



The Soldier: America's Most Deployed Combat System



**Project Manager Soldier Weapons
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For the
**Armaments Technology Firepower
Symposium and Exhibition**
National Defense Industrial Association

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13 June 2007

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As of 11 APR 2007

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- PM Individual Weapons
- PM Crew Served Weapons

- PM Air Warrior
- PM Land Warrior

- PM Clothing & Equipment
- PM Sensor & Lasers
- PM Soldier Survivability

- Operations
- Logistics
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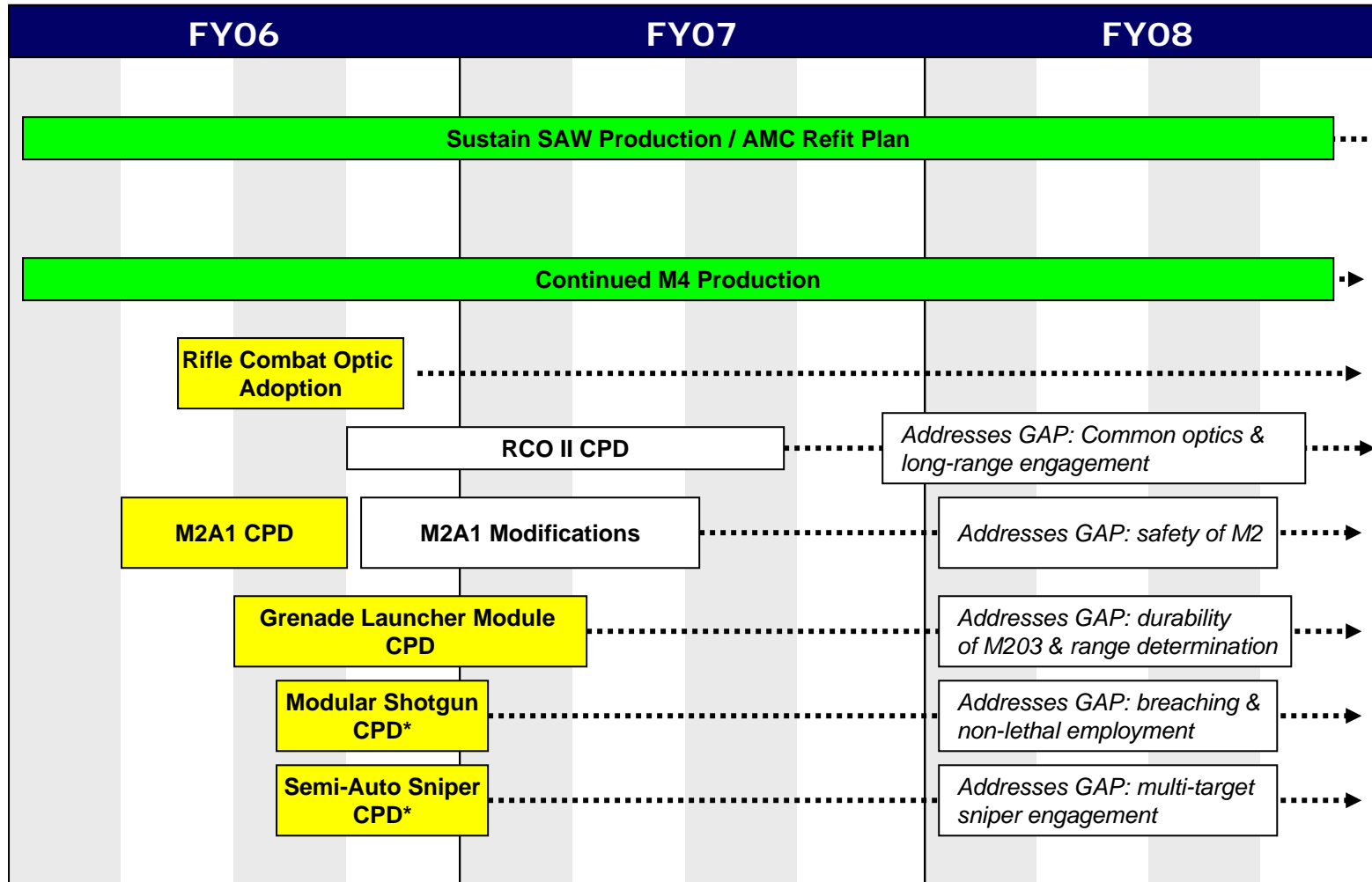
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Near-Term Strategy Implementation

