

Quadcopter

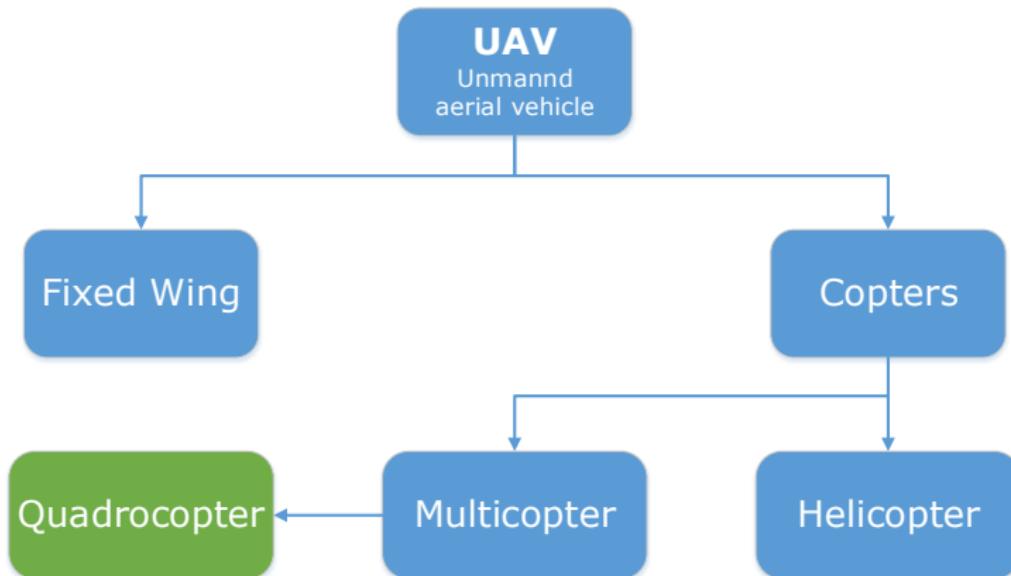
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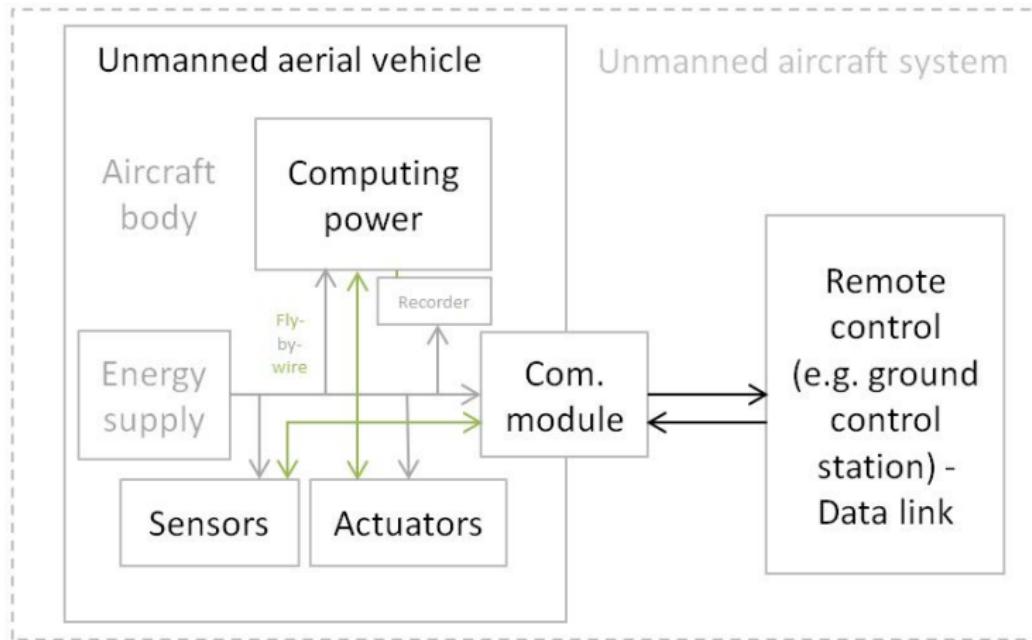
Inhaltsverzeichnis

- 1 Introduction
- 2 How it works
- 3 Dji 450
- 4 Usage
- 5 Outlook

Introduction



Physical structure



Components



1 Introduction

2 How it works

3 Dji 450

4 Usage

5 Outlook

Compromise between:

- Flight time
- Agility
- Durability
- Control
- (Money)

Self build kit

- No special knowledge required
- Very sturdy
- A lot of auxiliary
- Payload
- Price-Performance ratio

[Introduction](#)
[How it works](#)
Dji 450
[Usage](#)
[Outlook](#)

Can
[Can not](#)
[Limitations](#)

