

AR Drone ??????????????

## AR Drone 1.0 ??

### Linux EMBEDDED COMPUTER SYSTEM

- ARM9 468 MHz
- DDR 128 Mbyte at 200MHz
- Wifi b/g
- USB high speed

### INERTIAL GUIDANCE SYSTEMS WITH MEMS

- 3 axis accelerometer
- 2 axis gyrometer
- 1 axis yaw precision gyrometer

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- **Running speed:** 5 m/s; 18 km/h  
(16.4 ft per second; 11.2 miles per hour)
- **Weight:**  
- 380 g with outdoor hull (0.8 pounds) - 420 g with indoor hull (0.9 pounds)
- **Flying time:** ? 10 Mins

### SAFETY SYSTEM

- EPP hull for indoor flight
- Automatic locking of propellers in the event of contact
- UL2054 battery ???
- Control interface with emergency button to stop the motors

### AERONAUTIC STRUCTURE

- High-efficiency propellers(specially designed for the Parrot AR.Drone)
- Carbon-fiber tube structure

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- 4 brushless motors, (35,000 rpm, power: 15W)
- Lithium polymer battery (3 cells,

11,1V, 1000 mAh)

- Discharge capacity: 10C
- Battery charging time: 90 minutes

## FRONT CAMERA: WIDE ANGLE CAMERA

- 93° wide-angle diagonal lens camera, CMOS sensor
- Encoding and live streaming of images on iPhone
- Camera resolution 640x480 pixels (VGA)
- Other AR.Drone detection
  - Validation of shots fired at enemy drones
  - Estimate of distance
  - Detection distance: 5 meters(16.4 ft) 3D tag detection
  - Positioning of virtual objects
  - Calculation of markers of virtual objects
  - Detection distance: 30 centimeters to 5 meters (1ft to 16.4 ft)
- Video feedback on the iPod touch /iPhone screen /Android

## ULTRASOUND ALTIMETER

- Emission frequency: - 40kHz
- Range 6 meters (19.7 ft) Vertical stabilization

## VERTICAL CAMERA: HIGH SPEED CAMERA

- 64° diagonal lens, CMOS sensor
- Video frequency: 60 fps
- Allows stabilization even with a light wind

TCP/IP ??

<http://bbs.5imx.com/bbs/forum.php?mo...ead&tid=415063>

Firmware ???

<https://projects.ardrone.org/documents/show/19>

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<http://www.amobbs.com/forum.php?mod=...ad&tid=4597069>

<http://mirumod.tk/intro.php>

Arduino ???

[http://mirumod.tk/hw/arduino\\_nano/arduino\\_nano.php](http://mirumod.tk/hw/arduino_nano/arduino_nano.php)

1.0 ??? ?? GPS ??

<http://www.amobbs.com/forum.php?mod=...ad&tid=4594637>

<http://bbs.wanwushangzhi.cn/thread-31749-1-1.html>

SDK

<https://projects.ardrone.org/>

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<http://www.amobbs.com/thread-5528911-1-1.html>

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