



SwiftCAN-HUB

Powered CAN Expansion Hub for UAVs and Robotics

Expands a single CAN interface into six powered CAN ports with up to 5A regulated output from a 2S–14S battery input.

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SKU: SW-CANHUB-01

Product Page: <https://swiftwingtech.io/product/swiftwing-swiftcan-hub/>

Product Overview

The SwiftCAN-HUB is a compact powered CAN expansion hub designed for UAV, robotics, and autonomous systems utilizing CAN-based peripherals.

The hub expands a single flight controller CAN interface into six powered CAN ports, simplifying the integration of multiple CAN devices such as GNSS receivers, compasses, airspeed sensors, ESCs, power sensors, rangefinders, and other CAN-enabled peripherals.

Unlike passive CAN splitters, the SwiftCAN-HUB incorporates an onboard high-efficiency DC-DC regulator capable of supplying up to 5A total output current, allowing connected peripherals to be powered directly from a 2S–14S battery input.

The compact enclosure, JST-GH connectivity, integrated status indication, and mounting provisions make it



Figure 1: SwiftWing
SWIFTCAN-HUB

suitable for professional UAV, VTOL, fixed-wing, robotics, and autonomous vehicle applications.

Why SwiftCAN-HUB?

Expands one CAN port into six powered CAN ports while delivering up to 5A of regulated 5.3V power from a 2S-14S battery input. Eliminates the need to power CAN peripherals from the flight controller.

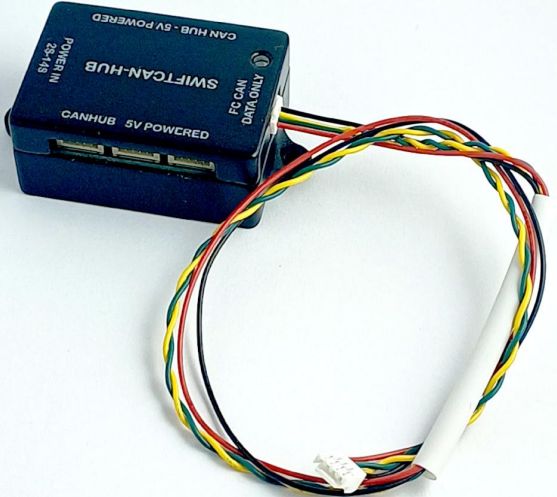
Key Features

- Supports 2S–14S LiPo battery input
- High-efficiency onboard DC-DC regulator
- Regulated 5.3V CAN power output
- Up to 5A total output current
- Six powered CAN ports
- Dedicated CAN input port for flight controller
- JST-GH 4-pin connectors
- Compact enclosed design.
- Power status LED
- Compatible with DroneCAN and other CAN-based peripherals
- Suitable for UAV and robotics applications

Typical Applications

- Multirotor UAVs
- VTOL Aircraft
- Fixed Wing UAVs
- Agricultural Drones
- Mapping and Survey Platforms
- Autonomous Ground Vehicles
- Robotics Systems
- Research and Development Platforms

Product Views

 A top-down view of the SwiftCAN-HUB, a small blue rectangular PCB. It features three gold-plated pins on the left side. Text on the board includes "CAN HUB - 5V POWERED", "SWIFT-CAN-HUB", "POWER IN 25-45", "CANHUB 5V POWERED", and "FC CAN DATA ONLY".	 The SwiftCAN-HUB is shown with a multi-colored ribbon cable attached to its right side. The cable has a white connector at the end. The board's text is visible from a slightly angled perspective.
Figure 2: Product View	Figure 3: Product with Included Cable

