

City Scanner Open Data Supplement

This document provides expanded definitions, units, and more information on the data provided in the .CSV files from City Scanner deployments.

Data Fields

time

- The time field is in Unix time and can be converted to local time with a simple script or using online tools.

latitude, longitude

- The latitude and longitude readings from the devices are determined via GPS and given in degrees for projected coordinates.

pm1, pm25, pm10

- The particulate matter (pm) readings from the optical particle counter after calibration.
- The units for each are instantaneous mass concentrations in $\mu\text{g}/\text{m}^3$.

no2

- The nitrogen dioxide (no2) readings from the gas sensors after conversion and calibration.
- The unit is instantaneous concentrations in parts per billion (ppb).

bin0-bin23

- Twenty-four bins from the OPC containing particle number counts for different sizes, ranging from 0.35 to 40 μm . The bin boundary sizes are as follows from bin0 to bin23:
 - 0.35
 - 0.46
 - 0.66
 - 1.0
 - 1.3
 - 1.7
 - 2.3
 - 3.0
 - 4.0
 - 5.2
 - 6.5

- ☐ 8.0
- ☐ 10.0
- ☐ 12.0
- ☐ 14.0
- ☐ 16.0
- ☐ 18.0
- ☐ 20.0
- ☐ 22.0
- ☐ 25.0
- ☐ 28.0
- ☐ 31.0
- ☐ 34.0
- ☐ 37.0
- ☐ 40.0

temperature

- Ambient temperature reading in degrees Celsius.

humidity

- Ambient relative humidity reading in percentage