
AT&T M2X Python Client Library Documentation

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AT&T

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Python toolkit for the [AT&T M2X API](#).

View the [M2X Python Client README](#) for usage details.

All methods in this client library require an API Key for authentication. There are multiple types of API Keys which provide granular access to your M2X resources. Please review the [API Keys documentation](#) for more details on the different types of keys available.

If an invalid API Key is utilized, you will receive the following error when calling client methods:

```
>>> client.method(...)
Traceback (most recent call last):
...
requests.exceptions.HTTPError: 401 Client Error: Unauthorized
```


class V2Mixin

Bases: `object`

Wrapper for AT&T M2X API

collection (*id*)

Method for [View Collection Details](#) endpoint.

Parameters *id* (*str*) – ID of the Collection to retrieve

Returns The matching Collection

Return type *Collection*

Raises `HTTPError` if an error occurs when sending the HTTP request

collections (***params*)

[List Collections](#)

Parameters *params* – Query parameters passed as keyword arguments. [View M2X API Docs](#) for listing of available parameters.

Returns List of *Collection* objects

Return type *list*

Raises `HTTPError` if an error occurs when sending the HTTP request

command (*id*)

Method for [View Command Details](#) endpoint.

Parameters *id* (*str*) – ID of the Command to retrieve

Returns The matching Command

Return type *Command*

Raises `HTTPError` if an error occurs when sending the HTTP request

commands (***params*)

Method for [List Sent Commands](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns List of Command objects

Return type

`list`

Raises `HTTPError` if an error occurs when sending the HTTP request

create_collection (***params*)

Method for [Create Collection](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The newly created Collection

Return type `Collection`

Raises `HTTPError` if an error occurs when sending the HTTP request

create_device (***params*)

Method for [Create Device](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The newly created Device

Return type `Device`

Raises `HTTPError` if an error occurs when sending the HTTP request

create_distribution (***params*)

Method for [Create Distribution](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The newly created Distribution

Return type `Distribution`

Raises `HTTPError` if an error occurs when sending the HTTP request

create_key (***params*)

Method for [Create Key](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The newly created Key

Return type `Key`

Raises `HTTPError` if an error occurs when sending the HTTP request

device (*id*)

Method for [View Device Details](#) endpoint.

Parameters **id** (*str*) – ID of the Device to retrieve

Returns The matching Device

Return type `Device`

Raises `HTTPError` if an error occurs when sending the HTTP request

device_catalog (***params*)

Method for [List Public Devices Catalog](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of [Device](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

device_tags (***params*)

Method for [List Device Tags](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns Device tags associated with your account

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

devices (***params*)

Method for [List Devices](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of [Device](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

devices_search (***params*)

Method for [Search Devices](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of [Device](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

distribution (*id*)

Method for [View Distribution Details](#) endpoint.

Parameters **id** (*str*) – ID of the Distribution to retrieve

Returns The matching Distribution

Return type [Distribution](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

distributions (**params)

Method for [List Distributions](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of [Distribution](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

job (*id*)

Method for [View Job Details](#) endpoint.

Parameters **id** (*str*) – ID of the Job to retrieve

Returns The matching Job

Return type Job

Raises `HTTPError` if an error occurs when sending the HTTP request

key (*key*)

Method for [View Key Details](#) endpoint.

Parameters **id** (*str*) – ID of the Key to retrieve

Returns The matching Key

Return type [Key](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

keys (**params)

Method for [List Keys](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of [Key](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

send_command (**params)

Method for [Send Command](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns The Command that was just sent

Return type Command

Raises `HTTPError` if an error occurs when sending the HTTP request

status ()

Returns current status of AT&T M2X API

Returns Current status of AT&T M2X API

Return type [dict](#)

`time()`

Method for the `/time` endpoint.

Returns The M2X server's current time in seconds, milliseconds and ISO8601 format

Return type `dict`

`time_iso8601()`

Method for the `/time/iso8601` endpoint.

Returns The M2X server's current time in ISO8601 format

Return type `str`

`time_millis()`

Method for the `/time/millis` endpoint.

Returns The M2X server's current time in milliseconds

Return type `int`

`time_seconds()`

Method for the `/time/seconds` endpoint.