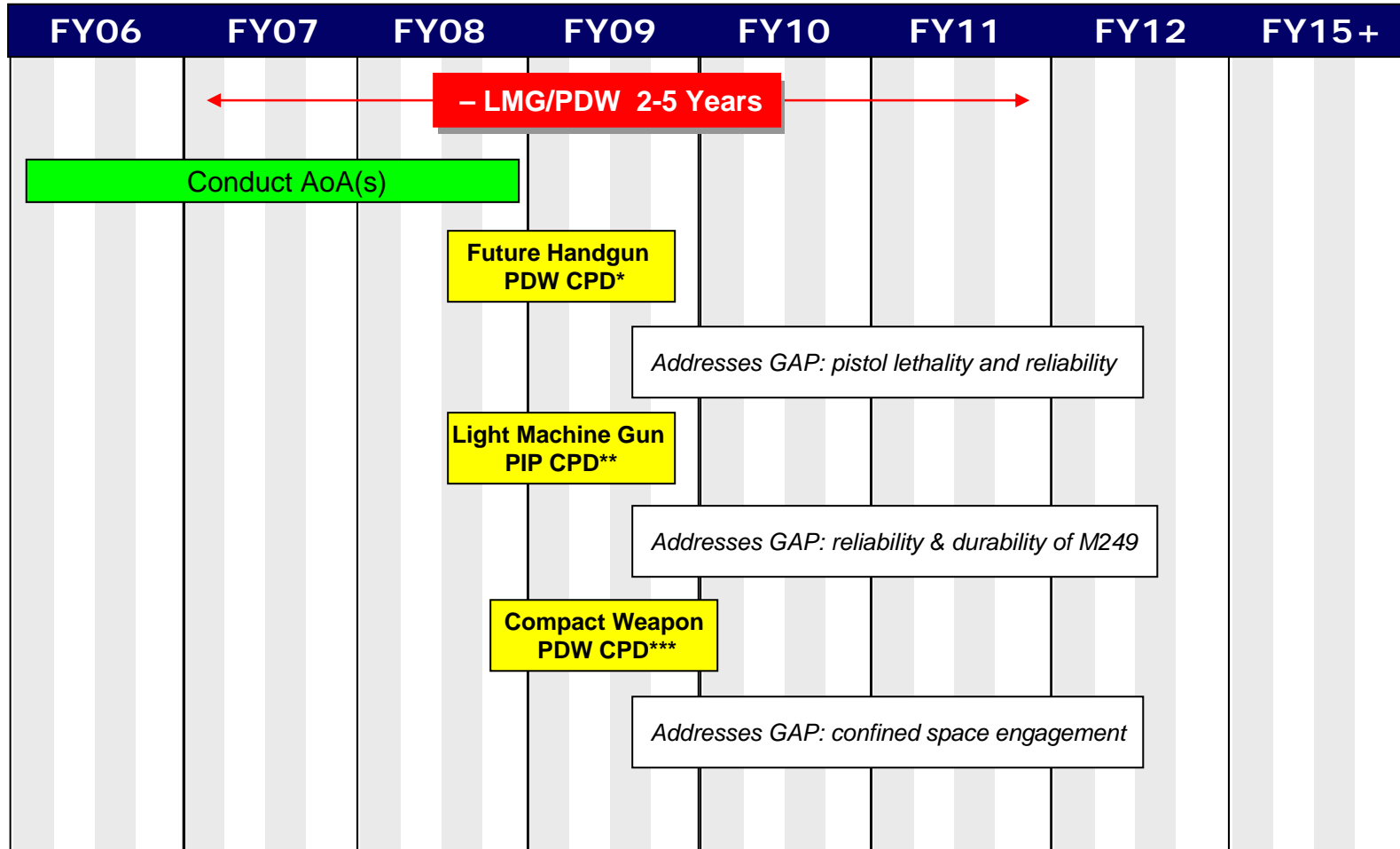


* JROC Validated ORD with Joint Independent Designator
Other SEP accessory efforts not shown.

