

**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**



**PROVIDING CRITICAL BATTLEFIELD INTELLIGENCE**

TEXTRON Systems



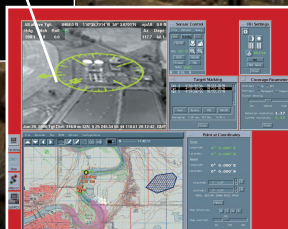
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AAI's One System® is the U.S. Army's premier ground control station (GCS), able to collect battlefield intelligence from multiple unmanned aircraft and deliver it to warfighters.

# 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)

- Increment 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

