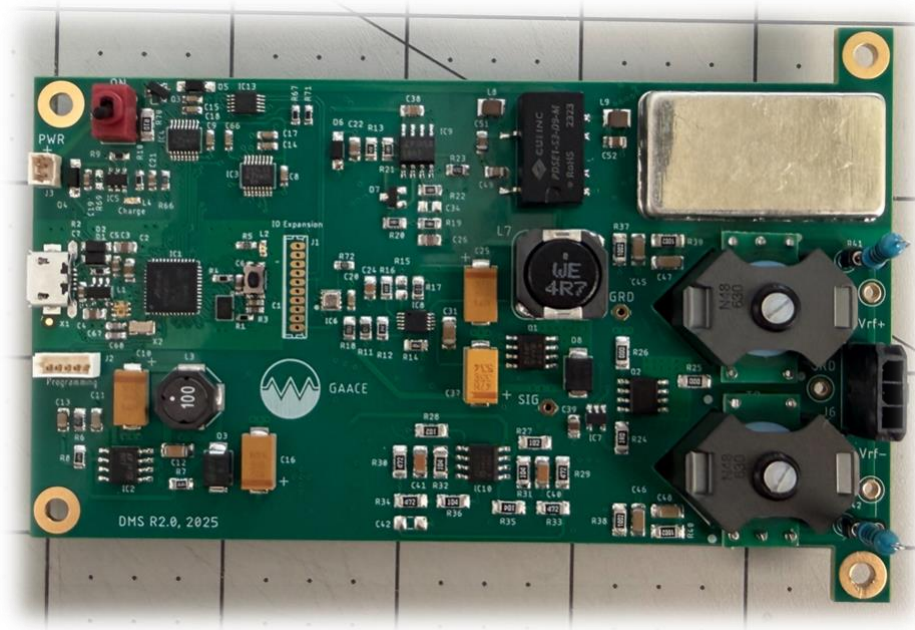


## DMS Module

GAA Custom Electronics, LLC



Differential Mobility Separation (DMS) is a gas-phase separation technique that separates ions based on their size, shape, and charge in an asymmetric electric field. The DMS module generates the necessary radiofrequency (RF) and direct current (DC) voltages that can be applied to a DMS cell to enable this technique. The DMS module comprises a dual polarity electrometer for signal collection and control software that facilitates scanning, recording, and displaying DMS spectra.

The DMS module is a compact, low-power, portable single-board solution that enables a fully featured DMS system when integrated with your DMS cell.

DMS module features:

- Size, 4.65" x 2.5" x 0.75"
- Weight, 6 ounces
- 120MHz ARM M4 processor
- Power, under 5 watts when generating 1000Vpp Vrf at 1.2MHz
- RF voltage generation, 400 to 1500Vpp Vrf, up to 1.2MHz
- CV voltage generation, +/-24VDC
- Electrometer, Dual channel with programable DC bias level on each channel, 0 to 5V and 0 to -5V
- Electrometer signal acquisition and DSP filtering
- CV voltage scanning over user defined range and speed
- Environmental monitoring, temperature, humidity, pressure altitude
- Single cell li-poly powered, 3.7V nominal
- Built in battery charger
- Limit testing and protection
- USB interface to host computer
- 2MB flash disk for data storage

- Real time clock
- Autonomous collection, can be configured to acquire data at user defined intervals
- Expansion interface
- Host software PC or MAC
  - Monitor and control
  - Plot scans
  - Generate heat maps



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