8-channel potentiostat/Galvanostat model CS3108 can achieve simultaneous measurements for up to 8 channels. The specifications of each channel are identical. Current control range is ±200mA, potential control range is ±10V. EIS 10μHz~1MHz is included in each channel. It supports floating mode, and uses Ethernet connection.

Each channel is completely independent. The user can choose to use just one or some of the channels. Multichannel potentiostat brings convenience to those who have many samples, and is an ideal device for studies of energy materials, battery study, metal corrosion etc.

Advantages

High current/voltage: Applied potential range ±10V, current ±200mA. It can meet the needs of most studies.

Comprehensive techniques: Built-in EIS (10μHz~1MHz) is equipped to one channel (CS3108). There are comprehensive techniques in each channel.

Warranty: 5 years warranty. We're the manufacturer, and our engineers will provide technical support anytime you need.

Low cost: The price includes instrument host, software (experiment control & data processing), necessary cables, dummy cell. No other charges.

Reliability &quality: We've been in the market for 20 years, and now is the No. 1 brand of potentiostat product in China

Application

- Reaction mechanism of Electrosynthesis, electrodeposition (electroplating), anodic oxidation.
- Electrochemical analysis, electro-catalysis, sensor;
- New energy materials, advanced functional materials, photoelectronic materials;
- Corrosion study of metals in water, concrete and soil etc;
- Fast evaluation of corrosion inhibitor, water stabilizer, coating and cathodic protection efficiency.

Specifications

Specifications	
Number of channels: 8	Channel insulation resistance: >100MΩ
Communication: Ethernet	Lower-pass filter: covering 8-decade
Potential control range: ±10V	Constant current control range: ±200mA
Potential accuracy: 0.1%×full range±1mV	Current accuracy: 0.1%×full range
Potential resolution: 10μV(>100Hz), 3μV(<10Hz)	Current resolution: 1pA
Potential rise time: ＜1μs(<10mA),<10μs(<2A)	Current range: 2nA ~200mA
Reference electrode input impedance: 10^{12}Ω||20pF	Maximum current output: 200mA
Compliance: ±12V	Current increment during scan: 1mA @1A/ms
CV and LSV scan rate: 0.001mV~10000V/s	Potential increment during scan: 0.076mV@1V/ms
CA and CC pulse width: 0.0001~65000s	DPV and NPV pulse width: 0.0001~1000s
SWV frequency:0.001~100KHz	CV minimum potential increment: 0.075mV
AD data acquisition:16bit@1MHz,20bit @1kHz	IMP frequency:10μHz~1MHz
DA resolution:16bit, setup time:1μs	Current and potential range: automatic
Operating System requirements: Windows 7/win8/win10	Weight: 18 Kg
Electrochemical Impedance Spectroscopy(EIS)	
Signal generator	
Frequency range:10μHz~1MHz	AC signal amplitude: 1mV~2500mV
Frequency accuracy:0.005%	Signal resolution: 0.1mV RMS
DDS output impedance: 50Ω	DC Bias: -10V~+10V
Wave distortion: <1%	Waveform: sine wave, triangular wave, square wave
Scan mode: Logarithmic/linear, increase/decrease	
Signal analyzer	
Maximum integral time:10^6 cycles or 10^5s	Measurement delay:0～10^5S
Minimum integral time:10ms or the longest time of a cycle	
DC offset compensation	
Potential compensation range: -10V~+10V	Current compensation range: -1A~+1A
Bandwidth adjustment: automatic and manual, 8-decade frequency range	

Techniques – CS3108

One channel includes all the techniques incl. EIS.

Other channels includes all but EIS.

Stable polarization

- Open Circuit Potential (OCP)
- Potentiostatic (I-T curve)
- Galvanostatic
- Potentiodynamic (Tafel plot)
- Galvanodynamic (DGP)

Transient Polarization

- Multi Potential Steps
- Multi Current Steps
- Potential Stair-Step (VSTEP)
- Galvanic Stair-Step (ISTEP)

Chrono Method

- Chronopotentiometry (CP)
- Chronoamperametry (CA)
- Chronocaulometry (CC)

