



## PERMITTING DECISION SUMMARY

### Discovery-1A

#### Mini-Cubes LLC

1. Mini-Cubes LLC is a US-based business founded in 2018. Their goal is to develop the PocketQube into a viable product with off-the-shelf parts and materials.
2. Discovery-1A is a miniaturised satellite with a size of 5cm<sup>3</sup>. The primary mission is a technology demonstration which involves testing the capabilities of the satellite to record temperature and visual images of the Earth. The satellite will also carry a digital collection of art and images into space from students across the globe.
3. The satellite is also testing a new solar panel mechanism, which will increase the radar reflectivity to that of a standard CubeSat or greater. This will allow for more accurate monitoring of the satellite in orbit.
4. Payloads are permitted in line with the [Outer Space and High-altitude Activities Act 2017](#) (OSHAA) and the [Outer Space and High-altitude Activities \(Licences and Permits\) Regulations 2017](#).
5. Each payload has been approved by the Minister for Economic Development, on advice from officials across agencies. When approving payloads, the Minister needs to be satisfied that:
  - a. The applicant has taken and will continue to take all reasonable steps to safely manage the operation of the payload;
  - b. The proposed operation of the payload is consistent with New Zealand's international obligations; and
  - c. The applicant has an orbital debris mitigation plan that meets prescribed requirements.
  - d. Despite being satisfied of these matters, the Minister may nevertheless decline a permit if he is not satisfied that the proposed operation of the payload is in New Zealand's national interest.

Date Granted	Authorisation Number	Payload Name	Owner or Operator	Country of Origin
19 December 2019	190092-PPT	Discovery-1A	Mini-Cubes LLC	USA



**NEW ZEALAND  
SPACE AGENCY**



**PAYLOAD PERMIT**  
**190092-PPT**

I, Hon Phil Twyford, as Minister for Economic Development, acting pursuant to section 17 of the Outer Space and High-altitude Activities Act 2017 grant a Payload Permit to:

**Mini-Cubes LLC**

Mini-Cubes LLC is authorised to launch and operate one PocketQube ('Discovery 1A'), for the purpose of technology demonstration.

This permit will take effect upon signature, and will expire (i) two years from the date of signature, or

(ii) if the payload is launched, when the payload is no longer in the Earth's orbit.

This permit is granted subject to the Outer Space and High-altitude Activities Act 2017 and all regulations under the Act, and the conditions of the permit.

19.12.19

Dated

Hon Phil Twyford  
Minister for Economic Development



New Zealand Government



**MINISTRY OF BUSINESS,  
INNOVATION & EMPLOYMENT**  
HIKI NA WHAKATUTUKI

New Zealand Government