



SPECIFICATIONS

DIMENSIONS

| | |
|---|---------|
| Unfolded Diameter (does not include Props) | 1325 mm |
| Folded Diameter (does not include Props) | 660 mm |
| Height to base of Toad In The Hole (TITH) | 263 mm |

POWERPLANT

| | |
|---|-------------------------------------|
| Number of Motors | 8 |
| Motor Type | Direct Drive 3-Phase PMAC Outrunner |
| Motor Make and Model | Freefly F45 |
| Motor Max Continuous Power Output | 350 W |
| Motor Max Instantaneous Peak Power Output | 950 W |
| Max RPM (flat rated) | 6300 RPM |
| Equivalent Kv | 384 |
| Electronic Speed Controller | Freefly Silent-Drive Sine Wave ESC |

PROPELLERS

| | |
|-----------------------|------------------------------|
| Make and Model | Freefly ALTA Propeller |
| Material | Carbon fiber with balsa core |
| Propeller Orientation | [4] CW and [4] CCW Props |
| Propeller Type | 18 x 6 Folding |

BATTERY

| | |
|---|----------------------------|
| Nominal Battery Voltage | 6S / 22.2V |
| Maximum Battery Size | 240 x 180 x 80 mm |
| Maximum Battery Quantity | 2 Battery Packs (Parallel) |
| Minimum Battery Quantity | 2 Battery Packs (Parallel) |
| Battery Connectors | 2x EC5 (Parallel) |
| Required Minimum Battery Discharge Rating | 250A / 500A Peak |

WEIGHTS

| | |
|--|--------------------|
| Maximum Gross for Takeoff ¹ | 18.1 kg (40.0 lbs) |
| Maximum Useful Load ² | 12.0 kg (26.4 lbs) |
| Maximum Payload ³ | 9.1 kg (20.0 lbs) |
| Typical Standard Empty Weight | 6.2 kg (13.6 lbs) |

WARNING

Always refer to the following aircraft limitations section for complete information on allowable maximum gross weights at different altitudes and temperatures before any flight.

SPECIFIC LOADINGS

| | |
|--|----------|
| Typical Specific Power ⁴ | 145 W/kg |
| Thrust Ratio at Max Takeoff Weight (MTOW) ¹ | 1.85 : 1 |

FLIGHT CONTROLLER

| | |
|--|---|
| Model Name | Freefly SYNAPSE Flight Controller |
| Flight Modes | Manual |
| Height Hold Mode | |
| Position Mode | |
| Return-To-Home | |
| Autoland | |
| Supported Inputs | DSMX, DSM2, S.Bus, S.Bus2, PPM, FPV SD |
| Supported Radios | Futaba S.Bus & S.Bus2 |
| DSMX, DSM2 (Spektrum/JR) | |
| PPM, PPM Invert, PPM Graupner | |
| Supported Radio Controller Telemetry Systems | Futaba w/ built-in voltage sense port |
| Minimum Radio Controller Channels Required | >5 |
| Supported GNSS | GPS, GLONASS, Galileo |
| Supported SBAS | QZSS, WAAS, EGNOS, MSAS |
| First-Person View System Video Formats | NTSC, PAL |
| Supported First-Person View Transmitters | Skyzone BOSCAM Immersion RC Fatshark |
| Supported First-Person View Cameras | Ready Made RC |
| First-Person View OSD Telemetry | User Configurable |
| Installed Transceivers | Wi-Fi |
| Data Logging Rate | 25 Hz |

LIGHTING AND INDICATION

| | |
|-------------------------|---------------------------------|
| Status Light | 1-Watt Red, 1-Watt White LED |
| Orientation Lights | 3-Watt RGB LED |
| Orientation Light Color | Red, Yellow, Blue, Green, White |

ISOLATION SYSTEM

| | |
|----------------------------|------------------|
| Vibration Isolation System | Silicone O-Rings |
|----------------------------|------------------|

ISOLATION SYSTEM OPTIONS:

| | |
|-------------------------|---------------|
| 1. Soft/Light Payloads | Red O-Rings |
| 2. Medium/Mid Payloads | Teal O-Rings |
| 3. Stiff/Heavy Payloads | Black O-Rings |

PAYLOAD MOUNTING

| | |
|-----------------------|---|
| Mounting Locations | Bottom and Top Mount |
| Mounting System | Freefly Toad In The Hole (TITH) Quick Release |
| FPV Camera Mount | Between booms 8 & 1 |
| FPV Transmitter Mount | Boom 2 |

NOTE

These limitations are advisory in nature and do not extend or restrict limitations provided by Governing Aviation Authorities.

POWERPLANT LIMITATIONS

| | |
|---------------------------------|------------|
| Maximum RPM | 6300 RPM |
| Maximum Battery Voltage | 25.2 Volts |
| Minimum Average Battery Voltage | 19.2 Volts |

ENVIRONMENTAL LIMITATIONS

Do not fly ALTA 8 in temperatures exceeding 45°C (113°F) or below -20°C(-4°F).⁵

FLIGHT CONTROLLER LIMITS

| | |
|--------------------------|---------------|
| Maximum Pitch/Roll Angle | 45° |
| Maximum Yaw Rate | 150° / second |

1. At sea level, standard conditions.
2. Top and bottom mount. Includes batteries.
3. Payload weight top or bottom mount. Battery weight not included and mounted on opposite side from payload in typical configurations.
4. At maximum takeoff weight, sea level, standard conditions.
5. Must additionally observe battery temperature ratings.

COMMUNITY

Loyalty Program
Case Studies
Every Axis Blog
Forums
Careers

PRODUCTS

Mövi Pro
Mövi XL
Mövi Carbon
Pilot
Astro
Alta X
Alta Pro
Alta 8
Mövi Wheels
Mövi Controller
Wave

SUPPORT

Knowledge Base
Wiki
Contact

STORE

Freefly Store
Dealers
Hours of Operation
Shipping Policies

Be the first to hear about promotions, new products and more.

ENTER EMAIL

SUBSCRIBE



Copyright 2021 Freefly Systems | Legal