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May 02, 2023

Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)

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 Description6

Executive Summary 7

Schedule 9

Performance10

Acquisition Budget Estimate 11

Unit Cost12

Risks 13

Low Rate Initial Production 14

Contracts15

Deliveries and Expenditures18

Operating and Support Costs19

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

Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)

Subprogram Name

Command Post Terminals (CPT)

DoD Component

Air Force

Responsible Office

Program Manager

Name: Col Jonathan J. Sorbet

Date Assigned: July 2, 2018

Address: MITRE D

202 Burlington Road

Bedford, MA 01730

Phone: (781) 271-4820

Mission and Description

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program will develop terminals capable of communicating with the Milstar and Advanced Extremely High Frequency (AEHF) satellite constellations. These terminals will be an essential component of the strategic nuclear enterprise.

The Command Post Terminals (CPT) subprogram provides a terminal capable of communicating with the Milstar and AEHF satellites from airborne, ground fixed and mobile locations. The CPT will replace existing Milstar-only terminals for ground fixed and mobile command locations, as well as aircraft.

Executive Summary

FAB-T CPT

Program Highlights Since Last Report

Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) Command Post Terminal (CPT) program has delivered 78/84 terminals and has installed 53 terminals of which 47 are available to conduct operations under an Operational Trial Period approved by United States Space Force (USSF), along with 6 support terminals. All ground installations (airborne installations remain) required for Initial Operational Capability (IOC) have been completed. Given the program's successful operations and the level of completed deliveries (over 94%), and pursuant to section 4351 of title 10, United States Code, this is the final SAR submission for FAB-T CPT.

The CPT schedule reflects the Program Management Office's (PMO's) best estimates for IOC/FOC and FRP which are subject to change as additional information from the test community and E-6B Program Office is received prior to an official Acquisition Program Baseline (APB) rebaseline. The program will re-baseline at the Full Rate Production decision after IOT&E is complete.

NOTE: Some of this program's executive summary highlights are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
Dec - 2022	Some of this program's history are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.
Dec - 2022	Completed annual CPT Cyber Control Validation Review.
Dec - 2022	Completed WIN 10 upgrades to all Data Set Manager (DSM) laptops.
Oct - 2022	CPT Type Authority to Operate (ATO) extended to June 30, 2023.
Dec - 2021	Executive Integrated Test Team conducted.
Nov - 2021	This Data has been marked as CUI and has been removed
Mar - 2021	This Data has been marked as CUI and has been removed
Jul - 2020	This Data has been marked as CUI and has been removed
Jun - 2020	This Data has been marked as CUI and has been removed
Dec - 2019	AFSPC approved early Operational Trial Period for the FAB-T terminal.
Dec - 2019	SAE approved "fact-of-life" update to the APB.
Sep - 2019	USAF procured remaining CPTs to meet requirements for 84 terminals.
Aug - 2019	PEO certified CPT for entry into Initial Operational Test & Evaluation (IOT&E).
May - 2019	AFSPC approved early operational use for the first FAB-T.
Feb - 2019	MDA approval to increase CPT LRIP quantity from 53 to 84 terminals.
Feb - 2019	MDA designated FAB-T FET as a Middle Tier of Acquisitions (Section 804) Rapid Prototyping effort.

Date	Significant Development Description
Jan - 2019	First FAB-T CPT operational installation began.
Dec - 2018	FAB-T CPT and FAB-T FET formally transition from AFPEO for Space to AFPEO NC3, effective December 1, 2018.
Nov - 2018	Conducted FAB-T FET Section 804 Vector Check with SAF/AQ; received approval to continue developing the FET Acquisition Strategy as a Rapid Prototyping effort.
Aug - 2018	Air Force Space Command/A6 approved the FAB-T Type ATO.
Aug - 2018	Secretary of the Air Force for Acquisitions (SAF/AQ) reassigns several programs, including FAB- T CPT and FAB-T FET, from Air Force Program Executive Office (AFPEO) for Space to AFPEO for Nuclear Command, Control, and Communications (NC3).
Jul - 2018	Milestone Decision Authority (MDA) signed the revised FAB-T APB.
Jun - 2018	Capability Development Council (CDC) approves FET CCA.
Jun - 2018	NSA issued FAB-T a one-year interim Authority to Operate (ATO) for FAB-T cryptographic units.
Apr - 2018	Contract award for 9 LRIPs (Ground Transportable Antennas (GTA)).
Mar - 2018	USSTRATCOM/J8 prioritizes FET requirements to expedite capability.
Dec - 2017	FAB-T FET Cost Capability Analysis (CCA) complete.
Nov - 2017	USD(AT&L) redesignates FAB-T as an ACAT IC program.
May - 2017	Contract award for 20 LRIPs (15 terminals with new Ground Fixed Antenna & 5 Airborne terminals with antenna modification kits).
Jun - 2016	Contract award for 12 LRIPs (6 Ground Fixed & 6 Airborne terminals with antenna modification kits).
Oct - 2015	Contract award for 10 Low Rate Initial Productions (LRIPs) (6 Ground Fixed & 4 Airborne terminals with antenna modification kits).
Sep - 2015	FAB-T CPT Milestone C approved.
Jul - 2015	Congressional notification from USD(AT&L) to divide FAB-T into two sub-programs (CPT and FET).
Jun - 2014	FAB-T CPT Production FFP contract awarded to Raytheon.
Dec - 2013	Deputy Secretary's Management Action Group (DMAG) decision to proceed with Command Post Terminal (CPT) only; Force Element Terminal (FET) deferred out of FYDP due to lack of platform integration funding.
Sep - 2012	Alternate Source contract awarded to Raytheon to incentivize competition and performance.
Jan - 2012	USD(AT&L) restructures Boeing FAB-T Development contract to Firm Fixed Price due to cost growth and schedule delays.
Feb - 2009	FAB-T Key Decision Point-C (KDP-C) satisfies Milestone B requirements.
Aug - 2006	USD(AT&L) designates FAB-T as an ACAT ID program.
Sep - 2002	FAB-T Development Cost Plus Award Fee (CPAF) contract awarded to Boeing.
Aug - 1999	DepSecDef initiates FAB-T by Program Decision Memorandum (PDM) as an ACAT II program.

