

KA-BAND HIGH COMPACTION RATIO REFLECTOR ANTENNA

HIGH-ACCURACY, LARGE-APERTURE ANTENNA OPTIMIZED FOR SMALLSATS

Harris' High Compaction Ratio (HCR) reflector antenna with 1m reflector and feed fits in a 2U volume or a 5m reflector in less than a quarter of an Evolved Expendable Launch Vehicle (EELV) Secondary Payload Adapter (ESPA) class satellite. The HCR reflector antenna is designed for high-frequency, high-gain antenna performance up to 40GHz.

The HCR reflector antenna has a fast production turnaround that supports smallsat constellation development.

Harris applies fabrication and surface-shaping processes that are based on 40 years of reflector heritage to streamline production and minimize development risk for our customers.



Harris 5m HCR reflector antenna

KEY FEATURES

- Offers 1m to 5m apertures that meet the needs of smallsat form factors
- Enables high data transfer rates typically only available with large-aperture reflectors
- Is not subject to ITAR controls

About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world. Learn more at harris.com.

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PERFORMANCE PARAMETERS

PARAMETERS	SPECIFICATIONS		
Antenna Size	1m	3m	5m
Frequency	X through Ka and above	X through Ka	X
Mass (KG)	4	14	58
Packaging	2u 96 x 99 x 234mm	1/4 ESPA 330 x 330 x 660mm	1/4 ESPA 343 x 343 x 912mm
Reflector Accuracy (RMS)	≈0.5mm	<1.0mm	<1.0mm
Optical Transparency	up to 85%	up to 85%	up to 85%

About Harris Space Antennas

Harris has been engineering first-of-their-kind payloads that meet and exceed the needs of our customers for more than 50 years. Our position as the most experienced unfurlable mesh reflector manufacturer in the world has been earned by continually pushing the boundaries of space antenna technology. Today, we are the number-one provider of large high-accuracy mesh reflectors, with more than 90 antennas on orbit.

By drawing upon this experience and our repeatable designs, proven processes, and rigorous testing capabilities, we reduce risk for our space antenna customers, who want to tap the potential of smallsats for their communications missions.