



**Federal Communications Commission  
Office of Engineering and Technology  
Laboratory Division**

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**APPLICATION PROGRAMMING INTERFACE (API) FOR OET EQUIPMENT  
AUTHORIZATION SYSTEM**

**1. OVERVIEW**

This publication describes the functions supported by the Application Programming Interfaces (API) for the OET Equipment Authorization System (EAS). The API currently has three method calls: `getFCCIDList`, `getWhitespaceAuthorizations`, and `getCBSDAuthorizations`. The following sections describe the details of the functions supported and the input and output fields. The `getFCCIDList` call takes either a full or partial FCC ID as a parameter and returns any matching approved equipment authorizations on file with the OET Laboratory. The `getWhitespaceAuthorizations` call takes a starting and ending date range as parameters and returns the FCC ID and equipment class combination for all whitespace-type equipment that was approved within that date range. The `getCBSDAuthorizations` call takes a starting and ending date range as parameters and returns all equipment authorizations for Citizens Broadband Radio Service Devices that have been approved over within that date range.

**2. DESCRIPTIONS OF THE SERVICES**

**getFCCIDList**: API allows users to enter a grantee code or the initial portion of an FCC ID and obtain a list of all granted FCC IDs that are an exact or partial match. The minimum search criterion that must be entered is a three or five-character grantee code. The return results include a list of FCC IDs that match the search parameters entered, the grant date and application purpose for each FCC ID, and the grantee name and address.

**getWhitespaceAuthorizations**: API allows users to obtain a list of all white space equipment authorizations subject to Certification that have been approved over the specified date range. The date is entered in the format MM-DD-YYYY. A start and end date are both required. The results returned identify the FCC ID, Equipment Class, Status, Status Date, and Application Purpose. This includes eight equipment classes for White Space devices (WSS-White Space Device with Sensing, WSG-White Space device with Geo Location, WSF-White Space Device with Sensing-Fixed, WS1-White Space Device with Sensing-Mode 1, WS2-White Space Device with Sensing-Mode 2, WGF-White Space Device with Geo-location- Fixed, WG1-White Space Device with Geo-location- Mode 1, and WG2-White Space Device with Geo-location- Mode 2).”

**getCBSDAuthorizations**: API allows users to obtain a list of all Citizens Broadband Radio Service Device equipment authorizations subject to Certification that have been approved over the specified date range. The date is entered in the format MM-DD-YYYY. A start and end date are both required. The return results include the Application Purpose, Equipment Class, FCC ID, Grantee Name, Status, Status Date, Grant Notes, Description, Emission Designator, Frequency Max, Frequency Min, and Power Output. This includes all equipment authorizations under the equipment classes CBD-Citizens Band Category A and B Devices, and CBE-Citizens Band End User Devices.

### 3. SUMMARY OF RESULTS PARAMETERS RETURNED

<u>Returned Result Field</u>	<u>Description</u>
Application Purpose	The application purpose is a description required on each application submitted that indicates if the application is for a new product or a change to an already existing product. The description can be one of the following: Original Equipment, Class II Permissive Change, Change in Identification, or Class III Permissive Change.
Description	Product description includes additional information about the product that was entered on Form 731 by granting Telecommunication Certification Body (TCB).
Emission Designator	This is typically a 7-character alpha numeric classification that describes the nature of the type of signal being transmitted and specifies the necessary bandwidth. See Sections 2.201 and 2.202 of the FCC rules for more detail.
Equipment Class	The equipment class is a three character identifier assigned by the FCC to group similar types of equipment.
FCCID	The FCC ID uniquely identifies the equipment authorization. It is made up of a three or five-character alpha-numeric grantee code that is assigned by the FCC, followed by the product code that is one to fourteen alpha-numeric characters assigned by the grantee and may include the “-“(dash or hyphen). Blank spaces are not allowed.
FreqMax	The FreqMax field returns the highest operating frequency in MHz.
FreqMin	The FreqMin field returns the lowest operating frequency in MHz.
Grantee Address Address State City Zip Code Country	The getFCCID method call returns multiple parameters related to the Grantee address. The grantee is the party responsible for compliance of the device. Information returned is their address of record in the EAS. State is only returned if the grantee is located in the US.
Grant Date	The date the device authorized in the FCC Database.
Grantee	The grantee result field returns the grantee company name. The grantee is the party responsible for compliance of the device. Information returned is their company name of record in the EAS.
Notes	The notes field returns grant note information. Grant notes are two-character standard text statements on equipment authorization grants that are commonly used that identify conditions of approval. A full list is available at: <a href="https://apps.fcc.gov/oetcf/eas/reports/GrantNotesList.cfm">https://apps.fcc.gov/oetcf/eas/reports/GrantNotesList.cfm</a>
Power Output	The power output is the amount of power of radio frequency (RF) energy that a transmitter produces at its output in watts. Unless specifically noted by a grant note, the power is measured as conducted power. If the grant note EP is specified, the measured power is EIRP.
Status	The status is a two-character alphabetic identifier that indicates the status of an FCC ID. This search currently returns results for authorized devices. The status codes will be one of the following: GI - indicates that an original Grant has been issued IP - indicates that a Permissive Change grant has been issued IM - indicates that a Modification of a grant has been issued
Status Date	The status date is the date the application status was last updated in MM-DD-YYYY format.

