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PowerFLARM Fusion

Safety made Easy.

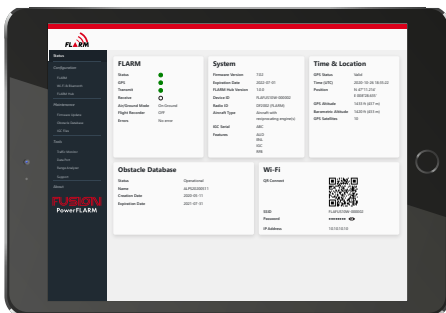
Product Highlights

- Next generation PowerFLARM technology, works worldwide
- Wi-Fi and Bluetooth connectivity
- FLARM Hub embedded web app for easy Configuration & Maintenance
- Stream data to ForeFlight, SkyDemon, EasyVFR, and other navigation apps
- Radio diversity and ADS-B/ADS-R/TIS-B & Mode-S receiver (1090 MHz) for complete coverage
- IGC recording (up to diamonds) with ENL

Every year, around 40 aircraft are involved in mid-air collisions. Half of these are fatal. Most of these accidents happen in good visibility and daylight. FLARM has effectively eliminated mid-air collisions between equipped aircraft. With more than 50,000 manned aircraft already equipped (over half of all GA in Europe), many pilots consider it unacceptable to fly without a functioning FLARM system. This implies not only a straightforward installation and configuration, but also ensuring the continued performance of the system.

An Interface for Humans

PowerFLARM Fusion combines the robust and proven PowerFLARM technology with the easiest and most comprehensive configuration and maintenance interface on the market. Introducing **FLARM Hub** — a web app that runs on the device and works with any smartphone, tablet, or desktop computer — configuring your FLARM has just become super easy.



FLARM Hub can be used for firmware and obstacle database updates. IGC files can be downloaded directly to the computer or mobile device. Additionally, FLARM Hub has a traffic display, a bi-directional data port, and built-in tools for range analysis as well as diagnostics & support.



Furthermore, PowerFLARM Fusion has a range of Bluetooth and Wi-Fi connection options and can connect to major navigation apps directly such as Air Navigation Pro, SkyDemon, ForeFlight, EasyVFR, iPilot, and XC Soar. In addition to the standard FLARM data port protocol (ICD), PowerFLARM Fusion also supports the GDL 90 protocol used by many EFBs and navigation apps.

Clear Configuration

Proper configuration is important for every FLARM device, as the collision warning algorithms adapt to the aircraft in which the device is installed. The new *Status* and *Configuration* pages make this easier than ever before. Configuration changes are instantly applied, and the current configuration can easily be verified and printed for documentation purposes.

The *Status* page shows the condition of the system, indicating firmware, obstacle, and error conditions. Four physical LED lights, known from (and missed since) Classic FLARM, have found their way back in PowerFLARM Fusion, and are also replicated on the *Status* page.

Traffic Monitor

A radar-like traffic monitor shows all aircraft seen by FLARM (including ADS-B traffic) and can be used for installation and configuration verification as well as for maintenance purposes.



www.flarm.com

Built-in Range Analyzer

The new CARP range analyzer, which continuously evaluates the measured range during flight, is now integrated into FLARM Hub using the same visualization as the online version. This makes it possible to verify the radio range on the airfield after any flight.

Diagnostics & Support

Even the most diligent people can sometimes overlook details in advanced systems. FLARM Hub makes obtaining 3rd party support a breeze. In addition to the practical *Status* page, a support package containing all relevant configuration and debug files can easily be downloaded to the connected computer or mobile device.

Connectivity

A plethora of FLARM displays and other accessories are available from a wide range of manufacturers. In addition, many tablet and smartphone apps can show traffic information from PowerFLARM Fusion directly, using its integrated Bluetooth and Wi-Fi dual radio. There is no need for an additional bridge device. Depending on the connected app, Fusion can stream either the complete data set via the FLARM data port protocol or limited traffic information using the GDL 90 protocol.

Painless Upgrade

The familiar antenna and data connections on PowerFLARM Fusion make it effortless to upgrade from a PowerFLARM Core. The form factor and mounting holes are identical. An adapter kit for the updated antenna connectors is available, allowing the use of existing antennas and cables.

All Options Included

PowerFLARM Fusion comes included with everything that is taken for granted in a modern PowerFLARM device: extended range, antenna diversity, improved interference and ESD protection, ADS-B/ADS-R/TIS-B & Mode-S receiver, wireless connectivity, and intuitive obstacle warnings (databases sold separately). Options that previously required a license are now included: IGC, ENL, Antenna Diversity (RFB), and Audio Out.

Same Same, but Better

PowerFLARM revolutionized aviation by establishing the system that had been so successful in gliding as the solution for avoiding mid-air collisions in all of General Aviation. PowerFLARM Fusion is the same PowerFLARM that you love, but with novel features making managing it ultraconvenient. Being safe has never been as accessible as now.

Technical Specifications

Dimensions	119 x 80 x 42 mm
Mass	250 g
Power supply	12-32 V DC \pm 5%
Current consumption (no external consumers)	200 mA @ 12 V DC (Peak) 180 mA @ 12 V DC (Typical)
Supply for external devices	250 mA @ 3 V DC (D-sub, RJ45) 700 mA @ 5 V DC (D-sub, USB) 200 mA @ 12 V DC (D-sub, RJ45), 80 mA @ 32 V DC (D-sub, RJ45)
Data Ports	D-sub DE-9 and RJ45, RS-232 FLARM ICD @ 4.8-230 kBaud Garmin TIS @ 9.6 kBaud (RS-232)
Wireless Data	FLARM ICD: Wi-Fi (TCP, WebSocket) and Bluetooth GDL 90: Wi-Fi

Audio Out	AC, 1.7 V peak-to-peak @ 1 k Ω
GPS	SMC connector External 50 Ω active (4.7 V) antenna Accuracy \leq 5 m (typical)
Radio (FLARM)	RP-SMA Connectors (2x) 868 to 869 MHz (SRD860 band) 902 to 928 MHz (ISM band)
Radio (SSR/ADS-B)	SMA Connector 1090 MHz (RX only, ADS-B/ADS-R/TIS-B)
USB	Connector for USB 2.0 flash drive FAT16, FAT32, exFAT; 128 GB max.
Operating temperature	-15 to 70 $^{\circ}$ C
Detection range	>10 km (typical) Depending on antenna and installation
Accessories	Internal antennas & cables (included) Adapter kit for PowerFLARM Core AV-75 external FLARM antenna

A list of installers and dealers is available at
www.flarm.com/buy



www.flarm.com

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