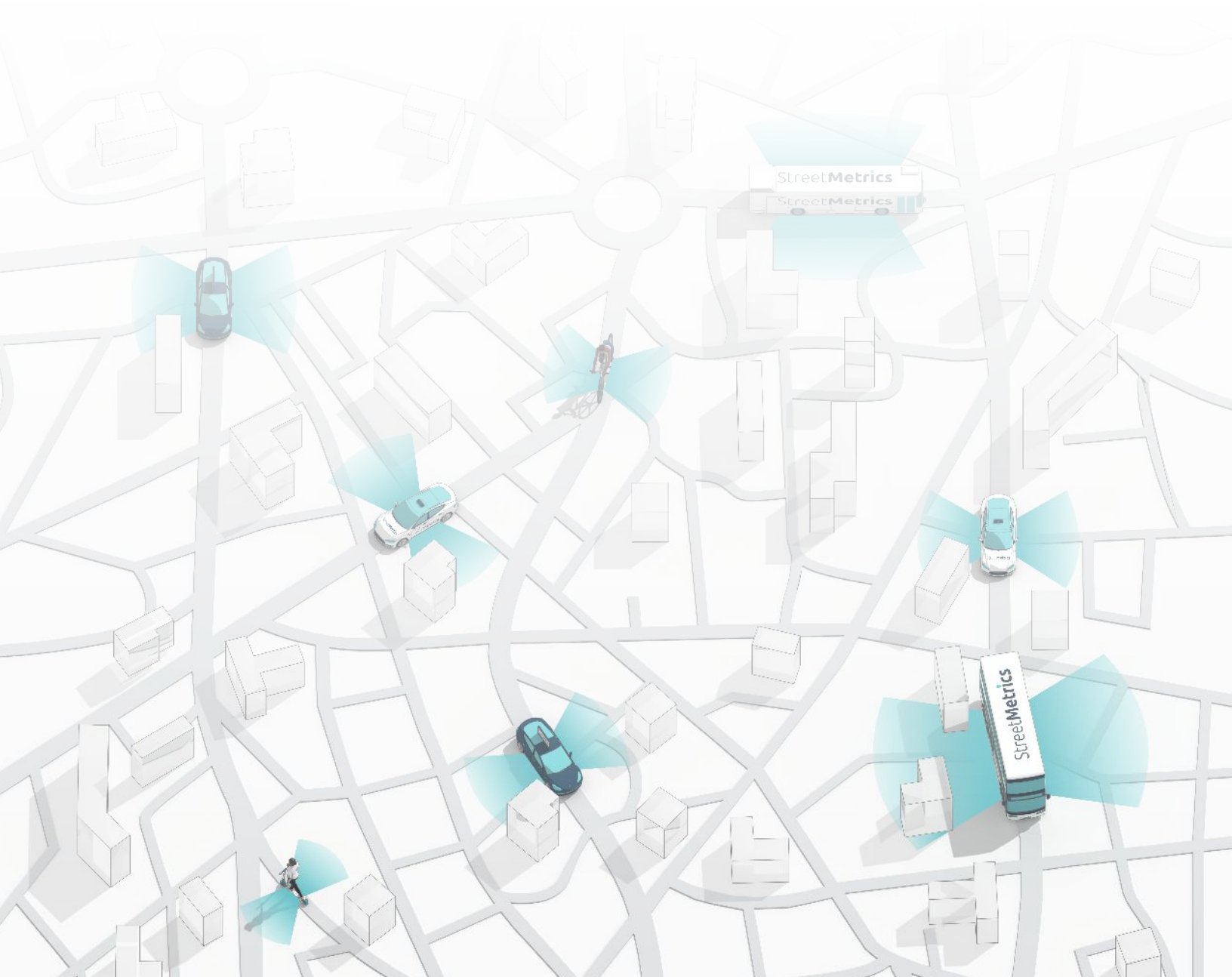


GPS Integration Overview

Integrating your vehicle GPS system with StreetMetrics

For Digital Ads



GPS Integration for digital ads

How to setup your vehicle GPS system with StreetMetrics

1

Identify your GPS Provider

- a. General Transit Feed Specification - aka GTFS (used by most Transit Authorities)
- b. Third-party GPS Provider
 - i. For a seamless third-party integration, we recommend using one of the following preferred providers: **OneStep, CalAmp, Samsara, or BrickHouse Security**
 - ii. If your business utilizes a non-preferred GPS provider, please note that this may lead to integration delays and unforeseeable issues following integration.
- c. First-party GPS solution (e.g. Owned mobile app or GPS device)

2

Identify your CMS Provider

- a. Third-party CMS provider (e.g. Broadsign, Xibo, etc.)
- b. First-party CMS solutions (e.g. owned CMS Solution)

3

Combine CMS and GPS Data Feeds

StreetMetrics relies on a direct relationship between the road segment and the creative/Vehicle ID to accurately measure and attribute exposure for each individual ad play. When creating/identifying the objects in the schema, please confirm your CMS provider is able to accomodate.

