

Pemrograman Menggunakan Airdupilot untuk penerbangan autonomous

MOOC UNAIR

**Merakit dan Mengaplikasikan Robot Terbang/
Drone untuk Pemula dengan Menggunakan
Platform Open Source**



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Install Mission Planner



Feature of Mission Planner

- Point-and-click waypoint/fence/rally point entry, using Google Maps/Bing/Open street maps/Custom WMS.
- Select mission commands from drop-down menus
- Download mission log files and analyze them
- Configure autopilot settings for your vehicle
- Interface with a PC flight simulator to create a full software-in-the-loop (SITL) UAV simulator.
- Run its own SITL simulation of many frames types for all the ArduPilot vehicles.

Link Download Mission Planner (latest)

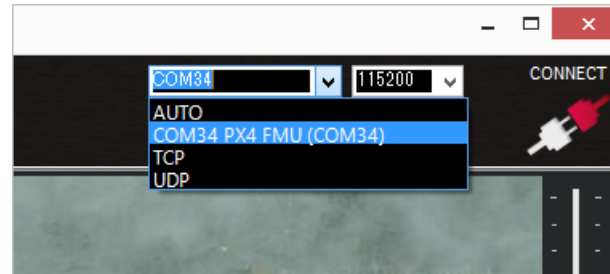
<https://firmware.ardupilot.org/Tools/MissionPlanner/MissionPlanner-latest.msi>

First time setup Airdupilot Drone Platform

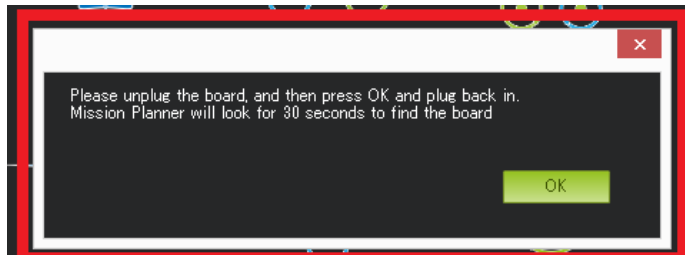
Connect autopilot to computer



Select the COM port

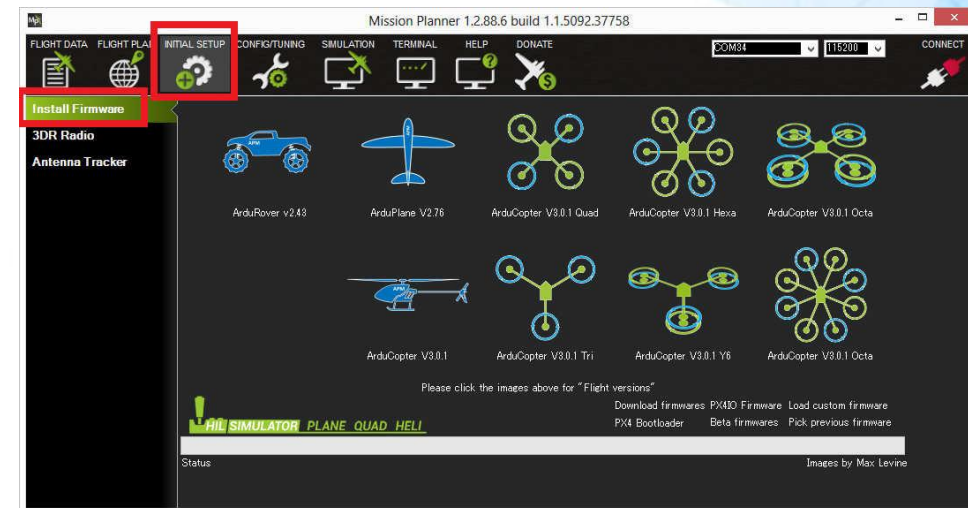


If all goes well, you will see a status appear on the bottom right including the words: "erase...", "program...", "verify..", and "Upload Done". The firmware has been successfully uploaded to the board.



Done!!!

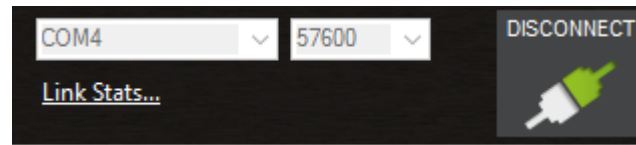
Install Firmware Based on Drone Platform



Connecting Ardupilot Drone Platform with SIK Radio (Telemetry Module)



Select the desired port and data rate and then press the **Connect** button to connect to the autopilot. After connecting **Mission Planner** will download parameters from the autopilot and the button will change to **Disconnect** as shown:



Green Indicator
 (Done!!)

How To Create Mission Planning Waypoints

Mission Planner 1.3.75 build 1.3.7883.26333

ARDUPILOT COM8 115200

MISSION Zoom

Distance: 0.1553 km
 Prev: 148.90 m AZ: 290
 Home: 145.36 m

Grid View KML
 GoogleHybridMap
 Status: loaded tiles
 Load File
 Save File
 Read
 Write
 Write Fast

Home Location
 Lat -7.266315331
 Long 112.7851402
 ASL -0.589932949

WP Radius Loiter Radius Default Alt
 2 30 1

Relative Verify Height Add Below Alt Warn Spline

	Command	Delay			Lat	Long	Alt	Frame	Delete		Grad %	Angle	Dist	AZ
1	TAKEOFF	0	0	0	-7.2663233	112.78517...	20	Absolute	X		562.1	79.9	20.9	104
2	WAYPOINT	0	0	0	0	0	0	Relative	X		0	0	0	0
3	WAYPOINT	0	0	0	-7.2663127	112.78559...	1	Relative	X		-41.6	-22.6	51.0	89
4	WAYPOINT	0	0	0	-7.2666293	112.78570...	1	Relative	X		0.0	0.0	37.1	161

Tutorial on Video

