

CLEARED
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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

COMMON INFRARED COUNTERMEASURES (CIRCM)

December 2021 Selected Acquisition Report (SAR)



December 31, 2021

Department of the Army

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Executive Summary

Program Highlights Since Last Report (Congress): The Common Infrared Countermeasure (CIRCM) is the next generation lightweight, laser-based infrared countermeasure component that will interface with both the Army's Common Missile Warning System and future missile warning systems to defeat current and emerging missile threats to Army rotary-wing, tilt-rotor and small fixed-wing aircraft. For CY 2021, the PEO Intelligence, Electronic Warfare, and Sensors (IEW&S) certifies the CIRCM requirements are stable and funding is adequate for the program to execute within its baseline cost parameters. There are no increased programmatic or operational risks since the last SAR report.

CIRCM completed Initial Operational Test & Evaluation (IOT&E) on December 18, 2019 and concluded a comprehensive test program with Army Test and Evaluation Command (ATEC) and Director of Test and Evaluation (DOT&E) oversight. DOT&E provided a successful Beyond Low Rate Initial Production (BLRIP) report to Congress on September 28, 2020 stating CIRCM is effective, suitable and survivable.

On April 13, 2021 CIRCM received approval to enter Full Rate Production (FRP) and awarded a five (5) year Indefinite Delivery Indefinite Quantity (IDIQ) contract to Northrop Grumman (NG) for CIRCM B-Kits and services to include Engineering, Contractor Logistics Sustainment (CLS), Repairs, and Field Service Support. The program awarded the first FRP Delivery Order (DO) for 120 B-Kits in conjunction with the IDIQ award. In June 2021, NG completed B-Kit deliveries from the Low Rate Initial Production (LRIP) 3 DO 1 contract and NG continues to deliver LRIP 3 B-Kits from DO 2 according to schedule. The CIRCM office works closely with DCMA who maintains a presence at NG to monitor progress and there are no risks to production at this time.

Additional highlights for CY 2021 include New Equipment Training (NET) conducted in May 2021 with the First Unit Equipped (FUE), the successful completion of flight testing on the AH-64E platform, and Tri-Service Committee approval in December 2021 which will pave the way for Foreign Military Sales (FMS). Lastly, the system accrued additional hours through flight testing in CY 2021 and system reliability continues to exceed requirements.

CIRCM has met the Initial Operation Capability (IOC) requirements for three (3) of the four (4) platforms (UH-60M, HH-60M, and CH-47F), and is on track to complete the last platform (AH-64E) prior to the September 2022 threshold date established in the Acquisition Program Baseline (APB). The program was also approved to implement an Engineering Change Proposal (ECP) for the laser Line Replaceable Unit (LRU) which

will increase capability against near-peer threats established in the Capabilities Production Document (CPD). CIRCM is on track to begin testing the enhanced laser in FY 2022.

For initial fielding, CIRCM will be supported through interim CLS provided by NG. CIRCM is on track to transition to organic sustainment through the execution of a Public-Private Partnership (PPP) utilizing organic depots and industry partners. The program has the necessary contract support in place to support transition timelines and is working with the Army Communications-Electronics Command (CECOM) to stand-up required depot capabilities and facilities.

There are no risks to the sustainment strategy at this time.

History of Significant Developments Since Program Initiation:

Date	Description
Jul-2009	Materiel Development Decision (MDD).
Dec-2011	Milestone A.
Aug-2015	Milestone B.
Sep-2018	Milestone C.
Dec-2019	Initial Operational Test & Evaluation (IOT&E).
Apr-2021	Full Rate Production (FRP) Decision.

