



# FLARM Firmware Release Notes

*Published 31 October 2018*

## Updates and Interoperability

Every FLARM device must be updated with the latest firmware version at least every 12 months to avoid firmware expiration. This will also ensure interoperability with all other FLARM devices. Make sure to enter the update schedule into applicable maintenance documentation.

If you haven't updated your device within the last 12 months, do it before your next flight. Also check the "Safety Equipment Requires Care and Maintenance" section on <https://flarm.com/support/manuals-documents/> or from the manufacturer of your device.



## Version 6.63

*Published 31 October 2018*

<b>Platforms</b>	All PowerFLARM- and Classic FLARM-based devices
<b>Build</b>	07d10ec6e
<b>Expiration</b>	Not operational after 31 May 2020

## Changes since 6.62

### Fixes

- PowerFLARM: Unreliable ENL sound reception.



## Version 6.62

*Published 16 October 2018*

<b>Platforms</b>	All PowerFLARM- and Classic FLARM-based devices
<b>Build</b>	abb00d962
<b>Expiration</b>	Not operational after 31 May 2020

## Changes since 6.60

### Enhancements

- All devices: Compliance with new IGC specification for flight recorders from 2016/04
- PowerFLARM: Improved flight recording for UAVs, helicopters and balloons

### Fixes

- PowerFLARM: Could not retrieve IGC flight record when an empty task was declared



## Version 6.60

*Published 11 July 2018*

<b>Platforms</b>	All PowerFLARM- and Classic FLARM-based devices
<b>Build</b>	acc16f4eb
<b>Expiration</b>	Not operational after 31 January 2020

## Changes since 6.42

### Enhancements

- PowerFLARM: Improved data fusion of mixed FLARM/ADS-B targets
- PowerFLARM: \$PFLAA output of ADS-B targets sorted by distance
- PowerFLARM: Invalid commands sent over the data port do not trigger diagnostic output. Mitigates issues with data port stalling in some setups, e.g. SN10
- PowerFLARM: Throttle output of excessive diagnostic messages on serial ports
- PowerFLARM: THRE configuration is no longer overridden by ACFT, see FTD-014
- PowerFLARM Portable: Blank display duration during startup shortened
- All devices: Targets with no-track enabled are output on data port if very close, even when own aircraft is stationary/hovering, see FTD-012

### For OEMs/Integrators

- PowerFLARM: Added "Force Flight State" command, see FTD-014
- PowerFLARM: Added status message \$PFLAJ, see FTD-012
- Application Module: Support for 1090 Receiver Module
- Application Module: Support for device model configuration for e.g. IGC file output

### Fixes

- PowerFLARM: Capabilities are properly output in the device log
- LXV, LXV\_FM and LXV\_FM\_IGC devices: Fixed unrealistic targets
- PowerFLARM: Fixed firmware update when using macOS. This fix will be active once the device is running firmware version 6.60 or higher
- All devices: Correct alarm type ("no alarm") in \$PFLAU when towing or being towed



## Known issues

- Because of the method previously used by PowerFLARM-based devices to validate firmware files, only one firmware file (.fw) may be present on the USB stick or SD card. If more than one firmware file is present, the update might not work, with no error message given. The only symptom will be that the device will continuously restart, as long as the USB stick or SD card is in the device. Therefore, make sure that only the latest firmware file is present on the USB stick or SD card when updating to version 6.60. For future updates, this issue has been solved (see under "Fixes" above").
- When downloading/saving the firmware file on a Mac computer, because of the non-standard way in which macOS saves file metadata, a second hidden .fw file will be saved and consecutively copied to the USB stick or SD card. This may cause the problem described above. There are two different ways to mitigate the problem:
  1. If you are familiar with the Terminal, you can delete the improper file by using the `dot_clean` command, as described on the following page: [goo.gl/CG9BGh](https://goo.gl/CG9BGh)
  2. If you are not familiar with the Terminal, use a PC to copy the firmware file to the USB stick or SD card



## Version 6.42

*Published 06 November 2017*

<b>Platforms</b>	All PowerFLARM- and Classic FLARM-based devices
<b>Build</b>	1f59603
<b>Expiration</b>	Not operational after 31 October 2019

## Changes since 6.41

### Fixes

- PowerFLARM: Fixed an issue with suppressing ADS-B targets with a lower altitude, based on the ADSBVRANGE configuration setting
- PowerFLARM Portable: Fixed an issue where the screen would rarely remain white after start-up
- Classic FLARM: Maintenance release

### Known issues

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  1. If you are familiar with the Terminal, you can delete the improper file by using the dot\_clean command, as described on the following page: [goo.gl/CG9BGh](http://goo.gl/CG9BGh)
  2. If you are not familiar with the Terminal, use a PC to copy the firmware file to the USB stick or SD card



## Version 6.41 (Classic FLARM)

*Published 08 September 2017*

<b>Platforms</b>	Classic FLARM-based devices
<b>Build</b>	36bffda6
<b>Expiration</b>	Not operational after 31 January 2019

### Changes since 6.40

#### Fixes

- Classic FLARM: Fixed an issue where a not configured device uses a wrong FLARM ID



## Version 6.40

*Published 23 August 2017*

<b>Platforms</b>	All PowerFLARM- and Classic FLARM-based devices
<b>Build</b>	00cecdb
<b>Expiration</b>	Not operational after 31 January 2019

