

**CLEARED
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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



Common Infrared Countermeasure (CIRCM)

FY 2024 President's Budget

**Defense Acquisition Visibility Environment
(DAVE)**

Table of Contents

Acronyms and Abbreviations 3

Program Information 5

Responsible Office 5

Mission and Description 6

Executive Summary 7

Schedule 7

Performance 9

Acquisition Budget Estimate 10

Unit Cost 12

Risks 13

Low Rate Initial Production 14

Contracts 15

Deliveries and Expenditures 22

Operating and Support Costs 23

Common Acronyms and Abbreviations

\$B - Billions of Dollars

\$K - Thousands of Dollars

\$M - Millions of Dollars

ACAT - Acquisition Category

Acq O&M - Acquisition-Related Operations and Maintenance

ADM - Acquisition Decision Memorandum

APB - Acquisition Program Baseline

APPN - Appropriation

APUC - Average Procurement Unit Cost

BA - Budget Authority/Budget Activity

Blk - Block

BY - Base Year

CAPE - Cost Assessment and Program Evaluation

CARD - Cost Analysis Requirements Description

CDD - Capability Development Document

CLIN - Contract Line Item Number

CPD - Capability Production Document

CY - Calendar Year

DAB - Defense Acquisition Board

DAE - Defense Acquisition Executive

DAMIR - Defense Acquisition Management Information Retrieval

DoD - Department of Defense

DSN - Defense Switched Network

EMD - Engineering and Manufacturing Development

EVM - Earned Value Management

FMS - Foreign Military Sales

FOC - Full Operational Capability

FRP - Full Rate Production

FY - Fiscal Year

FYDP - Future Years Defense Program

ICE - Independent Cost Estimate

Inc - Increment

IOC - Initial Operational Capability

JROC - Joint Requirements Oversight Council

KPP - Key Performance Parameter

LRIP - Low Rate Initial Production

MDA - Milestone Decision Authority

MDAP - Major Defense Acquisition Program

MILCON - Military Construction

N/A - Not Applicable

O&M - Operations and Maintenance

O&S - Operating and Support

ORD - Operational Requirements Document

OSD - Office of the Secretary of Defense

PAUC - Program Acquisition Unit Cost

PB - President's Budget

- PE - Program Element
- PEO - Program Executive Officer
- PM - Program Manager
- POE - Program Office Estimate
- RDT&E - Research, Development, Test, and Evaluation
- SAR - Selected Acquisition Report
- SCP - Service Cost Position
- TBD - To Be Determined
- TY - Then Year
- U.S. - United States
- UCR - Unit Cost Reporting
- USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
- USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Common Infrared Countermeasure

DoD Component

Army

Responsible Office

Program Manager

Name: COL Brock Zimmerman

Phone: 256-313-3762

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Mission and Description

Common Infrared Countermeasure (CIRCM), an ACAT IC program, is a laser-based infrared (IR) countermeasure system designed to work in conjunction with Service missile warning systems. CIRCM provides laser based infrared countermeasure systems for rotary-wing, tilt-rotor, and small fixed wing aircraft across the Department of Defense.

Executive Summary

CIRCM

Program Highlights Since Last Report

Program Highlights Since Last Report (Congress): CIRCM is a ACAT 1C Program of Record in Full Rate Production. In 2022 the program continued to install A-Kits on UH/HH-60M, CH-47F, and AH-64Ev4 Army aircraft. The program completed Initial Operational Capability (IOC) in September 2022. The program awarded multiple task orders to the prime contractor, Northrop Grumman Systems Corporation, to support fielding the system Outside the Continental United States (OCONUS). The contracts included Engineering Services, Repair Services, Interim Contractor Logistics Support, and Field Service Representative Support. In addition, the program conducted multiple New Equipment Training sessions with deploying units. The program continued to receive B-Kits from Delivery Order (DO) 1 on schedule and awarded B-Kit DO 2 and DO 3 to NGSC. Deliveries for those DOs will begin in 2023 and 2024 respectively. The program also continued qualification and testing on the next generation Jupiter laser which will provide enhanced capability to the Warfighter. The Army Requirements Oversight Council (AROC) approved an increase to the CIRCM Army Procurement Objective (APO) in April 2022. Because of the change the program will request a new Acquisition Program Baseline in April 2023 to capture the quantity increase and associated cost changes. CIRCM reports no increase to the program risk level since the last submission of the CIRCM SAR.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
Sep - 2022	Initial Operational Capability (IOC)
Apr - 2021	Full Rate Production (FRP) Decision
Dec - 2019	Initial Operational Test & Evaluation (IOT&E)
Sep - 2018	Milestone C
Aug - 2015	Milestone B
Dec - 2011	Milestone A
Jul - 2009	Materiel Development Decision