Sustains Current Force And Addresses Some Gaps Through PIP/COTS Solutions



Mid-Term Strategy Implementation

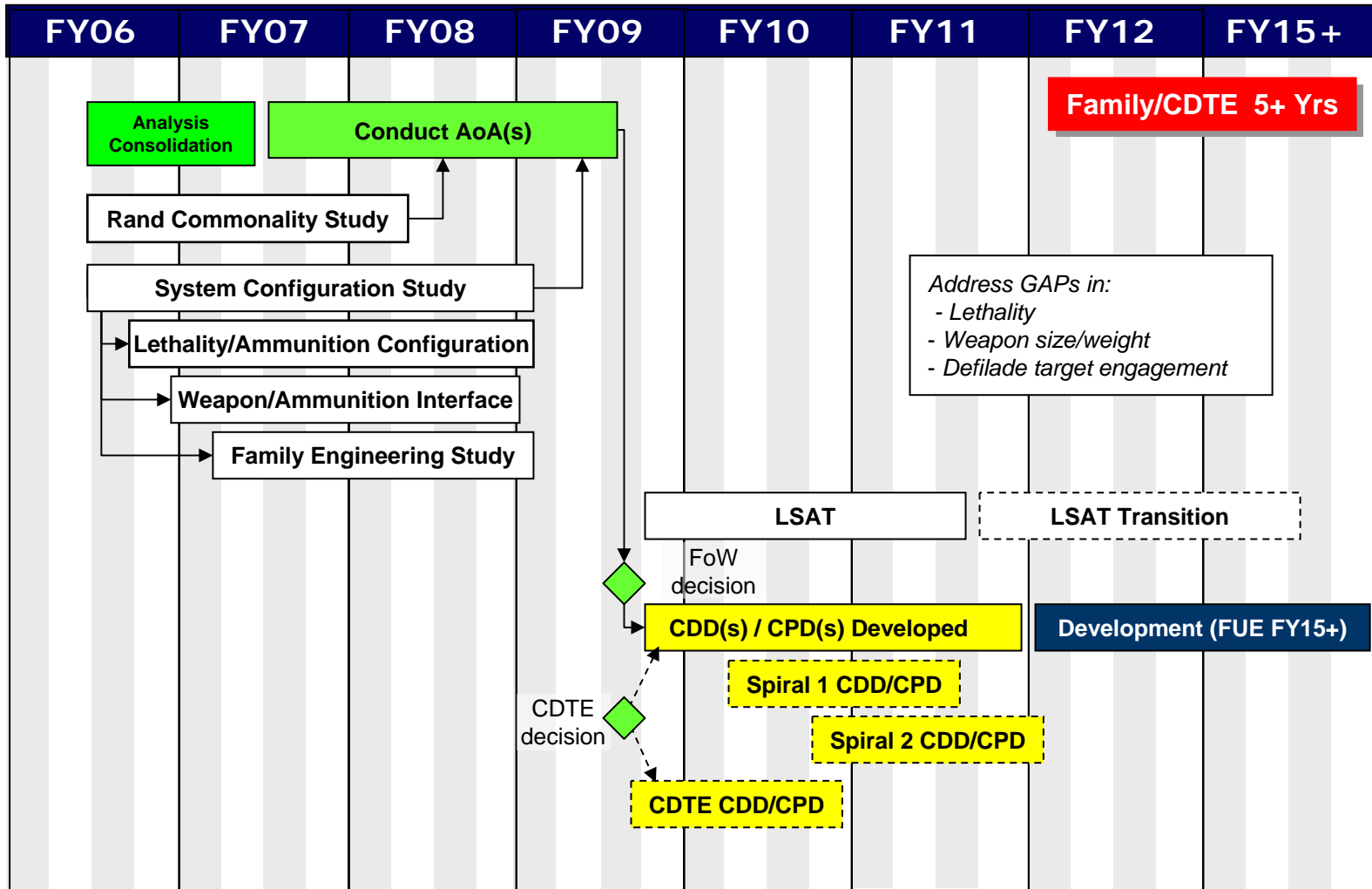


* Pending outcome of SOCOM Combat Pistol Staffing
Source document: SaaS ICD, GSS CDD (PDW Attribute)
 ** Source document: SaaS ICD, GSS CDD, SAW JSOR
 *** AoA to determine configuration.
Source document: SaaS ICD, GSS CDD (PDW attribute)

Addresses Key Current Force Gaps With Specific Solutions



Far-Term Strategy Implementation



Develops More Lethal And Effective Future Systems Based On Appropriate Analysis And Emerging Advanced Technology



Soldier Weapons Mission



Individual

Crew Served



M16A4 Rifle



M16/M203



M4 Carbine



M249 Squad Automatic Weapon (SAW)



MK19 Grenade Machine Gun



M2 .50 CAL Machine Gun



M107 Long Range Sniper Rifle



M240B Medium Machine Gun

Individual Weapons

25mm Ammo
High and Low Velocity



Airburst

Armor Piercing

Crew Served Weapons



XM320 40mm Grenade Launcher



Compact



Designated Marksman



Light Machine Gun

Family of Weapons



XM25 Individual Air Burst Weapon



XM29 Integrated Airburst Weapon System



XM110 Semi-Automatic Sniper System (SASS)



Common Remotely Operated Weapon Station (CROWS)



XM307 Crew Served Airburst Weapon

Counter Defilade



PM Soldier Weapons Programs List