Product Architecture

CAN Network Expansion

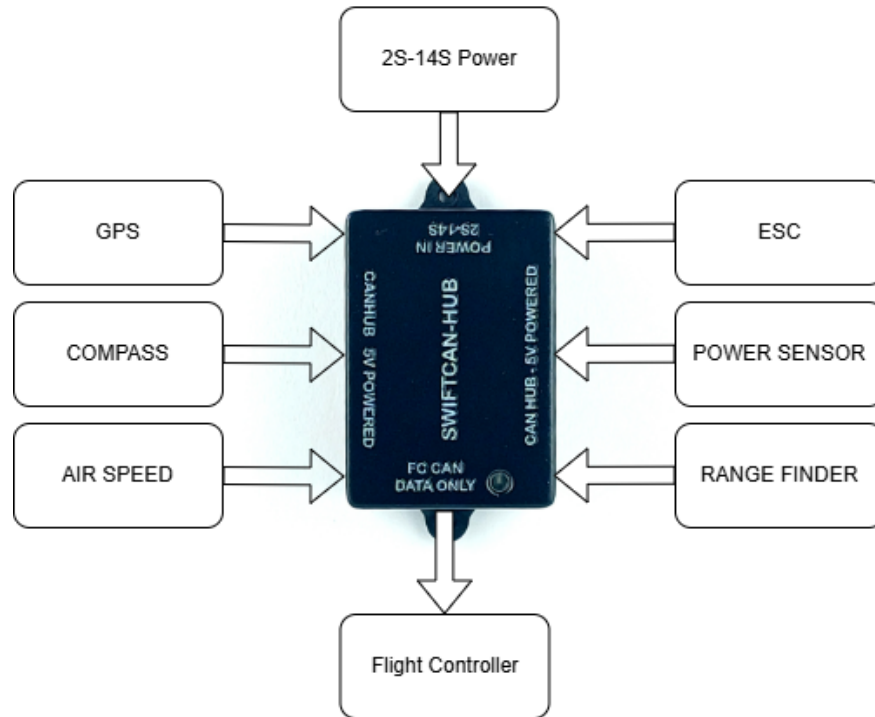
The SwiftCAN-HUB expands a single CAN interface into six powered CAN ports for connecting multiple peripherals on a common CAN network.

Power Distribution

Battery input is converted to a regulated 5.3V rail used to power connected CAN peripherals through all six CAN ports.

The flight controller CAN port carries CAN data signals and ground only. Power for CAN peripherals is supplied exclusively from the hub's internal regulator.

CAN bus termination should be provided by the end devices as required by the system architecture.



Electrical Specifications

Electrical characteristics measured under nominal operating conditions unless otherwise specified.

Parameter	Specification
Input Voltage	2S–14S LiPo
Input Connector	XT30
Output Voltage	5.3V $\pm$ 0.15V
Efficiency	> 90%
Maximum Output Current	5A Total
CAN Peripheral Ports	6
Flight Controller CAN Port	1
Peripheral Connector Type	JST-GH 4 Pin
Status Indicator	Red Power LED

Operating Temperature	-20°C to +60°C
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CAN Port Pinout

Pin	Signal
1	VCC(5V)
2	CANH
3	CANL
4	GND

Flight Controller CAN Port

Important

The dedicated Flight Controller CAN port carries:

- CANH
- CANL
- GND

The 5V line from the flight controller is intentionally not connected.

All CAN peripherals receive power from the SwiftCAN-HUB's internal 5.3V regulator.

Typical CAN Devices

The SwiftCAN-HUB may be used with:

- GNSS Receivers
- Magnetometers
- Airspeed Sensors
- ESCs
- Power Sensors
- Rangefinders
- Telemetry Nodes
- Custom CAN Devices

Typical Current Consumption Examples

Device	Typical Current
GPS + Compass	120mA
Airspeed Sensor	40mA
DroneCAN ESC	50mA
Rangefinder	100mA

