Operating- & Installation Instructions

Canopyflasher incl. Connect Modul

Table of Contents

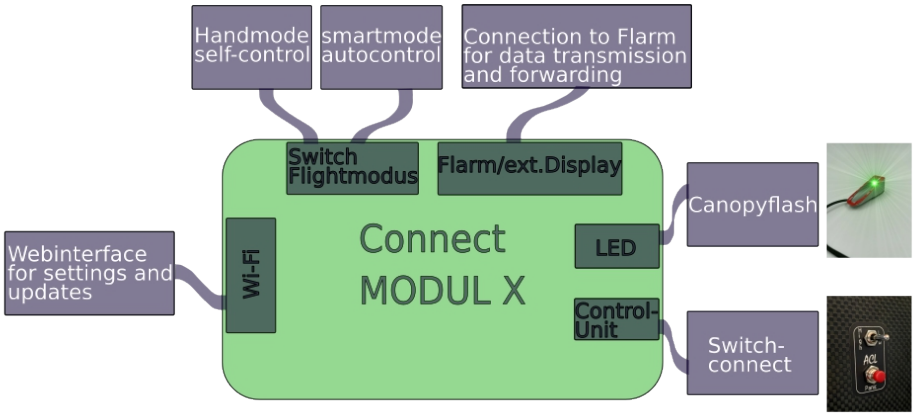
Revision History

Rev. 1.5 (12.2025)

Rev.	Description	Date
1.1	Mode settings changed to correct name	02.04.24
1.2	Dimensions Connect Modul adapted/ Brightness for red LED´s completed	14.12.24
1.3	Change photos for installation instruction	31.01.25
1.4	Changes for SW version CF-1.1.0 & FL-1.1.0 (Flash Interval Selection, Panic Mode Trigger Level, Bluetooth; SW Update)	30.08.25
1.5	Changes overview of structure (more detailed description of flarm connection)	03.12.25

Overview of the canopyflasher

The following overview shows the structure of the canopyflasher



How the canopyflasher works

Warning: There is a risk of eye injury! Never look directly into the flash.

The ForeSight Avionics canopy flasher has several modes and setting options.

Operation via control unit
A high and a low level can be switched on via the Control Unit built into the instrument panel using a toggle switch (main switch).

Green LED´s

High-Level: All 10 LEDs are in operation. This achieves the full brightness of 10500 lumens according to the data sheet.
Low-Level: Only 5 LEDs are in operation. This achieves a brightness of 5250 lumens according to the data sheet.

Red LED´s

High-Level: All 10 LEDs are in operation. This achieves the full brightness of 6000 lumens according to the data sheet.
Low-Level: Only 5 LEDs are in operation. This achieves a brightness of 3000 lumens according to the data sheet.

A button can also be used to switch the canopyflasher to **Panic Mode** and thus generate a higher flash frequency for a specified time.

In Smart mode (see Mode settings), it is possible to carry out an **operational test** of the strobe. This can be triggered by briefly pressing the button. The canopyflasher flashes for 2 seconds.

Mode settings

A slide switch on the Connect module can be used to select between 2 start modes, manual mode and smart mode.

Handmode starts by switching on using the toggle switch located in the cockpit (main switch of the control unit).
Smartmode starts from a movement speed of 40 km/h and ends 10s after standstill

Interfaces

If the Connect module is connected to a Flarm or Flarm-like device via an RJ45 interface, the panic mode (in addition to the panic button) can be triggered by a collision warning.

An additional display (AirTraffic Display, Butterfly, etc.) can be connected via the second RJ45 interface. This built-in flarm splitter saves the need for additional splitters.

Setting up a Bluetooth connection

The name of the Bluetooth module is „ACL_Flarm“ and must be paired with the receiving device (e.g., smartphone) once.

XCSoar settings:
In the „NMEA connection“ section, active a new connectionan set it as follows:
Connetion: ACL_Flarm (Bluetooth)
Driver: Flarm

Setting up a Wi-Fi connection

- By switching on the canopyflasher, a Wi-Fi is made available for 10 minutes.
- Starting with **SW version CF-1.1.0 & FL-1.1.0**, Wi-Fi is activated when the panic button is pressed while turning on the canopyflasher until the canopyflasher flashes one.
  The SSID is the name of the serial number
  The password is '**ForesightFlash**'

- Connect a WLAN-capable receiver device (e.g. smartphone) to this network

Setting options

The device is supplied with a tried and tested basic setting. However, it is possible to customize this for yourself.