DEVELOPMENT

WEAPONS

1. XM25, Individual High Explosive Air Burst Weapon System Technology Demonstration
2. XM101, Common Remotely Operated Weapon Station (CROWS)
3. Advanced Crew Served Weapon (ACSW) Programs

SOLDIER ENHANCEMENT PROGRAMS

4. XM26, 12 Gauge Modular Accessory Shotgun System (MASS)
5. Future Handgun System
6. Family of Small Arms Suppressors (FoSASS)
7. M68 Close Combat Optics Re-competition
8. XM1116, 12 Gauge Extended Range Non-Lethal Cartridge
9. XM1022, Sniper Ammunition For M107
10. XM110, 7.62 Semi-Automatic Sniper System (SASS)
11. Close Quarters Battle (CQB) Kit
12. XM1041/XM1042/XM1071 - Close Combat Mission Capability Kit (M4/M16/M249/M9/M11)
13. Advanced Sniper Accessory Kit (ASAK)
14. XM320, Grenade Launcher Module (GLM)
15. M2 A12 Quick Change Barrel Kit Program

BLOCK MOD PROGRAMS

16. CROWS-Lightning Remote Weapons Station
17. XM150, Rifle Combat Optic (RCO)
18. M2E2 Machine Gun Lightweight Tripod Program
19. Swing Arm Mount For HMMWVs
20. HMMWV Improved Auxiliary Weapon Mount
21. XM240E6, Medium Machine Gun Weight Reduction Program
22. M249 SAW 200 Round Soft Pack

AMMO BLOCK MOD PROGRAMS

23. XM1037, Short Range Training Round For M4, M16 and M249
24. Lightweight Small Caliber Ammunition
25. Proximity Fuzed Door Breaching Cartridge
26. 40mm Day Night Training Cartridge (FCT)

