

PRODUCT SPECIFICATION

HPR Q500 Frame Kit

American Made. NDAA Compliant.



HPR Q500 — 500 mm carbon-fiber quadcopter airframe.

Overview

The HPR Q500 is a 500 mm quadcopter frame kit designed and manufactured in the United States for autonomy research and development. The airframe is NDAA compliant, making it suitable for university labs, government programs, and commercial teams required to source drone hardware outside restricted supply chains.

The structure combines carbon fiber with carbon-filled PA12 nylon, producing a stiff, light platform that holds alignment through the repeated teardown and reassembly that research work demands. The assembled frame weighs 920 g, leaving usable margin for compute, sensors, and battery within a given all-up weight budget.

Payloads can be mounted and re-mounted as an experiment evolves, and individual subassemblies can be serviced or replaced without discarding the platform.

Key Features

- **NDAA Compliant, American Made** — designed and manufactured in the United States, for labs, government programs, and contractors restricted from sourcing foreign-made drone hardware.
- **Carbon Fiber + PA12-CF** — carbon fiber structure with carbon-filled PA12 nylon components — high stiffness-to-weight, holding alignment through repeated teardown and reassembly.
- **Fits Common Motor Bolt Patterns** — motor mounts accept 16 mm, 19 mm, 16×19 mm, and 25 mm bolt circle diameters — most standard research and industrial motors bolt on without adapter plates.
- **Built-In Electronics and Compute Mounting** — 30.5 mm and 45 mm electronics patterns plus dedicated provisions for Raspberry Pi and NVIDIA Jetson Orin Nano class companion computers.
- **Swings Props Up to 12 Inches** — arm geometry and motor mounting support propellers up to 12 inches, to trade efficiency, endurance, and payload across test configurations on one airframe.
- **Field Repairable** — every arm, motor mount, and landing gear leg unbolts in minutes.

Views

HPR

HARDPOINT ROBOTICS

AMERICAN MADE. NDAA COMPLIANT.



HPR

Robotics LLC

Front view – landing gear, arm clamps, and stacked top plates.



Top-down – 500 mm wheelbase, electronics bay, and arm geometry.

Specifications

Airframe

Configuration	Quad · X-frame
Wheelbase	500 mm
Frame Weight	920 g assembled
Materials	Carbon Fiber · PA12-CF
Top / Bottom Plate	2 mm / 1.5 mm · 3K carbon
Arms	16 mm OD carbon tube
Assembly Time	About one hour

Mounting

Motor Mount Patterns	16 · 19 · 16×19 · 25 mm bolt circle
Electronics Patterns	30.5 mm · 45 mm
Companion Compute	Raspberry Pi · NVIDIA Jetson Orin Nano
Prop Clearance	up to 12"

Propeller Compatibility

Recommended Props	up to 12"
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Motor mount detail – accepts 16, 19, 16×19, and 25 mm bolt circles.

In the Box

- Carbon fiber plates
- Carbon fiber tubes
- Standoffs and mounting pieces
- Screws and nuts
- 5.5 mm nut driver and 2.5 mm hex driver

A typical build takes about an hour with nothing else to source. Not included: flight controller, ESCs, motors, propellers, receiver, battery, payload. For a near-complete build, see the NDAA ARF Kit.

Documentation & Source Files

- Source files: STEP · mechanical drawings · BOM — published on Gitbook.io
- Source files are published so the platform can be modified, extended, and repaired.

Compliance & Origin

- Origin: designed and manufactured in the United States — no overseas contract manufacturers.
- American Made. NDAA Compliant.

Ordering

Price	\$500.00
Availability	Available on Amazon
Part Number	HPR-Q500
ASIN	B0HJLZKY21
Order	amazon.com/dp/B0HJLZKY21
Product Page	hardpointrobotics.com/products/q500

Contact

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