

# Acute

## DG4000 Digital Pattern Generator

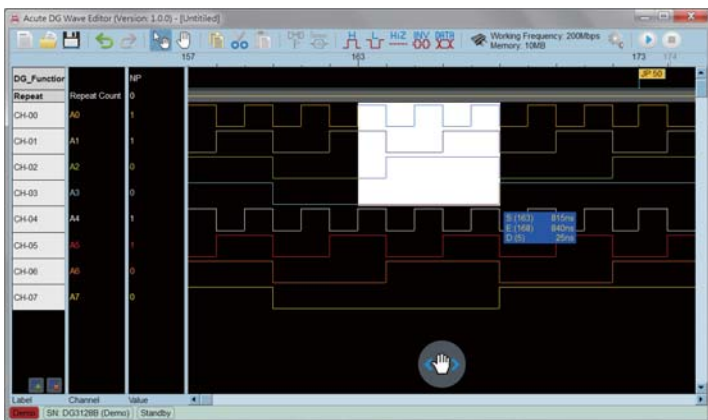
- USB 3.0 interface, 12V power adaptor
- Channels : 112 Max. (Data Output), 16 (Event Input)
- Data rate : 700Mbps @Ch (Max.)
- Memory : 256Mb/ch
- Clock Range : 1Hz ~ 2.4GHz (6 digits)
- Probe output : 0.9V ~ 5.0V (0.1V resolution) and Hi-Z
- Phase tuning between channels
- Default pattern : I<sup>2</sup>C, MIPI I3C, MIPI RFFE, PMBus, PWM, SPI, Sync / Async-Counter, ...
- User pattern : Direct draw, Acute-LA / VCD, CSV (MIPI I3C, MIPI RFFE), ...



270 x 175 x 55 (mm<sup>3</sup>)

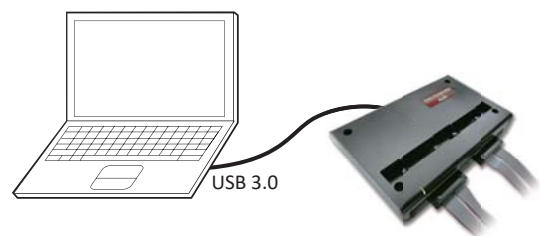
Model	Data Channel	Event Channel	Pattern Depth
DG4064B	48	16	256Mb/ch
DG4096B	80	16	256Mb/ch
DG4128B	112	16	256Mb/ch

### Software Window



### System Requirements

- USB 3.0 port
- Win 7, Win 8, Win 10, Win 11
- PC RAM 16GB (recommended) or 8GB at least



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PC-based T&M Instruments

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# DG4000 series

Model	DG4064B	DG4096B	DG4128B
Power Source	12V Power adapter		
Power	Static Power Consumption 9W	12W	18W
	Max Power Consumption 24W	30W	36W
Hardware Interface	USB 3.0		
Slot/Pod (1 Slot for 1 Pod)			
Available Slots	2	3	4
Available Data Output Channels (DG4K pods)	48	80	112 *2
Standard pod(s): DG4K/OE4K/EV4K/LVDS *1	1/1/1/0	2/1/1/0	3/1/1/0
Available Channels @	DG4K pod 32ch@300Mbps, 16ch@600Mbps, 8ch@1.2Gbps, 4ch@2.4Gbps	32ch@300Mbps, 16ch@600Mbps, 8ch@1.2Gbps, 4ch@2.4Gbps	
Max. Internal Clock	LVDS pod 16ch@300Mbps, 16ch@600Mbps, 8ch@1.2Gbps, 4ch@2.4Gbps	16ch@300Mbps, 8ch@600Mbps, 4ch@1.2Gbps, 2ch@2.4Gbps	
OE4K/EV4K pod			
DG4K-tip (Output ch, for DG4K/EV4K-pod)			
Max. Output Data Rate	700Mbps (350MHz)		
Min. output voltage at different data rates	0.9Vpp@ ≤ 40Mbps, 1.2Vpp@ ≤ 400Mbps, 1.5Vpp@ ≤ 500Mbps, 3.3Vpp@ ≤ 700Mbps		
Output Voltage Range	0.9Vpp ~ 5.0Vpp		
Rising Time	300ps @ 3.3V		
Impedance	CMOS with 20Ω		
Fan out	20mA/ch		
OE4K-tip (Output ch, for OE4K-pod)			
Max. Output Data Rate	700Mbps (350MHz)		
Min. output voltage at different data rates	0.9Vpp@ ≤ 40Mbps, 1.2Vpp@ ≤ 400Mbps, 1.5Vpp@ ≤ 500Mbps, 3.3Vpp@ ≤ 700Mbps		
Output Voltage Range	0.9Vpp ~ 5.0Vpp		
Rising Time	300ps @ 3.3V		
Impedance	CMOS with 20Ω		
Fan out	20mA/ch		
LVDS-tip (Output ch, for LVDS-pod)			
Max. Output Data Rate	1.2Gbps (600MHz)		
Output Voltage	±350mV*5		
EV4K-tip (Input ch, for EV4K-pod)*3			
Channel (LA/ClkIn)	16/1		
Max. Frequency	200MHz		
Threshold	-0.5V~4.5V@ 0.1V Resolution		
Input Voltage (Non-destructive)	±15V DC+AC peak(Max.)		
Impedance	1MΩ    5pF		
Sensitivity	~300mV		
Internal Clock Generation	Range	1Hz ~ 2.4GHz *4 (Period : 1s ~ 416ps)	
	Resolution	6 digits, Min. 1Hz	
External Clock Generation	Range	≤ 200MHz	
Memory per Channel	256Mb		
Phase Tuning Delayed	Depend on Internal Clock, Min. 416ps		
Temperature Operating / Storage	5°C~45°C(41°F~113°F) / -10°C~65°C(14°F~149°F)		
Event			
Internal	Hot Key		
External (Channel/Mode/Threshold)	16 / Logic AND OR / -0.5V~4.5V		
Software Feature			
Language	English / Traditional Chinese / Simplified Chinese		
Data Pattern File Format	DGW / DGV / VCD / CSV		
Regular Waveform Generator	Sync. Counter, Async. Counter, I2C, MIPI I3C, REF, PMBus, PWM, SPI		
Flow Control	Loop / Jump / Hold / Wait For Event		
Accessories (Gripper / Flying Lead Cable)	80/10	120/14	160/18
Device Dimension	(L)270mm x (W)175mm x (H)55mm		
Weight Device/Accessories	800g / 1850g		

\*1 DG: Single Ended ; OE: Output Enable ; EV: Event ; LVDS: Low Voltage Differential Signal.

\*2 Only a half channels are available for the D Slot.

\*3 A half EV pod's channels (EV4K-tip) are inputs, the other half channels (DG4K-tip) are DG outputs.

\*4 Max. 6 digits value adjustment.

\*5 The DUT (Device Under Test) inputs must be terminated by the 100Ω termination resistor.

## Packing List :

 DG4064B Device	 DG4K-tip DG4K-pod	 EV4K-tip EV4K-pod	 OE4K-tip OE4K-pod	 LVDS-tip LVDS-pod (Option)	 Flying lead cable	<ul style="list-style-type: none"> <li>· USB3.0 (1.8M)</li> <li>· BNC to MCX</li> <li>· Gripper</li> <li>· Power Adapter</li> </ul>
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Software and Manual Download links at: <http://www.acute.com.tw>