# AirMapSDK

## version 1.0A

**Airmap**

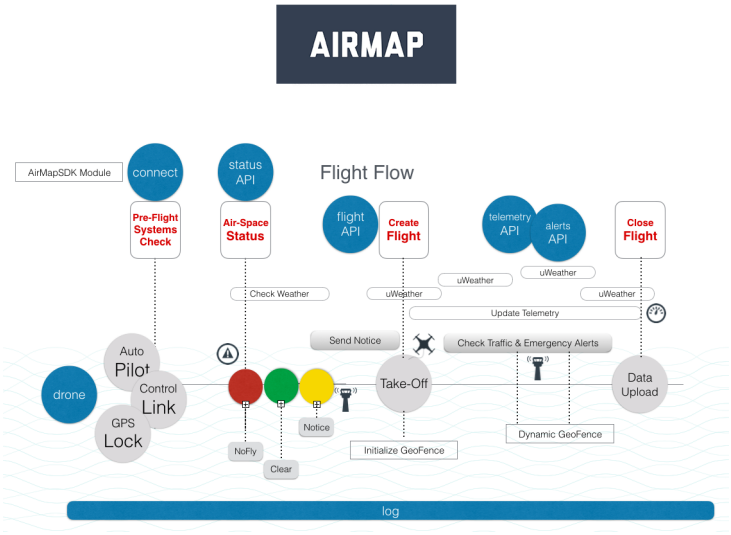
**September 26, 2016**

# Contents

# Welcome to AirMap's documentation!

Airmap -- Airspace Management For Drones.

AirMapSDK is a Python library for interfacing with the Airmap API.




**Pre-Requistes:**

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 retreive 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

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*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 parametes address, port, timeot, 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** = *'api-aero-telemetry.airmap.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 requirments 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



*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 headerssecurity 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 0x2b572c215998>*
Global parameter access

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

## *statusAPI* Module

statusAPI AirMapSDK

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*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 0x2b572c215638>*

## *flightAPI* Module

flightAPI AirMapSDK

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*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 0x2b572c215ea8>*

## *drone* Module

drone AirMapSDK

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*class* airmap.drone.**drone**

## *log* Module

log AirMapSDK

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*class* airmap.log.**log**

## *telemetryAPI* Module

telemetryAPI AirMapSDK

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*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 0x2b572c215d40>*

## *alertsAPI* Module

alertsAPI AirMapSDK

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*class* airmap.alertsAPI.**alertsAPI**

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