RFI FY05 ITEMS

- TA31F - 4X ACOG
- Weapon Light
- M24 Small Binoculars
- M122/A1 Tripods
- M249/M240B Spare Barrel Bag
- Three Point Sling
- Improved Spotting Scope With Tripod
- Improved Cleaning Kit
- Improved Buttstock For M4 Carbine
- Forward Grip Bipod
- M203 Day/Night Sight
- Back Up Iron Sight
- M249 Rail
- M240B Rail
- M249 Ammo Soft Pack
- M240B Combat Ammo Pack
- M192 Lightweight Tripod
- M249 Short Barrel
- M249 Collapsible Buttstock
- M4/M5 Modular Weapon System
- M145 Machinegun Optic
- M68 Close Combat Optic

PROCUREMENT

27. M151E1 & M151E2 Protector Remote Weapon System (RWS)
28. MK19, Grenade Machine Gun
29. MK19 MODS
30. Mod Kit
31. Lightweight Adjustable Sight Bracket
32. Tactical Engagement Simulator (TES)
33. M107 Semi Automatic Long Range Sniper Rifle
34. M240B/H/E6, 7.62mm Medium MG
35. M240B MODS
36. M192, Light Weight Ground Mount For MG
37. Improved Bipod
38. M240B Collapsible Buttstock
39. Improved Flash Suppressor
40. Combat Ammunition Pack
41. M240B Short Barrel
42. M240B Improved Buttstock
43. Sling Assembly For The M240B
44. M249, 5.56mm Squad Automatic Weapon
45. M249 MODS
46. M192, Lightweight Ground Mount For MG
47. MG Front Rails
48. Improved Bipod
49. M249 Improved Collapsible Buttstock
50. Short Barrel For The M249
51. Sling Assembly For M249
52. M16A4 5.56mm Rifle
53. M16 Rifle Mods
54. M68 Close Combat Optics (CCO)
55. Close Quarters Battle (CQB) Kit (Production)
56. M4, 5.56mm Carbine
57. M4 Mods
58. M145 Machine Gun Optics
59. M25 Stabilized Binoculars
60. M24 Mini Binocular

AMMO PRODUCTION PROGRAMS*

61. M903/M962 Cal .50 SLAP/SLAPT
62. M1001, 40mm Canister Round
63. M100, Grenade Rifle Entry Munition (GREM)
64. M862 5.56mm Short Range Training Ammunition
65. M1030 12 Gauge Breaching Round
66. M973/M974, 7.62 Short Range Training Ammo
67. M992 IR Illumination Cartridge
68. M281 40mm Target Practice Cartridge

* Programs Managed By PM Soldier Weapons
For PEO Ammunition In Accordance With MOA



Individual Weapons





XM25

Demonstrated Counter Defilade Capabilities



High Explosive
Air Bursting



Training



Current
25mm
Low Velocity Ammo

- Semi-automatic Rifle
- Family Of 25mm Ammunition
- Defeat Defilade Targets
- 500 Meter Point Targets
- 500-700 Meters Area Targets
- Fully Integrated Target Acquisition/Fire Control
 - 2x Thermal Sight With Zoom
 - 2x Direct View Optic
 - Laser Rangefinder
 - Ballistic Computer
 - Digital Compass (Cant, Bearing, Tilt)
 - Fuze Setter
 - Internal Display
 - Environmental Sensors

Armor
Piercing



Door
Breaching



Anti-
Personnel



Non-Lethal
(Blunt)



Non-lethal
(Airburst)



Future
Development



XM320 Grenade Launcher



Description:

- Grenade Launcher
(Mounts To M16/M4 Series Of Weapons)

Capabilities:

- Improves Squad Level Indirect/Direct Grenade Launching Capability Out To 400 Meters
- Greater Reliability And Safety Than M203
- Greater Target Acquisition (Day And Night)
- Capable Of Being Fired As A
*Stand-Alone Weapon
- Able To Fire Wider Array Of Munitions

Status:

