PhotoSound®

Imaging and Data Acquisition Solutions

*Build the best data acquisition platform powered by PhotoSound®*

# FLASH™ ADC

## 32-Channel Analog-to-Digital Converter


- Compact, external USB housing for easy instrument integration
- Industry standard SMA input connectors
- Continuous analog-to-digital conversion with no buffering or multiplexing allowing faster data transmission and trigger rates
- Integrated amplifier chips with digitally controlled gain
- Generate trigger output at defined rate or repetition of external trigger input with programmed delay.
- Sync external hardware with data acquisition using electronic or optical IN and OUT ports located on the unit housing
- Includes standalone control software based on the MATLAB® computing environment and backend SDK written in C++ compatible with many frontend languages such as LabView, MATLAB® and Python™

| | |
|---|---|
| **Channels** (1) | 32 |
| **Programmable Gain** (2) | 44 to 94 dB |
| **Bandwidth @ -6 dB** (3) | 16 kHz to 35 MHz |
| **Sampling Rate** | 80 MSPS |
| **Resolution** | 12-bit |
| **Max Trigger / Frame Rate** (4) | 6000 Hz / fps |
| **Max Points** (5) | 80,000 |
| **Input Impedance** (6) | 50 kΩ |
| **Input Connector** | SMA |

(1) All channels fully parallel (simultaneous data acquisition without multiplexing)

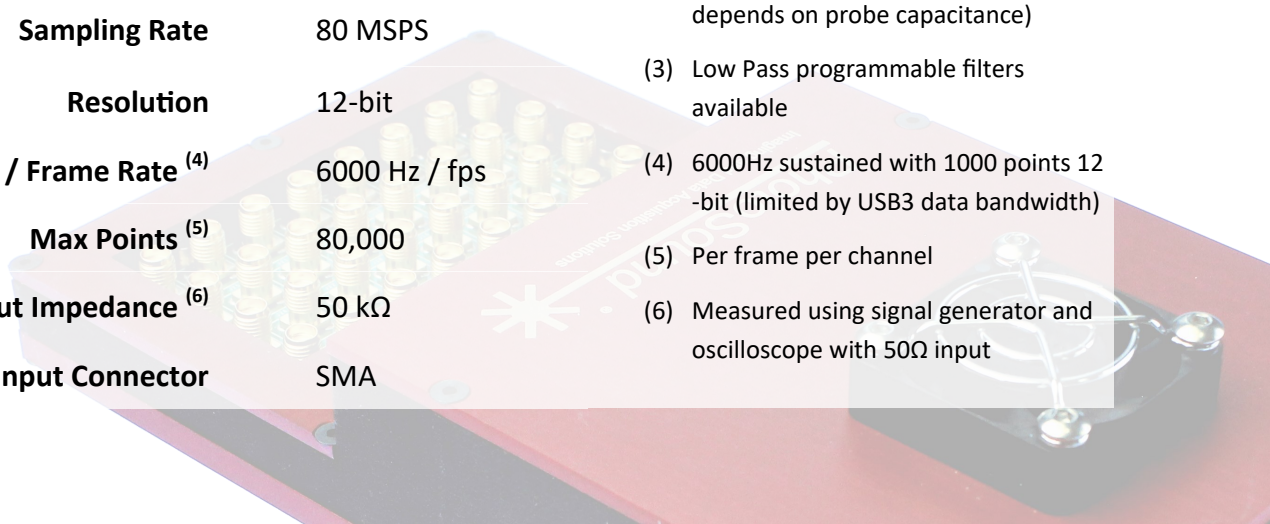
(2) Measured with 50Ω load (actual gain depends on probe capacitance)