Returns The M2X server's current time in seconds

Return type `int`

class `Collection` (*api*, ***data*)
Bases: `m2x.v2.resource.Resource`, `m2x.v2.metadata.Metadata`
Wrapper for AT&T M2X Collections API

add_device (*device_id*)
Method for `Add device to collection` endpoint.
Parameters `device_id` (*str*) – ID of the Device being added to Collection
Raises `HTTPError` if an error occurs when sending the HTTP request

devices (***params*)
Method for `List Devices from an existing Collection` endpoint.
Parameters `params` – Query parameters passed as keyword arguments. View `M2X API Docs` for listing of available parameters.
Returns List of `Device` objects
Return type
`list`
Raises `HTTPError` if an error occurs when sending the HTTP request

remove_device (*device_id*)
Method for `Remove device from collection` endpoint.
Parameters `device_id` (*str*) – ID of the Device being removed from Collection
Raises `HTTPError` if an error occurs when sending the HTTP request

CHAPTER 3

Devices Module

```
class Device (api, **data)
    Bases: m2x.v2.resource.Resource, m2x.v2.metadata.Metadata
    Wrapper for AT&T M2X Device API

    command (id)
        Method for Device's View of Command Details endpoint.

        Parameters id – ID of the Command to retrieve
        Returns The API response, see M2X API docs for details
        Return type dict
        Raises HTTPError if an error occurs when sending the HTTP request

    commands (**params)
        Method for Device's List of Received Commands endpoint.

        Parameters params – Query parameters passed as keyword arguments. View M2X API Docs
        for listing of available parameters.
        Returns The API response, see M2X API docs for details
        Return type dict
        Raises HTTPError if an error occurs when sending the HTTP request

    create_key (**params)
        Create an API Key for this Device via the Create Key endpoint.

        Parameters params – Query parameters passed as keyword arguments. View M2X API Docs
        for listing of available parameters.
        Returns The newly created Key
        Return type Key
        Raises HTTPError if an error occurs when sending the HTTP request
```

create_stream(*name*, ***params*)

Method for [Create/Update Data Stream](#) endpoint.

Parameters

- **name** – Name of the stream to be created
- **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The newly created Stream

Return type [Stream](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

delete_location_history(***values*)

Method for [Delete Device Location History](#) endpoint.

Parameters **values** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

keys()

Lists Keys associated with this device via the [List Keys](#) endpoint.

Returns List of API keys associated with this device as [Key](#) objects

Return type

[list](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

location()

Method for [Read Device Location](#) endpoint.

Returns Most recently logged location of the Device, see M2X API docs for details

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

location_history(***params*)

Method for [Read Device Location History](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns Location history of the Device

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

log()

Method for [View Request Log](#) endpoint.

Returns Most recent API requests made against this Device

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

post_update (***values*)

Method for *Post Device Update (Single Values to Multiple Streams)*
<<https://m2x.att.com/developer/documentation/v2/device#Post-Device-Update-Single-Values-to-Multiple-Streams>> endpoint.

Parameters **values** (*dict*) – The values being posted, formatted according to the API docs

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

post_updates (***values*)

Method for *Post Device Updates (Multiple Values to Multiple Streams)* endpoint.

Parameters **values** (*dict*) – The values being posted, formatted according to the API docs

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

process_command (*id*, ***params*)

Method for *Device Marks a Command as Processed* endpoint.

Parameters

- **id** – ID of the Command being marked as processed
- **params** – Optional data to be associated with the processed command, see API docs for details

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

reject_command (*id*, ***params*)

Method for *Device Marks a Command as Rejected* endpoint.

Parameters

- **id** – ID of the Command being marked as rejected
- **params** – Optional data to be associated with the rejected command, see API docs for details

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

stream (*name*)

Method for *View Data Stream* endpoint.

Parameters **name** – The name of the Stream being retrieved

Returns The matching Stream

Return type *Stream*

Raises `HTTPError` if an error occurs when sending the HTTP request

streams()

Method for [List Data Streams](#) endpoint.

Returns List of data streams associated with this device as *Stream* objects

Return type

list

Raises `HTTPError` if an error occurs when sending the HTTP request

update_location(params)**

Method for [Update Device Location](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

update_stream(name, **params)

Method for [Create/Update Data Stream](#) endpoint.

Parameters

- **name** – Name of the stream to be updated
- **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The Stream being updated

Return type *Stream*

Raises `HTTPError` if an error occurs when sending the HTTP request

values(params)**

Method for [List Data Stream Values](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

values_export(params)**

Method for [Export Values from all Data Streams of a Device](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type *dict*

Raises `HTTPError` if an error occurs when sending the HTTP request

values_search(params)**

Method for [Search Values from all Data Streams of a Device](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

Distributions Module

class `Distribution` (*api*, ***data*)

Bases: `m2x.v2.resource.Resource`, `m2x.v2.metadata.Metadata`

Wrapper for AT&T M2X [Distribution API](#)

add_device (*serial*)

Method for [Add Device](#) to an Existing [Distribution](#) endpoint.

