



COMPANY OVERVIEW: [Piera Systems Inc.](https://www.pierasystems.com) a wholly owned subsidiary of Piera Holdings founded in 2018 is a Mission-Based company that identifies dangerous particulate matter in the air, improving human health and providing healthy, energy-efficient indoor spaces. The company delivers world-class Sensor, Air Quality Monitors and Data leveraging AI to identify sources of pollution creating a unique market of AI driven, personalized assessments of Air quality.

OPPORTUNITY: The WHO has identified [Air Pollution](https://www.who.int/news-room/fact-sheets/detail/ambient-air-pollution-and-health-effects) as the cause of 9M deaths per year with 91% of the world's population living with air quality exceeding WHO guidelines. The primary cause is Particulate Matter (PM) from industrial and vehicle emissions, wildfires and indoor activities. Studies have shown that Indoor Air Pollution is 2-5x worse than outdoors. Climate change and Viruses (COVID-19, Influenza) have driven an urgent need to monitor and improve air quality globally. In response, the White House, CDC and [ASHRAE have released an Indoor Air Quality Standard \(241\) to reduce the risk of disease transmission in Indoor Spaces](https://www.ashrae.org/2022/01/24/ashrae-releases-indoor-air-quality-standard-241). This creates a 'tipping point' for affordable air quality monitors that can measure deadly sub-micron particles. Piera currently has the only sensor that can measure sub-micron particles at an affordable price.

PIERA: Piera has developed a family of 'Intelligent Particle Sensors' (IPS) and Canāree Air Quality Monitors (AQM) using breakthrough technology for measuring the count and size of particles with patented and proprietary Intellectual Property. Unlike current low-cost sensors which estimate particle weight, Piera devices correlate to expensive reference instruments showing particle count and size in real-time. Particle Data from these devices enables an ongoing business relationship with customers through hardware and services monitoring air quality, providing insights to drive mitigation, identifying pollution sources, and improving energy efficiency for industrial, commercial, and residential spaces alike.

COMPANY NAME: Piera Systems

ADDRESS: 11445 E Via Linda Suite 2, #543
Scottsdale, AZ 85259-2654
PHONE: +1 647 374-0101
EMAIL: info@pierasystems.com
WEBSITE: www.pierasystems.com

GENERAL DETAILS:

YEAR FOUNDED IN: 2018
of employees: 12

FUNDING HISTORY:

Total Raised to Date: \$3.0 M
Seeking \$3-5M to grow

Next Phase of Investment: Additional AI Based Pollutant Models, AI Based Chatbot will deliver personalized data to reduce health impacts of pollution, Canāree IX Platform adds gas sensors for AI models, AirSights SW to extend SenseiAQ for networks of sensor.

Cumulative Revenue: ~ \$ 2.6 M
Cash Flow Positive in 12 months

MARKET SIZE:

TAM: \$ \$25.0 B
Estimated Reach: > \$20.0M By Year: 2027

REVENUE and Forecast:

2022: 0.5 M
2023: 0.8 M
2024: 1.1 M
2025 5.0 M Forecast

TEAM:

Vin Ratford – CEO
Aaron Soh – Founder, CTO
Andy Soh – Technology Advisor
Howard Pakosh – Sales Director
Joe Costello – BOD, Advisor

- Decades of startup and corporate experience
- Serial entrepreneurs, innovation-focused
- Experienced in scaling multiple companies
- Semiconductors, Software, ML/AI, Biotech
- Multiple exits through M&A, IPO



Canāree AQM



Intelligent Particle Sensor

TECHNOLOGY	
A Particle Processing ASIC, the PSC , is the brains of our sensors delivering superior accuracy, measuring a wide range of particle sizes (0.1-50 microns) in real-time, reporting particle count and size. AI models analyze data identifying likely sources (vape, smoke, cooking, cleaning, construction dust), send alerts, provide insights, and monitor steps to 'clean' the air. Canāree is an Air Quality Monitor streaming data to Microsoft Azure cloud. AI models are in place for Vape/Smoke with others being developed. PSC is certified by Korean Electronics Technology Institute to meet ISO 21501-4, a required standard for monitoring clean rooms. SenseiAQ software and cloud services completes the solution.	
COMPETITION	
Existing low-cost PM sensors use a methodology called Low Pulse Occupancy (LPO) that are inaccurate, low resolution, and slow. Data varies from sensor to sensor and with temperature and humidity. The EPA reports they are good for 'estimates of particle mass or weight only'. Instruments costing \$10-\$25k are available but are not practical for building a global network of sensors or to embed in IoT devices nor are they affordable for commercial uses. Piera delivers reference instrument accuracy and resolution at a low price on an IOT enabled platform meeting the demands for real-life applications and uses.	
DEFENSIBILITY	
PSC is a custom particle processor adapted from technology developed for X-Ray machines. PSC-1 is protected by 3 US patents (architecture, high-speed, ultra-low noise circuitry, and embedded IP). Piera has developed a PSC-2 to add more particle sizes with a new Power Management IC reducing product costs. AI models utilizing particle data at the edge send alerts to the SenseiAQ Air Quality Monitoring Software that runs locally or in Piera's cloud services utilizing Microsoft Azure.	
BUSINESS MODEL	
Piera generates revenue from HW, Services and OTA Product updates. B2B Sales of IPS and Canāree are direct for major accounts, distribution (Farnell/Newark) and OEM/VARS. TAM of \$24.5B by 2026, Piera's SAM \$4B. Canāree uses a SAAS model leveraging SenseiAQ software bundling HW as a service. Additional revenue sources include Pollutant Models, software updates and service enhancements. HW sales drive additional customer revenue streams through ongoing interaction with customers.	
GO TO MARKET STRATEGY	
<ul style="list-style-type: none"> • B2B sales of Canāree and IPS targeting Schools, Offices, Commercial/Residential Property, Hospitality, Industrial. • Canāree and IPS design-ins at OEM's delivering air cleaning equipment (air purifiers, HVAC, disinfection robots, etc.). IPS Sales for outdoor air monitoring. • Partnership with MACSO to develop AI pollutant models, initial deployment for vape, smoke, cooking, underway. Project underway to measure construction dust. 	
MILESTONES	
Nov 2019 -	Reincorporated in Delaware as Piera Holdings, Inc.
Feb 2021 -	IPS Production, initial design wins
Oct 2021 -	Second Seed/bridge round, Total \$2.0+ M
Dec 2021 -	Canāree production and online orders at www.pierasystems.com
Nov 2022 -	CES Innovation Award – Digital Health for Canāree
May 2023 -	Product of the Year - Enterprise Edge AI Solution
June 2023 -	\$1.0M Cumulative revenue
Oct 2024 -	IX6 Vape Detector a Vendor of Record for Province of Ontario
Dec 2024	\$2.6M cumulative revenue, \$1.1M in 2024