

SATCOM

Calian's composites division

Calian has 50 years of experience in satellite communications, with a focus on designing and installing RF gateway systems across the globe.

At our composites division, we specialize in the design, prototyping and production of highly accurate composite reflectors. Regardless of project size, we have the capacity and experience to meet customer needs.

Benefits of Calian reflectors

- Expert reflector design team
- Engineering and manufacturing experience with single-piece and segmented reflectors
- Bespoke designs or build to existing specs
- Customize and characterize thermal performance for higher frequencies
- Tight tolerances, less than 200 μm RMS typical
- One-off builds or multi-unit production runs with cycle times of 1 - 4 weeks depending on reflector aperture

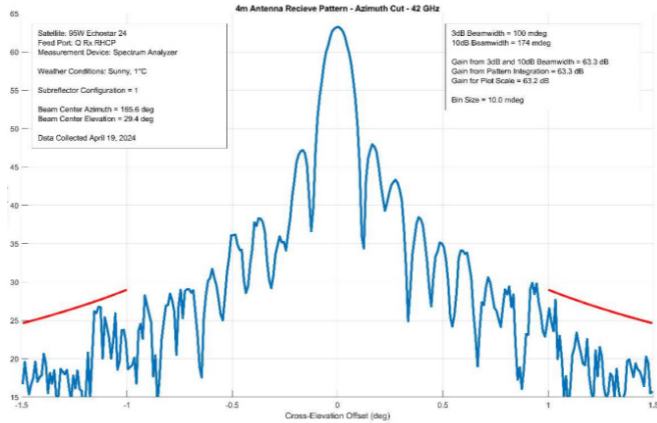
De-ice systems

- Proprietary in-laminate heating system, up to 1200W/m² and 500V
- Individual panel wiring can allow for tailored zone control if desired
- Embedded temperature sensors and thermal cut-out switches provide control and safety
- Configuration of redundant heating elements is available



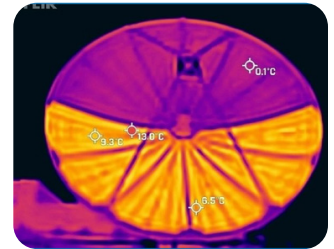
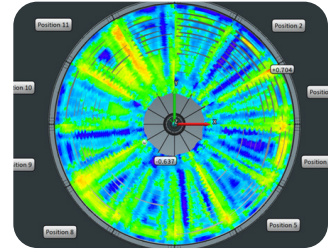
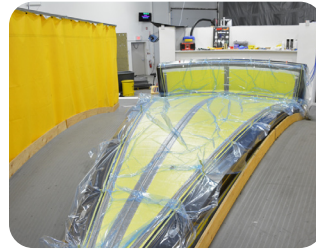
Example project: 4m Q/V band antenna

Designed, manufactured and installed within seven months as a result of strong project management and tooling vendor collaboration. The final composite reflector has 150 μm RMS, operates at 42GHz, and experiences gain fluctuations of only 0.2db over a 25°C change in temperature. The reflector is also installed with our proprietary de-ice system.



Example project: 10m Ka/Q/V band antenna

The first-ever commercial Q/V band network was installed using our reflector technology. We created this product to deliver high performance and exceptional accuracy to meet the demanding requirements seen at those frequencies. Multiple systems have been provided globally with installed reflector tolerances below 200 μm RMS.



Connect with us to learn about Calian.

Email us at composites@calian.com or visit calian.com/composites.



For over 40 years, Calian has delivered mission-critical solutions when failure is not an option. Trusted worldwide, we empower organizations in critical industries to overcome obstacles, manage risks and drive progress. By combining the expertise of our people, proven industry insight, cutting-edge technology, bold innovation and global reach, we deliver tailored solutions that solve complex challenges. Headquartered in Ottawa, Canada, with over 6,000 people around the world, Calian's solutions protect lives, strengthen security, foster global connectivity and drive economic progress, making a lasting impact where and when it matters most.