A binocular vision-based autonomous aerial refueling platform

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Introduction

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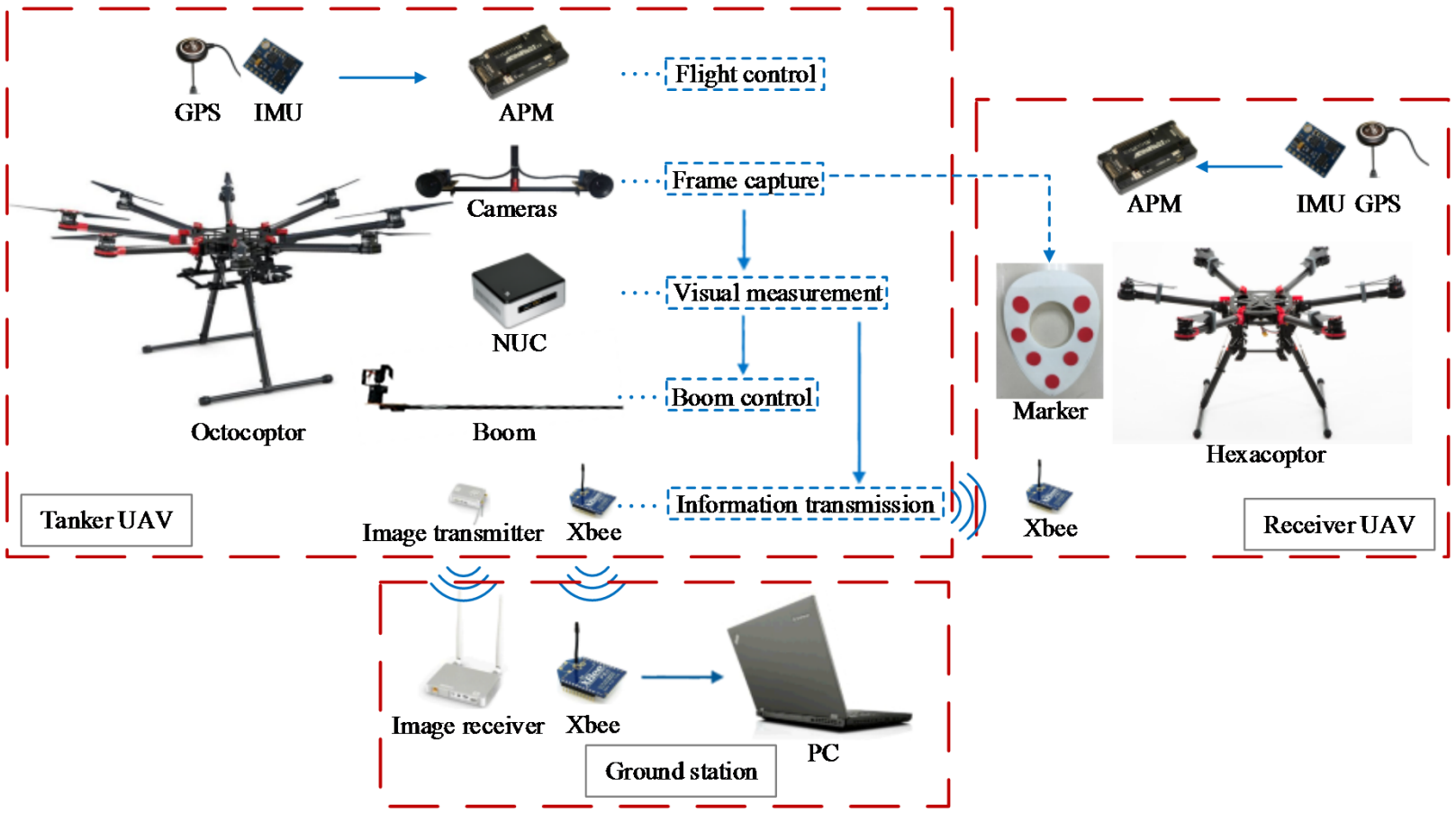
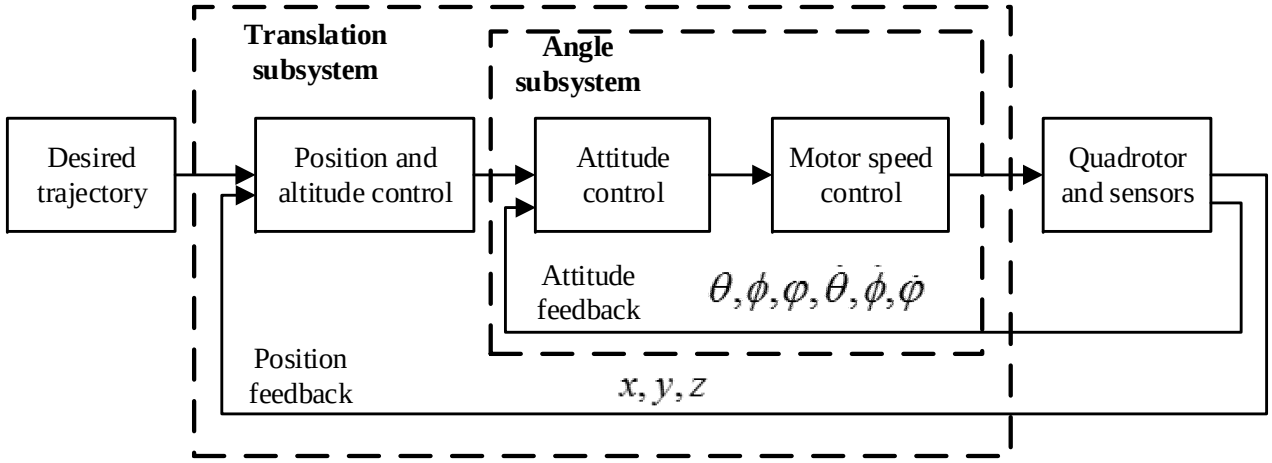
➢ Architecture of the platform

