

PowerLab Specifications

	RESEARCH				EDUCATION	
	16/35	8/35	4/26	2/26	26T	15T
Included Software	LabChart	LabChart	LabChart	LabChart	(Lt, Lt LabStation and LabChart purchased separately)	(Lt, Lt LabStation and LabChart purchased separately)
Data communication	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0
Trigger Input	Yes	Yes	Yes	Yes	Yes	No
Analog input channels	16	8	4	2	4	2
Single ended inputs	16	8	4	2	4	2
Differential inputs	4	4	4	2	4	2
Input voltage range	± 2 mV to ± 10 V	± 2 mV to ± 10 V	± 20 mV to ± 10 V	± 20 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	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	1 S/10 min
Max sampling rate per channel	200 kS/s (Max 400kS/s Aggregate)	200 kS/s (Max 400kS/s Aggregate)	100 kS/s	100 kS/s	100 kS/s	100 kS/s
Input crosstalk	75 dB (min)	75 dB (min)	> 90 dB	> 90 dB	> 90 dB	> 90 dB
Frequency response	- 3 dB (25 kHz, 10 V)	- 3 dB (25 kHz, 10 V)	- 3 dB (37 kHz, 10 V)	- 3 dB (37 kHz, 10 V)	- 3 dB (37 kHz, 10 V)	- 3 dB (37 kHz, 10 V)
CMRR	>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	>95 dB @100 Hz, 20-100 mV	>95 dB @100 Hz, 20-100 mV
Input impedance	1 MΩ @ 100 pF	1 MΩ @ 100 pF	1 MΩ @ 150 pF	1 MΩ @ 150 pF	1 MΩ @ 150-200 pF	1 MΩ @ 150 pF
Output amplifier	Yes	Yes	Yes	Yes	Yes	Yes
Output channels	2	2	1	1	1	1
Output resolution	16 bit	16 bit	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	± 200 mV to ± 10 V	± 200 mV to ± 10 V
Digital output channels	8	8	0	0	8	0
Digital input channels	8	8	0	0	8	0
Built-in bio-amplifier	No	No	No	No	Yes	Yes
Safety rating	IEC60601-1	IEC60601-1	IEC60601-1	IEC60601-1	IEC60601-1	IEC60601-1
Bio-amplifier channels	-	-	-	-	2	2
Amplification range	-	-	-	-	± 200 μV to ± 20 mV	± 200 μV to ± 20 mV
Bio-amplifier CMRR	-	-	-	-	110 dB	110 dB
Isolated stimulator	No	No	No	No	Yes	Yes
Isolated stimulator current range	-	-	-	-	0-20mA	0-20mA
Pulse duration	-	-	-	-	50 – 200 μs	50 – 200 μs
Pulse rate	-	-	-	-	Software selectable	Software selectable

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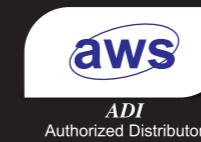
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ADI
Authorized Distributor
info@abdulwahabsons.com
www.abdulwahabsons.com



Cell: +92 333 4452807
LandLine: +92 42 3717 3814 / 37361901
Add: 260-Allama Iqbal Road, Mustafabad, Lahore, Pakistan.



PowerLab Overview

High performance data acquisition hardware



PowerLab is a high quality data acquisition device engineered to record precise, reliable, consistent data for research and education.

