

MULTIWE32:

Hardware specifications



Features:

- Full potentiostat capability
- Independent programmable offset for each channel
- Simultaneous sampling
- Potential applied continuously across all channels
- Stackable up to 8 units x 32 channels = 256 channels (i.c.w. IviumStat)

2 modes of operation:

Simultaneous

- CV/LSV/DPV/SQRwave/ChronoAmperometry
- Data acquisition of 32 WE currents at the same time,
- maximum rate of 10 samples/sec (0.1sec interval time)

Sequential

- All electrochemical potentiostatic methods possible
- Frequency response analysis

System Performance:

Current compliance	±1 mA for each WE (±32 mA for CE)
Maximum offset Voltage	±2 V
Applied potential	max. ±20V (depends on controlling potentiostat)
Potentiostat Bandwidth	>100 kHz
Stability settings	High Speed, Standard, and High Stability
Programmable response filter	1 MHz , 100 kHz , 10 kHz , 1 kHz , 10 Hz
Signal acquisition	dual channel 16 bit ADC, 100.000 samples/sec

Potentiostat:

Applied potential	determined by controlling Ivium potentiostat; CompactStat: max. ±4 V IviumStat: max. ±10V IviumStat.XR: max. ±20V
Applied potential offset	max. ±2 V, 0.0625 mV resolution
Applied potential accuracy	0.2%, or 2 mV
Current ranges	±10 nA to ±1 mA
High sensitivity current ranges	±1 pA, ±10 pA, ±100 pA, ±1 nA
Measured current resolution	0.015% of current range, minimum 0.15fA

Impedance Analyser

Frequency range	10µHz to 2MHz
Amplitude	0.015mV to 1.0V, or 0.03% to 100% of current range
DC offset	16 bit dc offset subtraction, and 2 dc-decoupling filters
Dynamic range	4 nV to 4 V

Electrometer

Input impedance	>1000 Gohm // <8pF
Input bias current	<10 pA
Bandwidth	>16 MHz

Environment

power requirements	external adapter: 100-240 V, 50-60 Hz, 400 mA
Interfacing	USB 1.1 or 2.0 compliant
Size	w x d x h = 12 x 26 x 2.5 cm
Weight	0.6 kg
PC requirements	Windows XP or Vista, with free USB port