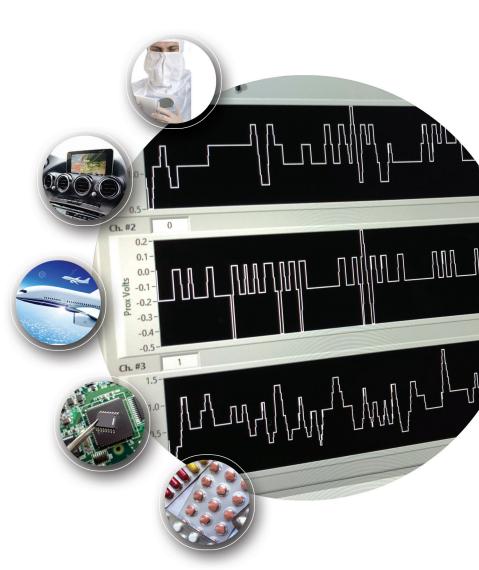
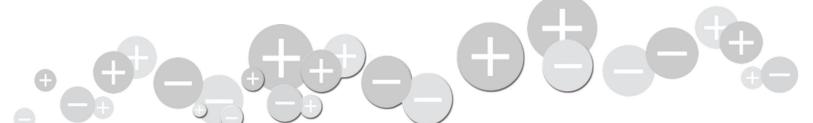


## **Process Monitoring**

CLEANROOMS, ESD-SENSITIVE WORK AREAS, IN-TOOL & CRITICAL MANUFACTURING ENVIRONMENTS







# Precision Empowered—Unveiling Simco-Ion's Revolutionary ESD Monitoring System for Critical Environment

Simco-lon redefines static charge management for Critical Environments through a meticulous three-step strategy. Commencing with an exhaustive audit of production areas, equipment, existing Electrostatic Discharge (ESD) programs, and personnel, Simco-lon Applications Engineers understand the dynamics within a facility. Following this, the spotlight shifts to an unparalleled suite featuring Novx Continuous Monitoring Instruments with integrated blowers and bars for real-time monitoring, feedback and control with FMS communication to the tool to meet Industry 4.0 requirements.

Simultaneously, Simco-lon's extensive ionization product range complements the monitoring initiative. Beyond effectively controlling static charge, these products exhibit remarkable versatility, meeting design requirements across diverse processes, tools, products, and facilities. This synthesis of cutting-edge monitoring technology and a comprehensive ionization lineup establishes Simco-lon as the forefront authority, with the confidence in our industry leading product reliability that has been established over many decades.

## **ESD Monitoring for Smart Manufacturing**

Unveiling the POWER of Simco-Ion's Novx Electrostatic Sensing and Process Monitors—elevate precision in Semiconductor, Life Sciences, and Electronic Industries. Safeguarding against catastrophic and latent product damage, our monitoring products are designed specifically to function in advanced process environments, including Semiconductor Manufacturing (Wafer Fab and Back-End), Life Sciences, Flat-Panel Display, PCB, and Electronic Assembly market segments. The requirement for real-time monitoring, data collection, and status reporting is met with the Novx Monitoring Systems product line.

Propel your manufacturing yields to new heights with the prowess of Novx—your gateway to precision, efficiency, and historical verification in Electrostatic Discharge (ESD) management.

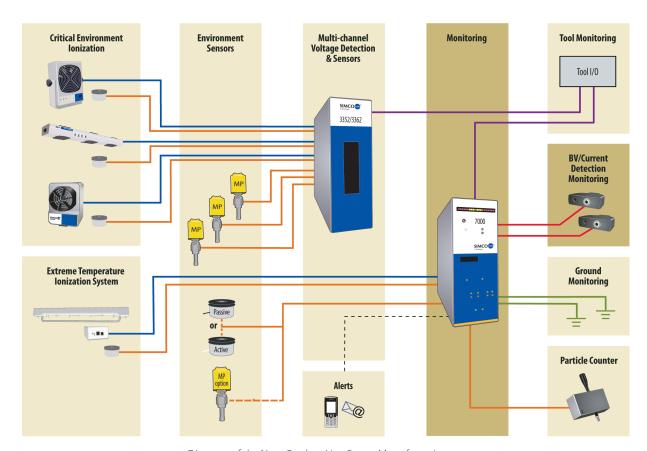


Diagram of the Novx Product Line Smart Manufacturing

## **Ionization Integration for Each Step of the Process**

### **Novx ESD Sensing and Monitoring Products**

Monitoring: Explore the Novx Series 7000 Process Monitor, a microprocessor-based instrument offering data collection, statistical process control, and direct tool communication. Its versatile capabilities include field charge detection, passive ionizer balance control, active balance monitoring, automatic decay testing, MiniPulse for ESD detection, and operator/ground monitoring. This robust monitoring solution ensures real-time insights into critical processes, providing warnings of potential ESD risks and enhancing overall operational control.



Novx Series 7000 Process Monitor



Novx Series 3352 & 3362 Voltage Detection



Novx MiniPulse ESD Event Monitor

**Voltage Detection**: Within the Simco-Ion lineup, the Novx Series 3352 (passive) and Series 3362 (active) stand out, providing multi-fan, closed-loop, real-time ionizer monitoring, and remote voltage sensing. This cost-effective technology allows for flexible control of multiple ionizers within a workstation or process tool. These ionizer controllers, compatible with Simco-Ion ionizers, ensure precise ionized air delivery to target areas.

**Critical Environment**: Simco-lon's Critical Environment Ionizing Blowers, equipped with Novx feedback sensors, offer a range of models catering to specific applications:

- Model 5645 Modulated Pulse AeroBar® Novx with Inside and Novx System
- Model 5941 In-tool Micro Blower for critical environment applications
- Model 5822i for in-tool applications with Novx System
- Model 5832 for benchtop coverage with Novx Inside and Novx System
- Model 5842 for overhead coverage with Novx Inside and Novx System

**Extreme Temperature:** For operations in extreme environments, the Model 4612 Extreme Temperature Ionizer, with a balance of <±10V, is selected for temperatures ranging from -50°C to +150°C. Teaming up with the 4062e Controller and 550 Extreme Temperature Antenna, this ionizer uses closed-loop control to ensure balanced ionized air delivery at the product location.

The Novx 3362, with its standard antenna, can also replace the 550 Antenna for active feedback and control in extreme temperatures. Simco-lon provides comprehensive ionization solutions, ensuring effective static control at every step of the process.



Model 5645 AeroBar



Model 5802i Benchtop Blower



Model 5810i Overhead Blower



Model 5822i In-tool Blower



Model 5832 Benchtop Blower



Model 5842 Overhead Blower



Model 4612 Extreme High Temp Ionizer

### **Compliance and Standards**

This comprehensive suite of monitor products ensures adherence to facility and compliance standards by providing real-time insights, precise control of ionization processes, and tailored ionized air delivery. Simco-lon's cutting-edge technologies guarantee a meticulously controlled environment, meeting the stringent requirements of diverse industries' regulatory standards.

#### **Applications Engineering**

Technical assistance can include specific tool evaluations, detailed manufacturing process analysis and research, or manufacturing facility assessments. Formal reports based upon investigations are comprehensive and include advanced analysis methods to provide clients with the maximum usefulness in managing electrostatic issues in their process or facility. All measurements and evaluation methods are conducted with calibrated equipment and adhere to standards, advisories, guidelines, and methods as appropriate.



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