

CS310X multichannel potentiostat (X is the number of channels) can achieve simultaneous measurements for up to 8 channels. The specifications of each channel are identical: current control range is $\pm 200\text{mA}$ (up to $\pm 500\text{mA}$ for 4-channel potentiostat), potential control range is $\pm 10\text{V}$. It supports floating mode, and uses Ethernet connection.

Each channel is completely independent. Multichannel potentiostat brings convenience to those who have many samples, and is an ideal device for studies of energy materials, metal corrosion etc.

Built-in EIS ($10\mu\text{Hz}\sim 1\text{MHz}$) and Voltammetry module can be flexibly added to any number of the channels. Researchers of different budgets can get the instrument to their satisfaction. No external device for options makes the instrument compact and convenient to use.

Models

Model (each channel with basic functions, no EIS)	CS3103	CS3104	CS3105	CS3106	CS3107	CS3108
Number of channels	3	4	5	6	7	8



8-channel potentiostat / galvanostat model CS3108



4-channel potentiostat / galvanostat model CS3104

Advantages

-**High current/voltage**: Applied potential range $\pm 10V$, current range $\pm 500mA$ (4-channel) / $\pm 200mA$ (5~8 channels). It can meet the needs of most studies.

-**Flexible configuration**. Built-in EIS ($10\mu Hz \sim 1MHz$) and Voltammetry module can be added to any number of the channels. Researchers of different budgets can get the instrument to their satisfaction. No external device for options makes the instrument compact and convenient to use.

- **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

Applications

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

Specifications

Number of channels: 4~8 channels

Communication: Ethernet

Channel insulation resistance: $>100M\Omega$

Lower-pass filter: covering 8-decade

Potential control range: $\pm 10V$

Constant current control range: $\pm 500mA$ for 4-channel, $\pm 200mA$ (5~8 channels)

Potential accuracy: $0.1\% \times \text{full range} \pm 1mV$

Current accuracy: $0.1\% \times \text{full range}$

Potential resolution: $10\mu V (>100Hz)$, $3\mu V (<10Hz)$

Current resolution: $<1pA$

Potential rise time: $< 1\mu s (<10mA)$, $<10\mu s (<2A)$

Current range: $2nA \sim 200mA$, nine ranges; $2nA \sim 500mA$ for 4-channel

Reference electrode input impedance: $10^{12}\Omega$ | $20pF$

Maximum current output: $500mA$ for 4-channel potentiostat; $200mA$ (5~8 channels)

Compliance: $\pm 12V$

Current increment during scan: $1mA @ 1A/ms$

CV and LSV scan rate: $0.001mV \sim 10000V/s$

Potential increment during scan: $0.076mV @ 1V/ms$

CA and CC pulse width: $0.0001 \sim 65000s$

DPV and NPV pulse width: $0.0001 \sim 1000s$

SWV frequency: $0.001 \sim 100KHz$

CV minimum potential increment: $0.075mV$

AD data acquisition: $16bit @ 1MHz$, $20bit @ 1kHz$

IMP frequency:10 μ Hz~1MHz

DA resolution:16bit, setup time:1 μ s

Current and potential range: automatic

EIS(Electrochemical Impedance Spectroscopy)

Signal generator

Frequency range:10 μ Hz~1MHz

AC signal amplitude: 1mV~2500mV

Frequency accuracy:0.005%

Signal resolution: 0.1mV RMS

DDS output impedance: 50 Ω

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:10⁶ cycles or 10⁵s

Measurement delay:0~10⁵s

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

Software- Standard configuration

Stable polarization

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

Transient Polarization

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

Chrono Method

- Chronopotentiometry (CP)
- Chronoamperometry (CA)
- Chronocoulometry (CC)

Voltammetry

- Linear Sweep Voltammetry (LSV)
- Cyclic Voltammetry (CV)

Amperometric

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

Corrosion Measurements

- Cyclic polarization curve (CPP)
- Linear polarization curve (LPR)
- Electrochemical Potentiokinetic Reactivation (EPR)
- Electrochemical Noise (EN)

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

- Data Logger
- Electrochemical Stripping/ Deposition
- Bulk Electrolysis with Coulometry (BE)
- Rs Measurement

****Options****EIS module**

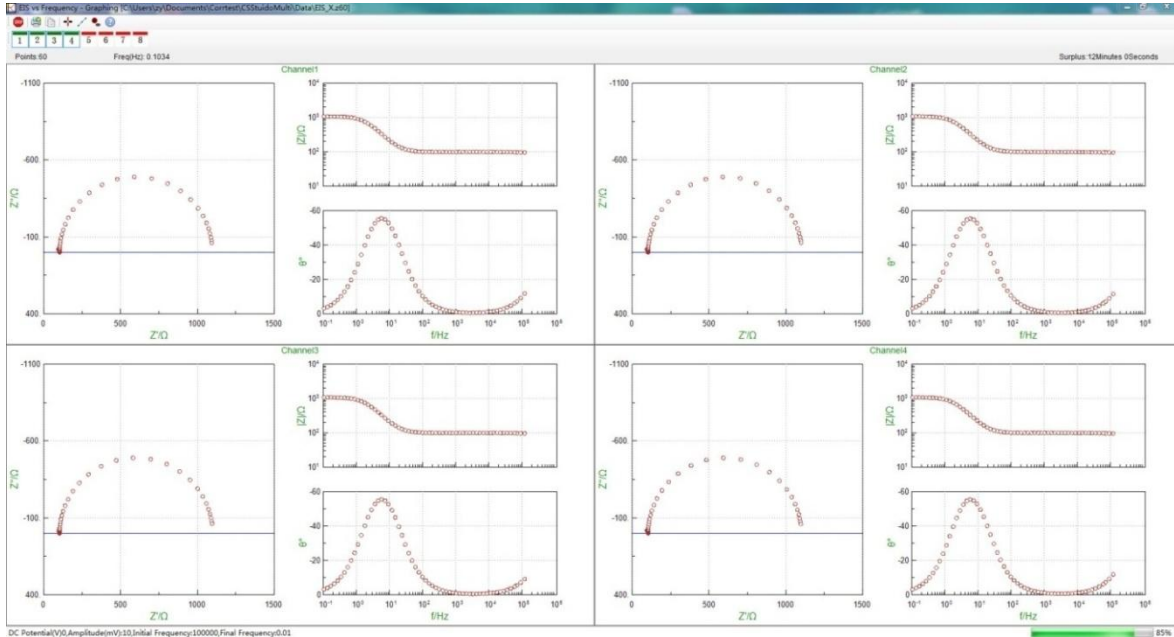
EIS vs Frequency (IMP), EIS vs Time (IMPT), EIS vs Potential (IMPE)

