XM307 Integration

*Increased Platform Lethality*

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*Robert Cavoretto, Sr. Program Manager – XM307*  
*GDATP*
XM307 Program

**XM307 System Design & Development (SDD)**
- PM-CSW ARDEC
- GDATP – Weapon & System Integrator
- GDOTS – 25mm Ammunition
- Raytheon – Surrogate Target Acquisition Fire Control
- Initiated Apr04 for XM307 Advanced Crew Served Weapon (ACSW)
- Transition to XM307 Remotely Operated Variant (ROV) for FCS
XM307 Weapon System
ACSW & ROV

Common Attributes
✓ Light Weight
✓ Reduced Recoil
✓ 25mm HEAB & AP Ammunition
✓ Accurate and reliable

ACSW
✓ Ground mount and dismountable vehicle applications
✓ Light weight tripod with T&E
✓ Full ballistic solution Target Acquisition Fire Control
✓ Ring mount and pedestal mount compatible
✓ Converts to .50cal XM312

ROV
✓ Integrated weapon, feed, sensors, and actuators
✓ Reduced integration effort, and weight and volume impact to vehicles.
✓ Remote safe, charge, and fire, self-powered
✓ Dual feed, first round selectable
XM307 ACSW

*Readily Supports Platform Integration*

- Light Weight, Low Recoil, and Self-Powered, Minimizes Platform SWaP Requirements
- Rapid Dismount Capable
- Dual Feed Capable
- Lethal 25mm Munitions
  - Air Burst Defeats Defilade Targets to 2,000m
  - Suppress and Defeat Area Targets to 2,000m
  - Armor Piercing Defeats Light Armor
- Remote Operations Capable
- Day/Night/All Weather Capable

**Unmatched Lethality with a Light Machine Gun Package!**
XM307 / XM312 Weapon System

25mm & .50cal

- Operator level change from 25mm XM307 to .50 cal XM312
  - Four part interchange
  - No special tools
- Fires standard .50 cal ammunition
- Lower recoil, lighter weight, and higher accuracy than legacy weapons

Lightweight and flexible design to defeat variable threats
XM307 / XM312 Mobility
Portability for Dismounted Operations

- Quickly dismounts from vehicle
- Supports Close Combat Fight
- Light & compact
  - Portable over rough terrain
  - 75-85 lb weight savings for most platforms

Enhances Close Combat Employment Flexibility

<table>
<thead>
<tr>
<th>System</th>
<th>40mm Mk-19 Mod3</th>
<th>Cal .50 M2HB</th>
<th>25mm XM307</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weapon Weight (lb)</td>
<td>75.6</td>
<td>84.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Tripod Weight (lb)</td>
<td>65.4</td>
<td>46.1</td>
<td>18.8*</td>
</tr>
<tr>
<td>Fire Control (lb)</td>
<td>N/A</td>
<td>N/A</td>
<td>6.5</td>
</tr>
<tr>
<td>Unloaded System Weight (lb)</td>
<td>141.0</td>
<td>130.1</td>
<td>55.3</td>
</tr>
<tr>
<td>Peak Recoil (lbs)</td>
<td>800</td>
<td>1000</td>
<td>250</td>
</tr>
</tbody>
</table>

* includes Pintle/T&E
XM307 FCS Vehicle Integration
Common Weapon, Common Solution

The XM307 has been selected as the Common Close Support Weapon for the Future Combat System Program

- **FCS Manned Ground Vehicles**
  - FRMV
    - Primary Armament
  - NLOS-C
    - Secondary Armament
  - MCS
    - Secondary Armament
  - C2V
    - Primary Armament

- **FCS Unmanned Ground Vehicles**
  - ARV-A(L)
    - Primary Armament
  - ARV-RSTA
    - Primary Armament

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**Vehicles & Mounts**

**CROWS Mount**
- Accomplished 3Q02
  - Sponsored by JSSAP Office and TACOM-ARDEC
  - GDATP – XM307 Weapon System Integrator
  - Raytheon – Fire Control System
  - Recon Optical, Inc. – CROWS Lightning Mount
- Successful integration & testing
  - Remotely operated weapon/mount system
  - Target, aim, and fire 25mm ammunition

**XUV**
- Accomplished 1Q03
  - Sponsored by JSSAP Office and TACOM-ARDEC
  - GDATP – XM307 Weapon System Integrator
  - Raytheon – Fire Control System
  - Recon Optical, Inc. – CROWS Lightning Mount
  - GDRS – Experimental Unmanned Vehicle
- Successful integration & demonstration
  - Remotely operated weapon/mount/vehicle system
  - Target, aim, and fire 25mm ammunition

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**Stryker Remote Weapon Station**

✅ **Phase 1**
- Accomplished 4Q04
- XM312, .50cal, integrated onto Kongsberg Block 1 RWS
- Successful Integration, Operation, Targeting, & Firing

✅ **Phase 2**
- Accomplished 3Q05
- XM307, 25mm, Integrated onto Kongsberg Block 2 RWS
- Successful Integration, Operation, Targeting, Firing, and Air-Bursting of 25mm rounds
- Dispersion 70% of XM307 SDD Exit Criteria
XM307 Platform Integration

Phase 3 Integration & Stryker Demonstration

- Joint Industry / Government initiative
- Integration and testing at RTTC
- May 11, 2006 Demonstration of system capability, lethality, and portability
  - Integrated XM307 / RWS / Stryker System
  - 25mm TP & TP-S rounds
    - Static vehicle live fire
    - Moving vehicle live fire
  - .50cal Ball & Tracer rounds
    - Static vehicle live fire
    - Moving vehicle live fire
    - Moving vehicle / moving target live fire
  - Dismounted firing
    - 25mm & .50cal
Summary

- Demonstrated capability with multiple platforms
- HEAB, AP, and .50 cal provides a lethality overmatch
- Light weight and low recoil facilitates integration
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