Voltammetry

- Linear Sweep Voltammetry (LSV)
- Cylic Voltammetry (CV)
- Staircase Voltammetry (SCV)
- Square Wave Voltammetry (SWV)
- Differential Pulse Voltammetry (DPV)
- Normal Pulse Voltammetry (NPV)#
- Differential Normal Pulse Voltammetry (DNPV)
- AC Voltammetry (ACV)
- 2nd harmonic AC Voltammetry (SHACV)
- Fourier Transform AC Voltammetry (FTACV)

Stripping Voltammetry

- Potentiostatic Stripping
- Linear Stripping
- Staircase Stripping
- Square Wave Stripping
- Differential Pulse Voltammetry Stripping
- Normal Pulse Voltammetry Stripping
- Differential Normal Pulse Voltammetry Stripping

Amperometric

- Differential Pulse Amperometry (DPA)
- Double Differential Pulse Amperometry (DDPA)
- Triple Pulse Amperometry (TPA)
- Integrated Pulse Amperometric Detection (IPAD)

Electrochemical Impedance Spectroscopy (EIS)

- EIS vs Frequency (IMP)
- EIS vs Time (IMPT)

- EIS vs Potential (IMPE)(Mott-Schottky)

Corrosion Measurements

- Cyclic polarization curve (CPP)
- Linear polarization curve (LPR)
- Electrochemical Potentiokinetic Reactivation (EPR)
- Electrochemical Noise (EN)
- Zero resistance Ammeter (ZRA)

Battery test

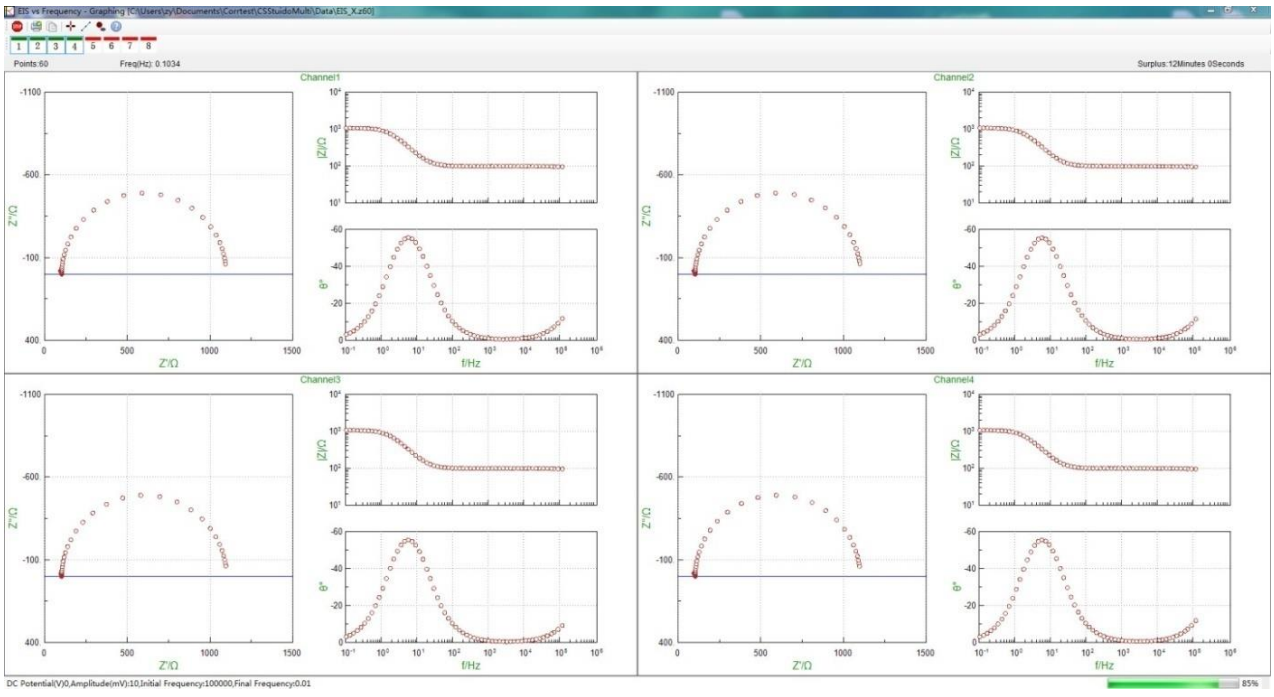
- Battery Charge and Discharge
- Galvanostatic Charge and Discharge (GCD)
- Potentiostatic Charging and Discharging(PCD)
- Potentiostatic Intermittent Titration Technique (PITT)
- Galvanostatic Intermittent Titration Technique (GITT)

