PowerLabs are high performance research data acquisition hardware engineered to record precise, reliable, consistent data.

PowerLabs are capable of high speed sampling and are compatible with instruments, signal conditioners, and transducers supplied by ADInstruments and many other leading brands.

Developed in 1985 and cited in more than 20,000 research papers, PowerLab has been a reliable data acquisition tool for an entire generation of scientists and educators. PowerLab has always offered a simple and flexible solution for almost all types of analogue physiological data acquisition. With the addition of the PowerLab C for research, we are excited to continue supporting a whole new generation of scientists with unparalleled flexibility for both analog and digital data acquisition.

> "PowerLab simply WORKS. It never crashes or has to be rebooted, and is 100% reliable."
>
> **Dr. Giovanni Casotti**, Professor of Biology, West Chester University

Features:

Easy to use
- Simple to set up, connects directly to Windows or Mac via USB
- Streamlined integration with analysis software

Reliable
- Excellent time synchronisation between channels
- Built to last with 5 year warranty on research models
- Robust and portable
- High-speed, real-time data acquisition
- High resolution on even the smallest of signals
- Advanced filtering and noise reduction

Flexible
- Record a broad range of signals simultaneously
- Compatible with a wide range of instruments, signal conditioners, and transducers
- Independent simulator outputs

Trusted
- Trusted brand for over 30 years
- Cited in more than 30,000 peer-reviewed journals
- Certified to meet the strictest international safety standards for human and animal use

PowerLab C

- **Modular system**
- **Powerful and portable**
- **Analogue compatible**
- **Digital framework for the future**

The combination of PowerLab C and C Series Interfaces creates a modular data acquisition foundation system that provides unparalleled flexibility for researchers looking to invest in customisable, reliable solutions for both now, and in the future.

PowerLab C   PLC01

PowerLab C is a digital data acquisition device that provides adaptive mains filtering, power management for peripheral devices (max 100W via USB-PD) and sub-µS time synchronisation for up to four C Series compatible USB-C devices (currently up to 32 channels).
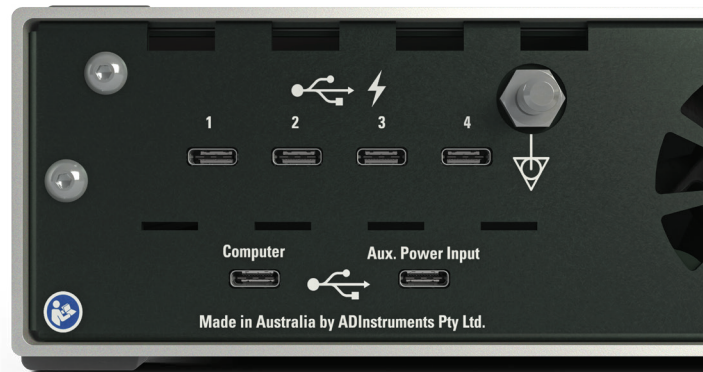
C Series Interfaces

Instrument Interface   PLCI1

Provides 4 channels of input capability from any analogue instrument to the PowerLab C. Up to 100kHz sampling on 4 channels. 20mV to 10 V range.

Front End Interface   PLCF1

Converts analogue data from existing (and majority of legacy) ADInstruments Front-Ends such as Bridge Amps and Bio-Amps, so that they can be digitally sampled by the PowerLab C. Up to 8 channels at 50 kHZ, or 4 channels at 100 kHz. Comes in 1, 2, 4, and 8 channel variants (with different cables).

Configuration Options

Both C Series interfaces are designed to work with the PowerLab C for adaptive mains filtering and sub-µS time synchronisation with other C Series compatible devices. Alternatively, for simple setup requirements, you can connect them directly to a computer.

PowerLab 35 and 26 Series

Built for precision, our 35 and 26 Series Research PowerLabs are engineered to give you high quality, reproducible data from analogue signals while meeting the strictest international safety standards.

35 Series

PL3508
PowerLab 8/35

The 8/35 PowerLab is for those researchers requiring an advanced feature set. 8 analogue input channels (4 of which can be used in differential mode), 8 digital inputs, 8 digital outputs and a maximum sampling rate of 200 kS/s per channel.

PL3516
PowerLab 16/35

The 16/35 research PowerLab is our most powerful DAQ system. 16 analogue input channels (4 of which can be used in differential mode), 8 digital inputs, 8 digital outputs and a 400kS/s ADC giving a maximum per channel sampling rate of 200 kS/s.

26 Series
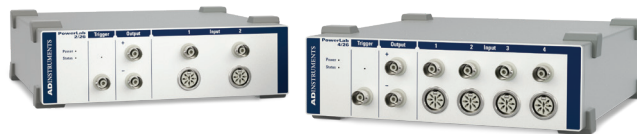
PL2602
PowerLab 2/26

For those who require minimal channels the 2/26 is an ideal entry option. Maximum sampling rate of 100kHz per channel. Independent ADCs for each channel to keep data perfectly in sync.

