

# ShowAnafiLog



Many thanks to all contributors and testers. It was and is still fun to work with you together. Happy flying!

Initiated and supported by [Parrot Pilots Drone Forum](#)

h-elsner 11/2019

## Summary

"ShowAnafiLog" is an application to show JSON log files from Parrot's "Anafi" quad-copter in a readable format, display charts from selected data columns and convert JSON logs into KML flight tracks, GPX files or CSV files for other usage.

## Installation

No installation needed, this is a portable application. But you need write access to the directory where the application located. "ShowAnafiLog" will store its settings in an XML file there.

## Usage

Retrieve flight logs (\*.json) from your controller device and save it in a directory on your PC.

Open this directory or simply drop it to the application. A list of JSON log files will be created (see Overview) and the first file will be loaded. You can select any file in the list to load and display it in the other pages (Log data, Charts, Details).

Enjoy.

## Overview

Select the directory where all the JSON log files are located. Double-click opens the file manager with this directory. The converted files will be saved there.

Convert the file in use to the output format defined in Settings.

Take screenshot for documentation.

Select log dir

Convert Screenshot Close

Overview Log data Charts Details Settings

Files: 3	Date	from	to	Run time	Ceiling	Distance	Top speed	Max battery level	Min battery level
0914_2018-09-01T152809+0200_5583AA_0003	2018-09-01	15:28:09	15:32:17	00:04:06	30.1m	24.4m	28.94km/h	71%	54%
0914_2018-09-01T202625+0200_B1B3D1_0001	2018-09-01	20:26:25	20:33:06	00:06:39	30.6m	7.2m	0.00km/h	96%	70%
0914_2018-09-02T161001+0200_0D11E9_000E	2018-09-02	16:10:01	16:23:50	00:13:47				76%	19%

Files: 3   2026   .kml   D:\FlightLog\_data\Anafi\_Logs\Logs\_Frz\0914\_2018-09-01T152809+0200\_5583AA\_0003.json

Position of selection = position of cursor

List of JSON files. Click on a row to select the file in use. File will be loaded and displayed. Table will be updated in the background.

Number of JSON log files

Number of data sets  
file in use contains

Output format for conversion

Status or error messages,  
i.e. file name of file in use.

