

VariFlight

<https://www.variflight.com>

Email: business@variflight.com

Address: VariFlight Pte. Ltd.

75 High Street

Singapore 179435



API docs

Flight Happiness Index V2.2

Offering rich and accurate data, to enhance passengers' decision-making and flight experience.

produced by

VariFlight

With a vision of "living on time", a
global leading aviation data intelligence
company

Version number:

2.2

Updated time:

June 23, 2026

This documentation is Intended to provide developers with a comprehensive understanding of our API endpoints, methods, requests, and responses, enabling them to effectively access data provided by Variflight.

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Introduction

This document describes how to use the Flight Happiness API, version 2.1.

It offers data related to flight experience, such as in-flight amenities, Wi-Fi, meals, and on-flight pictures to help passengers make informed travel decisions.

Authentication

The interface uses both token and IP for concurrent verification.

Token generation algorithm:

In the URL, all request parameters (excluding the token) are sorted in ascending order by KEY, the parameter names are connected in lowercase with the '&' symbol, then connected with the value of the **Registration code**, and then encrypted twice using MD5 (32-bit lowercase) encryption.

Registration code: Please obtain the registration code from the administrator of VariFlight. It is necessary for verification during the request process by both parties. Please be careful not to disclose it to the public.

Example (PHP):

```
ksort($data);
    foreach($data as $k=>$v){
        $strtomd5[]=$k.'='.$v;
    }
    $token= md5(md5(implode('&',$strtomd5).$appsecurity));
```

Note: \$appsecurity=Registration code

API Endpoints

The base URL for all requests is:

```
https://open-al.variflight.com/api/happiness?
```

The way to request: **GET**

The format of return: **JSON**

The API supports six types of queries:

1. **Flight number + Flight date** (Query a specific flight)
2. **Flight number + Flight date + Cabin** (Query a specific cabin on a specific flight)
3. **Departure&Arrival airport IATA code + Flight date** (Query all flights on a certain route)
4. **Departure&Arrival airport IATA code + Flight date + Cabin** (Query all flights on a certain route that offer a specific cabin)
5. **Departure&Arrival city IATA code + Flight date** (Query all flights between specified cities)
6. **Departure&Arrival city IATA code + Flight date + Cabin** (Query all flights between specified cities that offer a specific cabin)

Query 1 : Flight number + Flight date

Request parameters:

- fnum** : Flight number
- date** : Flight date
- lang** : Language (en = English)
- appid** : Application ID (Obtain from your sales)
- token** : Token

Example URL:

```
http://open-al.variflight.com/api/happiness?fnum=MU5100&date=2025-02-22&lang=en&appid=12345&token=$token
```

Query 2 : Flight number + Flight date + Cabin

Only available for Chinese airlines' domestic flights within Mainland China.

Request parameters:

fnum	: Flight number
date	: Flight date
cabin	: Booking code
lang	: Language (en = English)
appid	: Application ID (Obtain from your sales)
token	: Token

Example URL:

```
http://open-al.variflight.com/api/happiness?fnum=MU5100&date=2025-02-22&cabin=Z&lang=en&appid=12345&token=$token
```

Query 3 : Departure&Arrival airport IATA code + Flight date

Request parameters:

dep	: Departure airport IATA code
arr	: Arrival airport IATA code
date	: Flight date
lang	: language (en = English)
appid	: Application ID (Obtain from your sales)

token : Token

Example URL:

```
http://open-al.variflight.com/api/happiness?dep=PVG&arr=NRT&date=2024-08-28&lang=en&appid=12345&token=$token
```

Query 4 : Departure&Arrival airport IATA code + Flight date + Cabin

Only available for Chinese airlines' domestic flights within Mainland China.

Request parameters:

dep : Departure airport IATA code
arr : Arrival airport IATA code
date : Flight date
cabin : Booking code
lang : language (en = English)
appid : Application ID (Obtain from your sales)
token : Token

Example URL:

```
http://open-al.variflight.com/api/happiness?dep=PVG&arr=NRT&date=2024-08-28&cabin=Y&lang=en&appid=12345&token=$token
```

Query 5 : Departure&Arrival city IATA code + Flight date

Request parameters:

depCity : Departure city IATA code
arrCity : Arrival city IATA code
date : Flight date

lang : language (en = English)
 appid : Appid (Obtain from your sales)
 token : Token

Example URL:

```
http://open-al.variflight.com/api/happiness?depCity=DEL&arrCity=LON&date=2025-01-12&cabin=Y&lang=en&appid=12345&token=$token
```

Query 6 : Departure&Arrival city IATA code + Flight date + Cabin

Only available for Chinese airlines' domestic flights within Mainland China.

