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Document Status

Published status	Confidentiality status
☐ Draft ☒ Released ☐ Canceled	☐ Internal ☐ NDA ☒ Public

Version Control

Ver.	Date	Summary of changes
1.00	2025-04-14	Initial version
1.01	2025-09-25	Add BLE description
1.02	2026-03-19	Marked Bluetooth classic as legacy
1.03	2026-09-04	Added Garmin Pilot

Scope and Summary

PowerFLARM Fusion and Flex support real-time traffic streaming to Electronic Flight Bag (EFB) apps via Wi-Fi and Bluetooth. This guide outlines the supported connection types, explains how to set up each mode, and provides configuration details for popular apps like ForeFlight, SkyDemon, and XCSoar. Use this guide to ensure your device is correctly configured for seamless data integration with your EFB.

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1 Introduction

PowerFLARM Fusion and PowerFLARM Flex can both stream traffic and position data to Electronic Flight Bag (EFB) applications on tablets and smartphones. This guide provides an overview of supported connection types, setup instructions, and specific configuration settings for popular EFB apps.

2 Supported Data Interfaces

The connection can be made over either Wi-Fi or Bluetooth. The following modes are available:

Mode	PowerFLARM Fusion	PowerFLARM Flex
FLARM ICD on Bluetooth LE (BLE)	✓	✓
FLARM ICD on Wi-Fi (TCP: socket 2000)	✓	✓
FLARM ICD on Wi-Fi (WebSocket)	✓	✓
GDL 90 on Wi-Fi (UDP)	✓	✓

Note: Hub version 1.64 and older supported only Bluetooth Classic for PowerFLARM Fusion. Hub version 1.80 and newer only supports Bluetooth Low Energy (BLE).

3 Wi-Fi Connection Setup

To use Wi-Fi-based data streaming, connect your mobile device to the PowerFLARM device's Wi-Fi network.

On PowerFLARM Fusion, the Wi-Fi credentials (SSID, password) are available on the back of the device, also as a QR code. If the settings have been changed by the user, the modified credentials are on the Hub website (use FLARM Hub app).

On PowerFLARM Flex, the Wi-Fi credentials can be viewed by opening the menu.

The default host IP address is 10.10.10.10.

Note: Some EFBs offer connection options for third-party modules (e.g., AIR Connect). These often use different IP addresses or ports and may not be compatible with PowerFLARM.

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4 Data Interface Details

FLARM ICD on Wi-Fi (TCP)

- IP: 10.10.10.10
- Port: 2000
- Streaming begins when the client connects.
- Bidirectional: NMEA commands can be sent.
- Only one TCP client can connect at a time.

FLARM ICD on Wi-Fi (WebSocket)

- URL: http://10.10.10.10/api/flarm/dataport
- Only one WebSocket connection is allowed at a time.

FLARM ICD on Bluetooth (BLE)

Uses Bluetooth Low Energy (BLE) for both iOS and Android

- Device advertises service UUID `FFE0` and characteristic UUID `FFE1`
- Apps that support this interface can automatically discover and connect to the device.
- Once connected, no other consumer can connect to the device.

GDL 90 on Wi-Fi (UDP)

- Protocol: UDP, port 4000
- Auto-discovery is supported (e.g. by ForeFlight or Garmin Pilot)
- Transmits traffic and position data
- FLARM-specific messages are not included

FLARM ICD on Bluetooth Classic (legacy only)

Uses Bluetooth Classic (Android only)

- *Pair via FLARM Hub > Wi-Fi & Bluetooth > Start pairing*
- *Pair mobile device in Android system settings within 1 minute*
- *PIN code. 1234*
- *Once paired, apps can connect via virtual serial port*

Note: Bluetooth Classic is not supported after Hub version 1.80

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5 Apps

The settings for some common apps are listed below. For other apps, use the generic connection settings as specified above.

Air Navigation Pro

Wi-Fi:

- Traffic Source: "FLARM [...]"
- IP: 10.10.10.10
- Port: 2000
- No PIN code required

Airmate

Wi-Fi:

- Traffic Source: "ADS-B Device"
- Protocol: GDL 90

Enroute

BLE:

- Traffic Source: Bluetooth LE
- Protocol: NMEA
- Connect via New Connection / Bluetooth / Device (e.g. FLAFLX10W-000100, Bluetooth Low Energy)

Wi-Fi:

- Traffic Source: "UDP connection to port 4000"
- Protocol: GDL 90

EasyVFR

Wi-Fi:

- Traffic Source: "GDL90 Stratux [...]"

ForeFlight

Wi-Fi:

- Protocol: GDL 90 (auto-discovery)

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- No configuration needed

Garmin Pilot

Wi-Fi:

- Connect iOS device via Wi-Fi
- GDL 90 Signal will be detected by Garmin Pilot

Note: Garmin Pilot connectivity only possible on iOS devices. Android devices are currently not supported.

Helios Horizon

Wi-Fi:

- Traffic Source: "Stratux or Compatible GDL90 Device"

Oudie

Bluetooth Classic (legacy only)

- PIN code: 1234

SeeYou Navigator

BLE:

- Add device under 'Devices': Add FLARM device, e.g. 'FLAFLX10W-000100'
- Enable 'FLARM' layer

Sky-Map

Wi-Fi:

- IP: 10.10.10.10
- Port: 2000
- No password required

SkyDemon

BLE:

- Add Bluetooth Device under Connectivity: Select FLARM device, e.g. 'FLAFLX10W-000100'
- Select 'NMEA (FLARM or GPS)'

Wi-Fi:

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- Traffic Source: "GDL90 Compatible Device"
- Connect under Third-Party Devices as Wi-Fi GPS/Traffic

XCSoar

Wi-Fi:

- Mode: TCP client
- IP: 10.10.10.10
- Port: 2000
- Driver: FLARM

BLE:

- Port: Device name (e.g. FLAFLX10W-0000100) – BLE sensor
- Driver: FLARM

Bluetooth Classic (legacy only):

- Port: Device name (e.g. FLAFUS10W-003010) - Bluetooth
- Driver: FLARM
- K6Bt: Off

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6 Notes

- Only one TCP or WebSocket client can be connected at a time.
- GDL 90 allows multiple clients (UDP).
- Ensure the mobile device is on the same network as the PowerFLARM device when using Wi-Fi modes.
- Only one BLE connection is possible at a time.

For additional details, visit our website at <https://www.flarm.com> and consult the product manual. In case of further questions, contact our support at info@flarm.com.