## Log data

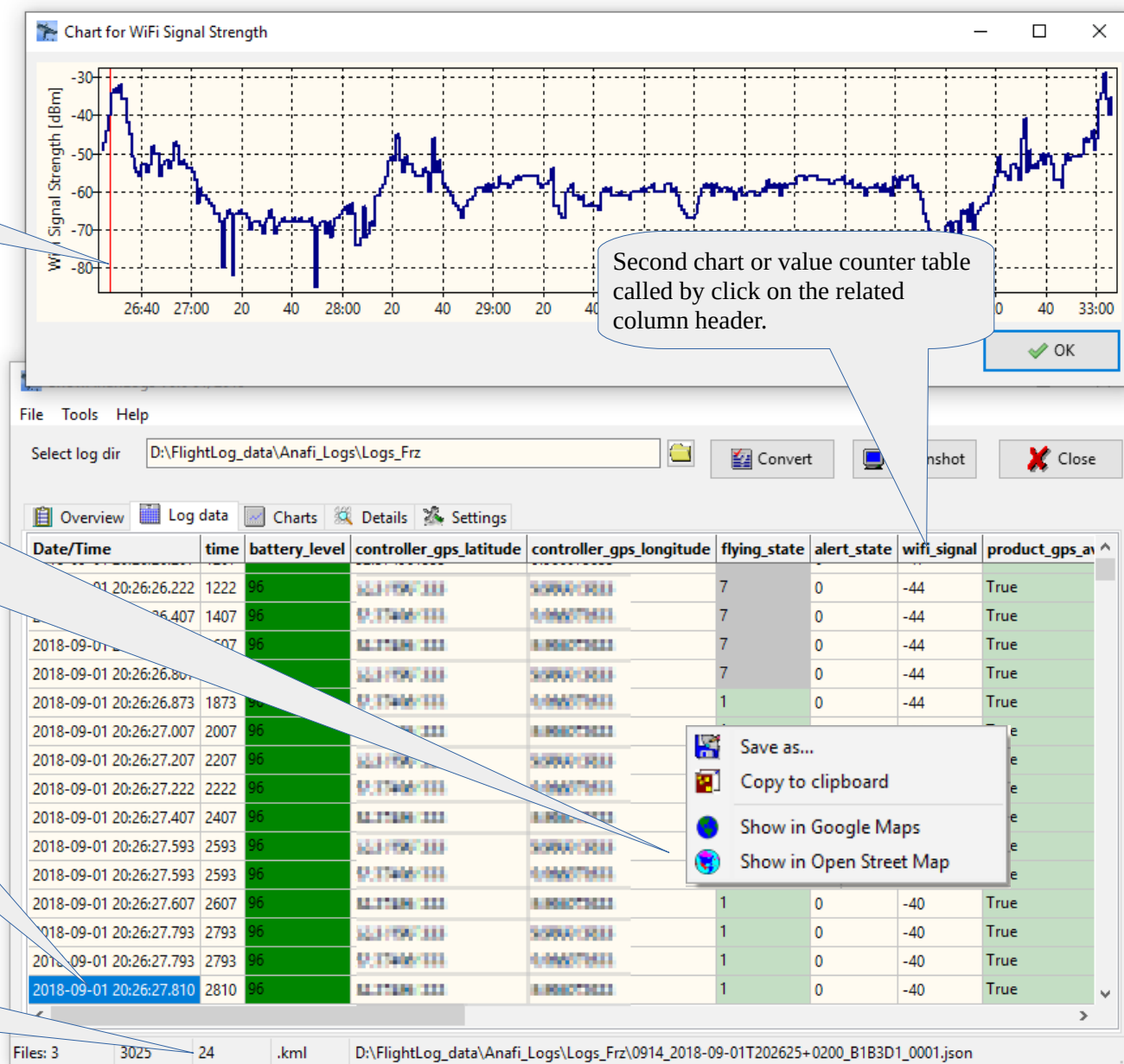
Cursor shows which row in the data table is selected. You can move forward by mouse wheel.

Hold the mouse pointer over a cell to get more information (a cell related hint).

Right mouse button opens a context menu to open coordinates in Google Maps or Open Street Map.

