

/// Safety data sheet.

<http://wiki.asctec.de/x/XYBJ>



/// The AscTec Hummingbird for flight dynamics & swarming.

Ascending Technologies – manufacturer and innovator of micro UAVs.

With more than 1000 multicopters sold worldwide, the company is highly experienced. You are kindly invited to profit from the expertise of the long-standing technology leader in unmanned aerial vehicles (UAV).

The AscTec Hummingbird is the most dynamic UAV of the AscTec Research Line.

High quality standards are held during the production process, to ensure our products are reliable and safe. Our customers are registered to a database, allowing us to provide them with the newest software and hardware updates.

Date & version: 01.05.2015 – V4.0

Product designation: AscTec Hummingbird

Producer: Ascending Technologies GmbH

Address:

Ascending Technologies GmbH
Konrad-Zuse-Bogen 4 /// 82152 Krailling
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/// Summary

This safety data sheet contains all relevant information about the flight system to apply for a take-off permission.

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Technical data & safety functions

Flight system

Type	Quadcopter
Size	540 x 540 x 85,5mm
Engines	4 electrical, brushless (sensorless) motors with 80W maximum power each
Rotor diameter	8" (~20cm)
Number of rotors	4
Rotor weight	~6g
Empty weight	~350g
Min. take-off weight	~510g
Max. take-off weight	~710g
Flight time	20min. ¹
Max. range	1 km ²
Tolerable wind speed	10m/s ^{1,3}
Max. payload	~200g

~ Max. airspeed

Manual mode	15m/s
GPS mode	3m/s
Max. climb rate:	5m/s
Max. thrust:	20N

Wireless communication

2.4 GHz XBee link	10–63mW (optional)
WiFi	(optional)

LiPo battery types [mAh]

PP2200, 3 Cells	2200
PP2100, 3 Cells	2100

Former & available payload options

AscTec Atomboard

Vision Kit

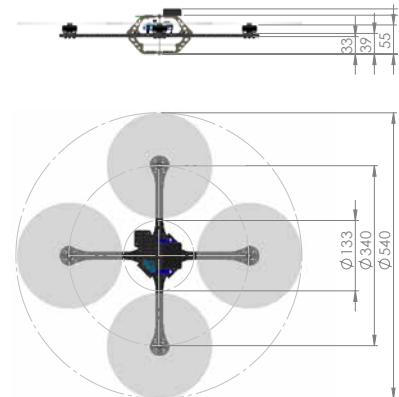
Up to two BlueFOX 1/3" CMOS Camera (color/monochrome)
Propeller Protection (small/large)

Certification

CE, RoHS

Safety functions

- ▼ **Telemetry in realtime:** All necessary system information such as GPS position, height, velocity, battery load, link and GPS quality for instance is displayed live.
- ▼ **Sensor output check:** All important sensor values and system parameters are checked automatically before each flight. If a value is critical, it will be identified and interrupt the launching procedure automatically.
- ▼ **3 Emergency modes:** The pilot can choose one of three emergency modes to determine the automatic landing in case of link loss: "Direct landing", "Comehome straight" (at its current height) or "Comehome high" (at max. mission height). As soon as the link is reestablished you may take control again and continue the flight.



¹Without payload /// ²Recommended: Line of sight (~150m) /// ³GPS mode /// This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.