

- 2/4 channel synchronous sampling
- 1Gsp/s per channel, 16bit
- Input bandwidth DC-400MHz
- Input range: ±1.0V、±2.0V
- Input impedance: 50Ω
- PCIe x8 Gen3 communication interface
- support FPGA secondary development
- Software development package supports C/C++, LabVIEW, Matlab etc



Series	Bus	Resolution	Channel	Sampling Rate	Bandwidth	Storage depth	System support
LD817x-1G16	PCIe x8 Gen3	16bit	2/4channel	1Gsp/s	DC-400MHz	8GB	Windows Linux

### Brief introduction

- LD817x-1G16 is Mysoow's "Agile" series PCIe acquisition card, supporting 2/4 channel, 16bit, achieving 1Gsp/s synchronous sampling, On board DDR4 memory granules, featuring a 128-bit bus width and 8GB storage volume, larger volume customization is also supported.
- PCIe x8 Gen3 bus interface, supporting the data speed up to 48Gbps.
- Support multiple triggering modes including hardware, triggering, software triggering and manual triggering etc. Continuous sampling mode is also supported.
- Support the secondary development for users, providing DLL dynamic link pool.
- Equipped with host computer Demo software, supporting the configuration of board and real-time display and storage of data.

### Typical applications

- Optical Coherence Tomography (OCT)
- Non-destructive detection
- Wave form recorder
- Multi-channel transient recorder
- Life science
- Particle physics
- Mass spectrometry analysis
- Communication
- Bandwidth signal analysis

## Detailed parameters

Terminal						
Simulated input	2/4 channel, SMA					
Triggered input	1 way wide range triggered input, SSMC					
Triggered output	1 way SSMC					
Reference clock input	1 way SSMC					
Reference clock output	1 way SSMC					
Communication bus	PCIe x8 Gen3					
JTAG seconardary development interface	2.0mm 2x14 box, internal					
UART serial port	2.0mm 3P socket, internal					
Other characteristics	2 way PWM output, 1 way pulse counter input, 2 way IO, adjustable voltage level					
Acquisition system						
Resolution	16bit					
-3dB Bandwidth	DC-400MHz					
Input channel	2/4 channel synchronous sampling					
Sampling rate	up to 1Gsps					
Sampling mode	Continuous sampling, finite point sampling					
Full range input scope	$\pm 1.0V$ 、 $\pm 2.0V$					
Input coupling	DC/AC Switching					
Input impedance	50 $\Omega$					
Extreme input	$\pm 2.1V_{max}$					
Storage						
Storage volume	8GB					
Recording capability	Can be set up by software, the overall volume does not exceed memory space					
Trigger depth	Can be set up by software, the overall volume does not exceed memory space					
Index parameter						
Input impedance	Range	SNR	SINAD	SFDR	ENOB	Test conditions
50 $\Omega$	$\pm 1.0V$	65	65	75	10.5	Input signal amplitude-1dBFS, frequency 10MHz, sampling rate 1Gsps
Trigger Input System						
Trigger source	Software trigger, threshold(channel) trigger, external(simulation and digital) trigger					

Channel number	1 channel, supporting simulation and digital TTL, LVTTTL, Input impedance 50Ω
Trigger input level	Simulation input $\pm 0.2V \sim \pm 5V$ , standard digital TTL, LVTTTL level, square wave/pulse wave/trapezoidal wave
Trigger frequency	$\leq 2\text{MHz}$
Trigger mode	post-trigger, pre-trigger, delay-trigger
Trigger direction	Rising edge trigger, falling edge trigger, double-sided edge trigger
Trigger threshold adjustment	$\pm 0.1V \sim \pm 5V$ precisely adjustable
Trigger input width	$\geq 50\text{ns}$
Trigger delay	$0 \sim 2^{31}$ sampling cycle
<b>Trigger output</b>	
Trigger output level	LVTTTL, output current 10mA
Trigger output width	$\geq 50\text{ns}$ , adjustable pulse width
<b>Clock system</b>	
Clock source	Internal/external clock source
Internal clock resource	10MHz, $\pm 1.5\text{ppm}$ , $\pm 10\text{ppb}$ optional
External input clock amplitude	0.4Vpp ~ 3.3Vpp sine wave or square wave
External input impedance	50Ω
External input coupling mode	AC coupling
External reference clock frequency	10MHz, other frequencies can be customized
<b>Power requirements</b>	
Power supply mode	PCIe insertion socket power supply, 5557-2×3P connector power supply
Power requirement	12V/3A
<b>Size and weight</b>	
Size	Standard full height & full length PCIe board, occupying 1 bit PCIe insertion socket, length×width×height: 190×20×111mm
Weight	~0.46kg
<b>Environment parameters</b>	
Working temperature	0°C ~ +50°C
Relative working humidity	10% ~ 90%RH, no condensation
Storage temperature	-40°C ~ +85°C
Relative storage humidity	5% ~ 95%RH, no condensation

## System requirements

- 1> PCIe x8 Gen3 interface;
- 2> larger than 4GB memory, 1GB hard-disk space;
- 3> Display screen resolution larger than 1280x1024;
- 4> Operation system supports Windows, Linux and domestically produced operation system;

## Software Development Package

Provide software development package to help users to quickly accomplish application development and integration. MSDK software development package is applicable for Windows, Linux and other operation system, supporting the secondary integration and development for C/C++, Matlab, Labview, Python, C#, QT and other software, including host computer software, interface pool, DEMO routine and development description documents etc.

## Ordering information

Ordering Information	
Model	Description
LD8172-1G16	2 channel 16bit, 1Gsps, PCIe x8 Gen3, bandwidth DC-400MHz
LD8174-1G16	4 channel 16bit, 1Gsps, PCIe x8 Gen3, bandwidth DC-400MHz

### Note:

The product is not equipped with coaxial cables by default, and our company can provide customized wire services

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