

# AirMapSDK

version 1.0A

**Airmap**

**September 25, 2016**



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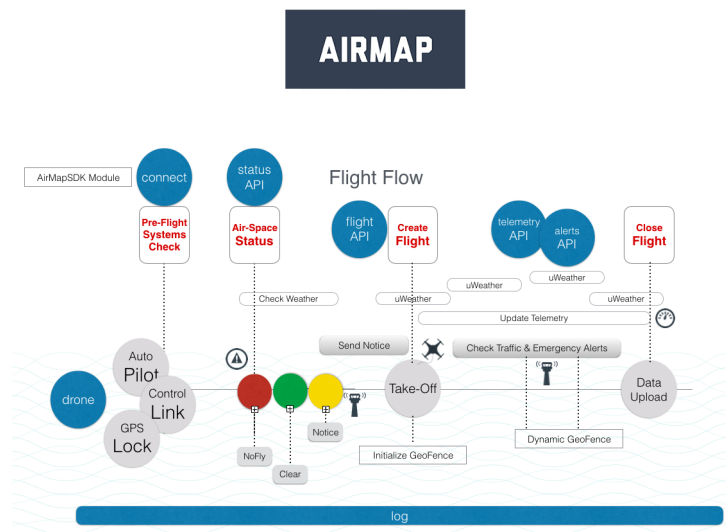
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# Welcome to AirMap's documentation!

Airmap -- Airspace Management For Drones.

AirMapSDK is a Python library for interfacing with the [Airmap API](#).



## Pre-Requisites:

- Airmap developer account
- X-API-Key from your account
- GPS data (fake gps included)
- OAuth token
- getAirmap.py (copy to /home/root/installs directory or similar)

## Wi-Fi Connectivity

```
ifconfig (check for wlan0 or LTE ethX)
cd /etc
sudo wpa_passphrase yourSSID yourPassphrase > wpa-Aero.conf
sudo wpa_supplicant -i wlan0 -c /etc/wpa-Aero.conf &
sudo dhclient wlan0
```

## Install simplejson

```
cd /home/root
mkdir installs
cd installs
python getAirmap.py simplejson simplejson
unzip simplejson-master.zip
cd simplejson-master
python setup.py install
```

## Install AirMapSDK

```
cd /home/root
mkdir Installs
cd installs
python getAirmap.py ricardoairmap EmbeddedSDK
unzip EmbeddedSDK-master.zip
cd EmbeddedSDK-master
```

## User Example

```
cd /home/root/Installs/EmbeddedSDK-master
python userapp.py
```

## API Example

(connect) `airmap.connect.set_XAPIKey(xapikey)` - Set your X-API-Key from your Airmap account  
(connect) `airmap.connect.get_CIDID()` - Retrieve CID information  
(connect) `airmap.connect.connect()` - Check internet connection and endpoint status Returns: True if ready  
(statusAPI) `airmap.statusAPI.get_status(lat,lon,Weather.on)` - Given position retrieve airspace data  
(statusAPI) Parse status information including weather, advisories, and maximum flight bounds (see statusAPI documentation)  
(user) Process required notifications if needed  
(connect) `airmap.connect.get_SecureToken()` - get security token  
(flightAPI) `airmap.flightAPI.create_FlightPoint (flight time,lat,lon,publicflight?,sendnotifications?)` - Setup the flight and flight time Returns flightID  
(flightAPI) `airmap.flightAPI.get_PilotID()` - Returns pilotID for this account  
(flightAPI) `airmap.flightAPI.end_Flight(flightID)` - End the flight specified by flight ID  
(flightAPI) `airmap.flightAPI.delete_Flight(flightID)` - Delete flight described by flightID  
(flightAPI) `airmap.flightAPI.get_FlightList(pilotID)` - Get all flights for pilotID  
(flightAPI) `airmap.flightAPI.cmd_KillFlights(pilotID)` - Delete all flights under specified pilotID

Documentation can be found at <https://developer.airmap.io>

Source code can be found at <https://github.com/...>

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Contents:

## AirMap Package

### ***airdefs*** Module

`airdefs AirMapSDK`

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

`class airmap.airdefs.Advisories` (*distance, last\_updated, name, city, color, country, longitude, properties, state, latitude, type, id*)

Adivosry group list

**Notes:** Distance, date of last update, name, city, color(status), country, longitude, properties, state, latitude, type, id

`class airmap.airdefs.Advisory`

Advisoy information (Pre-Flight, In-Flight)

