

ENABLED BY INDUSTRY-FIRST TECHNOLOGY

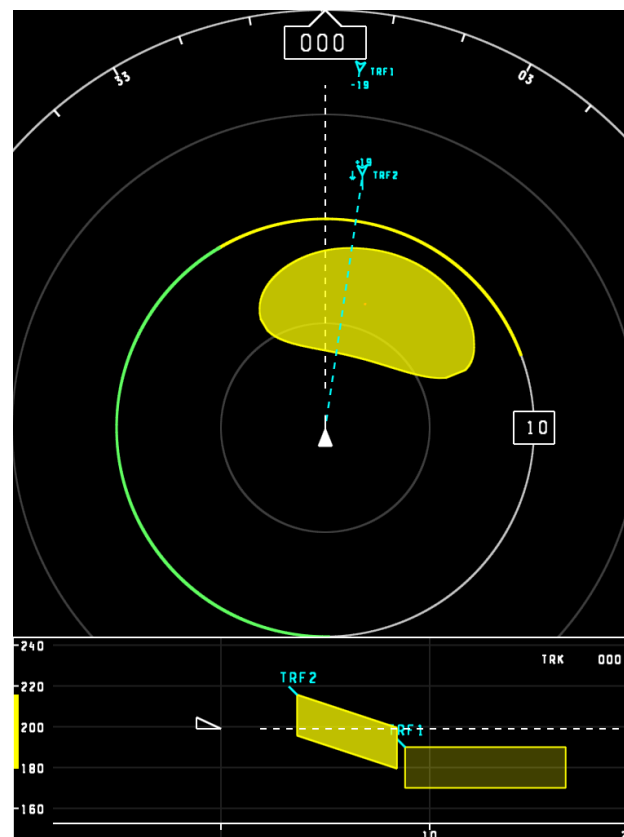
Detect and Avoid Radar and Pilot Interface

DETECT AND AVOID (DAA) RADAR

- Enables operations without a chase plane or off-board surveillance in domestic and international airspace (Due Regard Operations)
- Meets RTCA DO-366 and FAA TSO-C212 for use in conjunction with a DO-365/TSO-C211 DAA System
- Operates in approved aeronautical spectrum
- Active Electronically Scanned Array (AESA) employs "Search While Track" mode
- Detects and tracks gliders, ultralights, and other small or non-conventional vehicles
- 2,000+ flight hours on both manned and unmanned aircraft

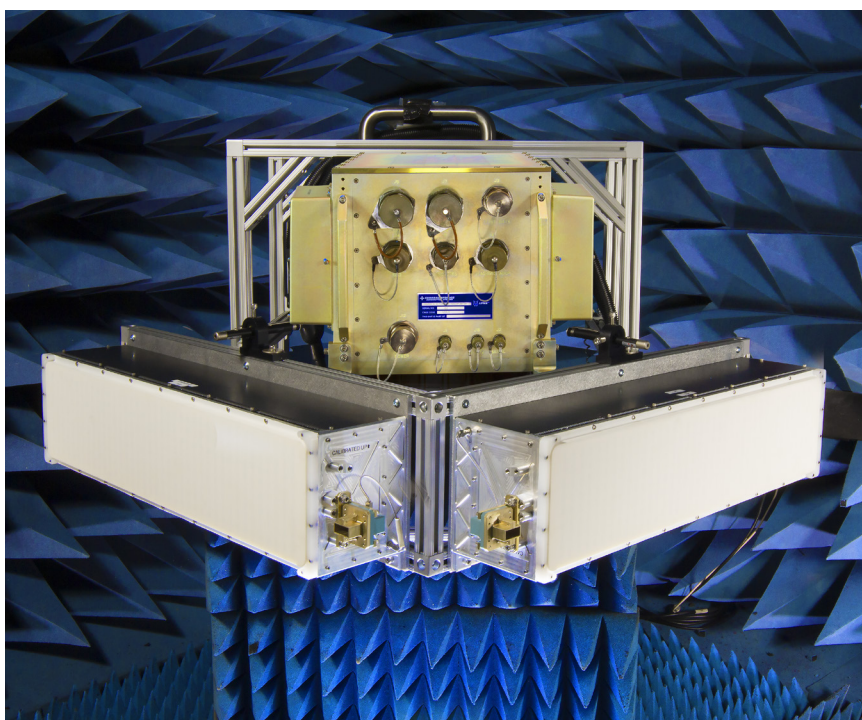
CONFLICT PREDICTION AND DISPLAY SYSTEM (CPDS)

- Provides situation awareness to pilot in command for DAA decision making
- Identifies regions of airspace where "DAA Well Clear" would be lost, similar to hazardous weather activity on weather displays
- Identifies aircraft with active DAA alerts or TCAS resolution advisories
- Traffic display compliant with RTCA DO-317B



