

# WASP

WIDE AREA  
SCANNING PARABOLIC

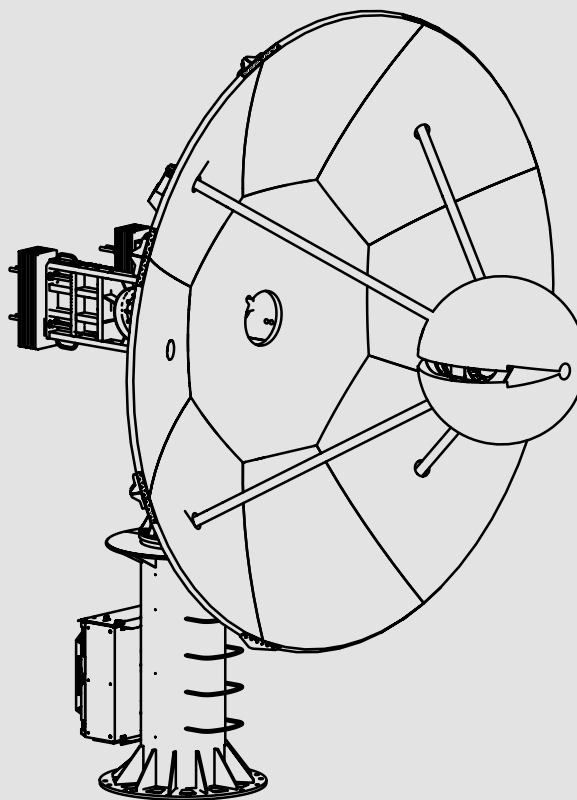


AV's Wide Area Scanning Parabolic (WASP) employs multiple, independently steerable, simultaneous beams at diverse center frequencies and bandwidths including advanced capabilities like antenna nulling, array healing, and beam shaping or spoiling. This solution supports seamless interface with both new and existing antenna reflectors and provides increased slew rate / beam steering capabilities reducing overall wear and tear on parabolic drive systems.

## \_WASP Technical Capabilities

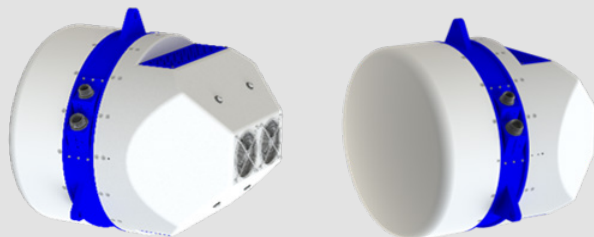
The WASP's digitally beamformed Phased Array Feed (DPAF) technology enables multi-band, multi-beam, and multi-kinematic operations through:

- > Multiple Beam Synthesis (MBS) provides a means of tracking multiple simultaneous targets from a single reflector.
- > Novel Beam Broadening (NBB) techniques that applies a proprietary taper to the phased array feed to match the performance of the feed to the reflector – at any frequency.
- > Wide Area Scanning (WAS) ensures targets are acquired consistently and efficiently using little a prior knowledge.
- > Fine Loop Pointing (FLP) enables high agility tracking in austere environments on traditional parabolic reflector – re-use / repurpose existing assets.
- > AV's WASP feed technology proves game changing capabilities in mission areas such as SATCOM, Telemetry, Electronic Warfare, RADAR, and ISR.

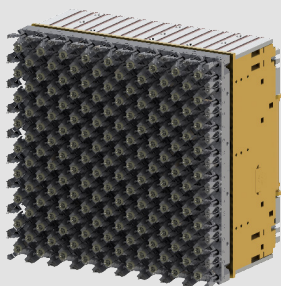


## \_Multi-band Software Defined Antenna (MSDA) Technology

AV's core digital beamformer technology is the MSDA tile which enables several AV phased array core products. The MSDA tile supports transmit and receive operations with 25 MHz of instantaneous bandwidth per beam. The MSDA architecture is extensible across multiple mission areas, enabling communications between multiple spatial, spectral, and temporal diverse targets.



WASP FEED LINE REPLACEABLE UNIT (LRU)



MSDA TILE: AV'S CORE BEAMFORMING TECHNOLOGY

## \_Technical Specifications

ORBITAL REGIMES	GEO/MEO/LEO
OPERATIONAL FREQUENCIES	1.7-12 GHz
SCAN ANGLE	±7 degrees
SIMULTANEOUS TX / RX	1/12
CHANNEL BANDWIDTH	25 MHz
OUTPUTS	Analog & Digital
OPERATING TEMPERATURE RANGE	-40°C to +50°C