



IRMA onAir Data

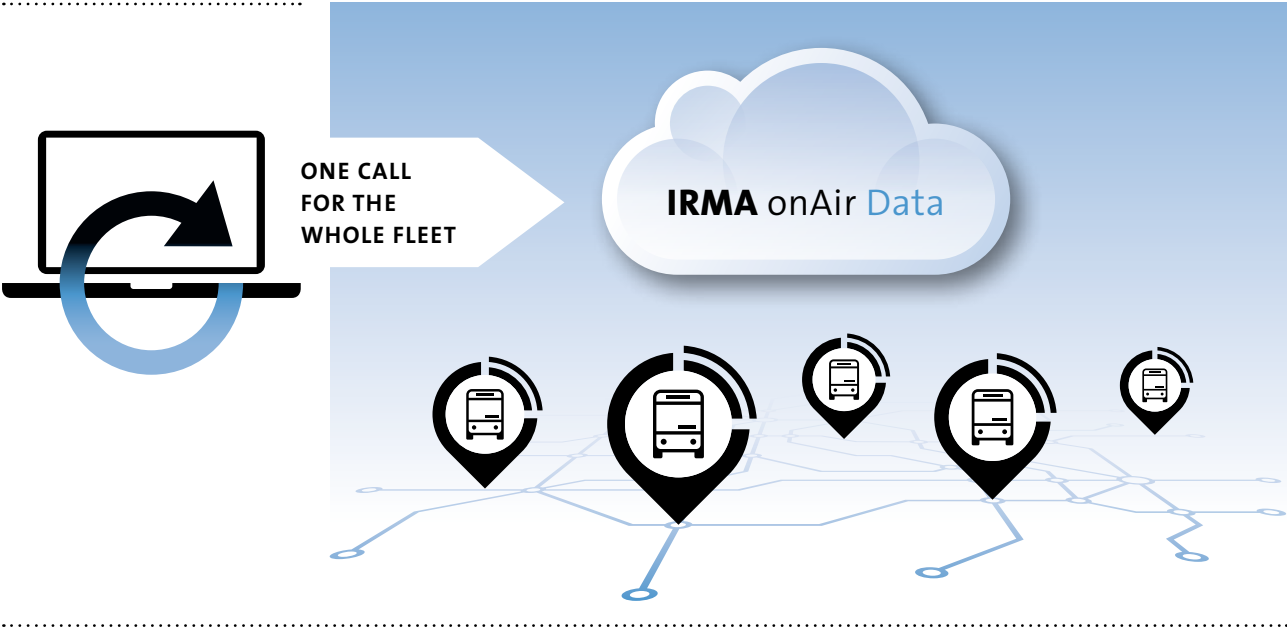
EN

Takes counting data into the cloud:
<https://api.irmaonair.com>

IRMA onAir Data offers the advantage of counting data in the cloud as a Software-as-a-Service (SaaS) and data source for software solutions of public transport. Calling on the real-time API by IRMA onAir, the data interface developed specially for real-time applications, is sufficient for safe access to the Internet of Things network of passenger counting sensors. A large number of different data formats facilitates the integration into subsequent systems.

The IRMA onAir counting data platform protects the data in the cloud from unauthorized access and secures the transmission and remote access of it for maintenance purposes by means of whitelisting and integrity monitoring.

IRMA onAir Data is based on a robust and scalable big data platform in the IRMA onAir cloud. A maximum fail-safe level and transparent software updates without waiting times ensure trouble-free operation of the Software-as-a-Service offer available world-wide. The scalability of the platform allows pilot operation of IRMA onAir with either just a few vehicles or large vehicle pools operating in megacities and urban agglomerations.



OPERATING DATA



Passenger data broken down by passenger categories (adults, children, bicycles, a. o.)



Satellite locating and time stamp



Status and diagnostic information



Door opening times

ADMINISTRATIVE DATA

• Vehicles • Clients • Devices



DATA FORMATS



JSON



XML



CSV

JSON EXAMPLE

```
{
  „VEHICLE“:[
    {
      „company“:„iris“,
      „vehicleId“:„B-BA3822“,
      „timestamp“:„2016-12-08T00:55:41+0100“,
      „stop“:{
        „type“:„PassengerTraffic“,
        „doorOpen“:„2016-12-07T02:40:20+0100“,
        „doorClose“:„2016-12-07T02:41:50+0100“,
        „longitude“:52.456940,
        „latitude“:13.531830,
        „apc“:[
          {„door“:1,„catId“:„Adults“,„in“:10,„out“:12},
          {„door“:1,„catId“:„Children“,„in“:2,„out“:4},
          {„door“:1,„catId“:„Bikes“,„in“:1,„out“:0}
        ] ...
      }
    }
  ]
}
```

IRMA onAir Data – APIs

IRMA onAir Data offers special data interfaces for the export of counting data. These APIs (Application Programming Interfaces) are based on the HTTP-REST technology and therefore platform independent. The programming language for data integration can accordingly be selected freely: Java, C#, Python or JavaScript lend themselves to this purpose. The integration of the data into subsequent systems is easy due to the minimal development effort required. The IRMA onAir Data interfaces are well documented under www.IRMAonAir.com and can be adjusted according to the customer's needs. The table above gives an overview of the available data types.



Realtime API

The real-time API is a specialised program for the export of counting data in real time. The systems receive the updates on passenger occupancy rate and geolocation information in the GTFS-realtime format (General Transit Feed Specification), among others. In this case occupancy rates are either classified ("empty", "standing room only", etc.) or given as a percentage. Geolocation information is entered into subsequent systems in the form of waypoints or halts with door opening and door closing times.



Reporting API

The Reporting API offers a selection of suitable interfaces, such as the VDV 457-2 raw data interface, for the export of counting data and geolocating information. The data are mainly provided in the CSV, XML or JSON formats. In addition to passenger counting data, a wide range of status and diagnostic information is transmitted from the IRMA onAir Kit devices for preventive maintenance and workshop scheduling.

on the move
on the cloud
onAir

iris-GmbH | Ostendstrasse 1–14 | 12459 Berlin | Germany
Telephone: +49 30 58 58 14-0 | E-mail: mail@irisgmbh.de



twitter.com/irma_onair



[linkedin.com/company/irma-onair](https://www.linkedin.com/company/irma-onair)

www.IRMAonAir.com