Data with Integrity

Developed in 1985, PowerLab has been a reliable product for an entire generation of scientists and educators. It is a simple and flexible solution for almost all types of physiological 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

- Built to last with 5 year warranty
- Robust and portable
- Fast processor for real-time data acquisition without data loss
- High speed sampling (up to 200kHz per channel) of virtually any analog signal
- 16-bit resolution on all gain ranges for high resolution on even the smallest of signals
- Each channel has individual filters and noise reduction circuitry for minimal channel crosstalk and signal noise

Flexible

- Detects a broad range of signals simultaneously, at adjustable sampling frequencies
- Compatible with a wide range of instruments, signal conditioners and transducers
- Independent simulator outputs
- DIN connectors for precalibrated transducers and low-cost amplifiers
- Digital inputs and outputs for external instrument control and triggering
- Adaptable to meet differing research applications

Trusted

- Trusted for over 30 years
- Cited in more than 20,000 peer-reviewed journals
- Certified to meet the strictest international safety standard for human and animal use

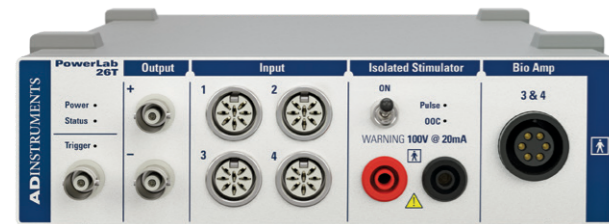


Education PowerLabs

The ideal data acquisition (DAQ) solution for life science classroom experiments. PowerLab supports engaging, hands-on learning with simple set-up and good quality data. It is designed to handle repeated and heavy use by students and maintain data accuracy and reliability.

The T Series PowerLab is an economically priced high quality DAQ unit with built-in, fully isolated, two-channel bio amplifier, isolated stimulator, separate non-isolated analog inputs, and a differential-mode analog output.

Education range



PL26T04
PowerLab 26T

Integrated data recording featuring a dual Bio Amp, an isolated stimulator, trigger input, 4 analog inputs, 8 digital inputs and 8 digital outputs. Independent ADCs for each channel to keep data perfectly in sync.



PL15T02
PowerLab 15T

Entry level integrated data recording featuring a dual Bio Amp, an isolated stimulator and 2 analog inputs. Independent ADCs for each channel to keep data perfectly in sync.

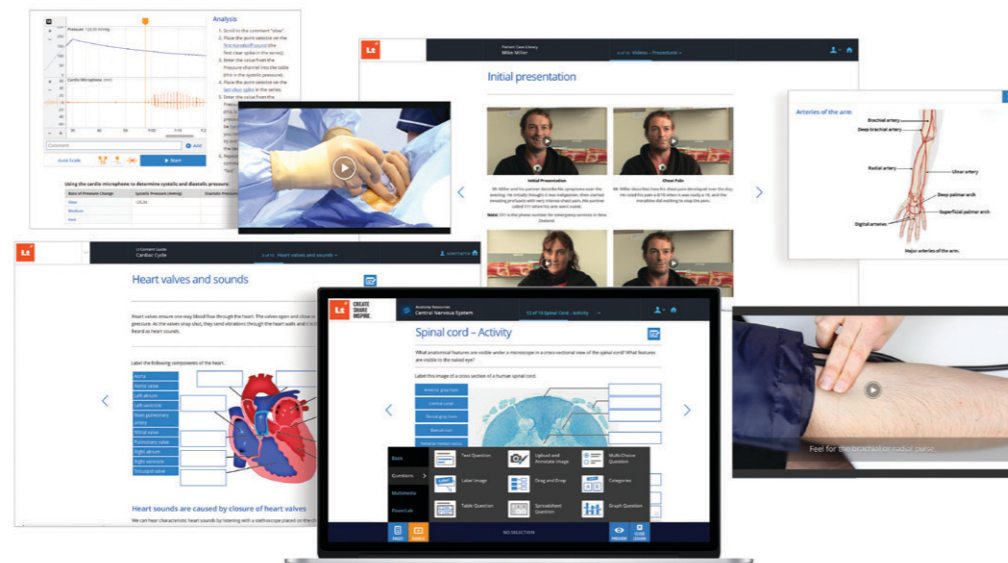


Software connectivity



Lt is an online learning platform with ready-to-use content for life sciences, nursing and medicine. Over 340 full editable lessons are available for use. Reinforce theory through experimentation by pairing Lt with PowerLab and a range of teaching hardware kits so that students can record and analyze physiological signals in real time.