PL2604
PowerLab 4/26

Our entry level research grade DAQ system, the 4/26 provides 4 analogue input channels and has a maximum sampling rate of 100kHz per channel. Independent ADCs for each channel to keep data perfectly in sync.
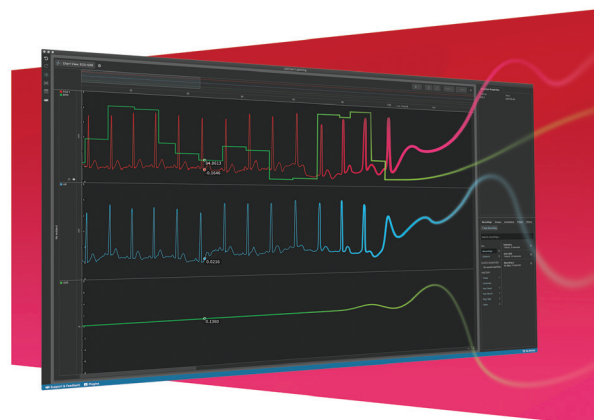
Software Connectivity

LabChart

Enabling Discovery

LabChart 8 is our traditional data analysis software for life science research. It creates a platform for all of your recording devices to work together, allowing you to acquire biological signals from multiple sources simultaneously and apply advanced calculations and plots as your experiment unfolds.

LabChart LIGHTNING

Data acquisition and analysis re-imagined

LabChart Lightning is the latest iteration of our easy to use data acquisition and analysis software. While supporting similar features to LabChart 8, including auto-recognition of PowerLabs and other compatible hardware, LabChart Lightning has been completely re-imagined to focus on combining power, ease of use, and data integrity.

ADInstruments equipment is used in the **TOP 100 INSTITUTIONS** for Life Science worldwide and is cited in more than **30,000** peer-reviewed papers.

Unlimited channels

Cross-recording analysis

Custom calculations

Cross platform

PowerLab
Specifications

	PowerLab C	16/35	8/35	4/26	2/26
Data communication	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0
Mains powered option	Yes	Yes	Yes	Yes	Yes
USB-PD powered option	Yes	No	No	No	No
Power available for external devices	Up to 350W (via USB-PD)	20W (via 12C)	20W (via 12C)	5W (via 12C)	5W (via 12C)
Dedicated trigger Input	No	Yes	Yes	Yes	Yes
Analogue input channels	Up to 32	16	8	4	2
Single ended inputs	Up to 16	16	8	4	2
Built in differential inputs	0	4	4	4	2
Differential inputs via Front Ends	Up to 32	Up to 16	Up to 8	Up to 4	Up to 2
Input voltage range	± 2 mV to ± 10 V	± 2 mV to ± 10 V	± 2 mV to ± 10 V	± 20 mV to ± 10 V	± 20 mV to ± 10 V
Data resolution	16 bit	16 bit	16 bit	16 bit	16 bit
Min sampling rate	1 S/10 min	1 S/10 min	1 S/10 min	1 S/10 min	1 S/10 min
Max sampling rate per channel	100 kS/s	200 kS/s (Max 400kS/s aggregate)	200 kS/s (Max 400kS/s aggregate)	100 kS/s	100 kS/s
Input crosstalk	>90dB	75 dB (min)	75 dB (min)	> 90 dB	> 90 dB
Frequency response	-3dB (24kHz, all ranges)	- 3 dB (25 kHz, 10 V)	- 3 dB (25 kHz, 10 V)	- 3 dB (37 kHz, 10 V)	- 3 dB (37 kHz, 10 V)
CMRR	>85dB (110Hz)	>100 dB @ 100 Hz, 2-100 mV	>100 dB @ 100 Hz, 2-100 mV	>95 dB @100 Hz, 20-100 mV	>95 dB @100 Hz, 20-100 mV
Input impedance	1 MΩ	1 MΩ	1 MΩ	1 MΩ	1 MΩ
Output amplifier	No	Yes	Yes	Yes	Yes
Output channels	0	2	2	1	1
Output resolution	-	16 bit	16 bit	16 bit	16 bit
Output voltage ranges	-	± 200 mV to ± 10 V	± 200 mV to ± 10 V	± 200 mV to ± 10 V	± 200 mV to ± 10 V
Digital output channels	-	8	8	0	0
Digital input channels	-	8	8	0	0
Supports external Bio-Amps	Up to 32 channels	Up to 16 channels	Up to 8 channels	Up to 4 channels	Up to 2 channels
Built-in bio-amplifier	No	No	No	No	No
Safety rating	IEC60601-1	IEC60601-1	IEC60601-1	IEC60601-1	IEC60601-1
Supports external isolated stimulator	Yes	Yes	Yes	Yes	Yes
Built in isolated stimulator	No	No	No	No	No

"It was one of the few pieces of equipment which worked well with the generator at basecamp."

Dr. Philip Ainslie,
Centre for Heart, Lung, and Vascular Health,
University of British Columbia

"Other systems do not match PowerLab, it is a great product."

Dr. Kengatharan,
President and COO,
Armetheon, Inc.

For more information contact your local representative at **info@animalab.eu** or visit **www.animalab.eu**

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