short memory 40kpts 40kpts 20kpts	Long Memor No Support 2Mpts # 1Mpts #		

#### **GENERAL SPECIFICATIONS**

Display						
Display Mode	Color TFT 7in diagonal Liquid Crystal Display					
Resolution	480 horizontal by 234 vertical pixels					
Display Color	64K color					
Point, Vector	Off, 1 sec, 2 sec, 5 sec, Infinite					
Menu Display	2 sec, 5 sec, 10 sec, 20 sec, Infinite					
Skin	Succinct					
Screen saver	1min, 2min, 5min, 10min, 15min, 30min, 1hour, 2hour, 5hour, off					
Waveform Interpolation	Sin(x)/x, Linear					
Color model	Normal , Invert					
Language	English, French, German, Russian, Spanish, Simplified Chinese, Traditional Chinese, Portuguese, Japanese Korean, Italian, Arabic					
Interface	USB Host, USB Device, RS232, Pass/Fail output					
nvironments						
Temperature	Operating: 10 ℃ to + 40 ℃ Not operating: -20 ℃ to +60 ℃					
Humidity	Operating: 85%RH, 40 °C, 24 hours  Not operating: 85%RH, 65 °C, 24 hours  Operating: 3000m  Not operating: 15,266m					
Height						
Power Supply						
Input Voltage	100-240 VAC, CAT II, Auto selection					
Frequency Scope	45Hz to 440Hz					
Power	50VA Max					
Mechanical						
	Length	Width	Height			
Dimension	399mm	110.5mm	148.5mm			
Weight	2.4 kg					

# **Ordering Details**



### JBM INSTRUMENTOS LTDA

Rua Araguaia, nº 69 - Boa Vista Santa Rita do Sapucaí - MG Brasil - 37540-000

Tel.: +55 (35) 3471-3014

E-mail: vendas@jbminstrumentos.com.br Web: www.jbminstrumentos.com.br

# An ISO-9001 Certified Manufacturer

ATTEN ELECTRONICS CO., LTD. Building A29, Tanglang Industrial Zone, Xili Nanshan, Shenzhen 518055 P.R.China

Tel.: +86-755-86021376, Fax: +86-755-61618291