Request parameters:

depCity : Departure city IATA code
 arrCity : Arrival city IATA code
 date : Flight date
 cabin : Booking code
 lang : language (en = English)
 appid : Appid (Obtain from your sales)
 token : Token

Example URL:

```
http://open-al.variflight.com/api/happiness?depCity=DEL&arrCity=LON&date=2025-01-12&appid=10176&lang=en&token=$token
```

How to spell token

Step1: Input parameters

depCity=DEL&arrCity=LON&date=2025-01-12&lang=en&appid=12345

Step2: Encrypted string with lower case parameters sort

\$str= 'depCity=DEL&arrCity=LON&date=2025-01-12&lang=en&appid=12345

,

Step3: Use Registration code

\$appsecurity= '56934765683fc'

Step4: Spell token

token=md5(md5(\$str.\$appsecurity))

Note: ‘.’ symbol is the connectors in PHP

Error Responses

Return parameter	Description
1	Wait for auditing
2	The visiting ip have not been joined in White List
3	Lack of parameters or parameter identification failed
4	No data permissions
10	No data
11	Unknown error

Return Parameter Examples

Example 1: Failed return

```
{  
  error_code: 3,  
  error: " wrong departure city format "  
}
```

Example 2: Successful return

```
[  
  {  
    FlightYear: "1.7",  
  
    FlightNo: "MU521",  
    FlightDate: "2024-08-28",  
    FlightDepcode: "PVG",  
    FlightArrcode: "NRT",  
    DepAvgDelaytime: "53",  
    ArrAvgDelaytime: "11",  
    PlanAvgFlytime: "254",  
    CancelProb: "3%",  
    FoodCode: "M",  
    Food: "Yes",  
    AirService: "Three-star ",  
    ArrService: "Four-star ",  
    DepService: "Three-star ",  
    OntimeRate: "30%",
```

```

ArrOnTimeRate: "77%",
FtypeDetail: "A350-900",
FlightTopic: {
  pic:
"https://file.variflight.com/buckets/happiness\_theme\_pic\_750x282/keys/MU\_A350-900.png"
  desc: " ",
},
HistoryGeneric: "#359|88.89%|3.3#77W|3.70%|7.1#333|7.41%|6.4",
distance: "1788",
aircraftDescribe: "The Airbus A350-900 features a number of technologies developed and applied for the A380, as well as production innovations. A350 uses a lot of light composite materials such as carbon fiber reinforced plastic (CFRP) and aluminum-lithium alloys. The A350's wings will be mainly made of CFRP, using the most advanced design and manufacturing technology and integrating the A380's slat drop technology. Slightly larger than the A350-800, the standard three-class passenger cabin layout can accommodate up to 300 passengers and the range can reach 7,500 nautical miles (13,900 kilometers).",
"FlightPics":
[
"https://file.variflight.com/buckets/comfort\_ftype\_image/keys/8cfd6c3f990f48fc098be24bc5c21294.jpg",
"https://file.variflight.com/buckets/comfort\_ftype\_image/keys/240b44b60b5dd5787b36e702aa21a76d.jpg",
],
CabinPic:
"https://file.variflight.com/buckets/comfort\_flayout/keys/fb5413e528061e2546"

```

```

420be8142fb1e1.png",
  Luggage: "Carry-on baggage
  Domestic flight:
    First customers are allowed 2 personal item, each within 10kg , and
    the volume cannot exceed 55 x 40 x 20 cm
    Business customers are allowed 1 personal item, each within 10kg ,
    and the volume cannot exceed 55 x 40 x 20 cm",
  Seatlayout: "3-3-3",
  Cabin: "Y",
  SeatSpace: "30.71",
  SeatWidth: "18.11",
  SeatTilt: "110",
  Media: "On Demand",
  Socket: "Yes",
  WiFi: "NEED TO APPLY",
  shareFlightNo: [
    "FM3039",
    "JL9568"
  ]
}
]