- Contract Awarded To Heckler & Koch Defense
5 March 2007
- CPD Approved Feb 07 (Designated “Army” Only)
- I&KPT Completed May 07
- IOT & E Planned For 4QFY07



*Stand-Alone



XM26, 12 Gauge Modular Accessory Shotgun (MASS)



Description:

- A Lightweight Shotgun System That Attaches To The M4

Capabilities:

- Provides The Capability To Fire Lethal, Non-lethal And Door Breach 12 Ga. Rounds
- Shotgun Can Be Zeroed To The Sighting System Of The Host Weapon
- Provides The Lethality Equivalent Of A Stand-Alone 12 Ga. Shotgun
- Capable Of Being Fired As A *Stand-Alone Weapon

Status:

- Vertu Corporation Is Prime Of SDD Contract
- MS C/LRIP Approved Mar 07



*Stand-Alone



XM150, Rifle Combat Optic (RCO)



Description:

- A 4 Power Magnified Optic That Will Attach To M4s, M16s And M249s And Will Improve The Soldier's Ability To Recognize And Engage Targets From 0-600 Meters

Capabilities:

- Improved Capability To Recognize And Engage Targets 0-600m
- Allow Soldier To Rapidly Transition Between Close Quarter And Long-Range Engagements

Status:

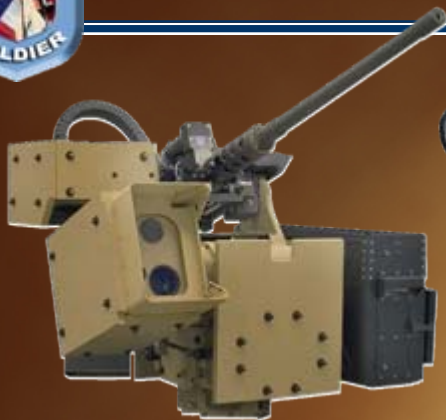
- This Capability Will Be Procured Through Full And Open Competition
- Army Adopted USMC RCO CPD On 09 Aug 06
- Program Is Partially Funded
- Full And Open Competition Ongoing



4x Rifle Combat Optic



Crew Served Weapons





XM307



Description:

- The XM307 Is A Lightweight 2-man Portable Crew Served Weapon Which Will Provide Enhanced Capabilities To The Soldier Improving Lethality And Survivability

Capabilities:

- Lightweight, 2-Man Portable, Crew Served Weapon
- System With 25mm Air Bursting Munitions
- Subsystems Include:
 - Weapon
 - Target Acquisition/Fire Control (TA/FC)
 - 25mm High Explosive Air Bursting And Armor Piercing Ammunition
 - Lightweight Tripod





Mobility

Heavy Firepower For The Close Combat Fight



System	40mm MK19 Mod 3	Cal .50 M2HB	7.62mm M240	25mm XM307	Cal .50 XM312
Weapon Weight lbs	75.6	84.0	24.2	28.0	34.0
Tripod Weight lbs	65.4	46.1	19.2	13.0	18.8
Fire Control lbs	N/A	N/A	N/A	6.5	N/A
Unloaded System Weight lbs	141.0	130.1	43.4	47.5	52.8
Peak Recoil lbs	800	1000	80	250	250



- **Low Recoil Burden On Weapon Station**
- **Quickly Dismountable From Vehicle Platform**
 - **Portable Over Rough Terrain**
- **Light & Compact**
 - **80-90 lb Weight Savings**

Enhances Close Combat Employment Flexibility



XM240E6, Medium Machine Gun Weight Reduction Program



Description:

- This Program Will Evaluate High Performance, Lightweight Material Alternatives And Alternate Manufacturing Methods In Fabricating Major M240B Components

Capabilities:

- Reduces The Soldier's Combat Load
- Allows Easier Handling And Movement Of Weapon
- Reduced Weapon Weight By 4.5 lbs



Status:

Past Events:

- Completed Coating Confidence Test – Sep 06

Current Events:

- Developmental Testing – Jan 2007

Next Milestone:

