

Critical Environment In-tool Ionizing Bar with Software Control

AEROBAR® 5225

Simco-Ion's Digital AeroBar with Software Control Model 5225 is designed to handle the demanding requirements of **in-tool ionization**. With high ion output providing fast neutralization of electric charge on wafers, E78 compliance at the most stringent levels can be achieved. An aerodynamic design and cleanroom compatible materials allow the Model 5225 to deliver complete and efficient ionization in mini-environments without disrupting laminar airflow. The AeroBar can be easily and seamlessly integrated with your tool mean a less costly solution to ionization, in addition to the benefits of reduced maintenance cost and better alarm handling. System alerts and messages are displayed at the tool controller for easy notification. Alternatively, simple FMS alarm output is available.

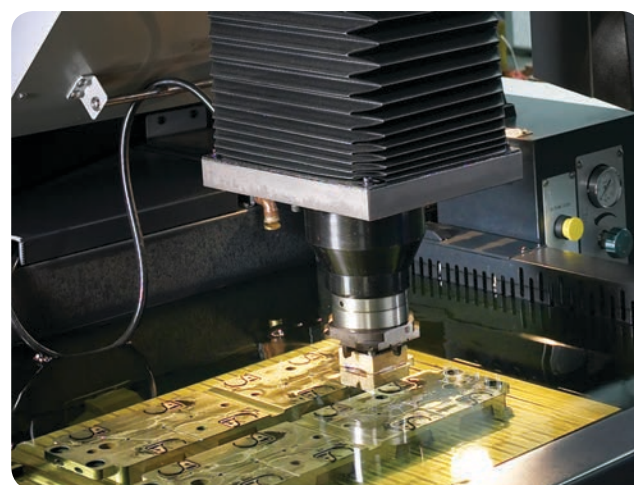


Features

- Complete integration with tool control system
- Fully adjustable parameters for each AeroBar
- Ion current monitoring
- Several lengths available including three specifically designed for Equipment Front End Modules (EFEM)
- Single-crystal silicon emitter points

Benefits

- Setup, operation and maintenance are controlled using existing tool or IonMonitor software GUI
- Fine-tune ionization for individual process requirements in each area of the tool
- More consistent ion output and stable performance
- Flexible lengths allow versatility for a variety of application designs
- Industry's proven cleanest emitter material, with no risk of wafer contamination from dopants or metals



Designed for front-end and back-end semiconductor manufacturing to control electrostatic discharge and particle contamination in mini-environment and workstations

5225 Specifications

Alarm	Alarm activates when the bar is no longer able to maintain the preset ion output level, alarm is displayed visually by a red LED in the middle of the ionizer chassis as well as on GUI, settable threshold alarm limits for predictive maintenance
Cleanliness	ISO 14644 Class 1
Connectors	RJ-11 modular jack receptacles
Control Signal	RS-485 from the Interface Module
Current	Output: <15 µA, current and voltage limited
EMI	Below background level
Emitter Points	Single crystal silicon, replaceable
Indicators	Individual red LEDs flash on for each polarity, middle red LED flashes rapidly when in alarm, all 3 LEDs blink at once when communication occurs, alarm relayed to tool GUI
Regulation	Output and balance stability is achieved by independently regulating the ion emission current of each polarity at each ionizer
Technology	Pulsed DC, Steady-state DC or standby
Timing	Both on and off timing for each polarity are settable from 0-10 sec @ 0.1 sec increments, LEDs on the bar indicate the polarity of the ion emission
Voltage	Input: 24 VAC, 50/60 Hz, 1W (typ), received from the Interface Module Output: 0-20 kVDC, ±10% for each polarity on an individual AeroBar; positive or negative output levels can be adjusted separately through GUI
Enclosure	ABS plastics, fire retardant
Dimensions	2.1"H x 1.2"W x 22.4, 28.4, 35.7, 44.4, 55.6, 64.4, 75.5, 84.4"L (53 x 30.5 x 569, 721, 907, 1128, 1412, 1636, 1918, 2144 mm)
Weight	1.5 lb (1.02 kg) for a 22" (56.9 cm) bar (approx 6 oz per additional ft/0.17 kg per additional 30 cm)
Certifications	SEMI-F47

5200-IM6T Specifications

Alarm Output	FMS, relay closure to ground (available on V4.0 and above)
Communication	Ethernet (RJ-45) or serial (RS-232/DB9)
Indicators	Green power on, yellow communication, red alarm
Output Ports	Six RJ-11 ports connect to up to six Model 5225 AeroBars
Voltage	24 VDC, 1.0A, ±5%
Dimensions	2.9"H x 2.8"W x 12.4"L (7.4 x 7.1 x 31.5 cm)
Weight	4 lb (2 kg)
Certifications	

Intelligent Integration

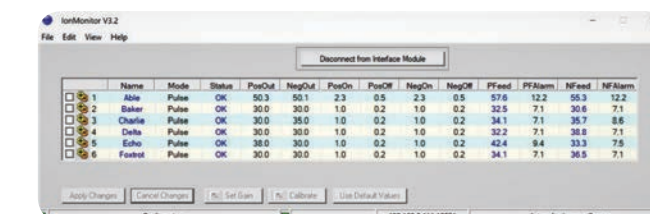
Simco-Ion's specially developed software eases integration into your system. Three different components are available to best suit your needs:

- A fully documented Application Programming Interface (API) minimizes integration time and cost.
- The open-source sample application in Visual C/C++ provides an example for use in developing your tool control software or can be used as a stand-alone application on your tool controller or laptop.
- An ionizer hardware simulator allows for easy software development in the absence of ionizer hardware.

Simco-Ion's powerful software provides complete control over the ionization system. Settings include adjustments for operating modes (including pulsed DC, Steady-state DC or standby), synchronization, on-times, off-times, power output levels and alarm thresholds for both positive and negative emitters, with independent control over each AeroBar. Sophisticated alarm and maintenance detection mean less downtime and costly diagnostic activity.

IonMonitor Software

IonMonitor is industry-first graphical user interface (GUI) that monitors and controls the AeroBar Model 5225 and connects to the Interface Model 5200-IM6T. This software package centralizes all control and monitoring operations, simplifying operation and saving valuable time.



Interface Module Model 5200-IM6T

This interface module powers up to six AeroBars. Model 5200-IM6T features an Ethernet port and an RS-232 port for communication with process equipment or EFEM controllers.

