COMPANY
Website:
www.pierasystems.com
Year Established:
2018
Industry:
Sensors and Air Quality Monitoring

Headquarters:
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TEAM
Vin Ratford – CEO
Aaron Soh – CTO
James Pekarsky – CFO
Kenny Premanand – VP, Mfg.
Raj Seelam – VP, Marketing, Customer
Success
Howard Pakosh – Sales Director
Joanna Yan – International Sales
Andy Soh – Chief Technology Advisor
Jay Ratford – Canāree Product Mgr.
Will Harader – Software Engineer
Hyosook Kim – Hardware Engineer
Chan-Ik Kang – Firmware Engineer

PRODUCTS
IC's: PCIC – Particle Counting IC's
Sensors: Intelligent Particle Sensors
AQ Monitor: Canāree
Applications: Air Quality Monitoring,
Air Cleaners, Purifiers, HVAC Systems,
Digital Health, Vape/Smoke Detection

Patents/Trademarks:
US8680474, US8729485, US9128195,
Canāree, SenseiAQ

Intelligent Particle Sensor
Piera-7100

Canāree AQ Monitor

Customer Problem: The World Health Organization has identified Air Pollution as the cause of 7.0M deaths per year with 91 % of the world's population living where air quality exceeds WHO guidelines of 10 $\mu g/m^3$ (mass concentration). The cause is Particulate Matter (PM) from industrial emissions, motor vehicles, domestic combustion, smoking, vaping, humans, etc. PM of size < PM2.5 is the most dangerous outdoors, PM <1.0 micron indoors. Until now there has been no real-time, accurate, affordable method for measuring airborne particles from PM0.1-10 microns.

The Company: Piera Systems goal is "To Make Air Quality Measurement as accurate, simple, inexpensive and pervasive as Temperature enabling a major improvement in the health of all humans". Piera has developed a family of 'Intelligent Particle Sensors **(IPS)**', which utilizes a breakthrough custom processor optimized for measuring the smallest particles. Developed by Piera for use in an optical sensor, **PSC-1** measures the count and size of individual particles in air. Unlike existing PM Sensors that are inaccurate, low in resolution and slow, IPS has superior accuracy over a wider range (PM0.1-PM10) and reports particle size and count in real time at low power.   IPS can be programmed to detect up to 7 unique sizes and is the first Software Defined PM Sensor enabling many applications. For the first time, applications can be developed that take advantage of low cost, accurate real time data about PM and its impact on Human Health. **IPS** data is analyzed using Algorithms and Machine Learning/AI to identify and classify sources such as vape, cigarette smoke, etc. IPS is the core of our **Canāree™** family of Air Quality Monitors delivering Air Quality Monitoring as a Service. IoT enabled Canāree devices together with our **SenseiAQ™** software application has a real-time dashboard including the EPA's Air Quality Index together with additional analytics and alerts about indoor Air Quality. When deployed in any indoor space, Canāree will help you answer the question, **What's in your Air?** Data can be integrated with other devices and Building Management Systems to improve Air Quality.

Market Opportunity: IPS can be sold into a wide range of applications; Air Quality Monitoring, Air Purifiers and Digital Health Applications like vape/smoke detectors. Air Quality Monitoring will reach $9.5 B by 2028 growing at 9.2%. Air Purifiers are currently $7.3B and will reach $15.0 B by 2025. The Air Quality Sensor Market targeted by IPS is expected to reach $1.5B by 2025. Applications that leverage the data analytics from IPS similar to Canāree are expected to significantly expand the SAM.

Current State of Development: IPS, IPS Eval Kits and Canāree in production.   Test Reports Available with Certification by KETI.

Business Model: Sell IPS into Products (Air Quality Monitors, Air Purifiers/Cleaners, Noxious Gas Detectors, Smart Spaces). Sell Canāree to businesses, consumers, enterprises, government organizations direct and though VAR/Resellers.

Partnerships: An exclusive R&D agreement with Luxen Technologies, Inc. (Korea) for design activities. Global Foundries for PSC-1 production. Ideal Technology (China) for IPS, Canāree Production. HPE-Aruba Solutions Partner for Air Quality Monitoring. Piera is also a member of the edge ai + vision ALLIANCE.

What's in your AIR?