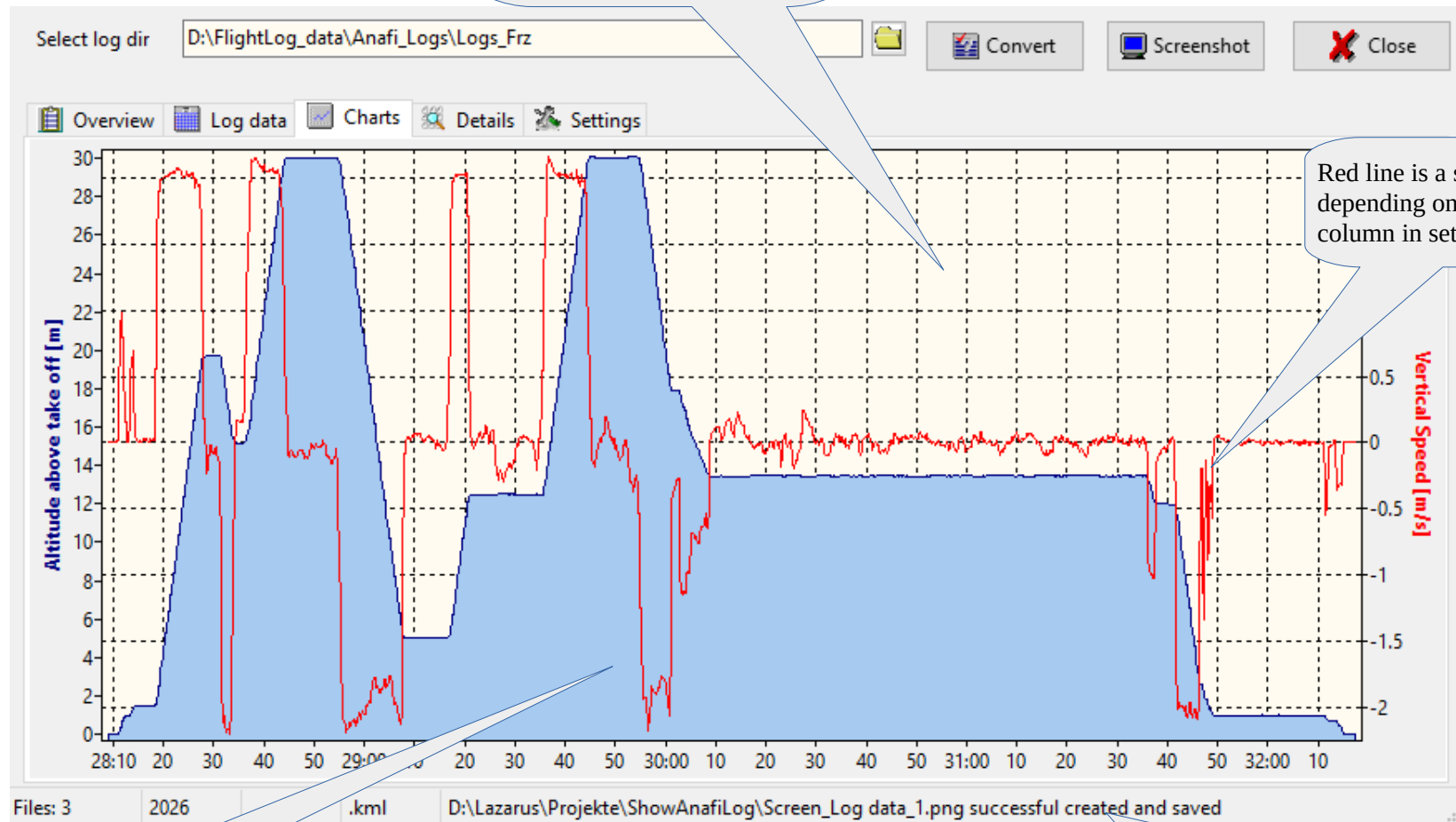
Selected cell means also selected data set.

Line number of selected data set = position of the red cursor in the second chart above.



## Chart altitude

Zoom chart by mouse wheel,  
pan with left mouse button hold,  
horizontal cursor by Ctrl-key.  
Reset zoom and/or pan by middle  
mouse button.