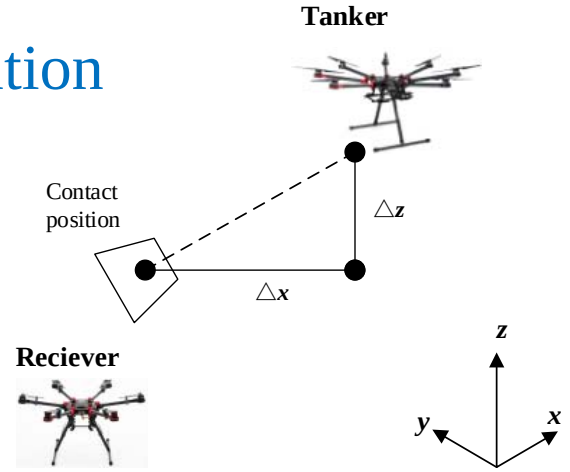


Formation controller

➢ Control structure

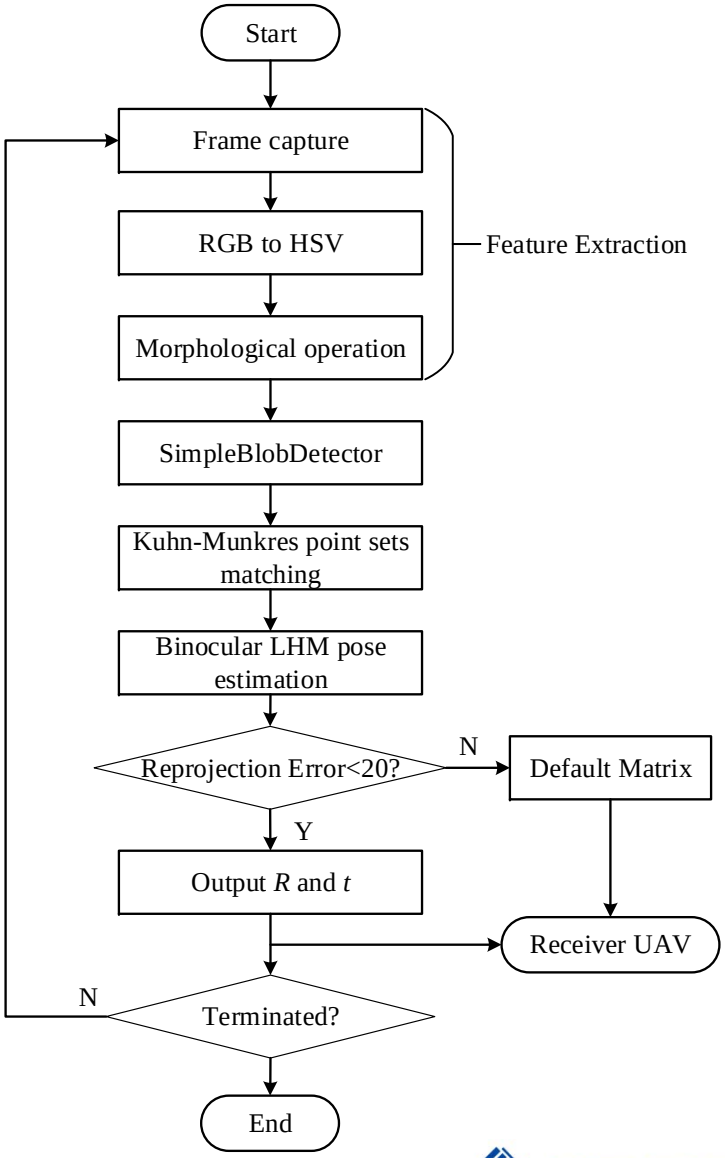


➢ Contact position



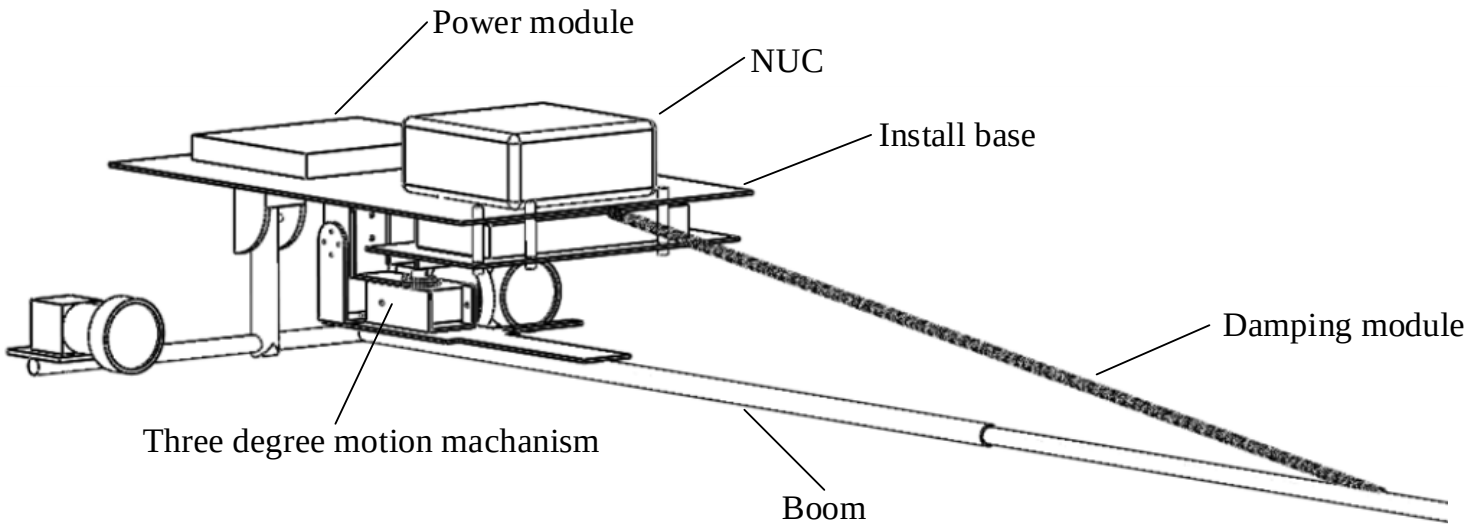
Binocular vision system

➢ Binocular vision system



Boom system

➢ Mechanical structure of the boom



Flight tests

Conclusion and future work

- ✓ The platform designed for the verification of algorithms designed for boom approach AAR is implemented.

- ✓ The binocular vision system is capable of accurate pose estimation.

Future work

The stability and accuracy will be improved.