Schedule

Schedule Events

Event Title (or Header)	Current Objective	Current Threshold	Current Estimate/ Actual Date	Deviation?
MDD	Jul-2009	Jul-2009	Jul-2009	
Milestone A	Dec-2011	Dec-2011	Dec-2011	
Preliminary Design Review	Jul-2013	Jul-2013	Jul-2013	
Milestone B	Aug-2015	Aug-2015	Aug-2015	
Critical Design Review	Oct-2016	Oct-2016	Oct-2016	
Milestone C	Sep-2018	Sep-2018	Sep-2018	
LRIP 2	Jun-2019	Dec-2019	Dec-2019	
IOT&E Start	Jun-2019	Dec-2019	Jun-2019	

First Unit Equipped	Feb-2020	Feb-2020	Feb-2020	
Full Rate Production	Apr-2021	Apr-2021	Apr-2021	
Initial Operational Capability	Sep-2021	Sep-2022	Jun-2022	

Significant Schedule Risks

Even	Date	Description

<i>Schedule Notes:</i>	<i>Schedule Deviation Explanations:</i>
<p>Changes from the 2019 SAR submission are as follows:</p> <p>First Unit Equipped (FUE) was accomplished earlier than anticipated (Feb 2020 vs May 2020). - Full Rate Production (FRP) approval was received later (Apr 2021) than planned (Jun 2020) due to COVID impacts but still within Threshold APB parameters.</p>	

Performance

Performance Attributes					
Current Objective	Current Threshold	Current Estimate	Deviation?	Demonstrated Performance	Date
Attribute Title:	Sustainment Materiel Availability			KPP	
88%	74%	90.8%		Current estimate based on AMSAA modeling	5/31/2020
Attribute Title:	Sustainment Operational Availability			KPP	
98%	95%	99.2%		Current estimate based on AMSAA modeling	5/31/2020
Attribute Title:	System Survivability / Probability of Countermeasure (Pcm)			KPP	
See classified SAR	See classified SAR	See classified SAR		See classified SAR	

<i>Performance Notes:</i>	<i>Performance Deviation Explanations:</i>
Changes from the 2019 SAR submission are as follows: Sustainment Materiel Availability and Sustainment Operational Availability estimates were both improved based on increased reliability. Current estimates are based on AMSAA modeling. Actual performance data will be updated once CIRCM is fielded.	

Acquisition Budget Estimate

Total Acquisition Cost

Budget Year: 2023 Base Year: 2010

Appropriation Category (\$ Millions)	Objective Base Year (current APB)	Threshold Base Year (current APB)	Budget Estimate Base Year	Budget Estimate Then Year	Deviation?
RDT&E	\$915.9	\$1,007.5	\$918.07	\$958.18	
Procurement (MILCON)	\$3,429.3	\$3,772.2	\$3,409.57	\$4,151.73	
Acq-O&M	\$24.4	\$26.8	\$24.51	\$29.48	
Total Acquisition	\$4,369.6		\$4,352.2	\$5,139.4	
PAUC	\$2,389	\$2,628	\$2,380	\$2,810	
APUC	\$1,925	\$2,118	\$1,914	\$2,331	

Total End Item Quantity

Quantity	Current APB	Current Estimate
Development Qty	48	48
Procurement Qty	1,781	1,781

Budget Notes:

Quantity Notes:

Cost Deviation Explanations:

Risk and Sensitivity Analysis

Current Procurement Risks

Unit Cost

Current Baseline Compared with Current Estimate

Current Baseline Base Year: 2019

Category (\$ Millions)	Current Baseline	Current Estimate	% Change	Breach? Significant or Critical
Program Acquisition Unit Cost				
Acquisition Cost	\$4,369.6	\$4,352.2		
Program Quantity	1,829	1,829		
PAUC	\$2,389	\$2,380	-0.40%	None
Average Procurement Unit Cost				
Procurement Cost	\$3,429.3	\$3,409.6		
Procurement Quantity	1,781	1,781		
APUC		\$1,914	-0.00%	None

Original Baseline Compared with Current Estimate

Original Baseline Base Year: 2015

Category (\$ Millions)	Original Baseline	Current Estimate	% Change	Breach? Significant or Critical
Program Acquisition Unit Cost				
Acquisition Cost	\$3920.6	\$4352.2		
Program Quantity	1,829	1,829		
PAUC	\$2,144	\$2,380	11.01%	None
Average Procurement Unit Cost				
Procurement Cost	\$3,042.8	\$3,409.6		
Procurement Quantity	1,781	1,781		
APUC	\$1,708	\$1,914	12.05%	None
Unit Cost Notes:				
PAUC and APUC increases from Original Baseline account for Full Rate Production (FRP) Baseline's update based on contract actual procurement data from Low Rate Initial Production. Update also includes additional cost required to upgrade from Solaris Laser to the Jupiter Laser.				

