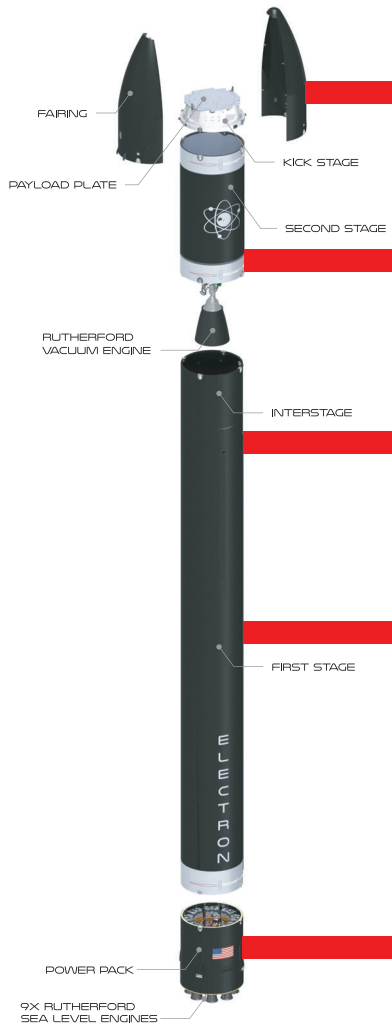


# MEET ROCKET LAB'S ELECTRON ROCKET!

The Electron rocket was designed and built to fly small satellites to space more often, affordably, and reliably than ever before. First launched to space in 2017, Electron has since flown multiple times to low-Earth orbit with 100% mission success. Electron has delivered satellites above Earth which help people communicate around the world; keep track of planes in our skies and ships in our oceans; monitor weather, climate, and changes across Earth, and which conduct experiments and research in space.



At the top of the Electron rocket is the fairing, or nose cone. These two structures protect the satellite inside it when Electron is flying through Earth's atmosphere on the way to space. The fairing is jettisoned before the payload is deployed. Inside the fairing sits the satellite. It is

The Electron's Second Stage is connected to the Kick Stage. It uses a special Rutherford engine designed for use in space to get the Kick Stage and the satellite onboard most of the way to where they want to go to orbit the Earth.

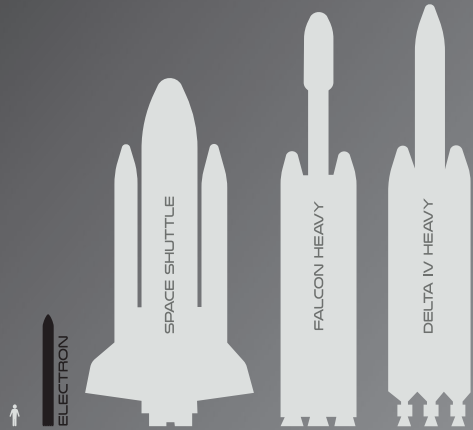
Electron is made of carbon-composite fiber, which is a type of material that allows vehicles like sports cars, racing yachts, and rockets to travel really fast and remain very light without also breaking apart. In fact, the thickness of the wall of Electron is only slightly larger than the thickness of a credit card!

The First Stage acts as a fuel tank for Electron's Rutherford engines. The fuel onboard Electron is a mix of RP-1 (a type of highly-refined kerosene similar to jet fuel) and liquid oxygen (LOX), which is very very cold oxygen (at least -183 degrees!).

Electron is powered by nine Rutherford engines. These Rutherford engines can be 3D-printed by a machine and are the first of their kind to ever fly in space! They can be printed in as little as 24-hours and unlike any other rocket engine, the Rutherford engine is powered by batteries, which also makes them super light.

connected to the Electron Kick Stage, which has its own mini engine called the Curie engine. With this engine, the Kick Stage can take a satellite exactly where it wants to go in space. Once the satellite is released, the Kick

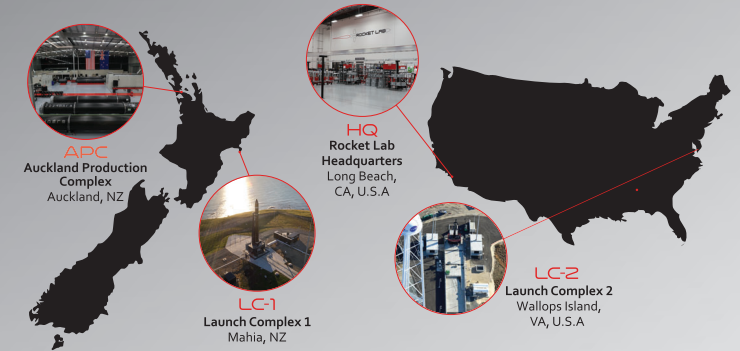
Stage is designed to restart its engine and propel itself back towards Earth to burn up in the atmosphere – leaving nothing behind in space but the satellite, and helping to keep the areas above Earth clear of space junk!



ELECTRON HAS DELIVERED  
SATELLITES ABOVE EARTH  
WHICH HELP PEOPLE  
COMMUNICATE AROUND  
THE WORLD

## WHERE ELECTRON LAUNCHES FROM

Rocket Lab operates two launch sites. Between them Rocket Lab can launch more than 130 times per year!



### LAUNCH COMPLEX 1

Rocket Lab's main launch site is Launch Complex 1 in Mahia, Hawke's Bay, New Zealand. Rocket Lab Launch Complex 1 is the only private spaceport launching to low-Earth orbit in the world. Launch Complex 1 was opened in 2016 and Rocket Lab can do up to 120 Electron launches from the site every year.

Launch Complex 1 in Mahia is a perfect spot to launch Electron from. Because of the wide range of different angles to launch Electron to from Launch Complex 1, it is possible for small satellites to be launched to many different positions in space to orbit Earth. There is also very little ship and airplane traffic around or above the launch site which allows for plenty of rocket launching opportunities!



### LAUNCH COMPLEX 2

Launch Complex 2 is Rocket Lab's newest launch site on the North-Eastern coast of the United States of America. Launch Complex 2 has been built on land owned by NASA on Wallops Island, Virginia, and will be the launching site for US small satellites operated by the US government. Because of much busier skies above the USA's east coast compared to New Zealand, Electron can launch from Launch Complex 2 up to once a month every year.