Parameters `serial` – The unique (account-wide) serial for the `DistributionDevice` being added to the `Distribution`

Returns The newly created `DistributionDevice`

Return type `DistributionDevice`

Raises `HTTPError` if an error occurs when sending the HTTP request

devices (***params*)

Method for [List Devices](#) from an existing [Distribution](#) endpoint.

Parameters `params` – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns List of Devices associated with this `Distribution` as `DistributionDevice` objects

Return type

`list`

Raises `HTTPError` if an error occurs when sending the HTTP request

CHAPTER 5

Keys Module

```
class Key (api, **data)  
    Bases: m2x.v2.resource.Resource  
    Wrapper for AT&T M2X Keys API  
    regenerate ()  
        Method for Regenerate Key endpoint.  
        Raises HTTPError if an error occurs when sending the HTTP request
```


class Metadata (*api*, ***data*)

Bases: `object`

Generic methods for interacting with an M2X resource's Metadata

read_metadata ()

Generic method for a resource's Read Metadata endpoint.

Example endpoints:

- Read Device Metadata
- Read Distribution Metadata
- Read Collection Metadata

Returns All of the user defined metadata associated with the resource

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

read_metadata_field (*field*)

Generic method for a resource's Read Metadata Field endpoint.

Example endpoints:

- Read Device Metadata Field
- Read Distribution Metadata Field
- Read Collection Metadata Field

Returns The value for the given metadata field of the resource

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

update_metadata (*params*)

Generic method for a resource's Update Metadata endpoint.

Example endpoints:

- [Update Device Metadata](#)
- [Update Distribution Metadata](#)
- [Update Collection Metadata](#)

Parameters **params** – The metadata being updated

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

update_metadata_field (*field, value*)

Generic method for a resource's Update Metadata Field endpoint.

Example endpoints:

- [Update Device Metadata Field](#)
- [Update Distribution Metadata Field](#)
- [Update Collection Metadata Field](#)

Parameters

- **field** – The metadata field to be updated
- **value** – The value to update

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

class Resource (*api*, ***data*)

Bases: `object`

Generic methods for interacting with an M2X resource

remove ()

Generic method for a resource's Delete endpoint.

Example endpoints:

- Delete Device
- Delete Distribution
- Delete Collection

Parameters *attrs* – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns The API response, see [M2X API docs](#) for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

update (***attrs*)

Generic method for a resource's Update endpoint.

Example endpoints:

- Update Device Details
- Update Distribution Details
- Update Collection Details

Parameters *attrs* – Query parameters passed as keyword arguments. View [M2X API Docs](#) for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

class `Stream` (*api, device, **data*)

Bases: `m2x.v2.resource.Resource`

Methods for interacting AT&T M2X Device Streams

add_value (*value, timestamp=None*)

Method for [Update Data Stream Value](#) endpoint.

Parameters

- **value** – The updated stream value
- **timestamp** – The (optional) timestamp for the updated value

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

delete_values (*start, stop*)

Method for [Delete Data Stream Values](#) endpoint.

Parameters

- **start** – ISO8601 timestamp for starting timerange for values to be deleted
- **stop** – ISO8601 timestamp for ending timerange for values to be deleted

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

post_values (*values*)

Method for [Post Data Stream Values](#) endpoint.

Parameters **values** (*dict*) – Values to post, see M2X API docs for details

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

remove ()

Method for [Delete Data Stream](#) endpoint.

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

sampling (*interval*, ***params*)

Method for [Data Stream Sampling](#) endpoint.

Parameters

- **interval** – the sampling interval, see API docs for supported interval types
- **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

stats (***attrs*)

Method for [Data Stream Stats](#) endpoint.

Parameters **attrs** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

update (***attrs*)

Method for [Update Data Stream](#) endpoint.

Parameters **attrs** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The Stream being updated

Return type `Stream`

Raises `HTTPError` if an error occurs when sending the HTTP request

update_value (*value*, *timestamp=None*)

Method for [Update Data Stream Value](#) endpoint.

Parameters

- **value** – The updated stream value
- **timestamp** – The (optional) timestamp for the updated value

Returns The API response, see M2X API docs for details

Return type `dict`

Raises `HTTPError` if an error occurs when sending the HTTP request

values (***params*)

Method for [List Data Stream Values](#) endpoint.

Parameters **params** – Query parameters passed as keyword arguments. View M2X API Docs for listing of available parameters.

Returns The API response, see M2X API docs for details

Return type [dict](#)

Raises `HTTPError` if an error occurs when sending the HTTP request

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