Find out more at adi.to/Lt



Lt LabStation is a lab-based learning platform where you can create interactive lessons for students to work through in an offline environment (sold separately). Over 150 fully editable lab lessons are also available for use. Students can record and analyze physiological signals using PowerLab + kits and Lt LabStation to reinforce theory through experimentation.

Find out more at adi.to/LtLabStation

www.abdulwahabsons.com

LabChart

Education PowerLabs can also be used with LabChart analysis software for teaching purposes (sold separately). Using research grade software can help form the foundation for your advanced undergraduate and postgraduate labs. Our LabChart experiments allow students to work through complex methods step by step, building knowledge of important physiological concepts.

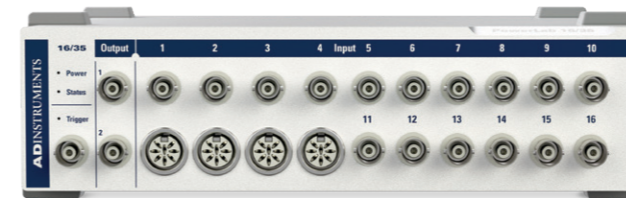
Find out more at adi.to/labchart

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Research PowerLabs

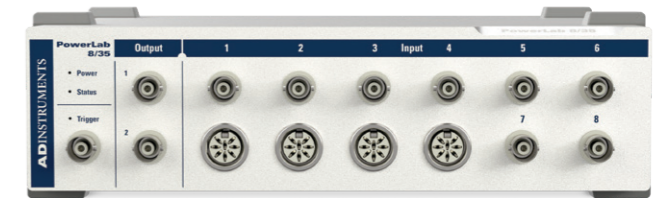
Built for precision, our research PowerLabs are engineered to give you high quality, reproducible data while meeting the strictest international safety standards. Each unit provides the full use of a multichannel, real time chart recorder, polygraph, XY plotter, digital voltmeter and storage oscilloscope with the benefits of easy data handling, high resolution, and variable speeds.

Research range



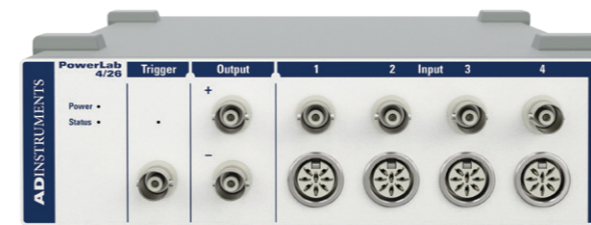
PL3516
PowerLab 16/35

The 16/35 research PowerLab is our most powerful DAQ system. 16 analog 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.



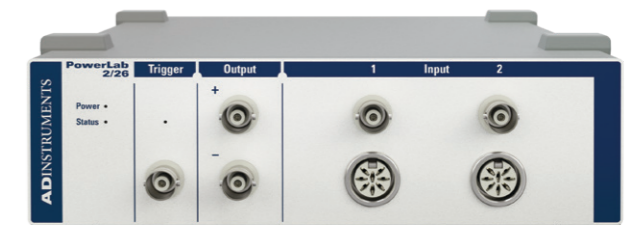
PL3508
PowerLab 8/35

The 8/35 PowerLab is for those researchers requiring an advanced feature set. 8 analog 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.



PL2604
PowerLab 4/26

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



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.



Software connectivity

LabChart

Research PowerLabs are designed to be used with LabChart analysis software. Designed specifically for life science data, LabChart provides up to 32 channels for data display and analysis options that are powerful and easy to use.

With auto-recognition of PowerLabs and other LabChart Compatible hardware, multi-window views, one touch recording, simultaneous recording from multiple devices, specialized preconfigured settings, easy sharing options and an interface that can be customized to show only the features you want to use.

Find out more at adi.to/labchart

www.abdulwahabsons.com



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