Extensions

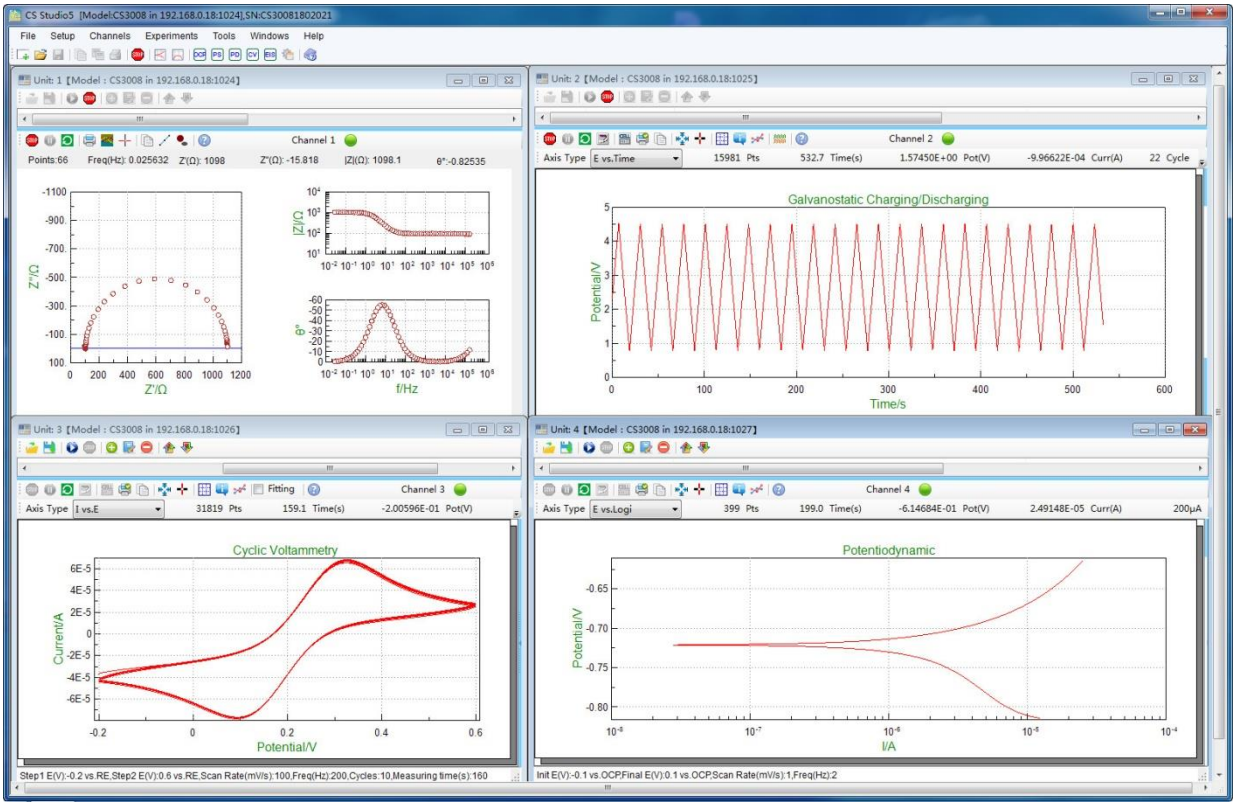
- Electrochemical Stripping/ Deposition
- Bulk Eletrolysis with Coulometry (BE)
- Rs Measurement

Simultaneous Measurements

The customer can choose a same electrochemical technique in every channel. For example, among 8 channels, you can choose to run 4 channels to all do EIS measurement. Set the parameters just one time, then EIS measurement in each channel will be conducted at the same time.



In each channel, you can also conduct different experiments. As is shown in the below picture, EIS, galvanostatic charge and discharge, CV, and polarization curve tests are conducted at the same time.



Standard supply for a set CS3108:

Instrument host CS3108*1
CS studio software package *1
Power cable * 1, Ethernet cable *1, Cell cable *16 pcs
Dummy cell *8
Manual *1

After-sales Service

1. Warranty period: 5 years.
2. Provide manual, software installation video & training videos.
3. Free repair service
4. Lifetime software upgrading(same model) and technical service.

Contact us

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