·2/4 channel synchronous sampling

·500Msps per channel，16bit

·Input bandwidth DC-220MHz

·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
LD816x-500M16	PCIe x8 Gen3	16bit	2/4channel	500Msps	DC-220MHz	8GB	Windows Linux

Brief introduction

·LD816x-500M16 is Mysoow's "Agile" series PCIe acquisition card, supporting 2/4 channel, 16bit，achieving 500Msps 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

·Ware 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-220MHz					
Input channel	2/4 channel synchronous sampling					
Sampling rate	up to 500Msps					
Sampling mode	Continuous sampling, finite point sampling					
Full range input scope	±1.0V、±2.0V					
Input coupling	DC/AC Switching					
Input impedance	50Ω					
Extreme input	±1.1Vmax					
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
50Ω	±1.0V	65	65	75	10.5	Input signal amplitude-1dBFS，frequency 10MHz，sampling rate 500Msps
Trigger Input System						
Trigger source	Software trigger, threshold(channel) trigger, external(simulation and digital) trigger					
Channel number	1 channel, supporting simulation and digital TTL, LVTTL，Input impedance 50Ω					
Trigger input level	Simulation input ±0.2V~±5V, standard digital TTL, LVTTL level，square wave/pulse wave/trapezoidal wave					
Trigger frequency	≤2MHz					
Trigger mode	post-trigger, pre-trigger, delay-trigger					
Trigger direction	Rising edge trigger, falling edge trigger, double-sided edge trigger					

Trigger threshold adjustment	±0.1V~±5V precisely adjustable
Trigger input width	≥50ns
Trigger delay	0~2^31 sampling cycle
Trigger output	
Trigger output level	LVTTL，output current 10mA
Trigger output width	≥50ns，adjustable pulse width
Clock system	
Clock source	Internal/external clock source
Internal clock resource	10MHz，±1.5ppm，±10ppb optional
External input clock amplitude	0.2Vpp ~ 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
Power requirements	
Power supply mode	PCIe insertion socket power supply，5557-2×3P connector power supply
Power requirement	12V/3A
Size and weight	
Size	Standard full height & full length PCIe board，occupying 1 bit PCIe insertion socket，length×width×height：190×20×111mm
Weight	~0.46kg
Environment parameters	
Working temperature	0℃ ~ +50℃
Relative working humidity	10% ~ 90%RH, no condensation
Storage temperature	-40℃ ~ +85℃
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
LD8162-500M16	2 channel 16bit，500Msps，PCIe x8 Gen3，bandwidth DC-220MHz
LD8164-500M16	4 channel 16bit，500Msps，PCIe x8 Gen3，bandwidth DC-220MHz

Note：

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

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