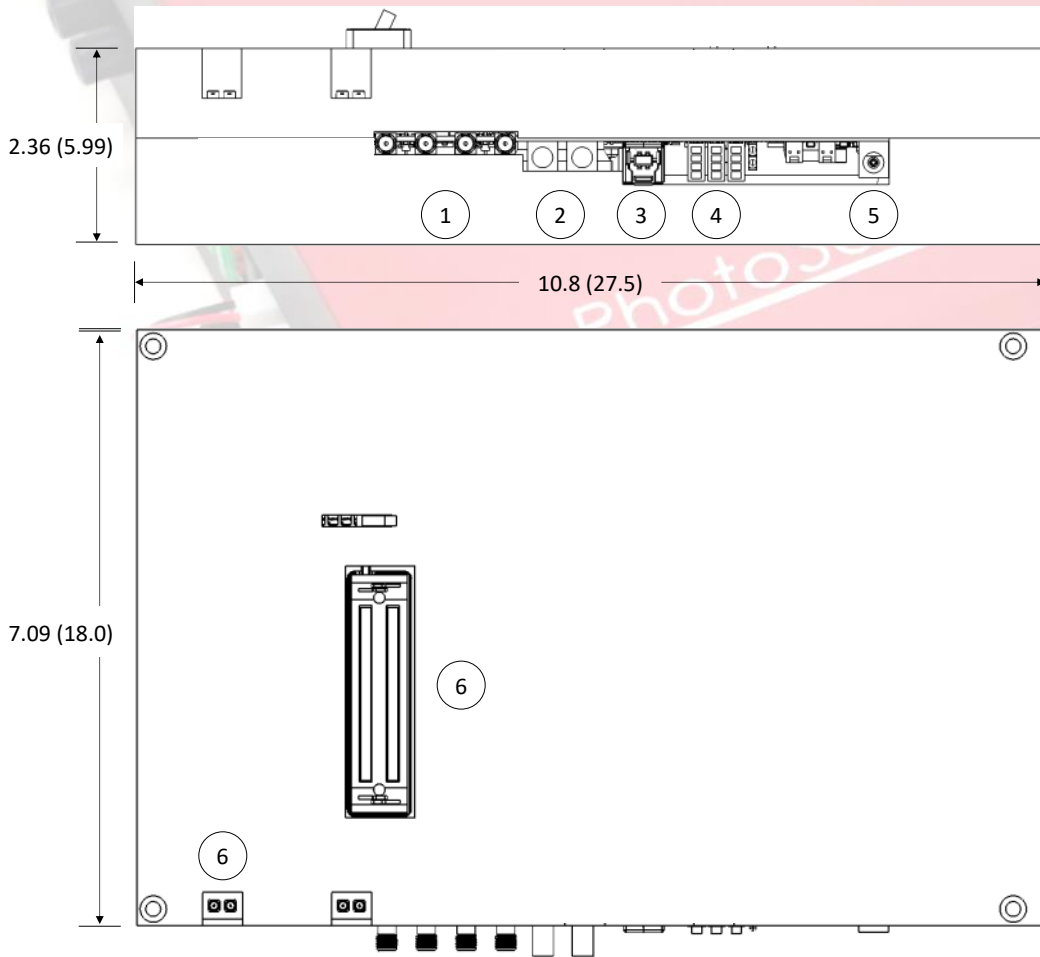


Compact, High Channel Count Data Acquisition Unit with 128 Analog-to-Digital Converters (ADC) and Integrated Preamplifiers



- 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).
- 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

Channels	Channels per ADC ⁽¹⁾	128	
	Preamps	1	
	Channels per Preamp	128	
ADC	Programmable Gain ⁽²⁾	6 to 51 dB	⁽¹⁾ Upgradeable to 256 parallel channels
	Analog Bandwidth @ -3 dB ⁽³⁾	12.5 kHz to 25 MHz	⁽²⁾ 12 to 45 dB MODE2 available.
	Resolution	12-bit	⁽³⁾ Low Pass programmable filters available. 50 kHz to 25 MHz MODE2 available.
	Sampling Rate	40 MSPS	⁽⁴⁾ 240 Hz after upgrade with 256-channels. Actual max frame/trigger rate might be limited by PC specs.
	Max Trigger / Frame Rate ⁽⁴⁾	480 Hz / fps	⁽⁵⁾ Per frame per channel
	Max Points ⁽⁵⁾	4096	⁽⁶⁾ Measured with 50Ω load. The total gain is Preamplifier Gain + Programmable Gain.
Preamp	Amplification ⁽⁶⁾	40 dB	⁽⁷⁾ Can be customized before the order is placed.
	Input Impedance ⁽⁷⁾	39 kΩ — 1 MΩ	⁽⁸⁾ Measured using signal generator and oscilloscope with 50Ω input.
	Output Impedance	50 Ω	
	Bandwidth @ -3 / -6 dB ⁽⁸⁾	40/25 kHz to 30/35 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 license.

PhotoSound Technologies, Inc. | *Imaging and Data Acquisition Solutions*

9511 Town Park Drive | Houston, TX 77036 USA

www.pst-inc.com | info@pst-inc.com | 713-401-9407