



Canaree A1 FAQ

How can I validate that my sensor is working properly?

We recommend using SenseiAQ Software on Windows 10 or MacOS 10.15+ Platforms using the Canaree connected via USB. SenseiAQ will factory-reset your sensor and validate proper and PM readings from all PM Size bins.

Can I use any Serial Terminal Program to communicate with the sensor?

When using the Piera-provided USB Cable your sensor becomes accessible on a COM Port using HyperTerminal, PuTTY or any other standard terminal emulation program.

See the IPS-Series Datasheet for serial commands and connectivity options.

What are the serial port settings for communicating with the sensor in UART mode?

115200 / 8 / N / 1 (No Flow Control)

Is there a way to restart the device directly in UART Mode?

Entering `$Wreset=` will soft power-cycle the device

What does the Factory configuration do?

Default configuration spits out PC and PM Data every second to serial port, as well as the sensors Serial number and IoT Keys. By default - PM values are displayed in ug/m3, PC values are in #/Liter

How do I reset to factory-defaults?

Each time you launch SenseiAQ App it will factory-reset the sensor. If using serial program Entering the following and your sensor will reboot with factory-default settings.

`$Wfactory=`

Can I change the units for PM Values output?

To change measured data unit, use the following command: `$Wunit=n` where $n=0, 1, 2,$ or 3
1 for PC/PM values per ft³ ,
2 for PC/PM value per m³ ,
3 for PC/PM value per liter.

Does SenseiAQ Support multiple Piera sensors simultaneously?

Example Python code is available to run multiple sensors simultaneously on a PC for logging purposes only.

Is there a program to communicate with multiple sensors on a PC/Mac ?

SenseiAQ software currently only supports a single sensor running on each PC/Mac. Piera offers a Python-serial based tool to read data from multiple sensors, each to a separate log file while displaying events and PC Averages. It can be modified to send commands to sensor for large-scale provisioning.

Does your sensor auto-clean? What about the high fan-speed setting?

The default factory setting is to initiate the auto-cleaning cycle for 10 seconds every week. It can be done manually with the cleaning command, or set to a different time interval. The fan runs about twice as fast during the cleaning cycle.

How do I stop the sensor from sending data continuously in UART Mode?

Enter `$Winterval=0` to stop auto streaming of data after bootup

Use `$Rget=` to retrieve a dataset for all PC and PM for previous seconds reading.

Use `$Wvsds=0` turns off the Vape / Smoke detection alerts on the Console.

Is there a warm-up time required to get accurate PC/PM Readings?

No specific warm-up time; however it takes about 6 seconds to sensor bootup and full fan speed to occur.

If dust has concentrated in the airstream, we recommend ignoring values for the first minute while the fan blows-thru any particles that may have settled.

SenseiAQ Software ignores the first 30 seconds of data after sensor is connected.

I tried issuing `$Won=200` in UART mode but nothing happened?

This command has been retired as of firmware version V1.6 For an updated list of UART commands please see the Piera IPS Datasheet

How much power draw will a Canaree require from USB Port?

0.08amps @ 5V continuous operation with fan running normally.

What is an acceptable range (lower and upper limits) of airflow rate for the specified sampling rate of 0.5 s?

0.05 - 0.1 CFM

Do we have any compensation for humidity?

Not at this time. It is planned in future product releases.

Do I have to wait 6 seconds after power-up / boot-up before I can read data?

Yes. The sensor needs to finish powering up before sending valid data. Always wait 6 seconds before reading data every time the sensor is powered on.

What's the sensor range? How far apart should the sensors be?

about 30 m³ for real-time event detection; 200 m³ for general purpose monitoring; and everything else is in between

Is there cross-talk or cross-pollination between our various bins?

No as our bins are distinctively measuring different sized particles.

What is the airflow rating for the fan?

0.2CFM

Canaree Aruba FAQ

I connected Canaree to my Aruba AP USB Port; however the device does not appear to power-on and I see no LED Lights.

If your Aruba AP is not receiving full PoE Power (30W @ 48V or uPOE+) the AP will shutdown the USB Port until available power becomes available. You can validate your Canaree powers on using a standard USB 5V Charger.

Can the Canaree be remote-mounted to an Aruba-AP using a USB-Extension cable?

Yes, a high-quality USB Type-A Extension cable up to 10 feet in length can be used.

How much Bandwidth does each Piera Sensor take up when communicating thru an Aruba AP to the Piera Cloud?

Approximately 8Kbps per sensor using 1 second update intervals.

That means 100 Sensors Connected to 100 Aruba APs would send 800Kbps

Does your solution support Aruba Instant-Access-Point (IAP) or Aruba Central

Yes, this is officially supported in the same 8.8 release as Aruba MC/VMC using the same configuration.

Where should Canaree be located?

Areas where AP's are already located that have high activity or foot traffic, entrances (lobbies), meeting rooms, bathrooms, cafeteria's, labs or industrial machinery in operation. In short, anywhere air quality can be impacted by people, machinery or ingress from outdoors. Canaree can be moved at any time so you can reconfigure as needed.

Can Canaree be used outdoors?

It's not designed for outdoor use. If the conditions warrant you could plug it into a sheltered patio or other space where it's protected from the elements however we don't recommend leaving it for extended periods.