Payload

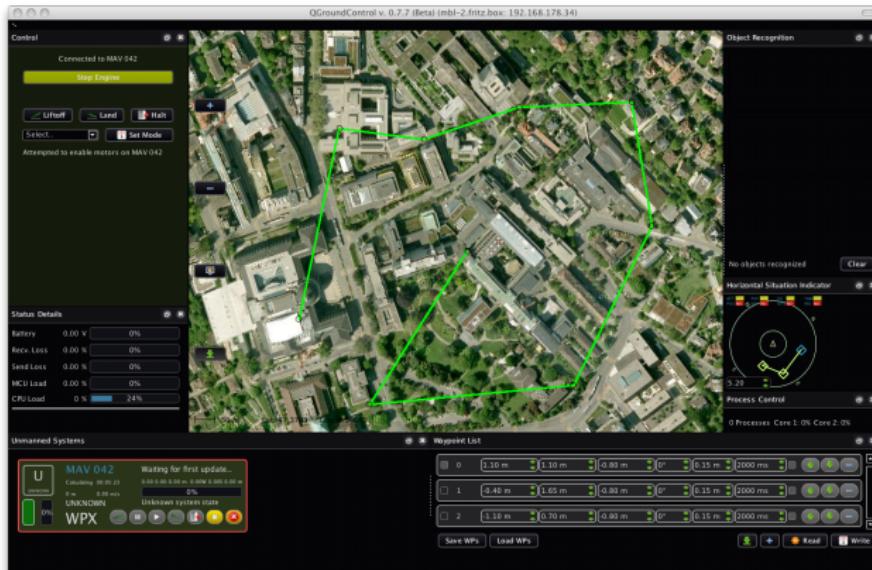


Controller, modes

- Manual
- Stabilize
- Way-points
- Follow + obstacle avoidance
- Acrobat
- 6 additional modes

Tools, way-point

Configure and calibration



Introduction
How it works
Dji 450
Usage
Outlook

Can
Can not
Limitations

Gimbal



FPV - First Person View

- Goggle with receiver
- Camera with transmitter
- Black & white picture
- Noise

Introduction
How it works
Dji 450
Usage
Outlook

Can
Can not
Limitations

Out of the box



Disturbance ,hazards

- Wind - Light weight
- Electronic Fields - 2.5 GHz band
- Water

[Introduction](#)
[How it works](#)
Dji 450
[Usage](#)
[Outlook](#)

[Can](#)
[Can not](#)
[Limitations](#)

Disturbance



Introduction
How it works
Dji 450
Usage
Outlook

Can
Can not
Limitations

Disturbance



Power supply

- Li-Po Battery: 14V, 5Ah → 0.055 kWh
- Flight time: 5min - 20min
- Charge time: about 2 hours
- Gasoline

Introduction
How it works
Dji 450
Usage
Outlook

Can
Can not
Limitations

Power supply



Distance

- 1.2 miles normal
- 6.2 miles Yagi antenna

Law, Risk towards others

- Aviation training and test
- Register devices
- Fish drones from sky

[Introduction](#)
[How it works](#)
Dji 450
[Usage](#)
[Outlook](#)

[Can](#)
[Can not](#)
Limitations

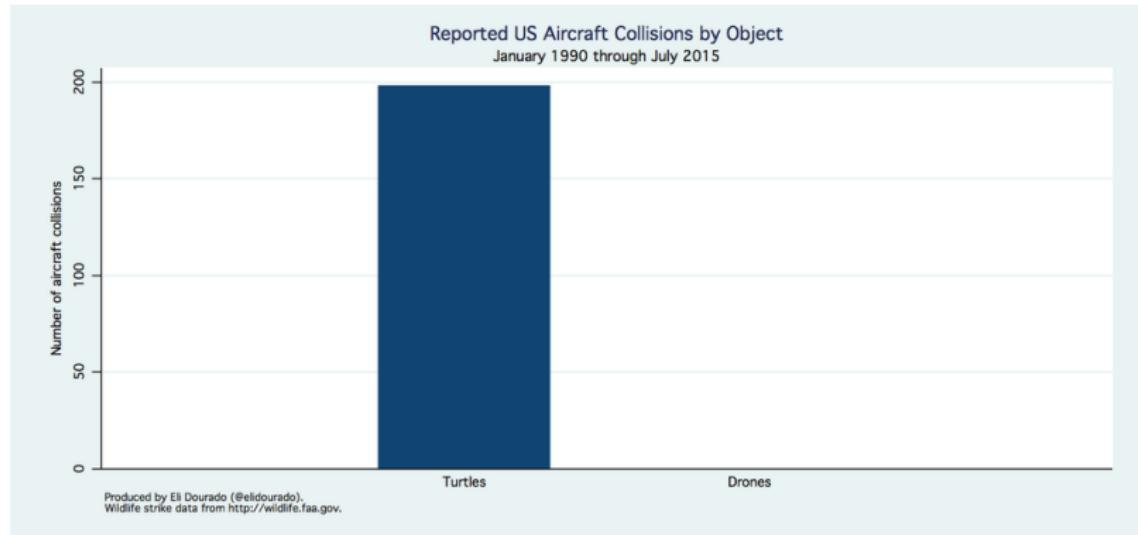
Law, Risk towards others



Law, Risk towards others



Law, Risk towards others



1 Introduction

2 How it works

3 Dji 450

4 Usage

5 Outlook

Learning the basics

- Software
- Hardware
- Away from Flight Simulator -> Real flight behaviour

Learning the basics

- A lot of auxiliary
- Photography

Testing

- Cheap version of a quad
- Test new control software
- Allowed to crash

Education

- Software and Hardware is changeable, expandable
- A good mix of everything
- Mostly indoors

1 Introduction

2 How it works

3 Dji 450

4 Usage

5 Outlook

Current time

- Easy to fly
- Cheap, without camera 60 CHF; with camera 150 CHF
- Problem with privacy
- Drones near the airport

Future

- Rescue Drones
- Package delivery (Amazon)

Sources

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