

IVIUMBOOST:

Hardware specifications



System Performance:

Current compliance
Maximum output Voltage
Potentiostat Bandwidth
Stability settings
Programmable response filter
Signal acquisition

40 A @ 10 V

±40 A
±10 V
>100 kHz
High Speed, Standard, and High Stability
1 MHz , 100 kHz , 10 kHz , 1 kHz , 10 Hz
dual channel 16 bit ADC, 100.000 samples/sec

20 A @ 20 V

±20 A
±20 V

Potentiostat:

Applied potential range
Applied potential accuracy
Current ranges
Measured current resolution
Rise time

±10 V, 0.33 mV resolution
0.2%, or 2 mV
±100 mA, ±1 A, ±10 A
0.015% of current range, minimum 0.15fA
< 50 µs

±20 V, 0.66 mV resolution

Galvanostat

Applied current resolution
Applied current accuracy
Potential ranges
Measured potential resolution

0.033% of applied current range
0.2%
±0.1 V, ±1 V, ±10 V
0.003% of potential range, minimum 40nV

±0.1 V, ±1 V, ±20 V

Impedance Analyser

Frequency range
Amplitude
DC offset
Dynamic range

10µHz to 100 kHz
0.015mV to 1.0V, or 0.03% to 100% of current range
16 bit dc offset subtraction, and 2 dc-decoupling filters
12 nV to 10 V,
and 0.05 fA to 40 A

12 nV to 20 V,
and 0.05 fA to 20 A

Electrometer

Input impedance
Input bias current
Bandwidth

>1000 Gohm // <8pF
<10 pA
>16 MHz

Special functions

Ohmic drop compensation
Safety features

2 V/current range, 16 bits resolution
automatic disconnect on internal/external exceptions

Peripheral connections

8 Analog in, and 2 analog out
2 Digital inputs, and 3 Digital outputs
I-out, and E-out
AC-out
Channel-X, and Channel-Y inputs

0 to +4 V, 16 bits resolution
0 to +5 V
analog monitor for cell current and potential
±0.5 V sinewave 10µHz-2MHz with variable attenuation
±4 V: to record impedance from peripheral devices

Environment

power requirements
Interfacing
Size
Weight
PC requirements

100-240 V, 50-60 Hz, 1000 VA
USB 1.1 or 2.0 compliant
w x d x h = 47 x 36 x 14 cm
16 kg
Windows XP or Vista, with free USB port