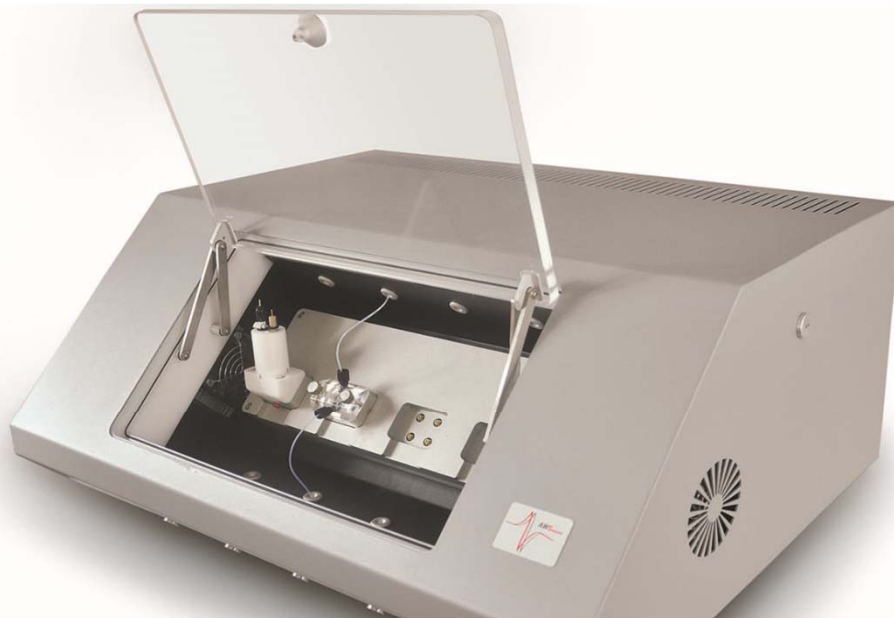


AWS A20+ Research Platform



The robust and versatile “workhorse” system for your lab

● Quality and sensitivity

Measurement of frequency and dissipation on multiple overtones using patented phase detection electronics (correctness verified against impedance analyzer).

Mass sensitivity of 50 pg/cm².

● Throughput and modularity

Basic configuration with 2 channels, upgradeable to up to 4 total channels as needs and budgetary constraints allow.

Measurement channels can be combined in different ways.

● Versatility

Measurements in air and in liquids.

A range of measurement cells for measuring under flow conditions or under stagnant conditions.

A wide range of sensors, including classical QCM, HFF-QCM, and Love-SAW.

Different sensors and cells can be combined in a single measurement, allowing up to 4 different experiments to be run simultaneously.

● Integration, robustness and comfort

Integrated software control of the experimental features (AWS Suite) .

Integrated temperature control.

Integrated potentiostat control of up to 4 channels for electrochemical measurements (AWS Suite).

Integrated fluidics control of up to 4 channels for in-flow applications with the integrations of the AWS F20+ Fluidics Platform (AWS Suite).

Intuitive design (cells, mounting, connections).

AWS A20+ Research Platform



Technical Specifications

Measurement channels	Starting at 2 channels, upgradeable to 4 channels (total)
Type of sensors	<ul style="list-style-type: none">• HFF-QCM (50,100,150 MHz)• Classical QCM (1 inch and 14 mm; 5,9,10 MHz)• Love-SAW (120 MHz)
Measurement modes	<ul style="list-style-type: none">• High resolution (single and multiple overtone)• Tracking (single overtone)
Number of overtones	Up to 7 (fundamental + 6 overtones)
Frequency range	5 MHz – 160 MHz
Máx. Frequency resolution	0.1 Hz
Máx. Dissipation resolution	1×10^{-7}
Temperature control range	20 °C – 40 °C
Temperature stability	± 0.05 °C
Máx. Time resolution	10 measurement points per second
Mass sensitivity in liquid	50 pg/cm ²

AWS Suite is a full-featured software for AWS A20+ RP operation



AWS F20+ Fluidics Platform



Flow-through modular system for flow operation and sample injection

- **Integration**

Fully integrated with AWS A20+ Research Platform.
Control and monitoring with AWS Suite.

- **Modularity and versatility**

Basic configuration with 1 channel, can be upgraded to a total of 4 channels.

Fluidics and AWS A20+ channels can be combined in different configurations.

- **Quality**

FPLC industry-standard components.

- **Robustness and comfort**

In-line degasser and independent temperature control for bubble-free operation.

AWS F20+ Fluidics Platform



Technical Specifications

Channels:	1 to 4 flow control channels
Channel components:	<ul style="list-style-type: none">• 1 positive displacement syringe pump (250 μL)• 1 distribution valve (up to 4 different buffers/reagents)• 1 In-line degasser• 1 injection valve• 1 solenoid pump for precise sampling
Temperature control:	Built-in thermostatic system controlled via software
Flow control:	Manual or automatic, via software
Simultaneous control:	Flow channels can be operated individually or in combination
Software integration:	Remote control and monitoring with AWS Suite

Bubble trouble minimized with the integration of a degasser

