

ArrayPGstat Specifications

Chassis

	Accommodates up to five 5-channel boards
Data Acquisition	National Instruments USB-6229 DAQ
Acquisition Speed	250 k samples/s (Aggregate) 9.25 kS/s/ch. (for 25 channels)
DAC Resolution	16 bits

5-Channel Board

Cell Control

Compliance Voltage	$\pm 15V$
Max Output Current	$\pm 65mA$ max per Ch.
Rise Time	45 μs for 1k Ohm load (0%-100% signal)
Slew Rate	0.2 V/ μs
Bandwidth	8 kHz (-3 dB, 1k Ohm load)
Applied DC Potential Ranges	1 ($\pm 10 V$)
Applied Potential Resolution	0.3 mV
Applied Potential Accuracy	< 0.04% Full Scale Range (FSR)
Current Autoranging	Yes
Applied DC Current Ranges	2 ($\pm 250\mu A$, $\pm 65mA$)
Best Applied Current Resolution	3 nA, 0.003% of FSR
Applied Current Accuracy	0.03% of FSR
Input Bias Current	500 pA
Input Impedance	250 G Ω parallel to 3 pf
Maximum Update Rate	4 μs
Maximum Scan Rate	100V/sec



Key Benefits:

- Multichannel potentiostat galvanostat
- Channels can be operated in parallel or in series
- Individual, row-by-row, or simultaneous channel evaluation
- Ideal for battery testing, electrode characterization, and other electrochemical applications

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(Continued)

Potential Measurement	
Measured DC Potential Ranges	1 (±10 V)
Resolution	3 μV, 300 μV (0.006%, 0.003% of FSR)
Accuracy	0.08 or 0.03% of FSR
Current Measurement	
Measured Current Ranges	Potentiostat: 2 (± 250uA, ± 65 mA)
Potentiostat Min to Max	80nA to 65mA
Best Resolution	Galvanostat: 80 nA (0.003% of FSR) Potentiostat: 80 nA - 20 μA (0.06 - 0.003% of FSR In Order of Range)
Accuracy	Galvanostat: 0.03% of FSR; Potentiostat: 0.3 - 0.03% of FSR Depending on Range



About Nuvant Systems Inc.

NuVant Systems is a worldwide provider of electrochemical instrumentation for academicians, industries, and national laboratories. We customize electronics for analysis, reconditioning and de-energizing of batteries for aftermarkets, repurposing, and end-of-life recycling. NuVant empowers small businesses and large vehicle fleets to improve energy storage device lifecycles, bringing electrochemistry to the streets. By integrating electronics and chemistry, we offer a scientific approach to success in the renewable energy market.

Features:



Modular Design (Add Channel and Signal Sources)



Battery Charge-Discharge Cycling



Control up to ±10 V



Acquisition Speed: 250kS/s



NuVant Systems Inc.
Pioneering Electrochemical Technologies

An A3 Global Company



+1.445-3GLOBAL



info@a3global.com



130 North West Street
Crown Point, IN 46307



www.nuvant.com
www.a3global.com