4

Identify all of the objects in your ad play schema

We require all objects listed under "Mandatory Objects" in your schema, but we ask that you send us as many "Optional Objects" as permitted by your company or that our data transfer agreement allows. *If your data is un-sequenced, then "end_location" is a mandatory object. Additionally, we ask that your creative_id remain consistent.*

Mandatory columns:

"start_timestamp" | "vehicle_id" | "creative_id" | "start_location" | "duration"

Optional Objects

"end_timestamp" | "market" | "speed" | "vehicle_direction"

Example of ad play schema:

POST [https://\[staging\]hermes.streetmetrics.io/ingest/IDENTIFIER](https://[staging]hermes.streetmetrics.io/ingest/IDENTIFIER)

```
{
  "timestamp": "2020-10-20T04:00:13.176245Z",
  "device_id": 1409656909085260368,
  "creative_id": "Glass Bottle",
  "start_location": [40.750921, -73.987718],
  "end_location": [40.751921, -73.988718],
  "duration": 10375
}
```

GPS Integration for Digital Advertisers (cont.)

5

Determine how you will share ad play data with StreetMetrics

- a. Sequenced: All ad play data (the total ad play log) is provided in sequence
If you will share all of your ad play data (with the GPS data) in sequence, then it's not mandatory we receive an "end_location" per ad play. This is because we can reasonably infer that the "start_location" for an ad play (per device_id) is also the "end_location" of the previous ad play.
- b. Unsequenced: Select ad play data is provided, not in sequence
If you will share un-sequenced ad play data (with the GPS data), meaning that we won't receive all ad plays from your ad server and will see gaps in the data, then it's mandatory to include an "end_location" per ad play.

6

Choose the best integration for your organization

API Integration (Pull): *Required for GTFS Integration*

For an API PULL Integration, StreetMetrics will retrieve, or "pull" the GPS data from the GPS Provider or other API feed. *Please email us the following:*

- a. Documentation for the API that details how the data should be pulled
- b. The format of the data (if not provided in the API documentation)
- c. Any necessary credentials to access the API (API Keys, token, etc.)

API Integration (Push) (Most Popular)

For an API PUSH Integration, StreetMetrics will receive GPS data that the client "pushes" to the StreetMetrics API ingestion endpoint. The endpoint accepts POST and PUT requests, and follows the endpoint schema of: <https://hermes.streetmetrics.io/ingest/IDENTIFIER>. *Please email the following:*

- a. A JSON object that shows the format of the data we will receive
- b. Payload Frequency (seconds) - how frequently the data will be delivered (e.g. 5, 10, 15, 30 seconds)

AWS S3 Integration (Push)

For the AWS S3 Integration, StreetMetrics will receive GPS data that the client "pushes" to the StreetMetrics AWS S3 bucket at a regular cadence. *Please email us the following:*

- a. The file format we should expect (e.g. CSV, JSON, etc.)
- b. The schema of the file being submitted (e.g. columns, properties, etc.)
- c. Payload Frequency (seconds) - how frequently the data will be delivered (e.g. 5, 10, 15, 30 seconds)

7

Email StreetMetrics

Please email the name of your **GPS provider** and the **information listed above** for your chosen integration type to technology@streetmetrics.io.

8

StreetMetrics completes the integration

Once all required information has been received, StreetMetrics will execute the integration.

FAQs

Does StreetMetrics have any rate limits for sending over ad play data?

There are no limits. You're welcome to send the ad play data as you have it, or send in batches every 10-30 seconds. Our standard instance can absorb 100 ad plays per second, and will scale as your number of requests increase.

Should the 'timestamp' payload be sent in seconds, milliseconds, or microseconds?

We do not have a preference, the 'timestamp' can be sent in seconds, milliseconds, or microseconds, however, *please* keep it **consistent**.

What unique identifiers should be used for creatives and campaigns?

We recommend making your unique identifiers plaintext ID, rather than a numerical or UUID. Unique identifiers are used for viewing purposes in the StreetMetrics dashboard.

Do the values in the schema need to be sent to StreetMetrics in the exact same format as what's requested in the document?

No, you can send "vehicleid" instead of "vehicle_id" if you choose.