Contracts

External Government Activities

Activity Title:	AH64Ev4 A-Kit Development				
Supported Phase	Development	CAGE Code		City	Fort Eustis
Work Start Date		CAGE Legal Name	Aviation Development Directorate- Eustis	State/Province	VA
Notes	Design/development and delivery of 100 AH64Ev4 A-Kits and 100 wing-tip pods.				

Activity Title:	Flight Testing & Support				
Supported Phase	Development	CAGE Code		City	Redstone Arsenal
Work Start Date		CAGE Legal Name	Redstone Test Center (RTC)	State/Province	AL

Notes	Continued test and analysis support for the CIRCM program. For CY 2021 support includes AH-64E flight testing and SW update testing. RTC will continue to provide testing support for A-Kit integration on additional rotary-wing platforms in future years.
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Activity Title:	Simulated Threat Testing & Support				
Supported Phase	Development	CAGE Code		City	Eglin AFB
Work Start Date		CAGE Legal Name	Guided Weapons Evaluation Facility (GWEF)	State/Province	FL
Notes	The GWEF laboratory utilizes CIRCM LRUs to provide simulated threat engagement against a wide range of KPP and KSA threats and measure effectiveness.				

Contracts and Efforts

Contract Number:	W58RGZ19D0110	Order Number:	W58RGZ19 F0563	Contract Title:	LRIP 3 B-Kits Delivery Order 1	
CAGE Code	26916	City	Rolling Meadows	Contracting Office	ACC-RSA	
CAGE Legal Name	Northrop Grumman Systems Corporation	State/Province	Illinois	Contract Strategy	FAR 16.5: Indefinite Delivery Indefinite Qu	
Effort Number						
Supportive Phase	Production	Latest Modification Number	P00016	Definitization Date	7/31/2019	
Contract Type	Firm-Fixed-Price	Latest Modification Date	10/7/2021	Work Start Date	7/31/2019	
Technical Data Rights	Government Purpose License Rights to Technical Data-- Noncommercial Items & Software	Notes	DO 1 under LRIP 3 contract. Includes 63 B-Kits plus spare Shop Replaceable Units (SRU).			
Contract/Effort Price, Quantity and Performance (\$M)						
Initial Target Price	\$87,111,561.15	Current Target Price	\$87,111,561.15	Contractor's EAC	\$87,111,561.15	
Initial Ceiling Price	\$87,111,561.15	Current Ceiling Price	\$87,111,561.15	PM's EAC	\$87,111,561.15	
Initial Quantity	63	BAC	\$87,111,561.15	BCWP	\$87,111,561.15	Work Completed 100%
Current Quantity	63	ACWP	\$87,111,561.15	BCWS	\$87,111,561.15	Cost Variance -\$0.00
Delivered Quantity	63					Schedule Variance -\$0.00
Factors Contributing to Cost Variance and Projected Effects on Program Costs:				Factors Contributing to Schedule Variance and Projected Effects on Program Schedule:		

Contract Number:	W58RGZ19D0110	Order Number:	W58RGZ20 F0231	Contract Title:	LRIP 3 B-Kits Delivery Order 2
CAGE Code	26916	City	Rolling Meadows	Contracting Office	ACC-RSA

CAGE Legal Name	Northrop Grumman Systems Corporation	State/Province	Illinois	Contract Strategy	FAR 16.5: Indefinite Delivery Indefinite Qu		
Effort Number							
Supportive Phase	Production	Latest Modification Number	P00006	Definitization Date	1/23/2020		
Contract Type	Firm-Fixed-Price	Latest Modification Date	7/1/2021	Work Start Date	1/23/2020		
Technical Data Rights	Government Purpose License Rights to Technical Data-- Noncommercial Items & Software	Notes	DO 2 under LRIP 3 contract. Includes 101 B-Kits.				
Contract/Effort Price, Quantity and Performance (\$M)							
Initial Target Price	\$118,299,471.00	Current Target Price	\$118,299,471.00	Contractor's EAC	\$118,299,471.00		
Initial Ceiling Price	\$118,299,471.00	Current Ceiling Price	\$118,299,471.00	PM's EAC	\$118,299,471.00		
Initial Quantity	101	BAC	\$118,299,471.00	BCWP	\$118,299,471.00	Work Completed	61.39 %
Current Quantity	62	ACWP	\$118,299,471.00	BCWS	\$118,299,471.00	Cost Variance	-\$0.00
Delivered Quantity	62					Schedule Variance	-\$0.00
Factors Contributing to Cost Variance and Projected Effects on Program Costs:				Factors Contributing to Schedule Variance and Projected Effects on Program Schedule:			