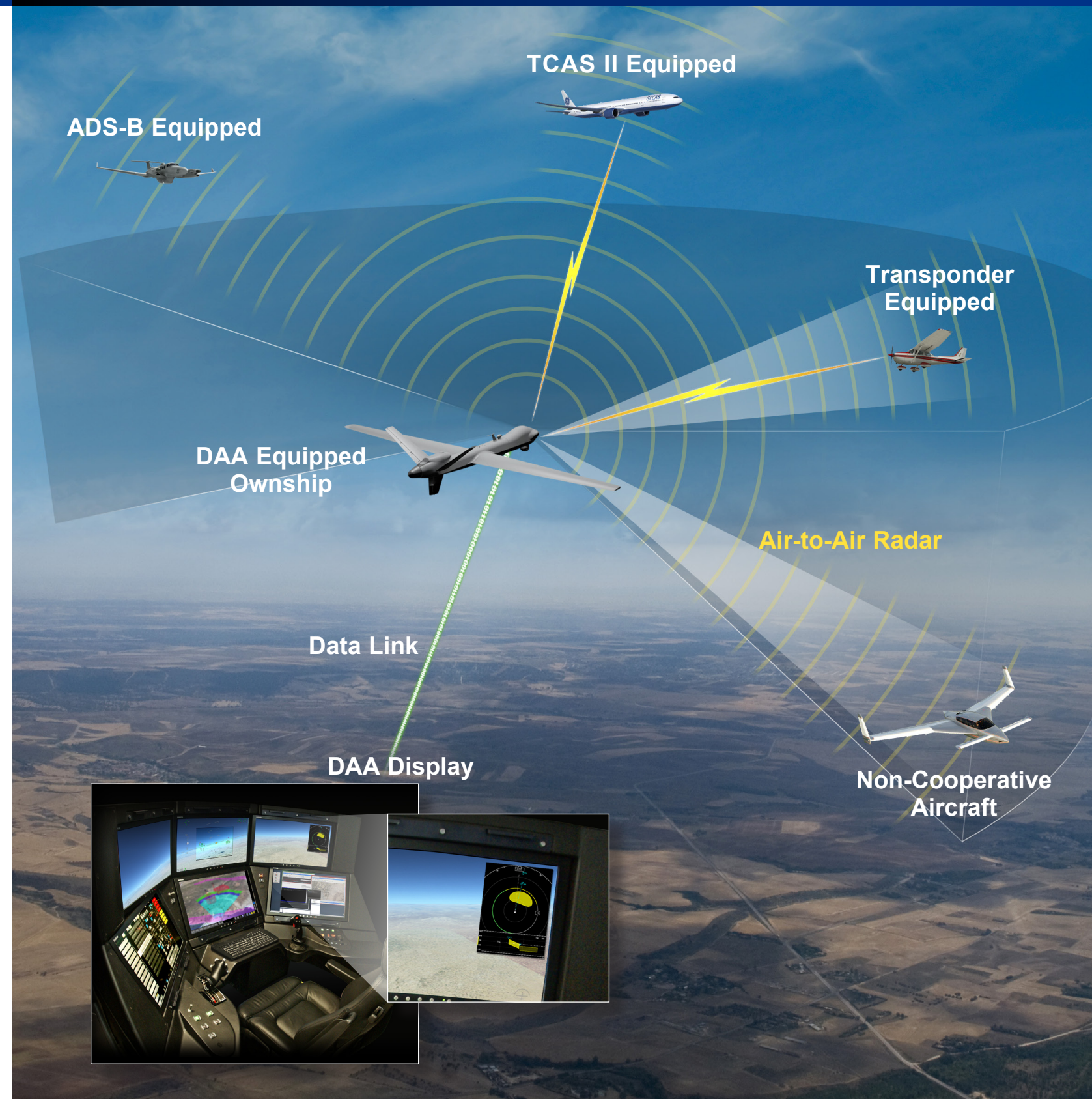
RADAR TECHNICAL SPECIFICATIONS: PRE-PRODUCTION UNIT

Total Weight:	<150 lb (68 kg)
Input Power:	28 VDC, <1.8 kW average
Transmit Power:	640W peak
Frequency:	X-Band (8.75 – 9.5 GHz)
Antenna Cooling:	Air-cooled
Radar Electronics Assembly:	Air-cooled
Detection Range:	>10 nautical miles (Ultra-light aircraft)
Antenna (AESA) Size:	25.0" (l) x 7.2" (w) x 6.6" (h)
Number of AESA Panels:	2
Electronics Module Size:	9.5" (l) x 16.2" (w) x 11.2" (h)
Operational Temperature:	-40°C to 60°C at sea level
Operational Altitude:	5,000 to 40,000 ft

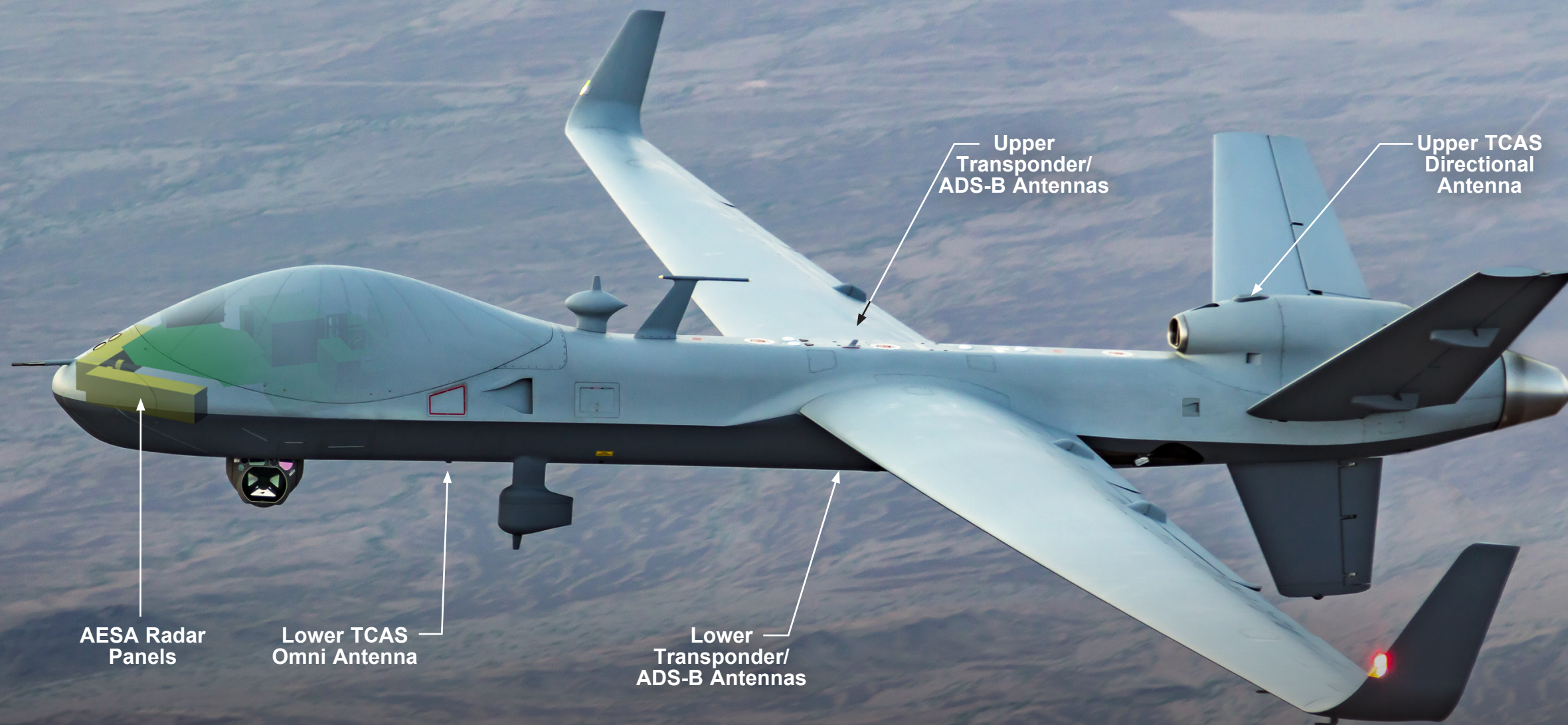


DETECT AND AVOID

Enabling Unrestricted Access to Civilian Airspace



Detect and Avoid Capability for MQ-9 Reaper/Predator B Family Remotely Piloted Aircraft Systems



DAA System shown on MQ-9B

SYSTEM CAPABILITIES

- Comprehensive traffic picture displayed to remote pilot for DAA decision making
- Detect and track both cooperative and non-cooperative aircraft
- DAA Radar simultaneously tracks multiple airborne vehicles with high 3-D accuracy
- Traffic Alert and Collision Avoidance System (TCAS) provides collision avoidance maneuvers against transponder equipped aircraft
- Heads Up Display (HUD) enables manual execution of collision avoidance maneuvers
- Coupling of TCAS resolution advisories to on-board flight computer ensures safe responses in all situations while maintaining the pilot's ability to intervene
- Optional ADS-B Out capability enables compliance with future airspace requirements (TSO-166b)
- Includes ADS-B In capability to support DO-317B ADS-B Applications

BENEFITS

- Facilitates unrestricted access to civilian airspace by fulfilling intent of operational requirements to see and avoid
- Enables unrestricted operations over high seas by meeting Due Regard operational requirements
- Designed as retrofit kit, maintaining existing operational capabilities of host aircraft

TESTING TO DATE

- Eight flight test campaigns in collaboration with FAA, NASA, RTCA and industry
- 1,000+ scripted encounters testing routine and off-nominal operational situations
- Tested against full range of intruders
- Includes testing on manned aircraft