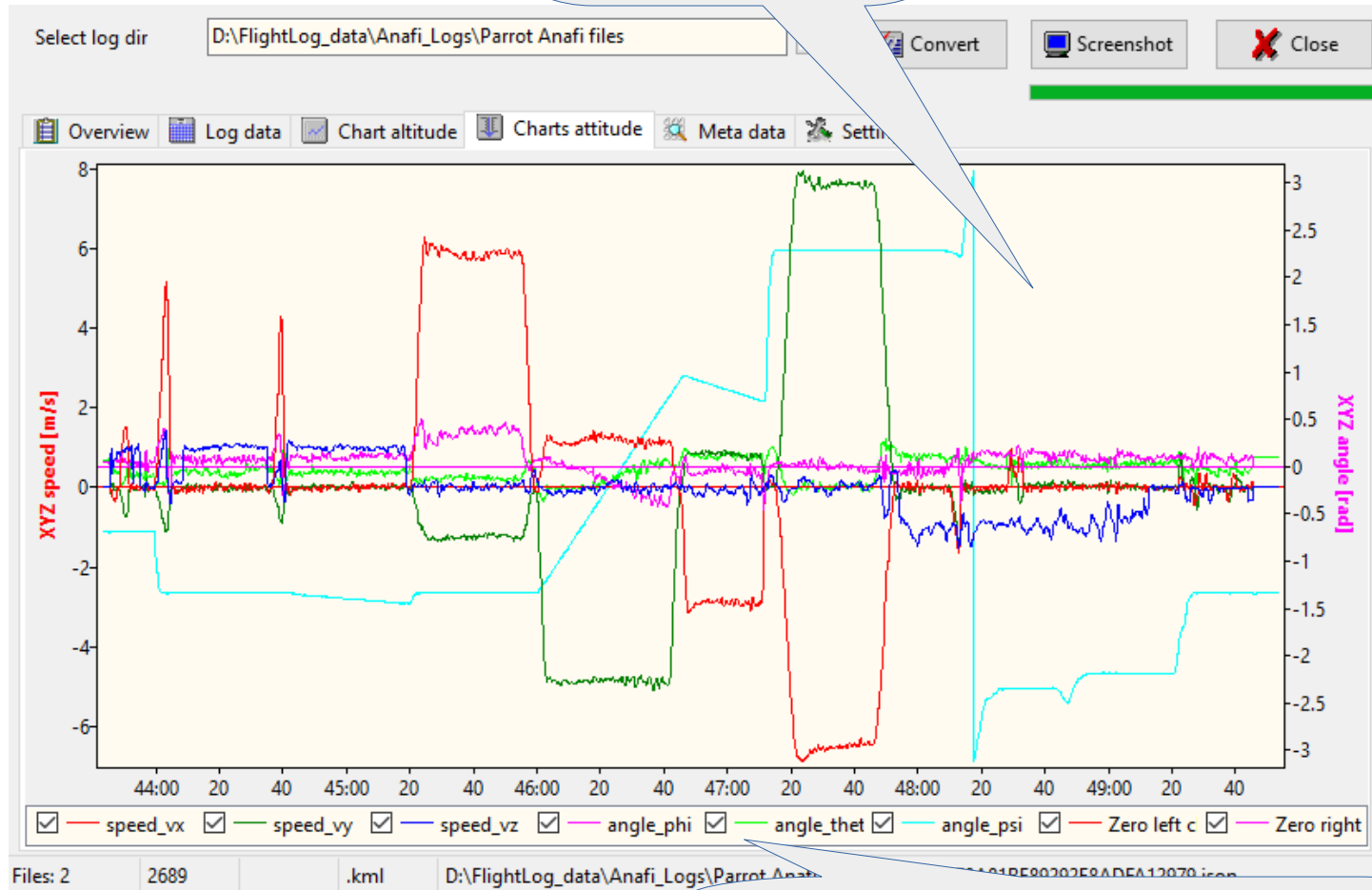
Red line is a second chart  
depending on selected data  
column in settings.

Filled chart shows the altitude  
relative to take off location.

Status message about a former saved file.

## Charts attitude

Zoom chart by mouse wheel,  
pan with left mouse button hold.  
Reset zoom and/or pan by middle  
mouse button.



Double click to toggle Attitude charts:  
All → only speed → only angle → only nick/roll → all

## Meta data from JSON log file

**Tools Menu:**

- Settings
- Screenshot
- Recompute air speed
- Create Pilot log book
- Rename JSON files with date/time stamp
- Show meta data from FDR log

**Meta data Table:**

Details	Value
Product name	Anafi
Product id	2324: Anafi 4K-HDR
Version	1.2
Serial number	PI040416AA8F021037
Date of manufacture	No 021037 from Juni 2018
Hardware version	HW_03
Software version	1.0.1
Total run time	00:08:59
Crash	0
Controller model	RC,Skycontroller 3
Controller application	PI040443AA8F023327,1.0.7
UUID	4667CD89-52C1-C2AB-FB8C-B7311FF
GPS available	True
GPS latitude	
GPS longitude	

**Statistics Table:**

Statistics	Min/max values	Occurred first time
Ceiling	5.520124m	22:52:42.003
Distance	6.926618m	22:44:05.004
Top speed	1.455777m/s	22:44:24.403
Max battery level	46%	22:44:05.004
Min battery level	9%	22:52:50.872

**FDR log directory:**

4667CD8952C1-C2AB-FB8CB7311FF7A501

**File list with matching UUID:**

2018-08-23T195433+0200\_F5B373.json

In older firmware versions the column "speed" was not filled. The main menu offer a possibility to recompute speed (True air speed) by vx, vy and vz.