Voltammetry module

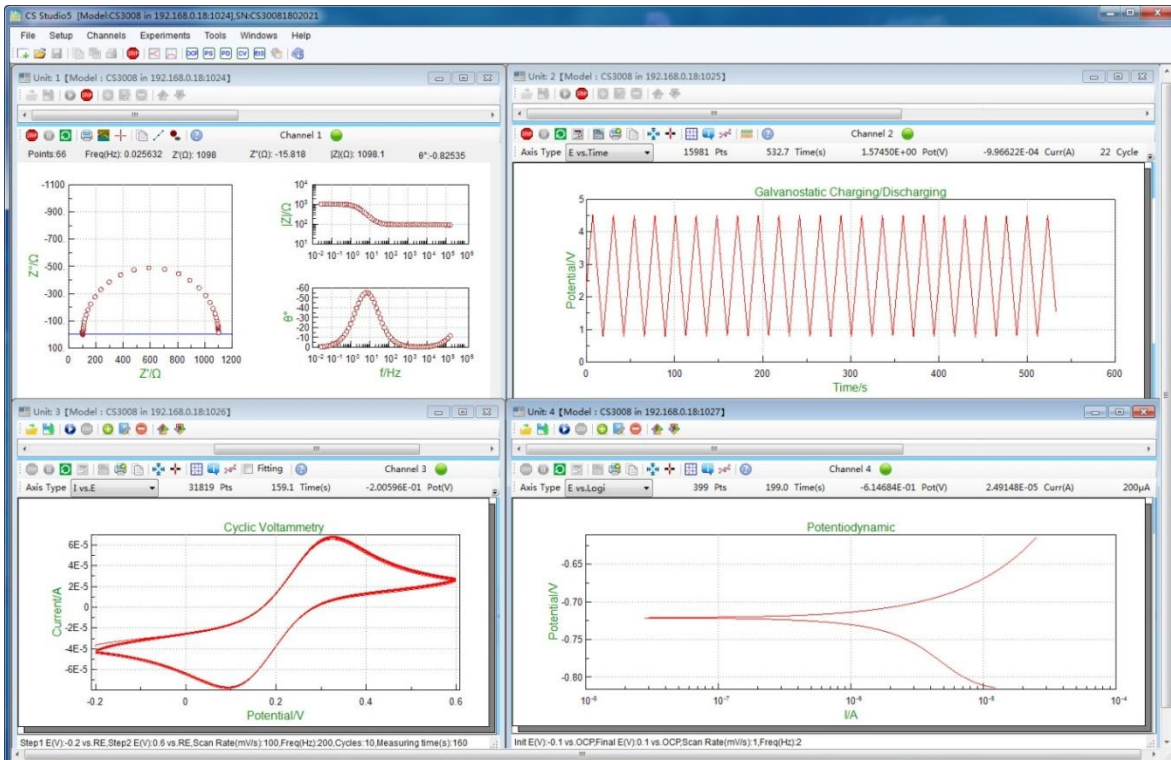
Staircase Voltammetry (SCV), Differential Pulse Voltammetry (DPV), Normal Pulse Voltammetry (NPV), Square wave voltammetry (SWV), AC voltammetry (ACV), Differential Normal Pulse Voltammetry (DNPV), 2nd Harmonic A. C. Voltammetry (SHACV), Fourier Transform AC Voltammetry(FTACV), Potentiostatic stripping, Linear stripping, Staircase stripping, Square wave stripping

Simultaneous Measurements

The customer can choose a same electrochemical technique in every channel. The parameters setting in each channel is identical. For example, as is shown in below picture, we choose only 4 channels to do EIS measurement. Set the parameters in each channel just one time, then EIS measurements are conducted simultaneously.



In each channel, the customer 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.



Supply list for a set of CS310X multichannel potentiostat:

Instrument host -1set;
CS studio testing and analysis software-1set;
Dummy cell X piece; (X is the number of channel)
Power cable 1 piece,
Ethernet communication cable 1 piece;
Electrode cable X pieces

***If you also need electrodes and cells, please contact us for purchase.**

Service

1. Warranty period: 5 years.
2. Provide installation guidance and manual, software installation video.
3. Free repair service
4. Lifetime free software upgrading and technical service.

Contact us

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