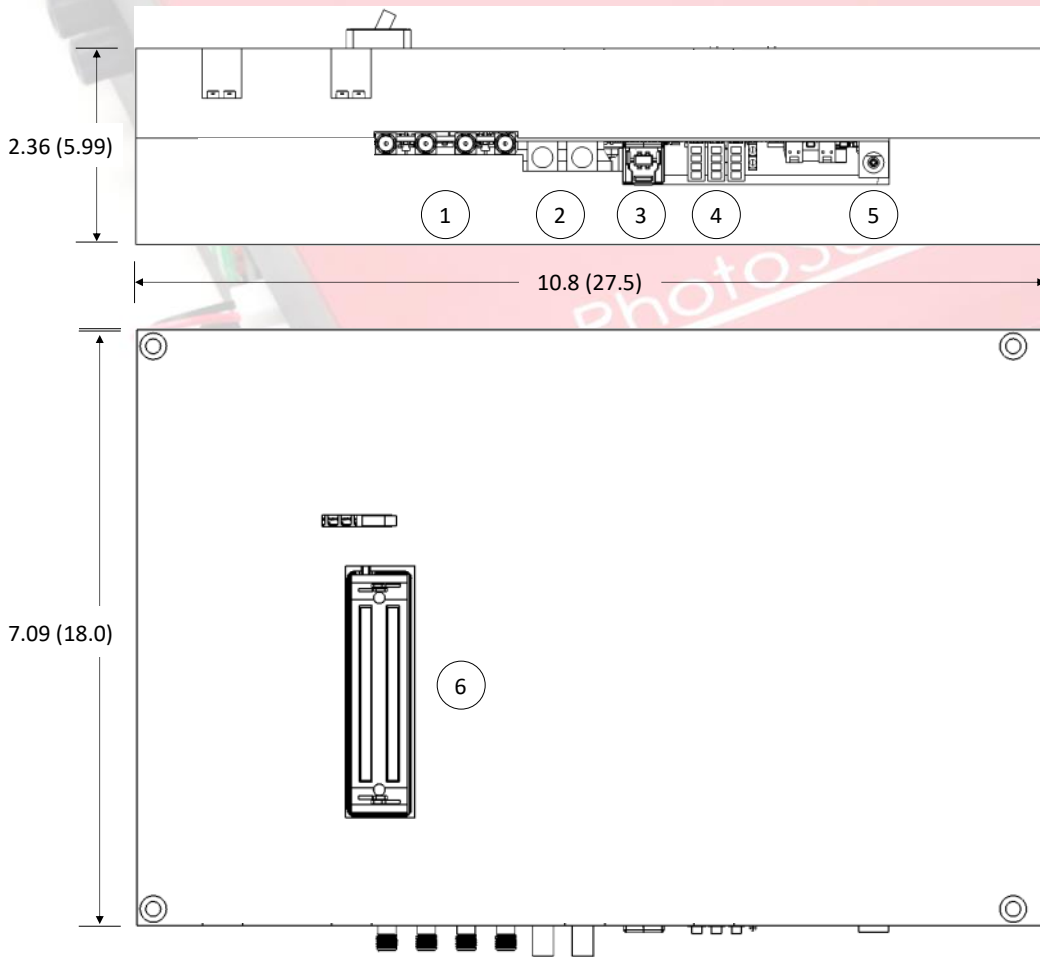


## Compact High Channel Count Data Acquisition (DAQ) Unit with 128 Parallel Channels



- 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).
- Upgrades available to enable 256 -channels or higher
- 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 RF data
- Optimized for photoacoustic imaging as the highest priority

<b>Channels</b>	Channels per ADC <sup>(1)</sup>	128	(1) All channels fully parallel for simultaneous data acquisition without multiplexing (upgradeable to 256 channels)
	Preamps	1	
	Channels per Preamp	128	
<b>ADC</b>	Programmable Gain <sup>(2)</sup>	6 to 51 dB	(2) Depends on mode selection (additional 40 dB with integrated preamp)
	Analog Bandwidth @ -3 dB <sup>(3)</sup>	12.5 kHz to 25 MHz	(3) Depends on mode/parameter selection (low pass programmable filters available)
	Resolution	12-bit	(4) Depends on PC specifications (limited to 200 Hz after 256-channel upgrade)
	Sampling Rate	40 MSPS	(5) Per frame per channel
	Max Trigger / Frame Rate <sup>(4)</sup>	400 Hz / fps	(6) Measured with 50Ω load (actual gain depends on probe capacitance)
<b>Preamp</b>	Max Points <sup>(5)</sup>	4096	(7) Customizable up to 1MΩ (HiZ is the best to minimize noise at high frequencies)
	Amplification <sup>(6)</sup>	40 dB	(8) Measured using signal generator and oscilloscope with 50Ω input
	Input Impedance <sup>(7)</sup>	39 kΩ	
	Output Impedance	50 Ω	
	Bandwidth @ -6 dB <sup>(8)</sup>	40 kHz to 35 MHz	



1. Two sets of programmable electrical trigger input and output (isolated SMA connectors)
2. Two optical trigger inputs for connecting 2 mm patch fibers allow precise triggering from the end-user's pulsed lasers
3. USB 3.0 port for high data transmission to end-user or PhotoSound provided computer
4. Status and diagnostic LEDs
5. 12VDC 5A (power supply included)
6. 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

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All specifications are subject to change without notice.

LEGION™ DAQ128 is classified EAR99 and does not require an export

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