

1 Background

FTS360 is an always available cloud service that collects data from a variety of sources: environmental monitoring stations such as the LT1-Cell, LT1-GOES, and RAOS; FTS legacy stations with the help of AutoCaller; and directly from the GOES LRGS servers provided the data is transmitted in one of the known data conventions (BLM, Time Ordered, SHEF and Pseudo Binary (USGS version)).

FTS360 is also a network management platform which allows you to see the location of your stations, view the data, and receive alerts when data passes the input thresholds.

FTS360 provides an always available developer friendly environment in which to get your data – a service that has a greater likelihood of being available than that from a station located in the field in a fringe connection area.

1.1 CSV API

The CSV API enables programmatic RESTful access to the data stored in FTS360. You can obtain CSV access for the stations in your agency by calling a URL with an access token provided by the FTS team.

The URL is in one of three forms, depending on if you are using the station's serial number or its station identification:

URL form if using a **Serial number**:

<https://fts360api.com/arkservice/data/csv?auth={token}&serialnumber={UnitSerialNumber}&addunits=n&startdt={ISO8601 Date/time}&enddt={ISO8601 Date/time}>

URL form if using a **Station Identification**:

<https://fts360api.com/arkservice/data/csv?auth={token}&stationid={UnitStationID}&addunits=n&startdt={ISO8601 Date/time}&enddt={ISO8601 Date/time}>

URL form using your own **Customer Reference ID**:

<https://fts360api.com/arkservice/data/csv?auth={token}&customerrefid={referenceID}&addunits=n&startdt={ISO8601 Date/time}&enddt={ISO8601 Date/time}>

Putting this link into a browser with the correct access token and serial number or station id for a station to which you have access, downloads all the data in CSV format for that station between the UTC start and end dates and times.

This is an HTTP-GET command, you can place this into your code in a loop to call it on a frequency with a time window.

The arguments are:

Field	Note
auth	The authentication token for your agency provided by FTS
serialnumber	The serial number of the station (found on the FTS360 Edit Station page). <ul style="list-style-type: none">• If the station does not have a serial number, use the stationid flag• Include any leading zeroes which occur in the serial numbers• IMPORTANT: do not use this flag if using the stationid flag or Customer Reference ID
stationid	The FTS360 Station ID (the last number in the URL bar on the FTS360 Station Data page) . Use in the event the station doesn't have a serial number <ul style="list-style-type: none">• IMPORTANT: do not use this flag if using the serialnumber flag or Customer Reference ID
customerrefid	The FTS360 Customer Reference ID is updated on the "Edit Station" page and can be any unique ID within your agency (alpha-numeric). For example, if a station in your remote system is referenced using "myStation6" then you would enter "myStation6" on the "Edit station page" and click save, then using customerrefid on the API with a token from that agency will return the data from that station. <ul style="list-style-type: none">• IMPORTANT: do not use this flag if using the serialnumber flag or stationid
startdt	The start date and time in 8601 ISO time format, in UTC time (eg 2018-04-01T00:00:00Z)
enddt	The end date and time in 8601 ISO time format, in UTC time (eg 2018-04-01T23:59:59Z)
addunits	(Optional) Either "y" or "n". <ul style="list-style-type: none">• If "y", the second line of the CSV will use the appropriate field to indicate the units of the display type, if they are set in FTS360.• If "n", the second line of the CSV will not include units.• If the addunits option is not used, the second line of the CSV will not include units

Example using serial number without addunits option:

<https://fts360api.com/arkservice/data/csv?auth=123456789&serialnumber=90001&startdt=2018-04-01T00:00:00Z&enddt=2018-04-01T23:59:59Z>

Example using station ID with addunits option:

<https://fts360api.com/arkservice/data/csv?auth=123456789&stationid=525&addunits=y&startdt=2018-04-01T00:00:00Z&enddt=2018-04-01T23:59:59Z>

The examples above will provide all the data associated with a specific station for the entire day of April 1, 2018.

1.2 Development Tips

1.2.1 Call Frequency

It is recommended to match the call frequency to that of the station send frequency. For example, if the station is sending data every 15 minutes, call the API every 15 minutes. Additionally, it can take up to 1 minute for the data to be available in the database, so it is recommended to collect the data one minute after the data is sent. For example, if the station is sending the data four times per hour at minutes 00, 15, 30, and 45, the data should be collected at minutes 01, 16, 31, and 46.

Calling the API too frequently may result in a rate-limiting error received.

1.2.2 CSV Headings

The CSV file contains header files that are unsorted. While the order of the columns may appear static, it is possible they may change, and very likely they will change, if the station configuration is updated. It is recommended to look up which column your data is in via the column header instead of assuming that the data you wish is always in a specific numbered column.

1.3 FAQ

1.3.1 How do I get an access token?

Contact FTS Service at 1-800-548-4264 or e-mail service@ftsinc.com

1.3.2 Can I customize the field return order or request specific data fields to download?

No. FTS360 will return all the data fields from the station within the requested time period in the field order from the CSV file.

1.3.3 Are the field orders guaranteed?

No. Although the field ordering is not guaranteed, it is likely that the field orders will return in the same order every time. However, if sensors, and subsequently their fields, were added to or removed from a station during the requested time period, the field order in the CSV file would be affected. It is recommended that the headers are used to find the row of data instead of a fixed row number.