Rename files with UUID as file name to file name containing date/time stamp and a part of UUID.  
Example:  
2018-08-23T195433+0200\_F5B373.json

I think this is the home point. Double-click on the table opens this point in Google Maps.

Meta data taken from the file in use. Ctrl+C copies the whole table to clipboard.

Some min/max values found during file load with time stamp when it first occurred. Ctrl+C copies the whole table to clipboard.

## Metadata from FDR log files

Log files in the FDR folder contains more detailed data compared to JSON log files but it is an undocumented binary format. Thus, the files keep their secrets. But some of the meta data at the beginning of the files are readable such as battery serial number or firmware versions.

The screenshot shows the 'ShowAnafiLogs V1.6 11/2019' application. The 'Tools' menu is open, highlighting 'Show meta data from FDR log'. A 'Details' table on the left displays metadata for an open FDR log file. A 'Statistics' table on the right shows flight metrics. A search panel on the right allows for finding UUIDs in the FDR directory. Callouts provide instructions on how to use these features.

**Main menu > Tools:**  
Open FDR log file (\*.bin) to read the meta data. Result will be shown in the Details table.

**Details Table:**

Field	Value
build.date	Thu Oct 3 16:38:39 UTC 2019
parrot.build.group	drones
parrot.build.product	anafi
parrot.build.project	anafi
parrot.build.uid	anafi-4k-1.6.1
parrot.build.variant	4k
parrot.build.version	1.6.1
smartbattery.usb_version	0.10
smartbattery.version	1.0.9.0

**Statistics Table:**

Statistic	Min/max value	Unit
Ceiling	5.520124m	m
Distance	6.926618m	m
Top speed	1.455777m/s	m/s
Max battery level	46%	%
Min battery level	9%	%

**FDR directory for recursive search for matching FDR log files.**

**The UUID we are looking for.**

**Find UUID**

**File list with matching UUID**

**Find FDR log files matching the UUID from JSON log files.**

**Meta data taken from the open FDR log file. Ctrl+C copies the whole table to clipboard.**

**Result list. Click on a file name to get matching meta data from FDR log files.**

# Settings

The screenshot shows the 'Settings' window of the 'ShowAnafiLogs V1.4 03/2019' application. The window has a menu bar (File, Tools, Help) and a toolbar with buttons for 'Select log dir', 'Screenshot', and 'Close'. Below the toolbar is a tabbed interface with 'Overview', 'Log data', 'Chart altitude', 'Charts attitude', 'Meta data', and 'Settings' (selected). The 'Settings' tab contains three main sections: 'Conversion', 'Scale unit', and 'Pilot log book'. The 'Conversion' section has an 'Output format' group with radio buttons for '.kml' (selected), '.gpx', and '.csv', and a 'KML track' button. Below this is a checked 'Extrude' checkbox and a 'Use semicolon for CSV' checkbox. The 'Scale unit' section has radio buttons for 'Metric' (selected) and 'Imperial'. The 'Pilot log book' section has radio buttons for 'Text' (selected) and 'CSV', a 'Create' button, and a 'Table settings' group with checkboxes for 'Use alternative header' and 'Angle as degree'. At the bottom, there are links for 'Latest SW version' and 'User manual', and a status bar showing file information.

**Main menu**

File Tools Help

Select log dir D:\FlightLog\_data\Anafi\_Logs\ROBAI

Screenshot Close

Overview Log data Chart altitude Charts attitude Meta data **Settings**

**Conversion**

Output format

- ☒ .kml
- ☐ .gpx
- ☐ .csv

☒ Extrude

KML track

☐ Use semicolon for CSV

**Scale unit**

- ☒ Metric
- ☐ Imperial

**Second chart**

- ☐ Battery level
- ☐ WiFi signal strength
- ☐ Number sats
- ☐ Vertical speed
- ☐ True air speed
- ☒ Distance from RC
- ☐ Flying mode

**Pilot log book**

Output format

- ☒ Text
- ☐ CSV

Create

**Table settings**

- ☐ Use alternative header
- ☐ Angle as degree

[Latest SW version](#) [User manual](#)

Files: 1 1658 .kml D:\FlightLog\_data\A 6T100426+0000\_D!