Mechanical Specifications

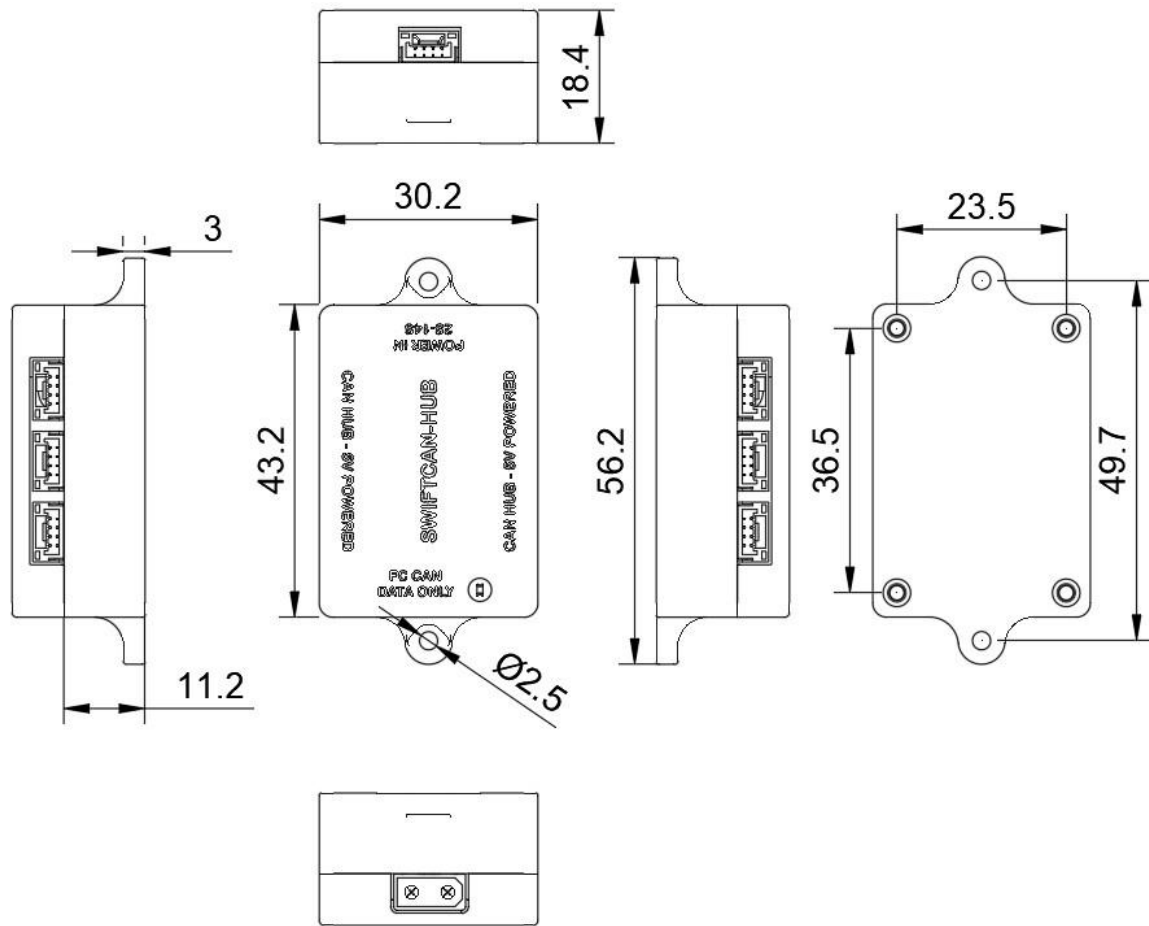


Fig: Product Dimensions (in mm)

Parameter	Specification
Length	56.2 mm
Width	30.2 mm
Height	18.4 mm
Weight	20 g
Mounting Hole Diameter	2.5 mm