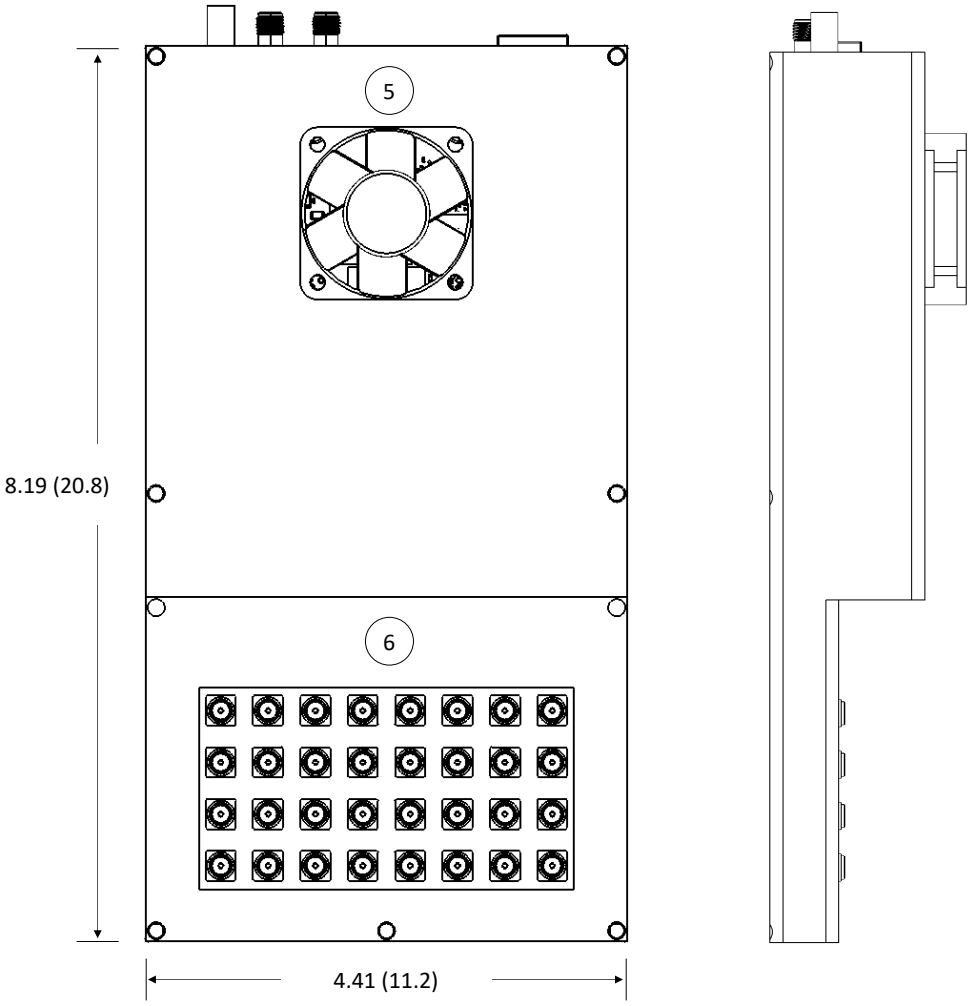
(3) Low Pass programmable filters available

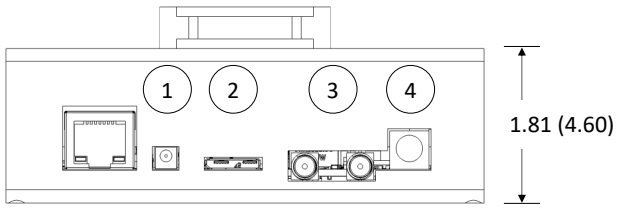
(4) 6000Hz sustained with 1000 points 12 -bit (limited by USB3 data bandwidth)

(5) Per frame per channel

(6) Measured using signal generator and oscilloscope with 50Ω input

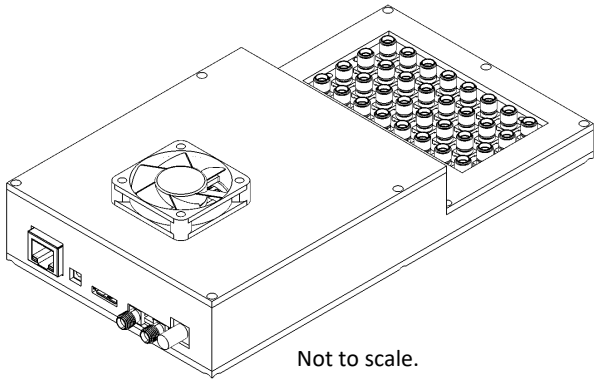





All dimensions approximate in inches (cm). Weight 1.8 lbs (0.82 g).

1. 12 VDC 2 A (4.2 A power supply included)
2. USB 3.0 port for high data transmission to computer
3. Programmable electrical trigger input and output (isolated SMA connectors)
4. Optical trigger input for connecting patch fiber allows precise triggering from external light source
5. Silent operation cooling fan and heatsink mounted directly on ADC
6. Industry standard SMA preamplifier input connectors for third-party probe (detachable preamplifier board can be replaced with inlcuded SMA feedthrough board with ESD and overvoltage protection for direct access to ADC32 50 Ω inputs)



Not to scale.

Minimum PC Requirements: 6th generation Genuine Intel® quad-core processor, 8 GB DDR4 RAM. USB3 port on Intel® host controller, 500 GB PCIe 3.0 x4 SSD w/ heatsink, Microsoft Windows 10 64-bit Home

Recommended PC Requirements: 9th generation Genuine Intel® hexa-core processor or better, 16 GB DDR4 RAM, USB3 port on Intel® host controller, 1 TB PCIe 3.0 x4 SSD w/ heatsink (e.g. Samsung 970 Pro), Microsoft Windows 10 64-bit Pro



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