

MMA SPACE ANTENNAS

Incomparable Coverage

Fits in a rideshare volume

Meta Lens

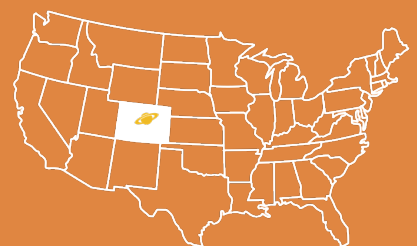
This L-Band Radar/Radiometer meta-lens antenna is created by using a 6+meter multi-layer membrane and a low profile array feed. It has superior packaging efficiency and lower deployed inertia in comparison to similar size mesh reflectors. The resulting mission concept packages within a rideshare volume, which means you can do BIG science at a fraction of the cost of conventional missions.

Multi-layered membrane

Large beam swath



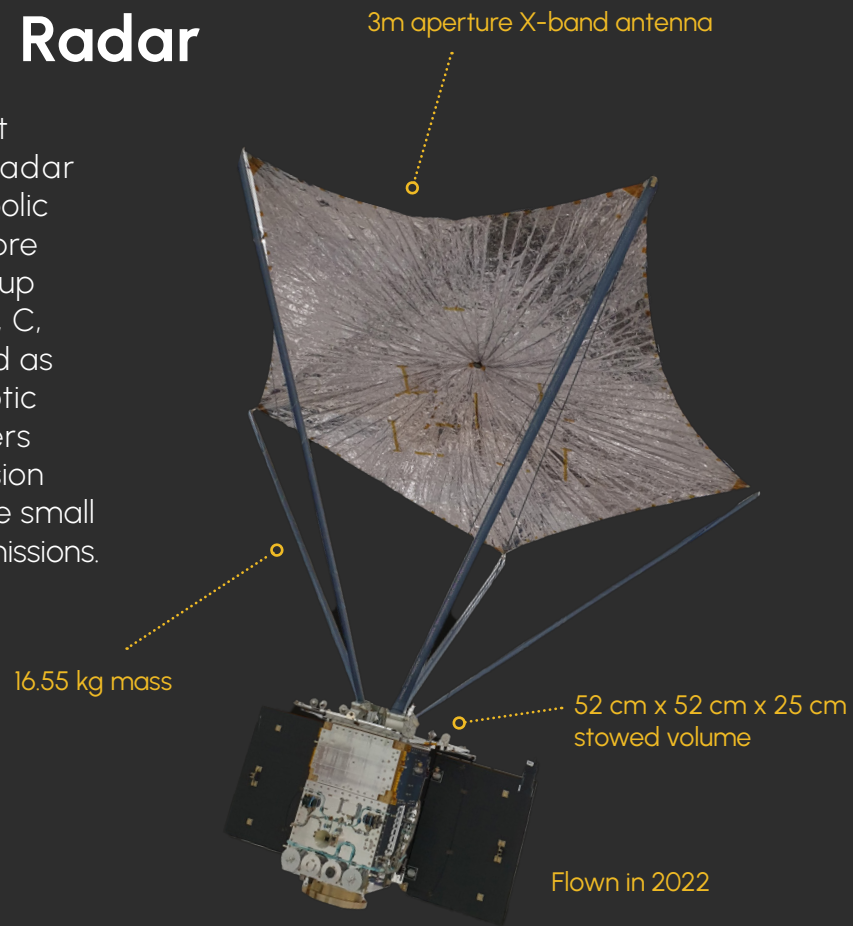
MADE IN THE USA



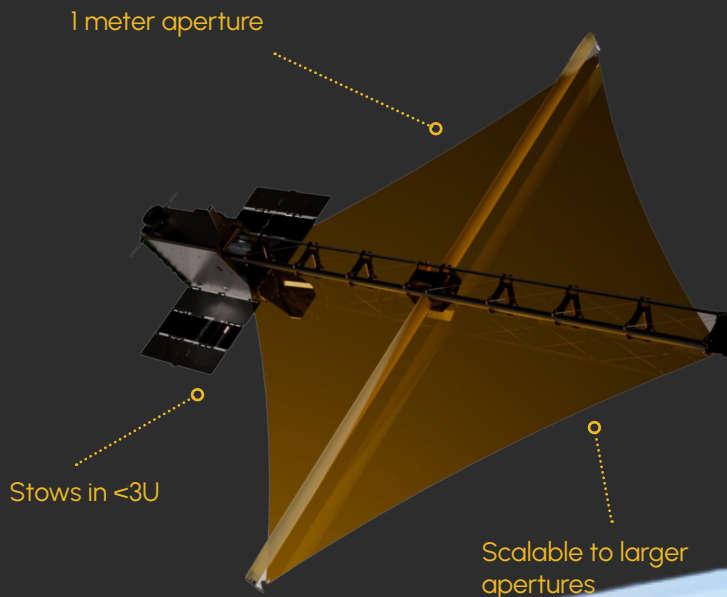


Radar

NeuSAR (shown at right) is the world's first fully polarimetric, Synthetic Aperture Radar (SAR). Compared with conventional parabolic antennas, this architecture stows much more efficiently and supports missions