



# Ground-Based 1U CubeSat Robotic Assembly Demonstration

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## Abstract

In-space assembly of small satellites could enable rapid response and reconfiguration of swarms and constellations. Key gaps currently limiting their in-space assembly are: (1) the lack of standardization of electromechanical CubeSat modules for compatibility with commercial robotic assembly hardware; and (2) testing and modifying commercial robotic assembly hardware to enable successful small satellite assembly on-orbit. [...]

**Keywords:** CubeSat, robotic assembly, standardization, space systems.

## 1 Introduction

As space becomes more accessible, there is a need for cost-effective on-orbit assembly of small satellites [...].