## 4. WEB APPLICATION DESCRIPTION LANGUAGE (WADL)

Endpoint - <https://apps.fcc.gov/OETLabServices/application.wadl>

### WADL Content

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<application xmlns="http://research.sun.com/wadl/2006/10">
  <doc xmlns:jersey="http://jersey.dev.java.net/" jersey:generatedBy="Jersey: 1.4 09/11/2010 10:30
  PM"/>
  <resources base="https://appsat.fcc.gov:443/OETLabServices/">
    <resource path="/getWhitespaceAuthorizations">
      <method name="GET" id="getWhiteSpaceAuthorizations">
        <request>
          <param xmlns:xs="http://www.w3.org/2001/XMLSchema" type="xs:string"
          style="query" name="beginDate"/>
          <param xmlns:xs="http://www.w3.org/2001/XMLSchema" type="xs:string"
          style="query" name="endDate"/>
        </request>
        <response>
          <representation mediaType="application/xml"/>
          <representation mediaType="application/json"/>
        </response>
      </method>
    </resource>
    <resource path="/getFCCIDList">
      <method name="GET" id="getFCCIDList">
        <request>
          <param xmlns:xs="http://www.w3.org/2001/XMLSchema" type="xs:string"
          style="query" name="fccId"/>
        </request>
        <response>
          <representation mediaType="application/xml"/>
          <representation mediaType="application/json"/>
        </response>
      </method>
    </resource>
    <resource path="/getCBSDAuthorizations">
      <method name="GET" id="getWhiteSpaceAuthorizations">
        <request>
          <param xmlns:xs="http://www.w3.org/2001/XMLSchema" type="xs:string"
          style="query" name="beginDate"/>
          <param xmlns:xs="http://www.w3.org/2001/XMLSchema" type="xs:string"
          style="query" name="endDate"/>
        </request>
        <response>
          <representation mediaType="application/xml"/>
          <representation mediaType="application/json"/>
        </response>
      </method>
    </resource>
  </resources>
</application>
```

## 5. METHOD CALLS

### 5.1 getFCCIDList

Search for approved equipment authorizations on file with the OET Laboratory matching a specified FCC ID.

#### *api call*

<https://apps.fcc.gov/OETLabServices/getFCCIDList?fccId=<parameter1>>

#### *example call*

<https://apps.fcc.gov/OETLabServices/getFCCIDList?fccId=OPS10>

#### *parameters*

- The full grantee code followed by a full or partial product code.
- FCCID – The full or partial FCC ID that uniquely identifies an equipment authorization (e.g. "OPS"). The FCC ID is made up of a three or five character alpha-numeric grantee code and a product code that can be one to fourteen characters and can be alpha-numeric and include the “-“ (dash or hyphen). Blank spaces are not allowed.

#### *response*

#### JSON

```
[
  {
    "address": "7435 Oakland Mills Road",
    "state": "MD",
    "country": "United States",
    "fccid": "OPS10",
    "applicationPurpose": "Original Equipment",
    "grantDate": "08/01/2017",
    "grantee": "FCC Laboratory Test Grantee Company",
    "city": "Columbia",
    "zipCode": "21044"
  }
]
```

## XML

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<fCCIDInfos>
  <fccidInfo>
    <address>7435 Oakland Mills Road</address>
    <applicationPurpose>Original Equipment</applicationPurpose>
    <city>Columbia</city>
    <country>United States</country>
    <FCCId>OPS10</FCCId>
    <grantDate>08/01/2017</grantDate>
    <grantee>FCC Laboratory Test Grantee Company</grantee>
    <state>MD</state>
    <zipCode>21044</zipCode>
  </fccidInfo>
</fCCIDInfos>
```

### result fields

- Grantee address (address, city, country, state, zip code)
- Grantee name
- Grant date
- FCCID
- Application Purpose

### error response

204 (NO CONTENT): If the query is successful, but no results are returned, this code is returned along with the message “The search was successful, but no results were found matching the specified criteria.”

400 (BAD REQUEST): This code, along with a specific error message is returned if the URL is not correctly entered (e.g. the FCCID parameter was not included on the URL).

500 (INTERNAL SERVER ERROR): If there is any exception on the server side, it is identified and the http status code is returned. The status description contains the detailed reason for the failure.

## 5.2 **getWhitespaceAuthorizations**

Get information on approved white space equipment authorizations within a given grant date range.