Connector Type	JST-GH 4 Pin
Power Connector	XT30

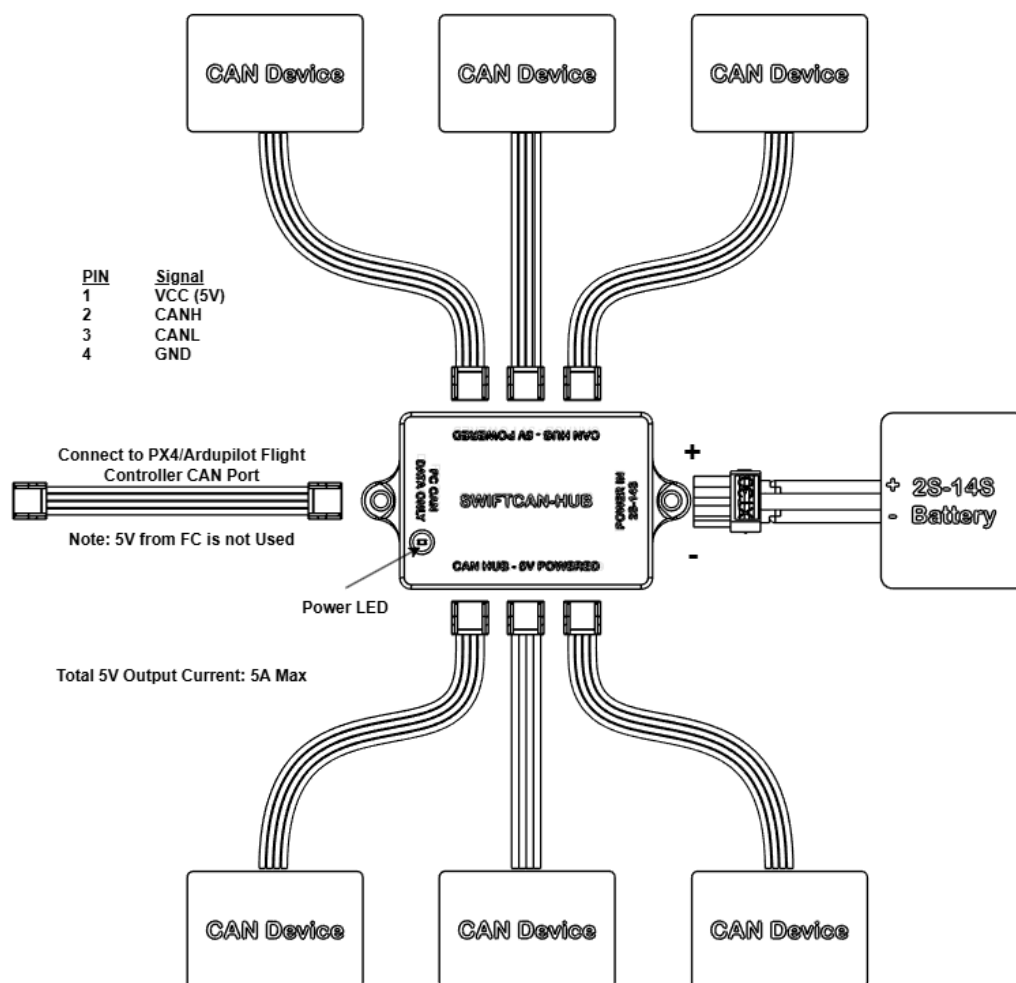
Wiring Guidelines

1. Connect battery power to the XT30 input connector.
2. Connect the flight controller CAN port to the dedicated FC CAN connector.
3. Connect CAN peripherals to any of the six powered CAN ports.
4. Verify CAN device IDs and bus configuration within the flight controller software.
5. The combined current consumption of all connected CAN peripherals must not exceed 5A total.

Status LED

The onboard red LED illuminates when valid input power is present and the internal regulator is operating normally.

Typical System wiring diagram



Compliance

- RoHS-compliant PCB materials and components
- Designed for UAV and robotics applications
- Intended for integration by qualified personnel
- Formal third-party certification is not included unless explicitly stated.

What's in the Box

- 1 × SwiftCAN-HUB
- 1 × JST-GH CAN Cable (30 cm)
- Mounting hardware

Ordering Information

Product Name	SKU
SwiftCAN-HUB – 6 Port Powered CAN Hub	SW-CANHUB-01

Manufacturer Information

Manufacturer: SwiftWing Robotics

Product Category: Drone Accessories

Model: SwiftCAN-HUB – 6 Port Powered CAN Hub

SKU: SW-CANHUB-01

Product Page:

<https://swiftwingtech.io/product/swiftwing-swiftcan-hub/>

Website:

<https://swiftwingtech.io>

Disclaimer

Specifications provided in this datasheet are subject to change without notice. While every effort has been made to ensure accuracy, SwiftWing Robotics makes no representations or warranties regarding the completeness or suitability of this information for any particular application.

This product is intended for integration into UAV and multirotor systems by qualified personnel. Incorrect installation, improper battery polarity, insufficient cooling, or operation beyond specified ratings may result in equipment damage or personal injury.

SwiftWing Robotics shall not be held liable for any direct, indirect, incidental, or consequential damages arising from the use or misuse of this product.

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

Revision History

Version	Date	Description
v1.0	Jun, 2026	Initial Release