

# Shadow Tactical Unmanned Aircraft System (TUAS)

## INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

## MISSION

Provides reconnaissance, surveillance, target acquisition, and force protection for the Brigade Combat Team (BCT) in near-real-time during day/night and limited adverse weather conditions.

## DESCRIPTION

The RQ-7B Shadow Tactical Unmanned Aircraft System (TUAS) has a wingspan of 14 feet and a payload capacity of approximately 60 pounds. Gross takeoff weight exceeds 380 pounds and endurance is more than five hours on-station at a distance of 50 kilometers. The system is compatible with the All Source Analysis System, Advanced Field Artillery Tactical Data System, Joint Surveillance Target Attack Radar System Common Ground Station, Joint Technical Architecture–Army, and the Defense Information Infrastructure Common Operating Environment. The One System Ground

Control Station (OSGCS) is the only Joint-certified Ground Control Station (GCS) in the Department of Defense. The RQ-7B Shadow can be transported by six Air Force C-130 aircraft. It is currently operational in both the Army and Marine Corps.

The RQ-7B Shadow configuration, fielded in platoon sets, consists of:

- Four air vehicles with day/night electro-optical/infrared (IR) with laser designator and IR illuminator payloads
- Two OSGCS on High Mobility Multipurpose Wheeled Vehicles (HMMWV)
- Four One System Remote Video Transceivers
- One hydraulic launcher
- Two ground data terminals
- Associated trucks, trailers, and support equipment

Shadow systems are manned by dedicated Unmanned Aircraft System platoons of 22 soldiers and typically two contractors. Shadow platoons are organic to the BCT. The Soldier platoon consists of a platoon leader, platoon sergeant, unmanned aerial

vehicle (UAV) warrant officer, 12 Air Vehicle Operators/Mission Payload Operators, four electronic warfare repair personnel, and three engine mechanics supporting launch and recovery. The Maintenance Section Multifunctional is manned by Soldiers who also transport spares and provide maintenance support. The Mobile Maintenance Facility is manned by contractor personnel located with the Shadow platoon to provide logistics support to include “off system support” and “maintenance by repair.”

The Shadow also has an early entry configuration of 15 Soldiers, one GCS, the air vehicle transport HMMWV, and the launcher trailer, which can be transported in three C-130s. All components can be slung under a CH-47 or CH-53 helicopter for transport.

## SYSTEM INTERDEPENDENCIES

### In this Publication

HMMWV Family of Vehicles, Single Channel Ground and Airborne Radio System (SINCGARS)

### Other Major Interdependencies

MEP803A 10kW

## PROGRAM STATUS

- **Current:** In production and deployment; flown more than 535,000 hours in support of combat operations in Operation Iraqi Freedom and Operation Enduring Freedom since achieving initial operating capability

## PROJECTED ACTIVITIES

- **FY11–12:** Field remaining production systems; procure and field laser designator, Tactical Common Data Link, and Universal Ground Control Station retrofits; develop and field reliability and product improvements

## ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

## Shadow Tactical Unmanned Aircraft System (TUAS)

### FOREIGN MILITARY SALES

Australia

### CONTRACTORS

#### Shadow System:

AAI Corp. (Textron Systems)  
(Hunt Valley, MD)

#### TCDL:

L-3 Communications (Salt Lake City, UT)

#### Shelter Integration:

CMI (Huntsville, AL)

#### GDT:

Tecom (Chatsworth, CA)

#### Shelters:

General Dynamics (Marion, VA)

#### ACE II Flight:

Athena (Warrenton, VA)

#### Mode IV IFF:

Raytheon (Baltimore, MD)

#### Amplifiers:

CTT (Santa Clara, CA)

