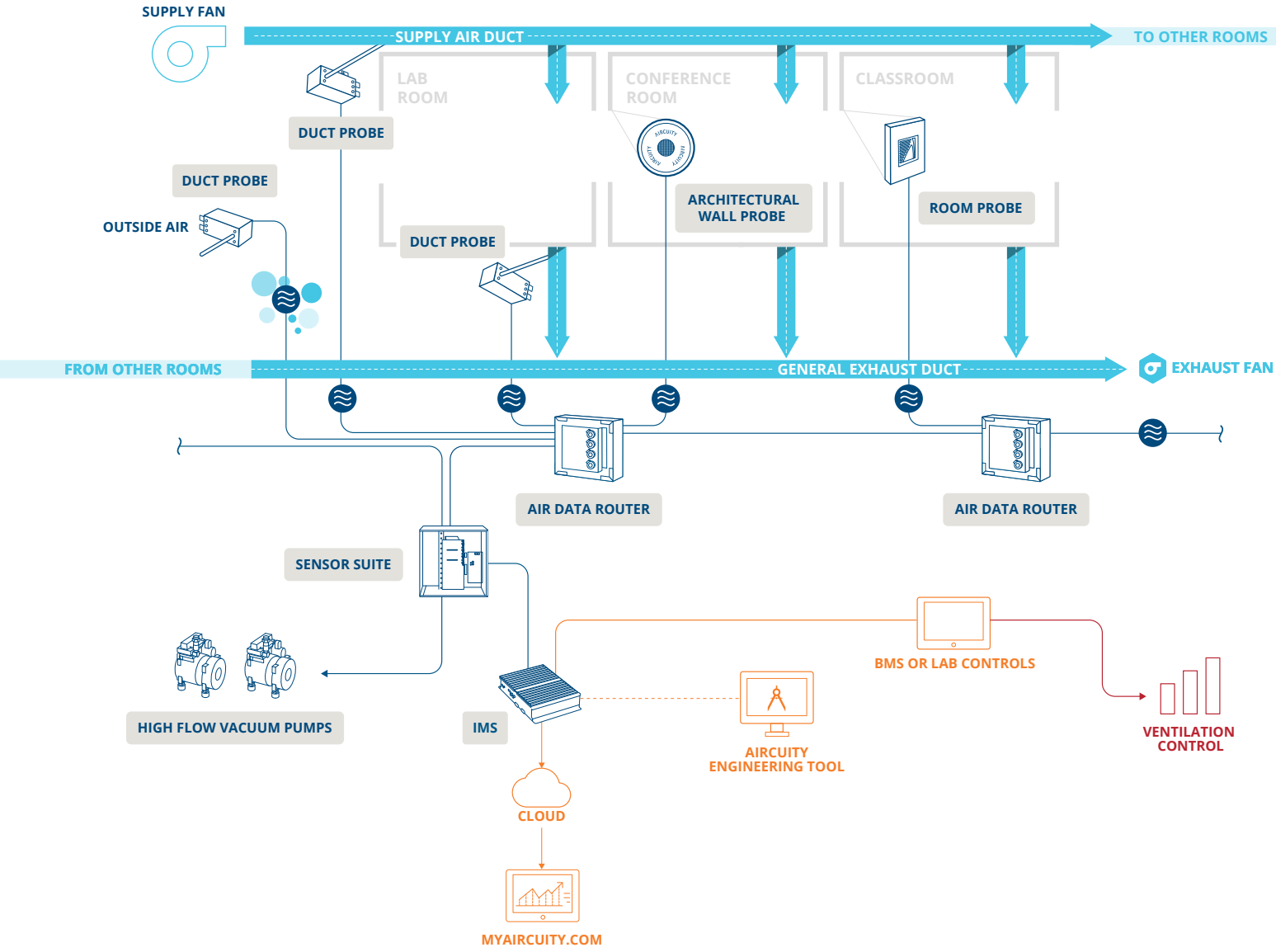
AIRCUITY®

Platform Overview



How Aircuity works:

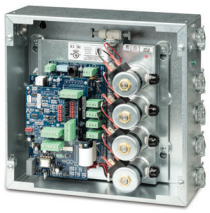
1. **Air Samples:** Air packets are drawn from individual test areas through the Air Data Router
2. **Routed:** Air packets are routed sequentially to the Sensor Suite
3. **Sensed:** Sensor Suite analyzes each air sample
4. **Feedback:** Smart signals are given to the lab or building management system for ventilation control

Information Management System

The Information Management System (IMS) provides network management of the Sensor Suites; communications to the web based user interface; and allows for integration to a facility's Building Management System via BACnet®.

