

Badger

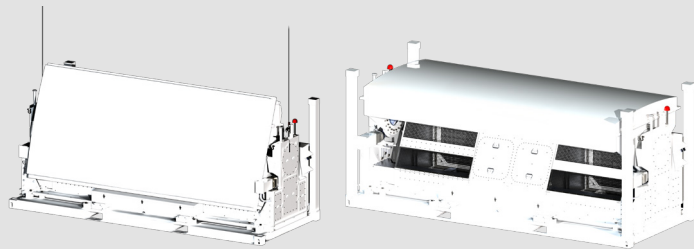


AV's Broad Area Deployable Ground Terminal Enabling Resilient Communication system, or BADGER, provides a modular and deployable large form factor ground-based phased array solution supporting complex SATCOM, telemetry, and electronic warfare missions.

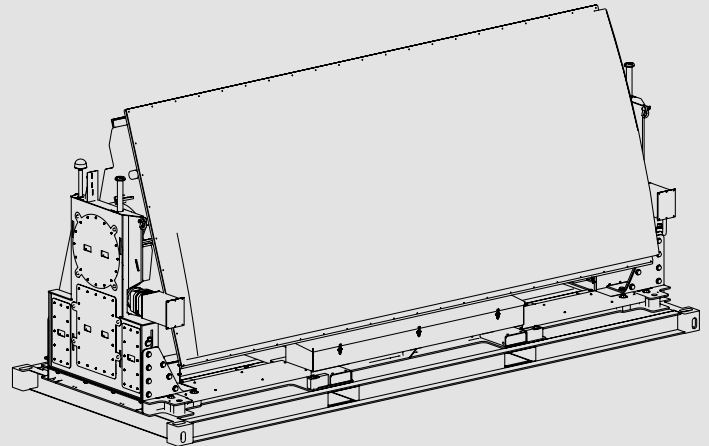
_Technical Specifications

ORBITAL REGIMES	GEO/MEO/LEO
OPERATIONAL FREQUENCIES	L/S/C-Band
SCAN ANGLE	±60 degrees
SIMULTANEOUS TX / RX	4/12
CHANNEL BANDWIDTH	25 MHz
OUTPUTS	Analog & Digital
OPERATING TEMPERATURE RANGE	-40°C to +50°C
INSTALLATION	Deployable 20-Foot ISO Container

BADGER's digital interfaces combined with its multi-band, multi-beam, and multi-kinematic operations enable support of multiple mission areas simultaneously—a game-changing advantage for today's warfighter. The rugged, self-contained design ensures operations in austere environments, supporting "communications-on-the-move" operations as needed.



BADGER PHASED ARRAY



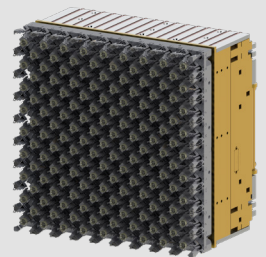
_BADGER Advanced Capabilities:

- › Rapid target acquisition and tracking with Broad Area Automated Acquisition (BA3) and Integrated Complex Mono-pulse Tracking (ICMT) systems
- › Antenna nulling, array healing, beam shaping or spoiling, and more
- › Multiple simultaneous missions capacity through Frequency Agile Operations (FAO) and software defined beam states and targets
- › L/S/C-Band phased array with a 2-kilowatt equivalent spatial distributed high-power amplifier (HPA)

The aggregation of multiple BADGER systems into a single phased array increases G/T and EIRP values, making it an ideal solution for multi-GEO contacts. BADGER supports a LEO configuration, enabling more than 150 simultaneous contacts within a single array.

_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. Through a unique implementation, the system provides 40 dB of isolation between transmit and receive enabling simultaneous, full duplex transmit and receive operations. The MSDA architecture is extensible across multiple mission areas, enabling communications between multiple spatial, spectral, and temporal diverse targets.



MSDA TILE: AV'S CORE BEAMFORMING TECHNOLOGY