

**Basic Brigade Tactical Unmanned Aircraft System (TUAS) consists of:**



*Two Ground Control Stations with Ground Data Terminals*



*Two GCS Support Vehicles*



*Two Equipment Trailers with 10-Kilowatt Generators*



*One Air Vehicle Transport (AVT) with Hydraulic Launcher*



*One AVT Support Vehicle with Equipment Trailer*



*Four Aircraft with Payloads*



*Four One System Remote Video Terminals (OSRVTs)*



*One Portable Ground Control Station (PGCS)/One Portable Ground Data Terminal (PGDT)*

**Maintenance Section:**



*Maintenance Section Multifunctional (MSM) with Equipment Trailer*



*MSM Support Vehicle with Equipment Trailer*



**RQ-7 TUAS Features and Accomplishments**

- Deployed in Operations Iraqi Freedom and Enduring Freedom
- More than 470,000 hours flown worldwide
- More than 90 systems delivered
- More than 115 systems under contract
- Worldwide performance based logistics support
- Automatic launch and recovery from small clearings
- Trainer embedded in GCS
- Emplace or displace in less than one hour
- Flexible design facilitates future enhancements
- In operational use by U.S. Army and Marine Corps

# SHADOW® RQ-7B SYSTEM

TEXTRON Systems

**PROVIDING CRITICAL  
BATTLEFIELD INTELLIGENCE**



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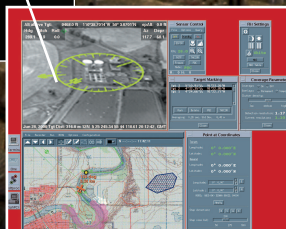
*AAI's One System® is the U.S. Army's premier ground control station (GCS), able to collect battlefield intelligence from multiple unmanned aircraft and deliver it to warfighters.*



# SHADOW TACTICAL UNMANNED AIRCRAFT SYSTEM

## One System Ground Control Station

- Common systems integration, or CSI
- Command and control for various aircraft
- Modular software
- Based on commercial, off-the-shelf components
- Redundant hardware
- Embedded training
- Joint variable message format/NATO format compatible



## Air Vehicle Operator (AVO) Display

- Flight and situational awareness
- Full mission and payload planning
- Integrated automatic launch and landing
- Electronic pre-flight and aircraft status monitoring

## Mission Payload Operator (MPO) Display

- Autosearch, point-at-coordinates, rate/position and autotrack
- Automated marking of searched areas
- Integration into any C4I system
- Artillery adjust-fire feature
- Laser designator control
- Searchable digital archive and retrieval system

## Plug-In Optronic Payload (POP-300)

- Electro-optical/infrared/laser designation, or EO/IR/LD
- Day/night capability
- Target detection slant range 10 km
- Target recognition slant range 7 km
- Artillery adjustment feature
- Target autotrack feature
- Laser designator for laser-guided weapons
- Laser range finder and laser pointer



## Shadow Hydraulic Launcher

- Hydraulic launcher mounts on standard HMMWV trailer
- Four 10-foot sections fold for transport
- One-man deployable in less than 10 minutes
- Launches in sustained 20-knot crosswinds

## Shadow RQ-7B with Extended Wings

- Length 11.8 feet (ft.)
  - Wingspan 20.4 ft.
  - Maximum gross weight 460 pounds (lb.)
  - Payload capacity 45-80 lb.\*
  - Data link range 125 kilometers (km)
  - Tactical Common Data Link, or TCDL, secure upgrade
  - Single Channel Ground and Airborne Radio System, or SINCGARS, communications relay
  - Maximum speed 110 knots
  - Loiter speed 65 knots
  - Cruise speed 90 knots
  - Maximum altitude 15,000 ft. mean sea level, or MSL\*
  - Endurance eight to nine hours
  - 38 brake horsepower, or bhp, engine with electronic fuel injection upgrade
  - More than 85 percent composite material
- \*depending on mission profile and payload options

## Tactical Automatic Landing System (TALS)

- Inclement weather and day/night performance
- Meets U.S. Army field requirements for automatic recovery, mobility and two-person transportability
- System components:
  - Portable ground tracking subsystem
  - Small airborne transponder
- Recovery in sustained 20-knot crosswinds



## Shadow TUAS Arrested Landing