### api call

<https://apps.fcc.gov/OETLabServices/getWhitespaceAuthorizations?beginDate=<parameter1>&endDate=<parameter2>>

### example call

<https://apps.fcc.gov/OETLabServices/getWhitespaceAuthorizations?beginDate=02-06-2015&endDate=02-06-2015>

### parameters

- The beginning grant date range in mm-dd-yyyy format.
- The ending grant date range in mm-dd-yyyy format.

### response

#### JSON

```
[
  {
    "status": "GI",
    "fccid": "OPS1",
    "statusDate": "02/06/2015",
    "equipmentClass": "WGF",
    "applicationPurpose": "Original Equipment"
  }
]
```

#### XML

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<equipmentAuthorizationVOes>
  <equipmentAuthorizationVO>
    <applicationPurpose>Original Equipment</applicationPurpose>
    <equipmentClass>WGF</equipmentClass>
    <FCCId>OPS1</FCCId>
    <status>GI</status>
    <statusDate>02/06/2015</statusDate>
  </equipmentAuthorizationVO>
</equipmentAuthorizationVOes>
```

### result fields

- FCCID
- Application Purpose
- Equipment Class
- Status
- Status Date

### error response

204 (NO CONTENT): If the query is successful, but no results are returned, this code is returned along with the message “The search was successful, but no results were found matching the specified criteria.”

400 (BAD REQUEST): This code, along with a specific error message is returned if the URL is not correctly entered (e.g. the beginning and ending dates were not included or not formatted properly on the URL).

500 (INTERNAL SERVER ERROR): If there is any exception on the server side, it is identified and the

http status code is returned. The status description contains the detailed reason for the failure.

### 5.3 **getCBSDAuthorizations**

Get information on approved Citizens Broadband Radio Service Devices within a given grant date range.

#### api call

<https://apps.fcc.gov/OETLabServices/getCBSDAuthorizations?beginDate=<parameter1>&endDate=<parameter2>>

#### example call

<https://apps.fcc.gov/OETLabServices/getCBSDAuthorizations?beginDate=08-01-2017&endDate=08-01-2017>

#### parameters

- The beginning grant date range in mm-dd-yyyy format.
- The ending grant date range in mm-dd-yyyy format.

#### response

#### JSON

```
[
  {
    "status": "GI",
    "fccid": "OPS10",
    "granteeName": "FCC Laboratory Test Grantee Company",
    "statusDate": "08/01/2017",
    "equipmentClass": "CBD",
    "applicationPurpose": "Original Equipment",
    "ISpecs": [
      {
        "description": "FCC example grant",
        "emissionDesignator": "15M0F9W",
        "powerOutput": 0.989,
        "freqMin": 3550,
        "freqMax": 3700
      }
    ],
    "INotes": [
      {
        "grantNote": "Output power is EIRP",
        "grantNoteId": "EP"
      }
    ]
  }
]
```

## XML

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<cBSDAuthorizationVOes>
  <cbsdAuthorizationVO>
    <applicationPurpose>Original Equipment</applicationPurpose>
    <equipmentClass>CBD</equipmentClass>
    <FCCId>OPS10</FCCId>
    <granteeName>FCC Laboratory Test Grantee Company</granteeName>
    <status>GI</status>
    <statusDate>08/01/2017</statusDate>
    <INotes>
      <notes>
        <grantNote>Output power is EIRP</grantNote>
        <grantNoteId>EP</grantNoteId>
      </notes>
    </INotes>
    <ISpecs>
      <specs>
        <description>FCC example grant</description>
        <emissionDesignator>15M0F9W</emissionDesignator>
        <freqMax>3700.00000000</freqMax>
        <freqMin>3550.00000000</freqMin>
        <powerOutput>0.9890000</powerOutput>
      </specs>
    </ISpecs>
  </cbsdAuthorizationVO>
</cBSDAuthorizationVOes>
```

### result fields

- Application Purpose
- Equipment Class
- FCCID
- Grantee Name
- Status
- Status Date
- Notes
- Description
- FreqMax
- FreqMin
- Power Output

### error response

204 (NO CONTENT): If the query is successful, but no results are returned, this code is returned along with the message “The search was successful, but no results were found matching the specified criteria.”

400 (BAD REQUEST): This code, along with a specific error message is returned if the URL is not correctly entered (e.g. the beginning and ending dates were not included or not formatted properly on the URL).

500 (INTERNAL SERVER ERROR): If there is any exception on the server side, it is identified and the http status code is returned. The status description contains the detailed reason for the failure.

## **Change Notice**

**08/13/2018:** 953436 D01 OET Laboratory Services API v02 replaces 953436 D01 OET Laboratory Services API v01. Changes to the document include the following:

- Added information on method call for Citizens Broadband Radio Service Devices.
- Added table for summary of results parameters returned
- Updated response examples