

CUSTOMER
SUCCESS STORIES

From Idea to Orbit with Altium, TE Connectivity, and Astranis

With a major launch on the horizon, Astranis had to act quickly—and that's where Altium came in handy.



Discover how Altium Designer and other Altium enterprise solutions are helping to expand internet connectivity across the country, bringing even the most remote areas online.

Internet connectivity is so central to everyday life that it is easy to assume that everyone, everywhere is online. From eCommerce and social media to streaming video, our quality of life has become inextricably linked with our bandwidth capabilities. The coronavirus pandemic of 2020 made our reliance on internet technology even more salient.

Yet, throughout the world internet coverage is unreliable. In many areas, including more rural parts of the United States, internet coverage isn't available at all.

The disparity in global internet access is due to multiple factors, but among the biggest are telecommunication satellites. Traditional communication satellites are massive and extremely costly, resulting in common placement over large population centers; those who live well outside urban areas often find themselves living offline.

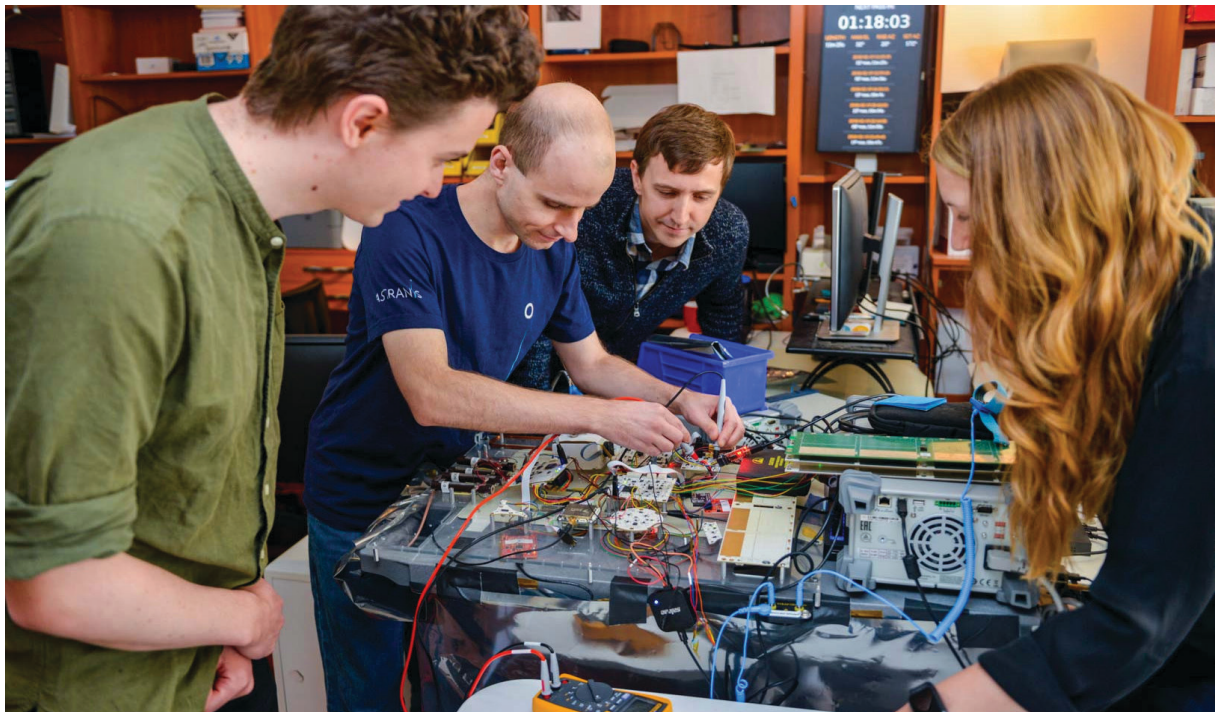
Traditional internet infrastructure, including fiber lines and massive telecommunications satellites, excludes nearly four billion people worldwide. A new solution was clearly needed—and Astranis was ready to meet the challenge.

”

Altium Designer’s powerful Multiboard Assembly feature was key to helping us with this project. The ability to verify the electrical and mechanical interfaces of designs meant the team could keep working making hardware that worked the first time, every time.

Brady Salz

SDR Hardware Lead, Astranis



A Small Company with a Big Vision

Astranis is determined to ensure everyone has reliable broadband internet access, no matter where they live. They’re starting in Alaska, where 39% of the population is still without reliable internet connectivity.

Astranis creates satellites that are much smaller than traditional ones, with a substantially lower price point. That smaller form factor makes them much easier to place away from major urban centers, bringing thousands of businesses and residents online for the first time. Accomplishing such a bold mission requires Astranis to act quickly—and that’s where Altium comes in handy.

The Right Tools at the Right Time

Like many companies, Astranis relies on Altium software to power the seemingly impossible. With an 18-month design-to-launch turnaround time, made more challenging by the global pandemic, Astranis had no time to waste, and so they turned to Altium.

Using [Altium's customizable software solutions designed for the enterprise-level client](#), Astranis was able to design their PCB boards and source the right components for their custom, high-performance software-designed radios for outer space use.

Altium technology made it possible for Astranis to create their specialized PCBs in the face of a global pandemic—without compromising their turnaround time.

“Altium Designer’s powerful Multiboard Assembly feature was key to helping us with this project. The ability to verify the electrical and mechanical interfaces of designs meant the team could keep working making hardware that worked the first time, every time,” reports Brady Salz, SDR Hardware Lead at Astranis.



Astranis was able to design their PCB boards and source the right components for their custom, high-performance software-designed radios for outer space use.

Utilizing Altium’s enterprise solutions, Astranis was able to access Octopart, Altium’s supply chain solution tool that connects companies of all sizes with the industry’s leading component manufacturers and distributors. With nearly 40 million parts listed in a user-friendly database, PCBs and engineers can access exactly what they need at any point in the design stage, ensuring that even the tightest deadlines can be met with ease.

Making Lasting Connections

Altium's robust Octopart database connected Astranis with TE Connectivity, a global industrial technology leader in connectivity and sensor solutions. TE Connectivity is a featured manufacturer in the Altium database, offering exactly the kind of rugged component parts Astranis needed. TE Connectivity's connectors and sensors are compact and exceptionally durable, designed to perform everywhere from the ocean floor to outer space, making them a natural partner for Astranis.



Creating dependable products that can withstand extreme environments requires the highest degree of excellence in engineering design and manufacturing, which is the kind of challenge our engineers love.

Thierry Marin-Martinod

Chief Technology Officer for TE Connectivity's Aerospace,
Marine and Defense business

"Over the years, TE has established itself as the go-to company for connectors and sensors that can withstand all kinds of elements – whether it's extreme temperatures, pressures, vibrations, humidity, moisture or high voltage – and still perform."

With a little help from Altium and TE Connectivity, Astranis will help bring Alaskans online — for a result that is truly out of this world.