

GalvanoPlot

Compact Multi Channel Electrochemical Interfaces



The smallest two channel electrochemical interface on the market

GalvanoPlot digital bi-potentiostat is the smallest portable potentiostat in the market and optimized for low potential on-chip electrochemistry applications. It provides most relevant electroanalytical measurement techniques and works with the GalvanoPlot Controller PC software.

GalvanoPlot is an ideal introductory level potentiostat for starting out in electrochemistry or educational purposes with a great satisfactory performance.

Main Applications

- Training and courses for students in electrochemistry
- Demonstration experiments
- Electrochemical research
- Sensor development experiments
- Reaction kinetics experiments in electrochemistry

GalvanoPlot two channel potentiostats are offered in three different settings, all compatible with 2, 3 and 4 electrodes sensors with common RE and CE. Hardware is optimized for glass chip thin-film electrodes and screen-printed electrodes and also compatible with a variety of experimental conditions.

Supported Techniques

Staircase Voltammetry	SCV
Linear Sweep Voltammetry	LSV
Cyclic Voltammetry	CV
Square Wave Voltammetry	SWV
Differential Pulse Voltammetry	DPV
Stripping Voltammetry	ASV, CSV
Amperometry	AD
Chronoamperometry	CAD
Pulsed Amperometry	PAD
Differential Pulsed Voltammetry	SV

In a **poly-potentiostat (GP series)**, one can run same protocol on both working electrodes, semi-synchronously (with only 100µsec lag), but where CE and RE are common. In GP201, both WE1 and WE2 can only have the same potential, while in GP202, WE2 can also be set to a constant potential or a bias in reference to WE1.

In is a **multiplexed-potentiostat (GX series)**, independent protocols can be performed on any working electrodes, but only in order: The second one runs after the first one is completed.

Hardware Specifications	GP201	GP202	GX202
Channels	Two, Parallel	Two, Independent	Two, Multiplexed
Scan Range	± 2 V	± 2 V	± 2 V
Current Range	5 µA -500 µA typ.	5 µA -500 µA typ.	200 nA -10 mA typ.
Max. Current	0.5 mA typical	0.5 mA typical	10 mA
Current Resolution	1 nA min.	1 nA min.	14 pA min.
Potential Resolution	736 µV min.	736 µV min.	100 µV min.
Sensor Cable	4 pin banana w crocs	4 pin shielded	4 pin shielded
Sensor Compatibility	2, 3 and 4 electrodes (Common RE and CE)		
Power	5 VDC over USB		
Size	48 x 37 x 23 mm (smallest on the market)		
Enclosure	Anodized aluminum and stainless steel		

Electrochemical Impedance Spectroscopy is available in **GPE and GXE series**, as a poly-potentiostat, or multiplexed-potentiostat, respectively. GPE202 is an absolute duplexed-potentiostat, where the two channels are completely synchronous without any time lag in detection.

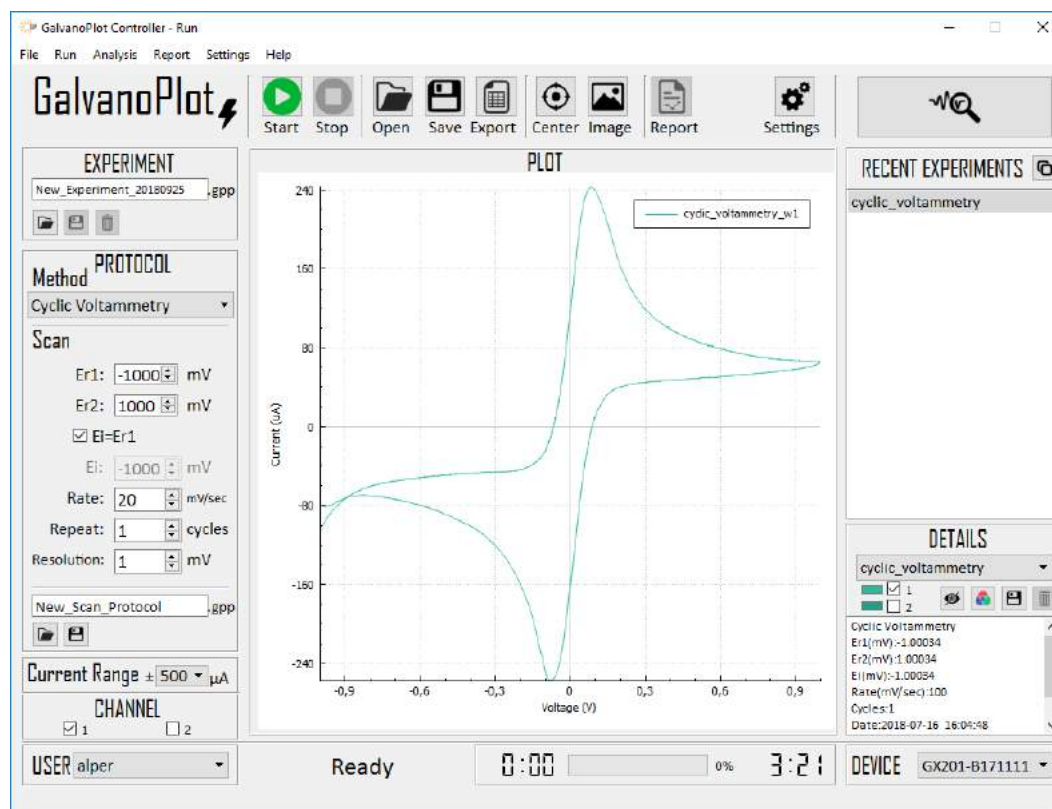
Hardware Specifications	GPE201	GPE202	GX802
Channels	Two, Parallel	Two, Parallel	8, Multiplexed
Scan Range	± 2 V	± 2 V	± 2 V
Current Range	200 nA -10 mA typ.	200 nA -10 mA typ.	200 nA -10 mA typ.
Max. Current	10 mA	10 mA	10 mA
Current Resolution	14 pA min.	14 pA min.	14 pA min.
Potential Resolution	100 µV min.	1.1 mV min.	100 µV min.
EIS	Up to 100KHz	Up to 100KHz	N/A
Multi-Channel Synchrony	100µsec lag	Absolute	In order
Sensor Cable	4 pin shielded	4 pin shielded	34 pin IDC
Sensor Compatibility	2, 3 and 4 electrodes (Common RE and CE)		
Power	5 VDC over USB		
Size	48 x 37 x 23 mm (smallest on the market)		
Enclosure	Anodized aluminum and stainless steel		

