

Cube mini carrier board v1.2 USER GUIDE

## **GENERAL**:

The Airbot Systems Mini carrier board is one of the most simple way to install a Cube (aka Pixhawk 2.1) on a drone. The Mini carrier board encapsulate all the wiring in a 50.5x57.5mm board The carrier board allows saving space and weight for applications which have size limits.

### **DIMENSIONS :**



### FEATURES :

- Dual power inputs (redundant power with automatic switch to the second power source when first one fails, thanks to the Proficnc-Hex Power Selection Module // Power inputs must be between 5v and 5.7v)
- Easy to install on a drone (see the mounting pattern above)
- Power distribution & voltage protection (providing the current to each connector)
- Motors PWM signal distribution (up to 8 motors distributed on board corners)
- Standard 2.54mm servo PPM/S.BUS/Spectrum RC input (+5v/+3.3v selectable and provided by the carrier board)
- AUX center pins are connected together. It allows to power the AUX rail by adding external power supply.

## **CONNECTIVITY :**

LABEL	CONNECTOR ON THE BOARD	CONNECTOR TO PLUG IN
I2C_2 - CAN1 - CAN2	JST GH : BM04B-GHS-TBT	GHR-04V-S
USB - TELEM1 - TELEM2 - GPS2	JST GH : BM06B-GHS-TBT	GHR-06V-S
GPS1	JST GH : BM08B-GHS-TBT	GHR-08V-S
POWER1 - POWER2	Molex CLIKMATE : 502443-0670	502439-0600

All connectors are the same than the Proficnc/Hex original Pixhawk 2.1 carrier board

## **PINOUT DIAGRAM :**



## **RC SIGNAL AND POWER SELECTION :**



RC Signal power selection (Solder bridge to choose)

# HOW TO MOUNT IT :

You can make the fastener by yourself : if you have a 3D printer, you can download a 3D file to print the mounting bracket or download a .DXF file if you have a CNC milling machine. These files are downloadable from the product page on <u>www.airbot-systems.com</u> website.

We are considering to manufacture fasteners and put on our website, for people who can not make it themselves.

### POWER DISTRIBUTION BOARD : (optional)

The Airbot Systems Mini PDB is the best Mini Carrier Board companion. It allows to power up to height ESC with max total current @ 180A, and four pairs of small power pads (2 on top side / 2 on bottom). The mounting hole are the same than the Mini carrier board, so the board can be stacked together, separated by small nylon spacers.



ATTENTION ! : The power board can not be attached to a conductive support. Be careful of respecting distance from any conductive material by using nylon spacers and or isolation stuff (e.g PlastiDIP)