requiring up to 30% bandwidths for applications at L, S, C, X, Ku and Ka bands. It can be implemented as a prime-fed reflectarray or as a folded optic topology, giving spacecraft mission planners new degrees of freedom to maximize mission performance while taking advantage of the small spacecraft sizes enabling high persistence missions.

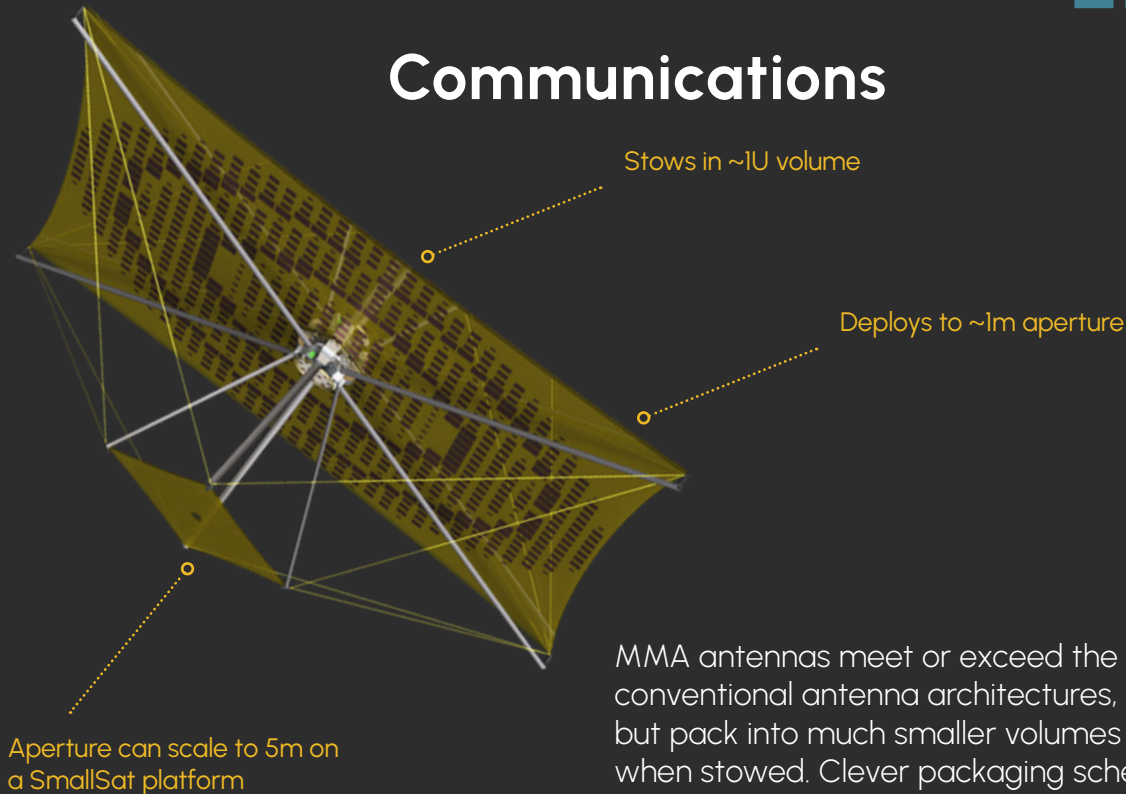


Earth Coverage



MMA can support your mission on any satellite platform or orbital environment. Existing architectures — such as the P-band, sinuous antenna for CubeSats (shown here) which deploys a 1m^2 aperture from a volume less than 3U, to membrane-based, electronically steerable TCDAs or other antennas that achieve even lower frequencies and larger apertures for ESPA class spacecraft — maximize Earth coverage from any orbit with the best-in-class stowed volume and mass available on the market.