Schedule

CIRCM

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
MDD Complete	Jul 2009	Jul 2009	Jul 2009	Jul 2009	
Milestone A Complete	Dec 2011	Dec 2011	Dec 2011	Dec 2011	
Preliminary Design Review Complete	Jul 2013	Jul 2013	Jul 2013	Jul 2013	
Milestone B Complete	Aug 2015	Aug 2015	Aug 2015	Aug 2015	
Critical Design Review Complete	Oct 2016	Oct 2016	Oct 2016	Oct 2016	
Milestone C Complete	Sep 2018	Sep 2018	Sep 2018	Sep 2018	

LRIP 2 Complete	Jun 2019	Jun 2019	Dec 2019	Dec 2018	
IOT&E Start Complete	Jun 2019	Jun 2019	Dec 2019	Jun 2019	
First Unit Equipped Complete	May 2020	Feb 2020	Feb 2020	Feb 2020	
Full Rate Production Complete	Jun 2020	Apr 2021	Apr 2021	Apr 2021	
Initial Operational Capability Complete	Sep 2021	Sep 2021	Sep 2022	Sep 2022	

Notes

Deviation Explanation

Performance

CIRCM

Performance Characteristics				
Milestone Baseline	Current Baseline Objective/Threshold	Demonstrated Performance	Current Estimate/Actual	Deviation
(KPP) - Sustainment Materiel Availability				
	88%	0.74	90.8	
(KPP) - Sustainment Operational Availability				
	98%	0.95	98.7	

Requirement Reference

JROC Memorandum approved the CPD on August 20, 2018.

Deviation Explanation

No deviations for this program/subprogram

Notes

Current Am based on AMSAA modeling. Demonstrated performance cannot be assessed until the system is 100% fielded.

Acquisition Budget Estimate

CIRCM

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	Base Year	Objective (BY\$M)	Objective (BY\$M)	Threshold (BY\$M)	BY\$M	TY\$M	Deviation
RDT&E	2018	865.9	915.9	1,007.5	930.5	981.6	
Procurement	2018	3,042.8	3,429.3	3,772.2	3,785.9	4,662.1	
MILCON	2018	0	0	0	0	0	
Acq. O&M	2018	11.9	24.4	26.8	24.6	29.7	
Total		3,920.6	4,369.6		4,740.9	5,673.4	
PAUC	2018	2.144	2.389	2.628	2.329	2.787	
APUC	2018	1.708	1.925	2.118	1.904	2.345	

Appropriation Category Deviation Explanations

PAUC Deviation Explanation

APUC Deviation Explanation

Budget Notes

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	48	48
Procurement	1781	1988
O&M-Acquired		0

Quantity Notes

In April 2022 the program received an AROC approved change to the Army Procurement Objective (APO) which increased the B-Kits procured. A new APB is currently in development and will be approved in 2023. The updated quantities will be reflected in the 2023 SAR submission.

Unit Cost

CIRCM

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2018	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	4,369.6	4,740.9	
Quantity	1,829	2036	
Unit Cost	2.389	2.329	-2.53%
Average Procurement Unit Cost			
Cost	3,429.3	3,785.9	
Quantity	1,781	1,988	
Unit Cost	1.925	1.904	-1.07%

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2015	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	2,537.1	4,507.2	
Quantity	1,124	2036	
Unit Cost	2.257	2.214	-1.91%
Average Procurement Unit Cost			
Cost	1,782.5	3,599.2	
Quantity	1,076	1,988	
Unit Cost	1.657	1.811	9.29%