- Type Classification Standard – Aug 2007



M240H 7.62mm MG (Aviation Version)



Description:

- 7.62mm Aviation Machine Gun Which Improves The Self Protection Capabilities Of The UH-60 And CH-47 Helicopters



Capabilities:

- Demonstrate Reliability Equal To The M240B
- Removable/Employable In A Ground Role

Pre-Planned Product Improvements (P3I):

- Hydraulic Buffer Added To Spade Grip
- Lightweight Aluminum Ammo Can
- Lightweight Receiver



High Capacity Feed System:

- Provides Two Minutes Of Continuous Suppressive Fire (UH60 Flight Tests May 06)



2,309 Systems Fielded To Date, Fielding Complete End Of FY07



M151 Protector Remote Weapon System



Weight:

- Above The Roof Including (4) M6 Smoke Grenade Launchers: 279 lbs (w/o M6 Smoke Grenade Launchers: 245 lbs)
- Total Weight: 372 lbs (w/o M6 Smoke Grenade Launchers: 338 lbs)

Supported Weapons:

- MK19, M2, M240 (Deferred)
- Growth To XM307/XM312, MK47 & Javelin

Sensor Suite:

- Color 27x Day Sight
- Dual FOV Night Sight (w/2x E-Zoom)
- Auto Focus
- STORM - Laser Range Finder
- IR Pointer (Low And High)
- Visible Pointer
- Low Ammo Sensor



Block II Features:

- Stabilized
- Four-Axis Independent System – Automatically Corrects For Super Elevation And Drift
- Embedded Training & Diagnostics

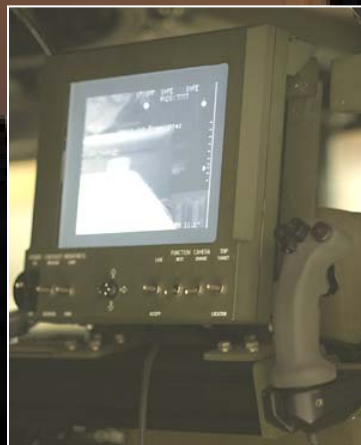
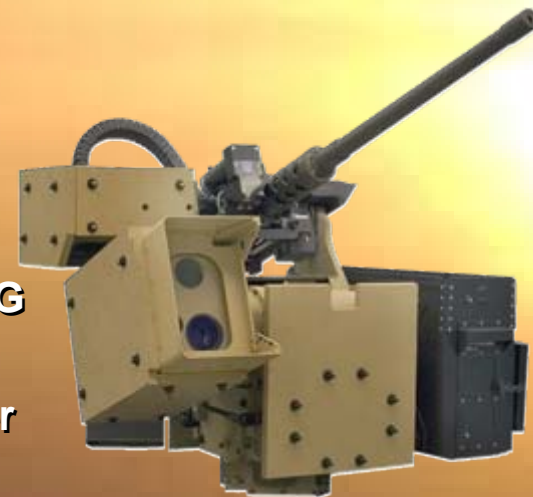




Common Remotely Operated Weapon Station (CROWS) Description



- Provide Soldiers With Capability To Acquire And Engage Targets At Maximum Effective Range While Protected By Vehicle Armor
- Supported Weapons
 - MK19 GMG, Cal .50 M2 MG, M249 SAW, M240B MG
 - Growth To M230 & XM307
 - Weapons Can Be Quickly Interchanged By Soldier
- Sensor Suite Supports Day/Night Engagements
- Can Zoom Optics On Target Independent Of Gun Super Elevation
- Two-axis Stabilized Mount, Laser Rangefinder & Fire Control Software Support On-the-move Target Acquisition & First Burst Target Engagements