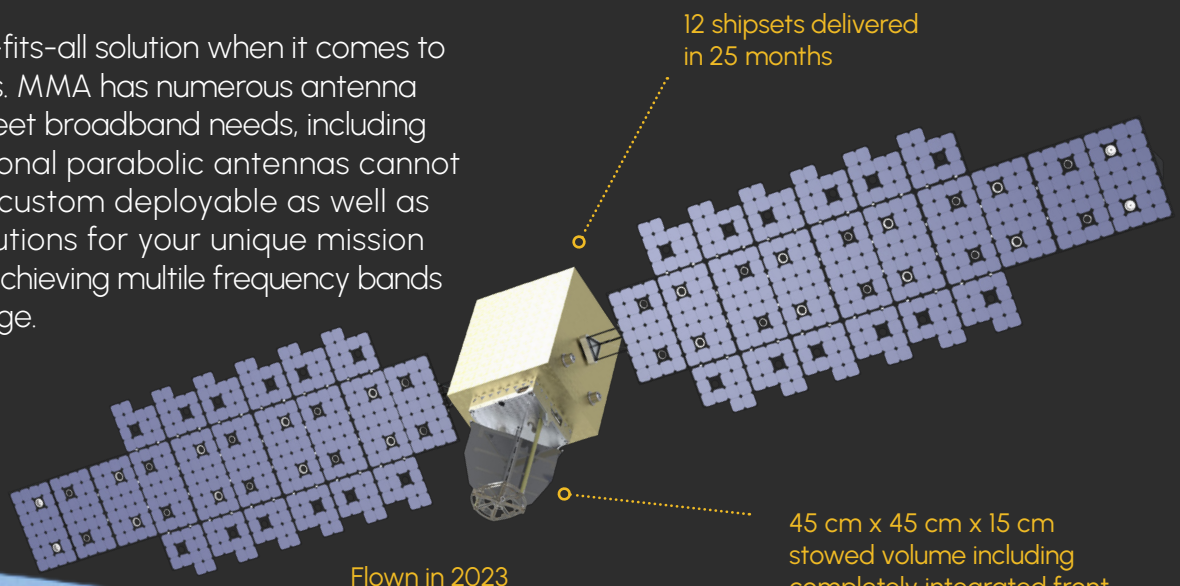
Communications



MMA antennas meet or exceed the performance of conventional antenna architectures, like parabolics, but pack into much smaller volumes with lower mass when stowed. Clever packaging schemes, thin-film membranes, flight tested mechanisms, and electronic control systems combine to enable precise, reliable and repeatable performance.

Broadband

There is no one-size-fits-all solution when it comes to broadband antennas. MMA has numerous antenna architectures that meet broadband needs, including many that conventional parabolic antennas cannot support. We create custom deployable as well as non-deployable solutions for your unique mission requirements, often achieving multiple frequency bands within a single package.



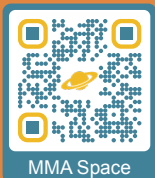
45 cm x 45 cm x 15 cm stowed volume including completely integrated front end (low noise amplifiers, filters and power supplies)

About MMA™ Space

Over our 18+ year history, we have made a name for ourselves by developing and delivering game-changing deployable solutions. Our RF payload sensors offer best-in-class packaging capabilities and technologies, fueling our growth and disrupting industry. Our revolutionary use of thin-film membrane technology which we developed for RF sensors in a variety of configurations and applications was first successfully flown in 2019, with several different membrane deployable antenna architectures demonstrated and flight tested since. This innovation has formed the foundation for MMA's expansion across the frequency band and space domain.

Founded in 2007, we are an entrepreneurial small business that is both well established and inherently innovative. Our culture is creative, agile and responsive. Our technologies are at once proven and constantly improving.

With over 10 years of flight heritage and a 100% deployment success rate, we deliver innovative solutions that are highly capable and reliable. From DARPA to start-ups, our customers know they will get custom, quality, creative solutions designed, built and delivered at scale.



1755 W. 160th Avenue, Suite 800, Broomfield, CO 80023
MORE@mmadesignllc.com
720-726-4712
mmaspace.com



2023
Northrop Grumman
Strategic Supplier Excellence
Award Winner

2016
Tibbetts Award Winner