Contract Number:	W58RGZ21D0028	Order Number:	W58RGZ21 F301	Contract Title:	FRP B-Kits Delivery Order 1		
CAGE Code	26916	City	Rolling Meadows	Contracting Office	ACC-RSA		
CAGE Legal Name	Northrop Grumman Systems Corporation	State/Province	Illinois	Contract Strategy	FAR 16.5: Indefinite Delivery Indefinite Qu		
Effort Number							
Supportive Phase	Production	Latest Modification Number	P00003	Definitization Date	4/30/2021		
Contract Type	Firm-Fixed-Price	Latest Modification Date	7/21/2021	Work Start Date	4/30/2021		
Technical Data Rights	Government Purpose License Rights to Technical Data-- Noncommercial Items & Software	Notes	DO 1 under FRP contract. Includes 120 B-Kits plus spares.				
Contract/Effort Price, Quantity and Performance (\$M)							
Initial Target Price	\$155,209,982.38	Current Target Price	\$155,209,982.38	Contractor's EAC	\$155,209,982.38		
Initial Ceiling Price	\$155,209,982.38	Current Ceiling Price	\$155,209,982.38	PM's EAC	\$155,209,982.38		

Initial Quantity	120	BAC	\$155,209,982.38	BCWP	\$0.00	Work Completed	61.39 %
Current Quantity	0	ACWP	\$0.00	BCWS	\$0.00	Cost Variance	-\$0.00
Delivered Quantity	0					Schedule Variance	-\$0.00
Factors Contributing to Cost Variance and Projected Effects on Program Costs:				Factors Contributing to Schedule Variance and Projected Effects on Program Schedule:			

Technologies and Systems Engineering

Significant Technical Risks

Event	Date	Description

Deliveries and Expenditures

Section 830 of the FY 2020 National Defense Authorization Act (NDAA) stated that SARs must be submitted in unclassified form with the exception of a classified annex. Accordingly, Controlled Unclassified Information (CUI) has been removed from this section of this unclassified SAR.

Quantities	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development				
Procurement				
Total				

Years Appropriated to date		Total Years Appropriated Funding (Current Baseline):		Percent Years Appropriated:	
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Appropriation Category (\$Millions)	Then Year Appropriated Amount	Then Year Expended Amount
RDT&E		
Procurement		
MILCON		
Acq O&M		
Total Appropriated/Expended		
Percent Appropriated/Expended		

Low-Rate Initial Production

	Initial Decision LRIP	Current Total LRIP
Approval Date	8/25/2015	9/14/2018
Approval LRIP Quantity	37	178
Approval Document Title	Milestone B ADM	Milestone C ADM
Start Year	2018	2018
End Year	2019	2020

Rationale if quantity exceeds 10% of the total number of articles to be produced: CUI: _____

Quantity Notes: CUI: _____

Operating and Support (O&S) Cost Estimate

Total program O&S Costs Compared with Baseline

Base Year: 2017

	Current Base Year Objective	Current Base Year Threshold	Current Base Year Estimate	Current Then Year Estimate	Deviation ?
Total O&S (\$Millions)	\$1,011.4	\$1,112.5	\$1,018.5	\$1,541.2	

Operating and Support Cost Breakdown

Category (Base Year \$Millions)	System Name: CIRCM	System Name:
Unit-Level Manpower	\$191.1	
Unit Operations	1.5	
Maintenance	\$361.2	

Sustaining Support	\$282.4	
Continued System Improvements	\$97.9	
Other	\$84.4	
Total O&S	\$1,018.5	

Cost Estimate Source

Type: Component Cost Position

Approval Authority and Date: Center for Army Analysis, April 8, 2021.

Note: Other includes Indirect Support costs of \$80.8 and Demilitarization costs of \$3.6.

O&S Notes: