ULTRA | Intelligence & Communications

REAP®
Rosetta Echo Advanced Payloads

Revolutionizing POD design, bridging and extending communications. REAP provides communications relay and tactical data link gateway services over large, widely dispersed and often austere environments in support of our joint warfighters.

Features

- Supports information superiority across the battlefield: air-to-air and air-to-ground
- Non-invasive to host aircraft
- Radio and TDL BLOS extension
- Bridging/translating between disparate waveforms and frequencies
- Video management and dissemination
- Link 16, SADL, EPLRS, CoT, JTRS, TTNT, ANW2, AIS, UHF/VHF, HAVEQUICK, SINGARS, MANET, Project-25, Multiband CDL, VoIP/RoIP
- Self-reporting of host aircraft into TDLs and COP
- Computing resource in the sky: publish, subscribe, query
- Flexible payload bus; can be used to host various C4ISR payloads

Overview

The REAP® (Rosetta Echo Advanced Payloads) provides a robust, non-invasive payload for tactical communications exchange in an airborne-qualified pod for external mounting to manned or unmanned aircraft.

From Ground Operators at the Tactical Edge (GOTE) to convoys, command centers and other participating aircraft, multiple users will benefit as the REAP—with its Battlefield Integrated Gateway for Tactical Exchange (BIGTEX)™ software—relays, bridges, translates, distributes and manages current and legacy data, voice and video.

From the lower altitudes of the mid-tier aerial network, to the upper-tier at 65,000 to 70,000 ft. Mean Sea Level (MSL), the REAP provides communications relay and tactical data link gateway services over large, widely dispersed and often austere environments in support of our joint warfighters.

Designed to be minimally invasive to the host aircraft, the REAP provides the ability for an aircraft to easily support a rapid reaction, multi-mission role without experiencing the huge time and cost drivers associated with a non-recurring engineering effort to develop and integrate new systems into the aircraft.

The REAP has a common MIL-STD mounting interface, houses its own antennas and requires nothing more than the attachment hard point and power from the host aircraft, allowing the flexibility to snap it on, pull it off and swap it out as required to support the mission.

The REAP uses high Technology Readiness Level Government and Commercial Off-The-Shelf (GOTS/COTS) components and an open architecture to provide a robust communications and situational awareness capability.

Ultra has integrated a number of components that facilitate Joint Tactical Radio System (JTRS), Adaptive Networking Wideband Waveform (ANW2), Mobile Ad Hoc Network (MANET), Tactical Targeting Network Technology (TTNT) and Common Data Link (CDL) waveforms; Link 16, Cursor on Target (COT) and Situational Awareness Data Link (SADL) Tactical Data Links (TDL); Naval Automatic Identification System (AIS) tracking; Automatic Dependent Surveillance - Broadcast (ADS-B); and tactical exchange of voice data and imagery, such as TDL tracks, situational awareness, chat, 9-line, free text, streaming and throttled video, still images, Voice over Internet Protocol (VoIP), sensor points of interest and file publish and subscribe services.

REAP interoperability at the tactical edge: REAP enables warfighter information superiority and enhances communication between edge users and theater commanders.

REAP's TacCore™ Hardware and Software

Software services

- Web browser-based interface
- User authentication and privileges
- Power switching and monitoring
- Data archive
- Chat server
- Pub/sub data bus
- Infrastructure for custom applications
- OMS/UCI

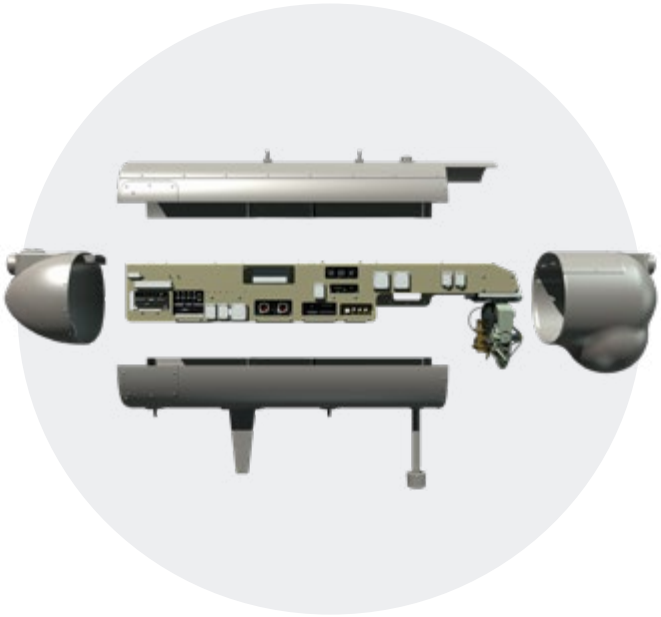
Basic specifications

(vary based on configuration)

- Weight: ~120 lbs
- Power: ~500 W
- Temperature: -40° C to +65° C
- Altitude: Up to 70,000 ft. MSL

REAP can also serve as a ready, pre-qualified testing platform for new airborne Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) electronic components requiring testing under operational conditions. Whether the requirement is for communications support from air-to-ground, air-to-air or both; or an ISR payload with communications distribution; or an experimental payload ready for flight, REAP is the solution.

TacCore hardware suite	Description
RTR - Ethernet backbone router	Cisco IOS, supports multiple Ethernet devices
ASC - Air Segment Computer	Configured per customer requirements
AID - Aircraft Interface Device	1553, synch, asynch, Ethernet USB, ARINC 429
PDU - Power Distribution Unit	Regulation, conversion, switching, monitoring
MPL - Maintenance Panel	Physical payload access, central crypto fill, mission load interface



Ultra reserves the right to vary these specifications without notice.

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