## Changes since 6.09

### Enhancements

- PowerFLARM: New intuitive obstacle warning behavior
- PowerFLARM: Fully symmetric antenna diversity, dynamic receive and transmit on both antennas (except USA and Canada)
- PowerFLARM: Firmware update possible via data port (relevant for developers only)
- PowerFLARM: License and obstacle database update possible via data port (relevant for developers only)
- Introduced new setting to query firmware expiration date: `$PFLAC,R,SWEXP`
- PowerFLARM: Obstacle ID (unique for specific database version) available in `PFLAU` (requires data port version 8 or higher)
- Introduced supplementary privacy option (all devices except F4)
- Introduced no track setting information in `PFLAA` in data port version 8 and higher
- PowerFLARM: Introduced ground station license (GND)

### Fixes

- Classic FLARM: Disallow unit to continue after GPS configuration failure
- Classic FLARM: Software expiration warning behavior

### Known Issues

- Classic FLARM: If ID was configured incorrectly in the past, ID changes to 0xFFFFFFFF. Reconfiguring ID to any valid type and ID or restoring to defaults solves the issue.





## Version 6.09 (PowerFLARM)

*Published 20 April 2017*

<b>Platforms</b>	PowerFLARM devices (PowerFLARM Core, PowerFLARM Portable)
<b>Build</b>	f07a879
<b>Expiration</b>	Not operational after 30 Sep 2018

**Note:** PowerFLARM devices with the obstacle database Alps 2017 installed or/and with error code 0x91 (Flight Recorder Error) must update to this version to be able to record data (IGC logger functionality) after the memory is full.

### Changes since 6.08

#### Fixes

- PowerFLARM: Fixed a flight recording issue (error 0x91) when Alps 2017 obstacle database is installed



## Version 6.09 (Classic FLARM)

*Published 10 March 2017*

<b>Platforms</b>	Classic FLARM devices including OEM FLARM devices
<b>Build</b>	d4ec337
<b>Expiration</b>	Not operational after 30 Sep 2018

### Changes since 6.08

#### Fixes

- Classic FLARM: \$GPGGA NMEA sentence now available on data port



## Version 6.08

*Published 28 February 2017*

<b>Platforms</b>	All FLARM and PowerFLARM devices including OEM FLARM devices
<b>Build</b>	0a62df4
<b>Expiration</b>	Not operational after 30 Sep 2018

## Changes since 6.07

### Enhancements

- Changes in Alert Zone (AZN) alarm behavior:
  - On entering the zone: Alarm is repeated 3 times every 12 seconds. Alarm duration is 4 seconds
  - After the first 3 alarms, while still in zone: Alarm is repeated every 60 seconds
- PowerFLARM: New serial command to test audio out (\$test,audio)
- PowerFLARM Core: Maximum allowed supply voltage increased to 32V
- Changes to the 'No track' configuration setting while flying are recorded to the IGC file
- Faster automatic detection of GPS leap second after startup

### Fixes

- PowerFLARM: RANGE configuration setting handles unlimited range correctly
- PowerFLARM Portable: Airplane type 'Unknown' can no longer be selected on display



## Version 6.07

*Published 09 September 2016*

<b>Platforms</b>	All FLARM and PowerFLARM devices including OEM FLARM devices
<b>Build</b>	5a5905f
<b>Expiration</b>	Not operational after 31 Mar 2018

## Changes since 6.06

### Enhancements

- Increased the maximum distance to other aircraft that is transmitted to FLARM Compatible displays from 32 km to unlimited.

### Fixes

- Minor fixes.



## Version 6.06

*Published 06 April 2016*

<b>Platforms</b>	All FLARM and PowerFLARM devices including OEM FLARM devices
<b>Build</b>	8244, 8249
<b>Expiration</b>	Not operational after 30 Sep 2017

## Changes since 6.05

### Enhancements

- IGC license activated for all PowerFLARM Core devices purchased on or after 1 February 2016
- Minor enhancements

### Fixes

- Added error message for incorrect ID configuration (error code 43)
- PowerFLARM Portable: Display brightness can no longer be set to a value lower than 10%
- Minor fixes



## Version 6.05

*Published 4 December 2015*

**Platforms** All FLARM and PowerFLARM devices including OEM FLARM devices

**Build** 7862

**Expiration** Not operational after 31 Mar 2017

## Changes since 6.02 / 6.01

### Enhancements

- User configurable ICAO aircraft address excludes some invalid values.
- More robust handling of duplicate IDs caused by user configuration.
- Added track in \$PFLAA when stealth mode is active.
- Improved glider tow detection for less nuisance alarms.
- Record more diagnostics information in IGC files.
- PowerFLARM: ADS-B warnings can now be disabled by configuration.
- Classic FLARM including OEM FLARM devices: Changed default horizontal range to maximum value of 25'000 m.

### Fixes

- GPS leap second updated.
- Classic FLARM including OEM FLARM devices: Fixed radio ID if SD card was inserted during flight while ID configuration set to automatic.
- Classic FLARM including OEM FLARM devices: Fixed nuisance warnings when erasing obstacle database from the memory.
- PowerFLARM: Reintroduced audio out beep at startup.
- Fixed incorrect date in IGC file in some rare cases.
- PowerFLARM: Fixed IGC file naming regardless of license type: use 'G' for IGC-approved devices and 'X' for other devices.
- Fixed CM2 header in IGC file.