



INTEGRATED MISSION SYSTEM · TETHERED ISR & COMMS

EPIC

EXPEDITIONARY PERSISTENT ISR AND COMMUNICATION

“Persistent Eyes. Extended Communications.”

EPIC is a tethered unmanned aircraft system that keeps a stabilized EO/IR sensor on station over a site while simultaneously lifting a tactical radio to altitude — extending line-of-sight range and tactical network coverage for teams on the ground. One airborne node, two mission-critical capabilities, continuously powered from the ground.

SYSTEM
EPIC

01 CORE CAPABILITIES



PERSISTENT EO/IR ISR WITH HIGH BANDWIDTH

Stabilized EO/IR gimbal delivers persistent full-motion optical and infrared surveillance from a stable, elevated vantage point. The fiber tether's high bandwidth supports more image detail.



AIRBORNE COMMUNICATIONS RELAY

An elevated tactical radio extends line-of-sight range and tactical network coverage well beyond ground-level radio horizon.



PERSISTENT GROUND-POWERED OPERATION

Continuous power delivered through the tether supports long-duration, uninterrupted on-station operation without battery-cycle downtime.



HARDWIRED AND SECURE VIDEO AND DATA LINK

ISR imagery and platform telemetry ride the fiber tether back to the ground station on a hardwired link, independent of the relay radio.



MODULAR TACTICAL RADIO INTEGRATION

Configurable to a supported tactical radio ecosystem — matched to the mission network the customer already operates. Easy mounting via a Picatinny rail interface.



FIELD-DEPLOYABLE GROUND SEGMENT

A self-contained ground power and networking package supports setup at expeditionary or temporary operating locations.

02 MISSION APPLICATIONS



EXPEDITIONARY ISR

Stand-up ISR coverage at forward or temporary sites



COMMS EXTENSION

Extends mesh & radio network range to the edge



PERIMETER SECURITY

Overwatch of site boundaries & access points



INCIDENT RESPONSE

Rapid on-scene situational awareness



ON-THE-MOVE OPTION

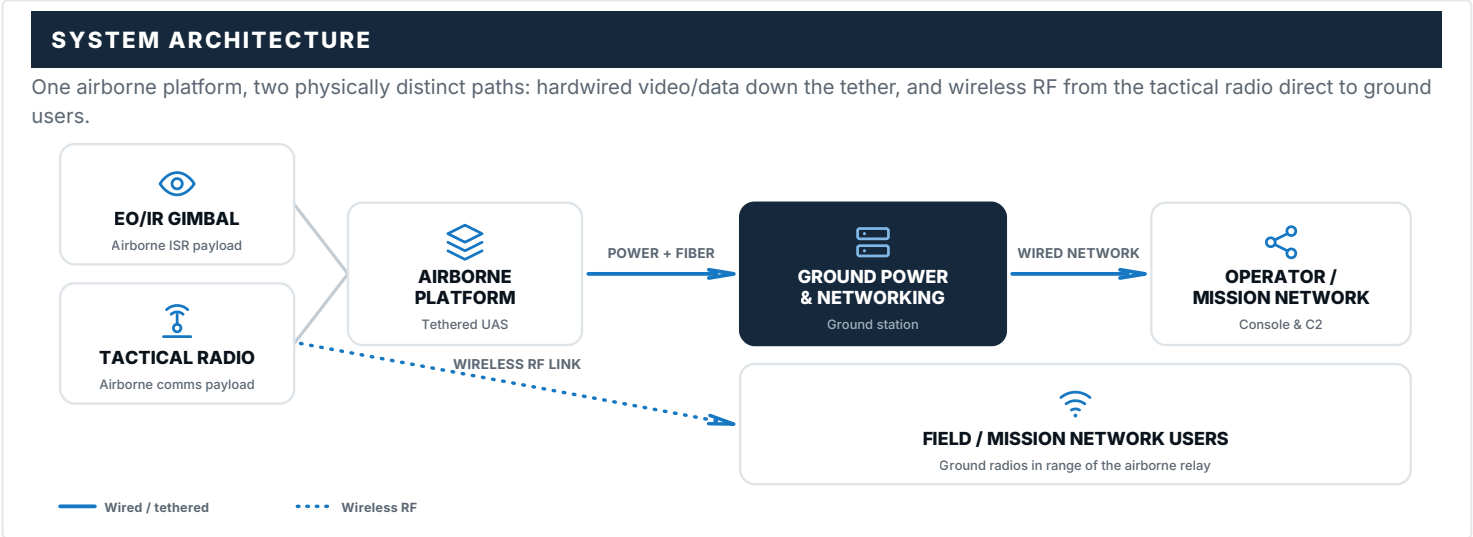
Fast-stand-up coverage for short-duration sites

EXTENDING ISR AND TACTICAL NETWORKS TO THE EDGE

SYSTEM ARCHITECTURE & SPECIFICATIONS

SYSTEM EPIC

Tethered EO/IR ISR & tactical communications relay



MAIN COMPONENTS

Airborne platform — QUAD-L / QUAD-8 tethered UAS (see platform options below)

EO/IR gimbal — continuous optical / infrared sensor, standard payload (Gremsy, Redwire, Nextvision, or Trillium)

Tactical radio payload — configurable relay radio, tailored to the mission network (Persistent Systems, Silvus, TrellisWare, Doodle Labs, etc.)

Power / fiber tether — hardwired power & data path to ground segment

Ground power & networking unit — ground power, tether mgmt, network interface

PAYLOAD & NETWORK INTERFACES

- EO/IR gimbal (standard)
- Tactical radio relay (configurable)
- Fiber Optic
- Mesh Radios (per radio)
- Video Streaming
- Ethernet
- IP Network
- MAVLink

OPTIONAL GROUND CONFIGURATIONS

- Operator Workstation
- Air Conditioning
- Trailer-Mounted
- Marine Configuration
- Mission Computer
- Vehicle-Mounted
- On the Move
- Custom Integration

TACTICAL RADIO INTEGRATION OPTIONS

Tactical radio options include Persistent Systems, TrellisWare, Silvus Technologies, and Doodle Labs. Radio selection and integration are tailored to the customer's mission network.

PLATFORM OPTIONS

QUAD-L Compact tethered quadcopter	QUAD-8 Extended-endurance quadcopter
Tether length (QUAD-L config)	Up to 300 ft
Tether length (QUAD-8 config)	Up to 400 ft
Max payload (QUAD-L config)	8 lb (3.6 kg)
Max payload (QUAD-8 config)	20 lb (9.1 kg)

Platform selection depends on the complete payload configuration, including weight, power requirements, and integration.

A photograph showing the ground segment of the system. It consists of a large, tan-colored trailer-mounted unit with a quadcopter drone mounted on top. The unit is parked on a dry, open field with mountains in the background.

DEPLOYMENT OPTIONS

EPIC's ground segment can be fielded trailer-mounted, vehicle-mounted, or in a fixed configuration — matched to the mission's mobility requirements. Trailer-mounted configuration shown above.