Cost Growth Details

Current Baseline PAUC Breach Explanation

Current Baseline APUC Breach Explanation

Original Baseline PAUC Breach Explanation

Original Baseline APUC Breach Explanation

Impacts of Schedule Changes on Unit Cost

Impacts of Performance Changes on Unit Cost

Actions Taken or Proposed to Control Future Cost Growth

Risk and Sensitivity Analysis

CIRCM

Risk and Sensitivity Analysis

Current Procurement Cost(December 2022)

Original Baseline Estimate (July - 2016)

The OSD CAPE ICE was approved as the APB baseline estimate for Milestone B in August 2015. The OSD CAPE ICE cost model reflects a 50% Confidence Level in accordance with the Army Cost Guidance. The most significant cost driver in the CIRCM estimate is the recurring production cost for the B-Kits. LRIP was included in the current EMD contract awarded in a competitive environment. Production contract unit pricing will be determined after the FRP decision which is planned for the second quarter FY 2020. Factors that may impact the production contract unit pricing include: award outside of a competitive environment, economies of scale achieved through optimizing lot procurement and impacts of Diminishing Manufacturing Sources. The unit of measure for the CIRCM APUC and PAUC calculation is the B-Kit. There is cost risk associated with the length of the CIRCM procurement program - production is planned through FY 2032. Due to the length of the production program and the difficulties in accurately forecasting future inflation, there is potential for increased TY cost, if inflation increases at a rate greater than projected in the OSD inflation rates.

Current Baseline Estimate (July - 2021)

Schedule Risk		
Technical Risks		

Low Rate Initial Production

CIRCM

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	08/25/2015	09/15/2018
Approved Quantity	37	178
Reference	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 procured:

Notes

Contracts & Efforts

Contract Data	
Contract Number	W58RGZ-21-D-0028
Effort Number	-1
Modification Number	P00003
Award Date	04/30/2021
Definitization Date	
Order Number	W58RGZ21F301
CAGE Code/CAGE Legal Name	26916/Northrop Grumman Systems Corporation
Contract Title	CIRCM FRP DO 1 B-Kits
Contract Address	Rolling Meadows, IL
Contracting Office	ACC Redstone
Supported Phase	Production
Contract Strategy	FAR 16.5 (IDDQ)
Contract Type	Firm-Fixed-Price
Modification Date	July 21, 2021
Work Start Date	April 30, 2021
Technical Data Rights	Government Purpose License Rights to Technical Data--Noncommercial Items & Software
Work Completed	25.00%

Contracts/Effort Price, Quantity, and Performance (TY\$M)

Initial Target Price	Current Target Price	
\$155.2	\$155.2	
Initial Ceiling Price	Current Ceiling Price	
\$155.2	\$155.2	
Contractor EAC	PM EAC	
\$155.2	\$155.2	
Initial Quantity	Current Quantity	Delivered Quantity
120	30	30
BAC	BCWP	ACWP

\$155.2	\$38.8	\$38.8
BCWS	Cost Variance	Schedule Variance
\$38.8	\$0	\$0

Contract Notes:

120 B-Kits plus spares

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Contract is FFP type. No earned value reported.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract is FFP type. No earned value reported.

Contract Data	
Contract Number	W58RGZ-21-D-0028
Effort Number	-2
Modification Number	P00002
Award Date	02/02/2022
Definitization Date	
Order Number	W58RGZ22F0178
CAGE Code/CAGE Legal Name	26916/Northrop Grumman Systems Corporation
Contract Title	CIRCM FRP DO 2 B-Kits
Contract Address	Rolling Meadows, IL
Contracting Office	ACC Redstone
Supported Phase	Production
Contract Strategy	FAR 16.5 (IDDQ)
Contract Type	Firm-Fixed-Price
Modification Date	May 26, 2022
Work Start Date	February 02, 2022
Technical Data Rights	Government Purpose License Rights to Technical Data--Noncommercial Items & Software
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

110 B-Kits plus spares

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	W58RGZ-21-D-0028
Effort Number	-3
Modification Number	Base
Award Date	11/21/2022
Definitization Date	
Order Number	W58RGZ23F0107
CAGE Code/CAGE Legal Name	26916/Northrop Grumman Systems Corporation
Contract Title	CIRCM FRP DO 3 B-Kits
Contract Address	Rolling Meadows, IL
Contracting Office	ACC Redstone
Supported Phase	Production
Contract Strategy	FAR 16.5 (IDDQ)
Contract Type	Firm-Fixed-Price
Modification Date	November 21, 2022
Work Start Date	November 21, 2022
Technical Data Rights	Government Purpose License Rights to Technical Data--Noncommercial Items & Software
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