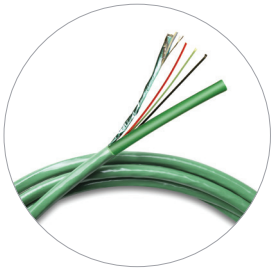
Sensor Suite

The Sensor Suite (SST) is built on a scalable architecture to accept a variety of sensors. It affords distributed, multiplexed based sensing of the monitored areas and as a shared sensor platform it minimizes calibration and maintenance costs.



Air Data Router

Air Data Routers (ADR) convey air samples to the Sensor Suite from up to four distinct test areas via dedicated Architectural Wall Probes, Room Probes and/or Duct Probes and the associated OSC/MD/OT. The router multiplexes air samples from the probes via onboard solenoid valves.

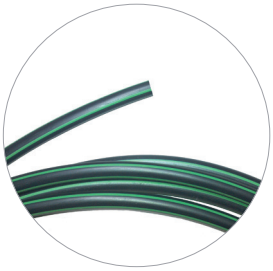


OSC Structured Cable

The OSC Structured Cable (OSC) is composed of a hollow inner tube, MicroDuct, used to transport air sample packets, interlaced low voltage power and data communications conductors, and a protective outer sheath. It is primarily used between the SST and its associated ADRs as the backbone for the Aircuity System and can also be used between the ADR and any critical environment test area location.

MicroDuct® Tubing

The MicroDuct Tubing (MD) is a technology breakthrough composed of a fluoropolymer resin and carbon nanotube blend used to transport air sample packets from the test area location back to the ADR. This tubing provides a cost-effective solution for multi-parameter environments.



OT Tubing

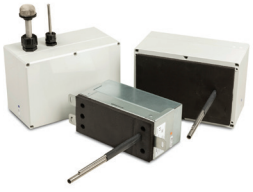
The OT Tubing (OT) is used to transport air sample packets from the test area location back to the ADR. The tubing provides a cost-effective solution for environments where only carbon monoxide (CO) and/or carbon dioxide (CO2) levels are being monitored.

Room Probe

The Room Probe (RS) interfaces to the ADR for room level sensing of a multitude of environmental parameters including discrete temperature, and for drawing air samples back to the SST.

Architectural Wall Probe

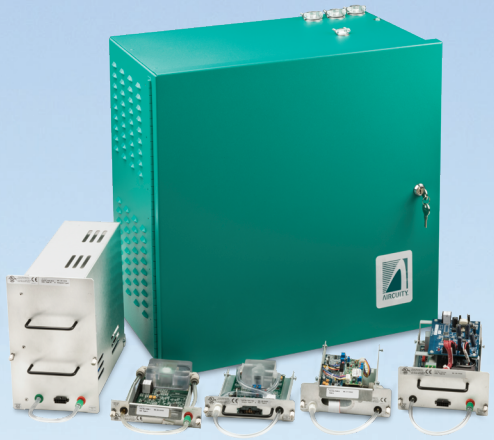
The Architectural Wall Probe (AWP) interfaces to the ADR for room level sensing of a multitude of environmental parameters (excluding temperature), and for drawing air samples back to the SST.



Duct Probes

The Duct Probes (DPB) can be mounted on a duct or in an outdoor environment and interface to the ADR for sensing a multitude of environmental parameters including discrete temperature, and for drawing air samples back to the SST.

Innovative, Proven, Results



Sensor Calibration

Freshly NIST traceable calibrated sensors will be installed once a year or bi-annually depending on the application and system configuration, ensuring the best possible performance and accuracy of data.

Hardware Assurance

Aircuity's Hardware Assurance will cover the replacement of all critical consumable components such as Sensors, Sensor Suites, Air Data Routers, Information Management Systems, and Vacuum Pumps.

Reporting

Reporting is a platform of continuously captured data, actionable insight and analytical tools that demonstrate savings achieved, protection provided and improvement opportunities.

Monitoring

Monitoring is routine review of the system by experts on Aircuity and the built environment to identify issues and opportunities that impact customer outcomes.

Healthier Environment for All Occupants

Sustainable Ventilation

Energy Savings

Reduced Deferred Maintenance Backlog

As the demand control solution, Aircuity addresses both energy use and the indoor environment by optimizing ventilation with its patented technology. Customers achieve high priority outcomes including reducing carbon emissions and healthier IAQ for enhanced employee productivity, occupant safety, and even cognitive function.

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