To do this, go through the following steps:

- If the receiving device is successfully connected to the Wi-Fi, a web page is made available for configuration

- Enter the host name “acl.local” in the browser to open the website of the canopyflasher for configuration

- Enter “ACL” in the input field
  (see photo 3.1)

3.1

- To ensure that the system functions reliably system works reliably, all fields the required settings
  must be entered in all fields

- The following should be entered:

  - Flash Interval Selection (only for **SW version CF-1.1.0**):
    Duration of the flash activation time in [ms]

- First Break:
  Duration of the first break betwenn the flashes in [ms]

- Second Break:
  Duration of the second break between flashes in [ms]

- Third Break:
  Duration of the third break between flashes in [ms]

- Fourth Break:
  Duration of the fourth break between flashes in [ms]

- Panic mode duration:
  Duration of the active panic mode in [s] after it was triggered by the button or the flarm

- Flarm baud rate:
  Correct baud rate of the connected Flarm device

- Click on "Save Settings" to save the settings
- The canopyflasher restarts in setup mode
- Starting with **SW version CF-1.1.0 & FL-1.1.0**, the new flash interval is run through once after saving.

Installing software update

- If the receiving device is successfully connected to the Wi-Fi, a web page is made available for configuration
- Enter the host name "acl.local" in the browser to open the website of the canopyflasher for configuration
- Enter "**ACL**" in the entry field
  (see photo 4.1)
- Select the new bin file, which
  is as follows:

  ForeSight_Canopyflash_[Version].ino.bin

For **SW version CF-1.1.0 & FL-1.1.0**
ForeSight_Canopyflash_[Version].ino.bin
and
ForeSight_Canopyflash_[Version].spiffs.bin

and click „Update Firmware"

- The upload takes a short while
- After a successful update, the canopyflasher restarts in setup mode and the LEDs flash 3 times

Installation instructions for the canopyflasher

1 Measure the canopy using a tape measure and attach the transparent alignment sticker supplied to the outside of the canopy. It is best to attach the canopyflasher at some distance from the canopy frame, otherwise reflections may occur in the cockpit.

1.1 Clean and degrease the inside of the canopy at the relevant point **CAUTION** Only use suitable degreasing agents, otherwise the canopy may be damaged!

5.1

1.2 Apply the alignment sticker to the canopy.
The center of the canopy can be measuredusing a long thread
(see photo 5.1)

1.3 Attachthe canopyflasher exactly to the alignment sticker and press it on
(see photo 5.2)

5.2

2 Attach the Connect module to a suitable place in the aircraft.
2x M3 screws and cable ties are supplied for this purpose

3 Attach the control unit to a suitable place in the instrument panel

3.1 We recommend sticking the cockpit sticker in the appropriate place and then drilling holes.

3.2 Inserting the control unit.
Pay attention to the installation direction
(see photo 5.3 and back page of the Control Unit)

5.3

3.3 Connecting the control unit to the Connect moduleusing the plug connection

3.4 Connect the red cable to 12V (fuse! Recommendation see “Technical data” p.6) and the black cable to the

negative pole of the power supply.

4 The canopy contact must be installed for side hinged canopys. If this is not required, continue with point 4.3.

4.1 First fasten the contact on the fuselage side with the screws supplied.

4.2 The contact on the canopy side must then be fixed by aligning it. The easiest way to do this is to close the contact, remove the protective film from the 3M tape and then close the cover (...continue with point 4.4).

4.3 The single contact is used for front-opening canopys. It must be ensured that this can also open in the event of an emergency canopy release. However, it is possible for the contact to open due to unintentional pulling forces, for example. The canopy flasher is then without function. This can be reduced by securing **the contact on the fuselage side** with a cable tie.

4.4 Connecting the canopy flasher to the Connect module using the plug connection.

4.5 A functional test of the canopy emergency release system is highly recommended!

More photos for installation

Disclamer

The ACL canopy strobe is not EASA or FAA certified.

If the aircraft falls under EASA regulations, it is possible to have the additional device registered by an inspector using CS-STAN, standard modification CS-SC402a.

This device is not approved for use in aviation. It is expressly pointed out that the use of this device is at your own risk, to the exclusion of any warranty!

Index