110 B-Kits plus spares

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

External Government Activities

Activity Title		Government Entity		Supported Phase
Simulated Threat Testing & Support		Redstone Test Center (RTTC)		Development
CAGE		Work Start Date	43466	
City	Redstone Arsenal	State/Province:	VA	
Notes				
The GWEF laboratory utilizes CIRCM Line Replaceable Units (LRUs) to provide simulated threat engagement against a wide range of Key Performance Parameters (KPP) and Key System Attribute (KSA) threats to measure system effectiveness.				

Activity Title		Government Entity		Supported Phase
RTC Testing & Support		Redstone Test Center (RTC)		Development
CAGE		Work Start Date	43466	
City	Redstone Arsenal	State/Province:	VA	
Notes				
The GWEF laboratory utilizes CIRCM Line Replaceable Units (LRUs) to provide simulated threat engagement against a wide range of Key Performance Parameters (KPP) and Key System Attribute (KSA) threats to measure system effectiveness.				

Activity Title		Government Entity		Supported Phase
Simulated Threat Testing & Support		Redstone Test Center (RTC)		Development
CAGE		Work Start Date	43466	
City	Redstone Arsenal	State/Province:	VA	
Notes				
The GWEF laboratory utilizes CIRCM Line Replaceable Units (LRUs) to provide simulated threat engagement against a wide range of Key Performance Parameters (KPP) and Key System Attribute (KSA) threats to measure system effectiveness.				

Deliveries and Expenditures

CIRCM

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	48	48	48	100.00%
Production	305	305	1,781	17.13%
Total Program Quantity Delivered	353	353	1829	19.30%
Expended and Appropriated (TY \$M)				

Years Appropriated to date: 14

Total Years Appropriated Funding (Current Baseline): 39

Percent Years Appropriated: 35.90%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 28.46%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 28.46%

Total Acquisition Cost: 5,673.36

Deliveries & Expenditures Notes:

Deliveries & Expenditures are based on the Full Rate Production (FRP) Acquisition Program Baseline (APB) approved April 2021. In April 2022 the program received an AROC approved change to the Army Procurement Objective (APO). The change does not exceed any cost threshold parameters for the program; however, a new cost position and APB are currently in review and will be approved in 2023. The updated procurement quantities and costs will be reflected in the 2023 SAR submission.

Operating and Support Costs

CIRCM

O&S Cost Breakdown:

Category (BY\$ Million)	CIRCM
Unit-Level Manpower	208.4
Unit Operations	1.5
Maintenance	357.8
Sustaining Support	313.0
Continued System Improvements	122.7
Other	.0
Total	1,003.2

Cost Estimate Source: dated

O&S Cost Notes:

Total Program O&S Cost Compared with Baseline					
	Current Baseline				
	Objective (BY\$M)	Threshold (BY\$M)	Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
Total O&S	1,011.4	1,112.5	1,003.2	1,569.0	

Note:

Current Then Year Estimate \$1,569.03

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs**CIRCM****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Sustainment Factors	System Name: CIRCM	Antecedent System Name: ATIRCM
Quantity to Sustain	1988	120
Unit of Measure	B-Kit	B-Kit
Unit Expected Service Life	15 Years	15 Years

Base Year:

Annualized Unitized O&S by Category Base Year \$ Unit: \$M	System Name: CIRCM	Antecedent System Name: ATIRCM
Unit-Level Manpower	208.38	
Unit Operations	1.46	
Maintenance	357.75	
Sustaining Support	312.96	
Continued System Improvements	122.69	
Other	0	
Total O&S	1003.23	669.10

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: CIRCM	Antecedent System Name:
Total Disposal	3.6	

Cost Estimate Source - Disposal

Type:

Approval Authority and Date:

Note:

Disposal Cost Notes:

Additional O&S Estimate Assumptions:

Sustainment Strategy:

CIRCM is currently sustained through contractor logistics support and was approved to transition to organic sustainment by the end of FY 2027.

Antecedent Estimate Assumptions:

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