**Notes:** Advisory status color list

`class Color`

Flight status color code

**Colors**

Color code

**Parameters:**

- **gray** -- Disbabled
- **green** -- Go
- **yellow** -- Advise
- **red** -- NoFly

alias of `Enum`

`enum (*sequential, **named)`

`class airmap.airdefs.Globals`

Global settings

**Notes:** Session parameters address, port, timeout, api key, token, pilot id, flight id

**AirConnected** = *False*

**dbgPrint (data)**

Debug send to console

**Parameters:** **data** -- Debug or information to send to console

**Returns:** None

**httpPort** = 80

**httpsAddr** = 'api.airmap.io'

**httpsPort** = 443

**keyAddr** = 'sso.airmap.io'

**myFlightID** = None

**myToken** = None

**pilotIDValid** = *False*

**pilot\_id** = None

**strPrint (data)**

Information send to console

**Parameters:** **data** -- information to send to console

**Returns:** None

**testAddr** = 'cm/pxv.com'

**thisCID** = None

**timeOut** = 18

**xapikey** = None

**class airmap.airdefs.Notify**

Enable notifications

**Parameters:**

- **on** -- Enable notifications
- **off** -- Disable notifications

**off** = *False*

**on** = *True*

**class airmap.airdefs.Properties (prop\_name, prop\_value)**

Name to Value Keypairs

**class airmap.airdefs.Public**

Make flight public

**Parameters:**

- **on** -- Public flight
- **off** -- Private flight

**off** = *False*

**on** = *True*

**class** airmap.airdefs.**Requirement**  
Notification requirements contact key pair list

**State**  
alias of **Enum**

**enum** (*\*sequential, \*\*named*)

**class** airmap.airdefs.**Startup**  
Startup configuration

**Notes:**

**class** **Drone**  
Drone information (ID, Location, Status)

**State**  
alias of **Enum**

**enum** (*\*sequential, \*\*named*)

**class** airmap.airdefs.**Weather**  
Weather control parameters

**Parameters:**

- **on** -- Enable weather data
- **off** -- Disable weather data

**off** = *'false'*

**on** = *'true'*

## **connect** *Module*

connect AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

**class** airmap.connect.**Connect**

**connect** ()  
Connect to service

**Param:** None

**Returns:** True - if connected otherwise False

**connection** = *None*  
Connection instance

**Notes:** HTTPS access variable

**get\_CIDID** ()  
Retrieve CID from mmcblk0

**Param:** None

**Returns:** CID otherwise False

**get\_SecureToken** ()



Retrieve security token and refresh

**Param:** None

**Returns:** Token if successful otherwise False

**Todo:** Remove hardcoded token and add token from https endpoint based on CID

**headers** = None

Connection headers security and format

**Notes:** Security and format headers

**os** = <module 'os' from '/usr/lib/python2.7/os.pyc'>

OS access

**Notes:** Run sys commands

**set\_Timeout (time\_out)**

Set https request timeout time

**Parameters:** **time\_out** -- Timeout time in seconds

**Returns:** True - Success, False - Fail

**set\_XAPIKey (xapikey)**

Set https request timeout time

**Parameters:** **xapikey** -- X-API-Key from developers account

**Returns:** True - Success, False - Fail

**thisGlobals** = <airmap.airdefs.Globals instance at 0x2ac329f56290>

Global parameter access

**Notes:** Endpoint address, ports, token, id(s)

## **statusAPI** Module

statusAPI AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.statusAPI.Status
```

```
    cmd_ProcessAdvisories ()
```

```
    connection = None
```

```
    get_Advisories ()
```

```
    get_Advisory (id)
```

```
    get_Condition ()
```

```
    get_Humidity ()
```

```
    get_MaxDistance ()
```

```
    get_Precipitation ()
```

```
    get_StatusCode ()
```

```
    get_StatusColor ()
```

```
get_Temperature ()
get_Visibility ()
get_WindGusting ()
get_WindHeading ()
get_WindSpeed ()
get_status (gps_lat, gps_lon, weather)
headers = None
levelDown (data)
localAdvisories = []
localLevelDown = []
localProperties = []
os = <module 'os' from '/usr/lib/python2.7/os.pyc'>
status_json = None
thisGlobals = <airmap.airdefs.Globals instance at 0x2ac329f5a5a8>
```

## **flightAPI** Module

flightAPI AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.flightAPI.Flight

    cmd_KillFlights (pilotID)

    connection = None

    create_FlightPoint (time, lat, lon, public, notify)

    delete_Flight (flightID)

    end_Flight (flightID)

    get_FlightList (pilotID)

    get_PilotID ()

    headers = None

    os = <module 'os' from '/usr/lib/python2.7/os.pyc'>

    thisGlobals = <airmap.airdefs.Globals instance at 0x2ac329901488>
```

## **drone** Module

drone AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.drone.drone
```

## **log** Module

log AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.log.log
```

## **telemetryAPI** Module

telemetryAPI AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.telemetryAPI.Telemetry

    connection = None

    headers = None

    os = <module 'os' from '/usr/lib/python2.7/os.pyc'>

    put_Telemetry (flightID, lat, lon)

    thisGlobals = <airmap.airdefs.Globals instance at 0x2ac329901d40>
```

## **alertsAPI** Module

alertsAPI AirMapSDK

Created by Ricardo Rodriguez on 6/28/16. Copyright (c) 2016 AirMap, Inc. All rights reserved.

```
class airmap.alertsAPI.alertsAPI
```

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