GalvanoPlot is also offered as **GPEOEM**, where all the capability of GPE201 is packed in a 15x6x4mm micro shielded PCB, for the ones who want to develop their own Electrochemical Analysis Device. A dedicated method can be developed over GP201 and can directly be embedded in GPEOEM for **autonomous OEM** functioning.

Hardware Specifications	GXE802	GXE162	GPEOEM
Channels	8, Multiplexed	16, Multiplexed	Two, Parallel
Scan Range	± 2 V	± 2 V	± 2 V
Current Range	200 nA -10 mA typ.	200 nA -10 mA typ.	200 nA -10 mA typ.
Max. Current	10 mA	10 mA	10 mA
Current Resolution	14 pA min.	14 pA min.	14 pA min.
Potential Resolution	100 µV min.	100 µV min.	100 µV min.
EIS	Up to 100KHz	Up to 100KHz	Up to 100KHz
Multi-Channel Synchrony	In order	In order	100µsec lag
Sensor Cable	34 pin IDC	2 x 34 pin IDC	DIP 16 pin
Sensor Compatibility	2, 3 and 4 electrodes (Common RE and CE)		
Power	5 VDC over USB		5 VDC
Size	48 x 37 x 23 mm (smallest on the market)		15 x 6 x 4 mm
Enclosure	Anodized aluminum and stainless steel		Metal Shield PCB



GalvanoPlot Controller Software for PC



GalvanoPlot compact potentiostat interfaces are controlled by GalvanoPlot controller PC software through USB connection. Easy to use full graphic interface enables users to run protocols, visualize results, overlay and compare multiple experiments, save and load run protocols, analyze voltammetry results for peaks and calculate calibration curves with Pearson's R^2 technique for method development. GalvanoPlot Controller has a multi-user and multi-device capability and runs on any platform with Windows 7 and newer with display resolution 1024x768 and over. You can plug-in upto 64 hardwares and interchange in-between over the software.

PC Software specifications

- Windows 7+ compatibility
- User friendly graphic interface
- Save and load run protocol settings
- Multiple experiment overlay
- Easy add and remove experiments
- Real-time experiment duration
- Export for MS Excel or as Image
- Digital real-time FFT filter with auto-optimization
- CV and DPV peak analysis
- Calibration curve and R^2 analysis
- Multiple devices and users

Ordering Information

GP.201 Compact Bi-Potentiostat for on-chip electrochemistry

Also including:

Sensor Cable (Bundle of 4 cables with 2 mm banana plugs)
Banana plug to crocodile clips adapter set
USB cable for PC interface
GalvanoPlot Controller software autoinstaller for PC

GP.202 Compact Bi-Potentiostat for on-chip electrochemistry

Also including:

Sensor Cable (Shielded cable for on-chip 4 electrode system)
USB cable for PC interface
GalvanoPlot Controller software autoinstaller for PC
Dummy Test Cell

GX.202 Compact Duplex Potentiostat for on-chip electrochemistry

Also including

Sensor Cable (Shielded cable for on-chip 4 electrode system)
USB cable for PC interface
GalvanoPlot Controller software autoinstaller for PC
Dummy Test Cell



Standard Box Configuration

GalvanoPlot compact potentiostat

Sensor cable

USB cable for PC interface

GalvanoPlot Controller software autoinstaller for PC

Dummy test cell

Please inquire at info@CoralBiotec.com for prices, volume discounts and more detailed technical information about GalvanoPlot two channel compact electrochemical interfaces, as well as glass chip thin film electrode sensors and adapters.



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