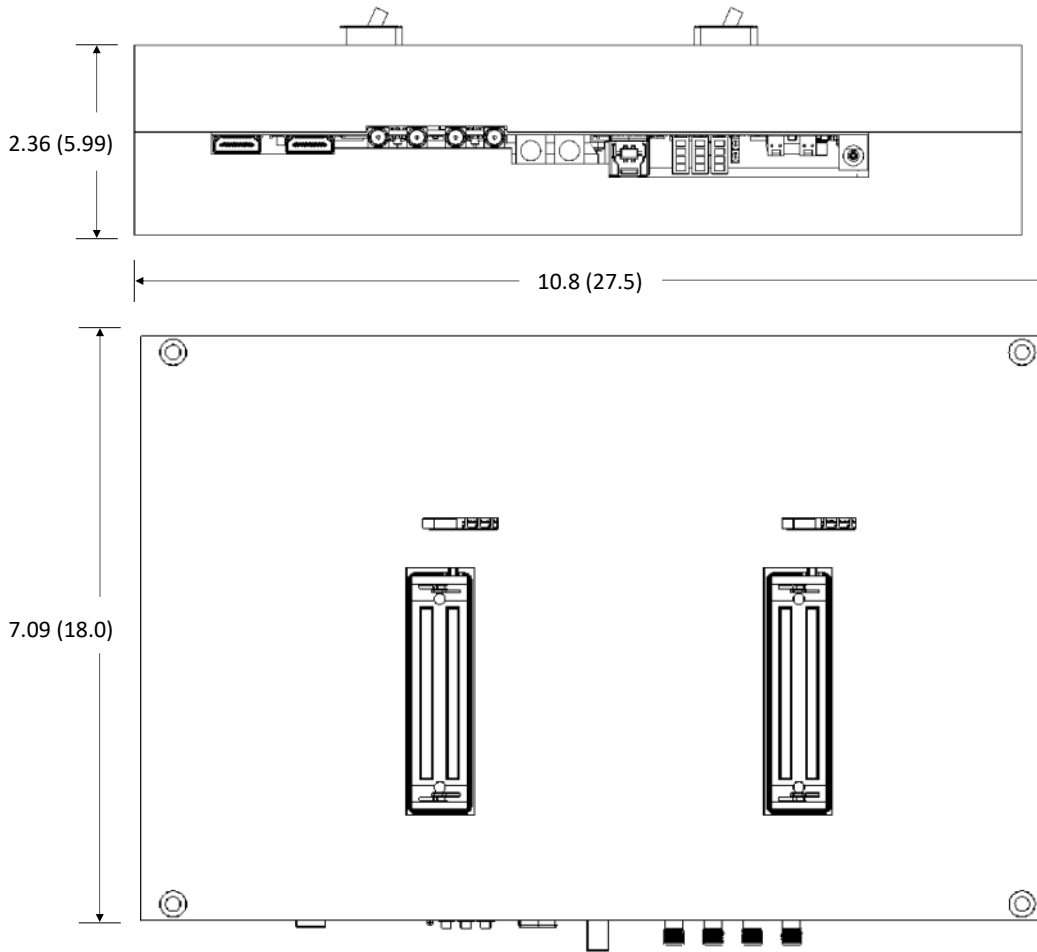


## Compact, High Channel Count Data Acquisition Unit with 256 Analog-to-Digital Converters (ADC) and Integrated Preamplifiers



- Compact housing and customizable input connectors for easy instrument integration
- Streaming ADCs for continuous data acquisition (no buffering) and faster transmission
- Internal trigger generator allows external device triggering at defined frequencies. Continuous mode sends trigger signal as soon as previous acquisition is complete (highest frame rate).
- Up to 4 units operating in parallel for a total of 1024-ch
- Integrated amplifier chips with digitally controlled gain
- Compact 2 x 25 mm preamps per channel
- Optical and electrical trigger inputs
- Open SDK and access to raw ADC data
- Optimized for photoacoustic imaging as the highest priority

<b>Channels</b>	Channels per ADC <sup>(1)</sup>	256	
	Preamps	2	
	Channels per Preamp	128	
<b>ADC</b>	Programmable Gain <sup>(2)</sup>	6 to 51 dB	(1) Upgradeable to 1024 parallel channels
	Analog Bandwidth @ -6 dB <sup>(3)</sup>	12.5 kHz to 25 MHz	(2) Depends on mode selection. Add 40 dB preamplifier gain.
	Resolution	12-bit	(3) Might be limited by filter, mode, and gain settings.
	Sampling Rate	40 MSPS	(4) Actual max frame/trigger rate might be limited by PC specs.
	Max Trigger / Frame Rate <sup>(4)</sup>	240 Hz / fps	(5) Per frame per channel
	Max Points <sup>(5)</sup>	4096	(6) Measured with 50Ω load. The total gain is Preamplifier Gain + Programmable Gain.
	Preamplifier Gain <sup>(6)</sup>	40 dB	(7) Can be customized before the order is placed.
<b>Preamp</b>	Input Impedance <sup>(7)</sup>	39 kΩ — 1 MΩ	(8) Measured using signal generator and oscilloscope with 50Ω input.
	Output Impedance	50 Ω	
	Bandwidth @ -3 / -6 dB <sup>(8)</sup>	40/25 kHz to 30/35 MHz	



1. Synchronization ports for connecting up to four LEGION DAQ-256 in parallel
2. Two sets of programmable electrical trigger input and output (isolated SMA connectors)
3. Two optical trigger inputs for connecting 2 mm patch fibers allow precise triggering from the end-user's pulsed lasers
4. USB 3.0 port for high data transmission to end-user or PhotoSound provided computer
5. Status and diagnostic LEDs
6. 12VDC 5A (power supply included)
7. Medical grade Cannon QLC-260 probe input connectors with signal and ground pins for each channel to minimize crosstalk (pinout map available upon request). **Custom connectors and pin mapping to match existing third-party probes can be substituted in place of default connectors.**

All dimensions approximate in inches (cm).

Computer* (optional)	Software
4+ generation Core i7 Processor Nvidia Graphics Card for CUDA only 16+ GB DDR4 Memory 500+ GB PCIe Solid-State Drive Windows 10 64-bit	Windows 7/10 64-bit drivers Standalone DAQ Application Software Development Kit (LabView) TDMS data output

\* End-user or PhotoSound provided



Up to four LEGION DAQ256 can be connected in parallel to offer an unprecedented number of channels (1024 total). Connect the units together yourself or have PhotoSound do it for you by connecting units together in a compact housing with integrated computer.

Version DAQ256.003.0319 © 2019  
 Trademarks are the property of PhotoSound®  
 All specifications are subject to change without notice.  
 LEGION DAQ256 is classified EAR99 and does not require an export license.