SwiftWing PDB-02-XT60

3S–6S Power Distribution Board with XT60 Connector

Official Technical Datasheet | Document ID: SW-PDB-02-XT60-DS-v1.2 | Release Date: February 2026
SKU: SW-PDB-02-XT60

Product Page: https://swiftwingtech.io/product/3s-6s-power-distribution-board-xt60/

Product Overview

The **SwiftWing PDB-02-XT60** is a 4-layer high-current 3S–6S power distribution board featuring a factory-installed XT60 battery input connector for simplified multirotor integration. Designed for UAV systems using external BECs or ESC-integrated regulators, it provides direct battery bus distribution through optimized copper planes.

Built with 2 oz copper layers and ENIG finish, the PDB-02-XT60 maintains a compact 50 mm × 50 mm form factor while improving installation convenience.

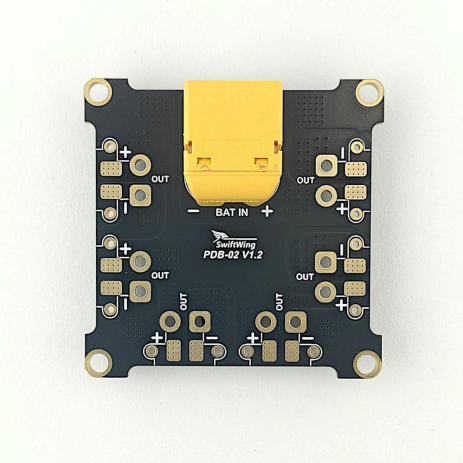

Figure 1: SwiftWing PDB-02-XT60

Applications

- Racing and freestyle quadcopters
- Long-range multirotor platforms
- UAV systems using ESC-integrated BECs
- Robotics battery distribution systems
- Educational and rapid prototype drone builds

Product Views

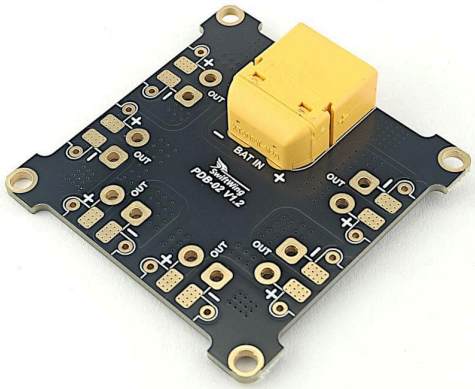

Figure 2: Top view

Figure 3: Bottom view

Absolute Maximum Ratings

The following ratings define the maximum limits beyond which permanent damage to the device may occur. Operation beyond these conditions is not recommended.

Parameter	Rating
Maximum Input Voltage	26 V DC
Maximum Continuous Current (Limited by XT60)	~60 A typical*
Operating Temperature	–10°C to +60°C
Storage Temperature	–20°C to +85°C
Maximum PCB Temperature	105°C

*XT60 connector rating depends on wiring gauge and cooling conditions.

Operation beyond these limits may cause permanent damage.

Electrical Specifications

Electrical characteristics measured under nominal operating conditions unless otherwise specified.

Parameter	Specification
Recommended Battery Input	3S–6S LiPo (11.1–25.2 V)
Maximum PCB Current Capacity	Limited by XT60 connector rating*
Distribution Type	Direct battery bus

⚠ External fusing and correct battery polarity are recommended.
⚠ External BEC or voltage regulator is required for powering flight electronics.

*XT60 connectors typically support ~60 A continuous depending on wiring gauge and cooling conditions.

Mechanical Specifications

Parameter	Value
Board Size	50 mm × 50 mm × 1.6 mm ±0.15 mm
Mounting Holes	4 × M3 (45 mm spacing)
PCB Layers	4-layer, 2 oz copper
Finish	ENIG
Weight	13 g

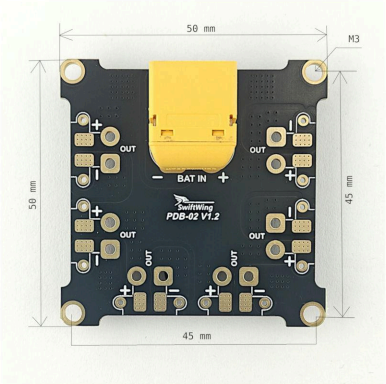

Figure 4: Top view with dimensions

Compliance

- PCB materials comply with RoHS directive requirements.
- ENIG surface finish is lead-free.
- Designed in accordance with standard UAV electronic system practices.

Connector & Assembly Notes

XT60 Battery Input

- XT60 connector is factory-installed
- Battery current capacity is limited by XT60 rating (~60 A typical)
- Use appropriate wire gauge for high current applications

ESC Outputs

- ESC outputs are provided as solder pads

- No XT30 connectors are pre-installed
- Ensure balanced load distribution across outputs

Assembly Note

- Ensure adequate airflow under high load conditions

What's in the Box

- 1 × SwiftWing PDB-02-XT60 (XT60 connector pre-installed)

(No additional connectors, wires, or mounting hardware included)

Ordering Information

Product Name	SKU
SwiftWing PDB-02-XT60 Power Distribution Board	SW-PDB-02-XT60

Manufacturer Information

Manufacturer: SwiftWing Robotics
Product Category: Power Distribution Board (PDB)
Model: SwiftWing PDB-02
SKU: SW-PDB-02-XT60

Product Page:
https://swiftwingtech.io/product/3s-6s-power-distribution-board-xt60/

Website:
https://swiftwingtech.io

Disclaimer

Specifications are subject to change without notice. SwiftWing Robotics assumes no liability for improper installation, incorrect battery polarity, or operation beyond specified ratings.

Users are responsible for verifying suitability and ensuring safe system integration.

Revision History

Version	Date	Description
v1.0	January 2026	Initial Release
v1.2	February 2026	Layout refinement and specification updates