Rosetta Echo Advanced Payloads (REAP®)

## EXTENDING THE EDGE: SUPERIOR COMMUNICATIONS FOR DISPERSED OPERATIONS

Features

- Supports information superiority across the battlefield: air-to-air and airto-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

Ultra I&C's REAP® (Rosetta Echo Advanced Payloads) is an airborne-qualified pod that enables seamless tactical communications exchange on manned and unmanned aircraft. Featuring BIGTEX™ (Battlefield Integrated Gateway for Tactical Exchange) software, REAP relays, bridges, and manages data, voice, and video across ground operators, convoys, command centers, and aircraft from mid-tier to upper-tier altitudes (65,000-70,000 ft MSL).

The system's non-invasive design uses MIL-STD mounting interfaces and integrated antennas, requiring only power and an attachment point from the host aircraft. This plug-and-play architecture enables rapid mission reconfiguration without costly engineering integration.

Built on proven GOTS/COTS components, REAP supports comprehensive communications protocols including JTRS, ANW2, MANET, TTNT, and CDL waveforms, along with Link 16, COT, and SADL tactical data links. The system also integrates Naval AIS tracking, ADS-B, and tactical exchange capabilities such as TDL tracks, chat, 9-line, video streaming, VoIP, and file services.
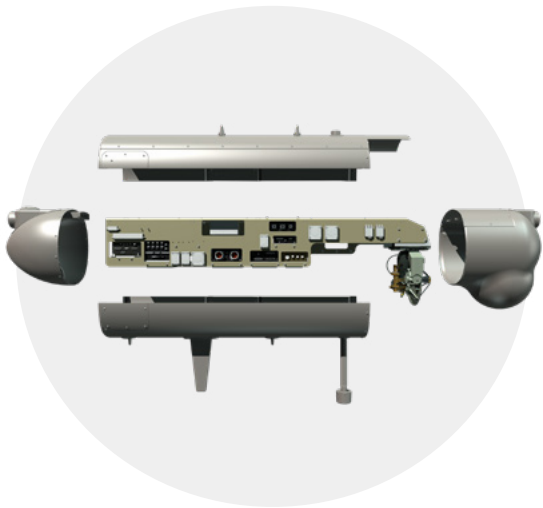
REAP delivers tactical information superiority by enabling seamless data exchange between frontline operators and theater command

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 pre-qualified testing platform for new airborne Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) electronic components requiring testing under operational conditions.

REAP adapts to diverse mission requirements, supporting air-to-ground and air-to-air communications, ISR payload distribution, and experimental payload testing.

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

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