Provides Extended Range Surveillance And Detection Of IED Emplacements



CROWS-Lightning Description



- **Lightweight Application For Various Wheeled & Tracked Vehicles (From HMMWVs & Heavy Trucks To Armored Personnel Carriers)**
 - 180 lbs Above Roof Including M240 & Ammo (200 Rds)
- **Moves Unprotected Gunners Into Vehicle Interiors**
- **Day/Night Capability To Identify & Defeat Targets Out To Max Effective Range Of Weapons While On-The-Move**
- **M240 Or M249 Machine Guns With Growth To Advanced Crew Served Weapon (XM307)**
- **Powered By Current Vehicle Capability**
- **2-Axis Stabilization**
- **Traverse: 360° Continuous**
- **Range Of Elevation: -15° To +45° (Objective: -20° To +60°)**
- **Azimuth Slew Rate: 60°/sec**
- **Elevation Slew Rate: 60°/sec**
- **Safety Features:**
 - Programmable Stops In Traverse
 - Manual/Emergency Back-Up Operation Of Weapons Through Top Hatch





XM110, 7.62mm Semi-Automatic Sniper System (SASS)



Description:

- Effective Against Personnel Targets And Light Materiel Targets
- Supplements Sniper's Role In Combat Operations
- Greater Firepower & Possible Standoff Ranges To Improve Sniper Survivability

Capabilities:

- Rapid Fire/Rapid Reload
- Suppressed Sniper Rifle
- Exceeds Rate Of Fire And Lethality Of M24 SWS
- Primarily Anti-personnel Ranges \geq M24 SWS
- Enhanced Sniper Spotting Scope (XM151) And Bipod

Status:

- Preparing For MS C/LRIP
- UMR Fielded To 10th Mtn.



Grenade Rifle Entry Munition (GREM)



Description:

- The GREM Uses An Explosive Warhead With A Standoff Rod, Has Little Back Blast, Is Effective Between 15 And 40 Meters, And Is Aimed And Fired In The Same Manner As A Rifle Grenade

Capabilities:

- Effective Against All Types Of Doors Without Endangering Troops Or Sacrificing The Element Of Surprise
- Can Quickly Destroy A Multitude Of Door Materials, Including Steel
- GREM Has A Maximum Range Of 40 Meters (~130 ft)

Status:

- Urgent Materiel Released (MR) In Support Of OIF
- Full MR In 2Q FY07
- In Iraq Today



**“Every Soldier is a
Rifleman First”**

GEN Schoomaker





Back Up Slides



XM1041/XM1042, XM1071 Close Combat Mission Capability Kit



**Pistol
XM1041**



**Rifle
XM1042**



**SAW
XM1071**



Description:

- Mission Rehearsal Exercise (MRE) System Consisting Of The M16/M4/M249/M9/M11 Family Of Weapons, Marker Munitions, And Personal Protective Gear
- Used To Rehearse Force-On-Force Close Range Marksmanship Techniques, Tactics, And Procedures (TTP)
- Fires 5.56mm And 9mm Dye-Marker Munitions Through Standard Military Issue Weapons

Capabilities:

- Allows for Realistic Force-On-Force Training
- Identify Shooter And Shot Placement
- Operator Installed
- Must Not Penetrate Skin Thru Hot BDU At 5m(T) And 0M(O)
- Must Not Fire Service Ammo
- Must Not Fracture SWD Goggles At 12 Inches





Weapon System Components



- 7.62mm SR-M110 Match Rifle
- 20-Round Magazine (4 each)
- 10-Round Magazine (4 each)
- 600 Meter Backup Iron Sight
- Harris Bipod LM-S
- Bipod Rail Adapter
- Leupold 3.5-10x Scope With TMR® Reticle
- Padded Scope & Crown Cover
- Zippered Scope Soft Case
- Scope Caps
- One-Piece Long Range Scope Mount
- Tan Leather Competition Sling Assy
- Military Sling Swivels Installed On Sling
- SASS 7.62mm Sound Suppressor
- Magazine Pouches
- System Transport & Storage Case
- Weapon & Optic Cleaning Kits
- Weapon Deployment Kit
- Dewey Special 35.5" Coated Rod
- Bore Rod Guide for Dewey Rod
- DMR Flex Rod Kit