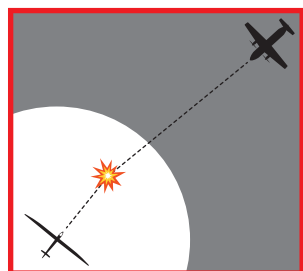© Chris Hiller

PowerFLARM – See & Be Seen

See & Be Seen by Everyone

Introduced over a decade ago, the original Classic FLARM devices have saved the lives of many glider pilots. Thanks to the success of FLARM, and because of more crowded airspace, FLARM has also been embraced by other aviation domains. Today, many powered airplanes, helicopters, and even low flying jet aircraft carry FLARM. There is no other technology as widely used in the lower airspace below FL100, outside large airports, than FLARM. Together with a general increase in high speed aircraft at lower altitudes, this changes the technical requirements for collision avoidance equipment to detect fast approaching aircraft in time. PowerFLARM was developed to specifically address these challenges.
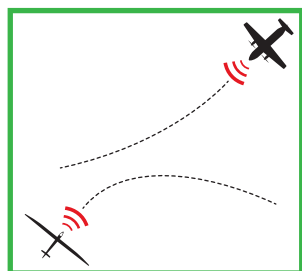
PowerFLARM makes aircraft that are hidden from old Classic FLARM visible. With a significantly increased range, radio performance improvements in all directions, and optional ADS-B and transponder data integration, PowerFLARM protects you from aircraft otherwise not visible in time.

Tripled Detection Range

With higher power and more sensitive radio receivers, range is increased for both sender and receiver, from around 3 km for old Classic FLARM to typically more than 10 km for PowerFLARM. When approaching a fast-moving aircraft with 250 kt (463 km/h) head-on, more than 5 km radio range is needed for a useful warning. PowerFLARM enables a timely detection of fast moving aircraft, making it possible for you to take resolutive action in time.
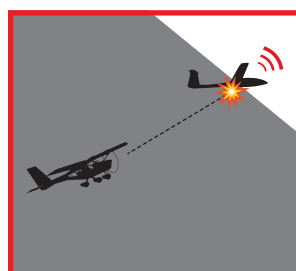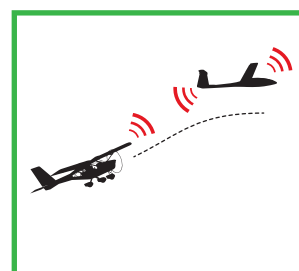

Classic FLARM · PowerFLARM

Dual Antenna Diversity

Just like transponder signals, FLARM range is limited by radio line-of-sight. This means that especially a metal or carbon fiber aircraft (as well as equipment of these materials) will shield the signal. With only one antenna, the view is limited to one direction only, away from such materials. PowerFLARM features two radio transceivers for two separate antennas. Aircraft approaching you from behind or below will thus no longer be hidden.
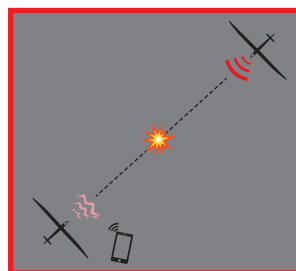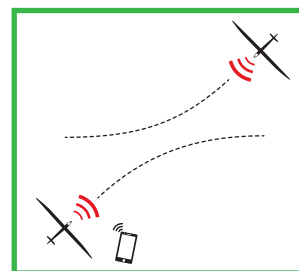

Classic FLARM · PowerFLARM

Better Interference Protection

The use of mobile phones and other portable electronic devices in aircraft has increased in the last years. Old Classic FLARM has limited protection against these signals, which could lead to FLARM radio signals not being received. PowerFLARM comes with built-in interference protection, keeping unwanted signals out and at the same time boosting the desired FLARM signals.

Classic FLARM · PowerFLARM

FLARM

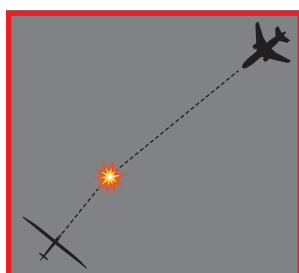**www.flarm.com**

© David Iliff

PowerFLARM supports more complex obstacle types, as well as improvements to the obstacle warning algorithm, not available in old Classic FLARM
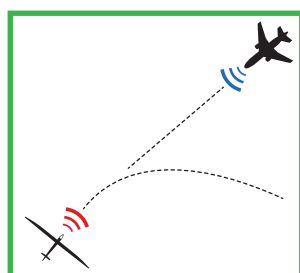
Transponder and ADS-B Receiver

While many aircraft are already FLARM-equipped, there are still some that are not. With the optional transponder and ADS-B 1090ES receiver, available in select PowerFLARM devices, you are protected from those aircraft as well. The additional receiver listens for intruders transmitting Mode-C, Mode-S, and ADS-B messages on 1090 MHz, and includes those aircraft in the smart trajectory prediction and collision warning algorithms. Since aircraft without FLARM cannot see you, it is all the more important that you can see them early to keep a safe distance.
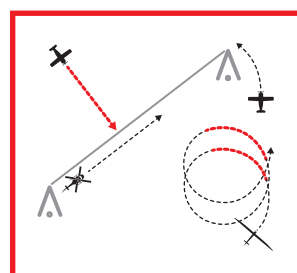
Intuitive Obstacle Warnings

FLARM warns when flying towards or near known obstacles, be it powerlines, cable cars, or large antennas. The database with tens of thousands of obstacles can be purchased online. Exclusively in PowerFLARM, lateral buffers are used for line objects like power lines, so flying parallel yields better warning behavior. The forecasted trajectories are more dynamic — no warnings will be issued when circling in proximity unless very close. Smart displays receive an obstacle ID so they can suppress repetitive warnings where required, e.g. for helicopter air-work.
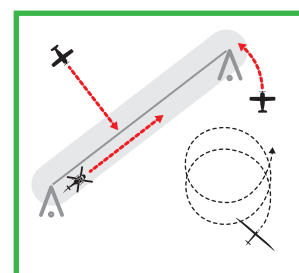

Classic FLARM

PowerFLARM

Classic FLARM

PowerFLARM

Technical Specifications

	PowerFLARM Core	**PowerFLARM Portable**
Type	Installed	Portable
Display	Separate	Integrated Color LCD
Recommended for	All aircraft types	Personal use in all GA aircraft
Dimensions	41 x 80 x 120 mm	46 x 96 x 94 mm
Mass	245 g (Pure) / 285 g (ADS-B)	260 g w/o batteries
Power supply	12-32 V DC	8-23 V DC
Power consumption	165 mA @ 12 VDC	175 mA @ 12 VDC
Data ports, Storage	2 (D-sub DE-9 and RJ45), USB	1 (RJ45), Micro SD
Transponder/ADS-B 1090ES receiver	Optional	Included

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