**Simple cargo lock – project card**

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**Sub-module to: Universal Flying Platforms (UFP)**

The aim of this project is to create a lock witch would be able to attach Enix copters to future UFP planes for the duration of delivery and detach them over their destination. The lock would be comprised of two parts: light passive hitch on a multirotor and an active part on the plane.

**Objectives:**

1. Single module weight < 15g - Enix part and <100g – plane part
2. Adapted to Enix universal mounting points.
3. High stability.
4. Current drained in a locked position – low or none.
5. No moving parts on Enix.
6. I2C bus at 5V for communication.
7. Rigid construction due to possible hard landings.
8. High reliability – no makeshift solutions.
9. Simple PCB (one layer not two).
10. Cheap microcontroller.
11. Possible use of 3D-printed parts.
12. Enix profile raised by not more than 5mm.
13. Enix part attached directly to top plate.

The constructor is required to provide a working prototype before the final set of parts for more such devices will be ordered.

**References:**

1. Enix physical design (in Autodesk Inventor) https://github.com/jmnich/UFP\_Enix\_Physical]