```

Return Parameter Details

Return parameter	Description
FlightYear	Historical average aircraft age
FlightNo	Flight number

FlightDate	Flight date (YYYY-MM-DD)
FlightDepcode	Departure airport IATA code
FlightArrcode	Arrival airport IATA code
DepAvgDelaytime	Average departure delay time over the past 180 days (in minutes)
ArrAvgDelaytime	Average arrival delay time over the past 180 days (in minutes, Positive numbers represent delays, negative numbers represent early arrivals)
PlanAvgFlytime	Average scheduled flight time over the past 180 days (in minutes)
CancelProb	Flight cancellation rate for the past 180 days
FoodCode	Meal availability on the flight D,L,M,B: Food available C,S,O,R,N,F: No food available Others: Unknown("Others" includes: "H",empty string(""),etc.) Code value B: Breakfast C: Beverages D: Dinner L: Lunch M: Meal (to be used as a generalization if no specific meal is intended) S: Snack or Brunch N: No Meal Service F: Food for Purchase H: Hot Meal K: Continental Breakfast O: Cold Meal R: Refreshments

Food	Meal availability on the flight Yes: Food available No: No free full meals provided Unknown or " " : Unknown
AirService	Airline service level of FHI
ArrService	Arrival airport service level of FHI
DepService	Departure airport service level of FHI
OnTimeRate	Historical departure punctuality rate over the past 180 days
ArrOnTimeRate	Historical Arrival punctuality rate over the past 180 days
FtypeDetail	Aircraft Model (eg:A350-900)
HistoryGeneric	In the past 30 days, the aircraft models and their corresponding proportions for this flight number.
FlightTopic	Theme of the flight
desc	Description of the themed livery (Theme flights only)
pic	Side view of the airplane
distance	Flight distance (in km)
aircraftDescribe	Description of the operating aircraft model
FlightPics	Onboard photos
CabinPic	Seat map pictures
Luggage	The allowance for free luggage
Seatlayout	Seat layout
Cabin	Attention When cabin is used as an input parameter: The returned Cabin field represents the Booking Code (matching the request). When cabin is not used as an input parameter: If

	Cabin appears independently, it represents the Cabin Class Code. Cabin class code P: Premium First Class F,U: First Class C,J,S,O: Business Class R,W,S,G: Premium Economy Y: Economy Class Booking code A-Z
SeatSpace	Seat pitch, available in two data formats: Format-1. Raw data (in inches) Example: 32 inches Format-2. Enumerated values (mapped from raw data) narrow: seat pitch $\leq$ 32 inches standard: 32 inches < seat pitch $\leq$ 33 inches comfortable: seat pitch > 33 inches
Seatwidth	Seat width, available in two data formats: Format-1. Raw data (in inches) Example: 18 inches Format-2. Enumerated values (mapped from raw data) narrow: seat width < 18 inches standard: 18 inches < seat width $\leq$ 19 inches comfortable: seat width > 19 inches
SeatTilt	Maximum seat tilt, available in two data formats: Format-1. Raw data (in degrees) Example: 120 degrees Format-2. Enumerated values (mapped from raw data)

	fixed: seat tilt = 90 degrees standard: 120 degrees < seat tilt ≤ 145 degrees comfortable: seat pitch > 145 degrees limited: others
Media	Onboard entertainment facilities, including: Overhead: Ceiling-mounted shared screens On Demand: On-demand video (AVOD), via seatback or personal device NO: No video entertainment available Pad: Airline-provided tablet device BYO(Streaming): Use your own device to stream onboard content over Wi-Fi BYO: Bring-your-own video source (e.g., plug your device into in-seat inputs) or watch on your own device Varies: Availability differs by aircraft/route/cabin Live TV: Satellite live television channels available onboard PMP: Portable Media Player provided by the airline DIRECTV: DIRECTV live TV service onboard On Demand/Overhead: Both on-demand IFE and overhead screens may be offered.
Socket	Onboard power, including: Yes, No, Power + USB, USB, Maybe
WiFi	Onboard WiFi, including: Yes, No, Maybe, NEED TO APPLY
ShareFlightNo	Codeshare flight number