**Measurement units for data presentation.**  
Currently I think the input from JSON log files is always metric, no matter what you have set on your device. But this is only an assumption.

**Select output format of the Pilot log book**

**Create a Pilot log book from all JSON files in selected directory.**

**Use more descriptive column header instead of header from JSON log files.**

**Settings for KML tracks.**

**Use semicolon instead of comma as data separator in CSV files.**

**Select data column for the red line chart in Charts.**



# Internals

See also: [https://developer.parrot.com/docs/olympere/arsdkng\\_arndrone3\\_piloting.html](https://developer.parrot.com/docs/olympere/arsdkng_arndrone3_piloting.html)

flyng_state	Meaning	Remarks, internal naming
0	Landed	Landed
1	Taking Off	Taking Off
2	Hovering	Hovering
3	Flying	Flying
4	Landing	Landing
5	Emergency	Emergency
6	User take off	Waiting for user action to take off
7	Motor ramping	Motor ramping
8	Emergency landing	Drone autopilot has detected defective sensor(s)

alert_state	Meaning	Remarks, internal naming
0	None	none
1	Normal flight	user
2	Anafi shut down	cut out, if something hit the propeller
3	Battery level crucial	critical battery
4	Battery level low	low battery
5	Flight angle exceeded	too much angle (>70°)

Output format CSV Pilot log book:

product_gps_position_error	Meaning	Remarks, internal naming
0	No error	Seems to be always 0
1	Not in outdoor mode	Possibly not used
2	GPS not fixed	Possibly not used
3	Compass not calibrated	Possibly not used

flip_type	Meaning	Remarks, internal naming
0	None	Seems to be always 0
1	Front	Not used
2	Back	Not used
3	Right	Not used
4	Left	Not used

Battery level	Color
>50%	green
50% to 25 %	orange
<25%	red

Number of sats	Color
>10	green
11 to 5	orange
<5	red

Index	Header
0	Serial number
1	Date
2	From
3	To
4	Duration
5	Ceiling
6	Distance
7	Route
8	Top speed
9	Max battery level
10	Min battery level
11	Location
12	GPS fix at start

Index	Header	Description	Unit	Metric/Imperial	Conversion
0	Date/Time	Computed from Date/Time in Meta data plus Time since boot	date/time		
1	time	Time since boot in ms	ms		
2	battery_level	Battery charge level	%		
3	controller_gps_latitude	Controller latitude	lat		
4	controller_gps_longitude	Controller longitude	lon		
5	flying_state	Flying mode	enum		
6	alert_state	Alert state	enum		
7	wifi_signal	WiFi signal strength	dBm		
8	product_gps_available	Anafi GPS lock	bool		
9	product_gps_longitude	Anafi Longitude	lon		
10	product_gps_latitude	Anafi Latitude	lat		
11	product_gps_position_error	Anafi GPS error	enum		
12	product_gps_sv_number	Number of sats	#		
13	speed_vx	Foreward speed	m/s	m/s – ft/s	
14	speed_vy	Sideways speed	m/s	m/s – ft/s	
15	speed_vz	Vertical speed	m/s	m/s – ft/s	
16	angle_phi	Attitude – Roll Angle	rad		rad - ° +/-180
17	angle_theta	Attitude – Pitch Angle	rad		rad - ° +/-180
18	angle_psi	Attitude – Compass Heading	rad		rad - ° 0..360
19	altitude	Altitude relative to take off	m ft	m – ft	
20	flip_type	Flip type	enum		
21	speed	True air speed	m/s	m/s – ft/s	m/s – km/h / ft/s – mph
22	DIST	Distance Anafi to RC,computed from coordinates	m	m – ft	m – km / ft – mi

## Disclaimer

This software is freeware. You can use this software royalty-free for private and commercial purposes.

**But use this application on your own risk.**

**There is no guaranty for correctness and/or completeness of the results of the evaluation of flight log data or interpretation of the values in the flight logs.**

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