

Counter-Rocket, Artillery, Mortar (C-RAM)/ Indirect Fire Protection Capability (IFPC)

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Integrates multiple Army- and DoD-managed systems and commercial-off-the-shelf systems with a command and control (C2) system to provide protection of fixed and semi-fixed sites from rockets and mortar rounds.

DESCRIPTION

The Counter-Rocket, Artillery, Mortar (C-RAM) System-of-Systems (SoS) was developed in response to a Multi-National Force-Iraq Operational Needs Statement (ONS) that was validated in September 2004. An innovative SoS approach was implemented in which multiple DoD Program of Record systems were integrated with commercial-off-the-shelf items to provide seven C-RAM functions: sense, warn, respond, intercept, C2, shape, and protect.

C-RAM component systems are: Forward Area Air Defense Command and Control (FAAD C2) system and Air and Missile Defense Workstation for “C2”; Lightweight Counter Mortar Radar and Firefinder Radars for “sense”; Land-based Phalanx Weapon System (LPWS) for “intercept”; and Wireless

Audio/Visual Emergency System and a wireless LAN for “warn.” “Response” is provided thru C-RAM integration with Army/Joint mission command systems.

Using this SoS approach, C-RAM completed development, integration, and testing in April 2005, meeting the requirements of the ONS. The C-RAM system was fielded five months after initial funding and just eight months after ONS validation. C-RAM SoS is currently deployed in two theaters of operation.

In transition to the IFPC acquisition program, IFPC Increment 1 will field the C-RAM warn capability to all Army Brigade Combat Teams.

SYSTEM INTERDEPENDENCIES

Other Major Interdependencies
Army and Marine Corps Battle Command Systems, Sentinel Radar

PROGRAM STATUS

- **1QFY11:** LPWS theater upgrades complete
- **1QFY11-4QFY11:** C-RAM sense and warn fielding to Operation Enduring Freedom (OEF)
- **1QFY11:** Near-term C-RAM initiatives

approved as a result of 2010 Air and Missile Defense (AMD) Capability Portfolio Review (CPR)

- **3QFY11:** C-RAM Program Directorate transition to PEO Missiles and Space
- **3QFY11:** C-RAM SoS demonstration
- **Current:** Sustainment of fielded C-RAM SoS capability

PROJECTED ACTIVITIES

- **1QFY12:** Complete C-RAM sense and warn fielding to OEF
- **2QFY12:** Initiate C-RAM support to Department of State/Office of Security Cooperation-Iraq efforts
- **2QFY12:** Initiate development/test/integration for near-term C-RAM initiatives
- **2QFY12:** Conduct IFPC Increment 1 Operational Assessment
- **3QFY12:** IFPC Increment 1 Milestone C
- **4QFY13:** Field C-RAM intercept capability to 5-5 ADA Battalion
- **2QFY14:** Begin fielding C-RAM initiatives

ACQUISITION PHASE

Technology Development

Engineering and Manufacturing Development

Production and Deployment

Operations and Support

Counter-Rocket, Artillery, Mortar (C-RAM)/Indirect Fire Protection Capability (IFPC)

FOREIGN MILITARY SALES

Australia, United Kingdom

CONTRACTORS

Hardware/Integration/Fielding/

Contractor Logistics Support:

Northrop Grumman (Huntsville, AL)

LPWS:

Raytheon Missile Systems (Tucson, AZ)

Software Development/Maintenance:

Northrop Grumman (Redondo Beach, CA)

Common Hardware, Software:

General Dynamics (Taunton, MA)

Shelters and Training:

Northrop Grumman (Huntsville, AL)

