



ASTROMESH® Unfurlable Mesh Antenna

The state-of-the-art AstroMesh (AM) unfurlable mesh antenna reflector technology is the most advanced and reliable large aperture deployable reflector available. Apertures can range from 3 to 22 meters in diameter, covering radio frequencies UHF to beyond Ka-band. AstroMesh can be integrated into any spacecraft configuration and with best in class compaction rates, AstroMesh can be stowed for the most challenging launch envelopes.

BENEFITS OF UNFURLABLE REFLECTORS

- Large unfurlable reflectors are able to communicate with small terminals
- Multiple design configurations allow for customizable solutions
- Increased frequency reuse for high-throughput satellite communication is possible
- Large unfurlable mesh reflectors can optimize system cost per bit

ASTROMESH CONFIGURATIONS

The AstroMesh family is designed for a broad spectrum of applications.

AM-1 CLASS

- Scalable from 6 to 22 meters
- Reduced diameter versus 1st generation AM
- Extensive flight heritage

AM-2 CLASS

- Optimized design for 18 meters and above
- Reduced stowed height by 40% from AM-1
- Deployed truss configuration identical to AM-1

AM-LITE CLASS

- Optimized mass design for 3 to 8 meters
- 50% reduction in mass from AM-1
- High frequency performance efficiency verified: 55% at 31 GHz & 45% at 50 GHz for 5.2-meter reflector

Unfurlable Mesh Antenna for UHF through V-Band Applications

ASTROMESH ADVANTAGES

- Over 150 years of collective on-orbit success
- Perimeter truss structure is inherently stiffer and lighter than competing technologies with unprecedented packing efficiency
- Stiff, robust, lightweight and reliable flight proven deployment booms and pointing mechanisms
- A proven PIM-free design and in-house PIM testing capabilities

FOR MORE INFORMATION

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<https://www.northropgrumman.com/what-we-do/space/spacecraft-products>