Schedule

FAB-T CPT

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold			Current Estimate/Actual	Deviation
Contract Award (Increment 1)	Sep 2002	Sep 2002	Sep 2002	Sep 2002		
System Requirements Review	Jan 2003	Jan 2003	Jan 2003	Jan 2003		
System Design Review	Jul 2003	Jul 2003	Jul 2003	Jul 2003		
Conduct Low Data Rate (LDR) System Critical Design Review (CDR)	Feb 2007	Feb 2007	Feb 2007	Feb 2007		
Conduct Extended High Data Rate (XDR) System CDR	Oct 2008	Oct 2008	Oct 2008	Oct 2008		
Conduct eXtended High Data Rate (XDR) System CDR						
Deliver First LDR System Engineering Development Model (EDM)	Jan 2009	Jan 2009	Jan 2009	Jan 2009		
LRIP Decision System LDR and XDR	Sep 2015	Sep 2015	Sep 2015	Sep 2015		
This Data has been marked as CUI and has been removed						
This Data has been marked as CUI and has been removed						
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Schedule Note

This program's schedule notes are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

Schedule Deviation Explanation:

This program's schedule Deviation Explanation is Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

Performance

FAB-T CPT

Performance Characteristics for this program are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation related to dissemination control.

Requirement Reference

Revalidated CDD, dated February 15, 2013; CPD approved by Joint Requirements Oversight Council (JROC), August 5, 2015; revised APB approved July 10, 2018

Performance Note

Given the establishment of the USSF, the FAB-T CPT APB performance criteria captured in the SAR has been updated, to reflect USSF in place of AFSPC, where referenced.

Acquisition Budget Estimate

FAB-T CPT

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	2015	1,159	1,178.1	1,295.9	1,218.5	1,146.8	
Procurement	2015	584	657.6	723.4	657.3	729.6	
MILCON	2015	0					
Acq. O&M	2015	0					
Total		1,743.0	1,835.7		1,875.8	1,876.4	
PAUC	2015	15.991	16.841	18.525	17.209	17.215	
APUC	2015	6.952	7.829	8.612	7.825	8.686	

Budget Note

This section covers the FAB-T CPT subprogram. Changes since the previous SAR are a result of an RDT&E increase of \$3.4M for Software Encryption Platform (SEP) and a Procurement net change \$-2.2M due to organic depot capability installation and funding realignment to PNVC Integrator's Procurement across the FYDP.

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	25	25
Procurement	84	84
O&M-Acquired	--	--

Quantity Note

For CPT there is a total of 109 systems, which includes 25 EDMs (12 Boeing and 13 Raytheon) and 84 production systems. All quantities shown reflect the program baseline as approved in the Milestone C ADM.

NOTE: Some of this Program's quantity notes are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

Unit Cost**FAB-T CPT**

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year: 2015	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	1,835.7	1,875.8	
Quantity	109	109	
Unit Cost	16.841	17.209	2.18%
Average Procurement Unit Cost			
Cost	657.6	657.3	
Quantity	84	84	
Unit Cost	7.829	7.825	-0.05%
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year: 2002	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	1,282.4	1,476.3	
Quantity	95	109	
Unit Cost	13.499	13.544	0.33%
Average Procurement Unit Cost			
Cost	735.3	517.3	
Quantity	84	84	
Unit Cost	8.754	6.158	-29.65%

Risks

FAB-T CPT

Risk and Sensitivity Analysis

Risk and Sensitivity Analysis
Current Procurement Cost (December - 2022)
1. The current procurement cost provides sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule, and programmatic risk, and external influence. In particular, it includes the most probable funding and schedule to complete installation of procured systems. It includes funding to cover overall cost growth to the remaining depot efforts.
Original Baseline Estimate (December - 2007)
1. Software development risk. The Independent Cost Estimate (ICE) included factors to account for 39% growth in software effort to account for project Maturity and project Complexity. The 2007 ICE represented FAB-T before competitive down select and the splitting of the program into CPT and FET sub-programs, total Life-Cycle Cost: 3622.2 TY\$M.
Current Baseline Estimate (December - 2019)
1. The SCP provides sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule and programmatic risk, and external influence. In particular, it includes the most probable funding and schedule to complete installation of procured systems. The estimate includes funding to cover 5% overall cost growth to the installation effort beyond scope identified in site surveys. CPT Total Life-Cycle Cost: 3413.1TY\$M

Significant Schedule Risks

Significant Schedule Risks
Current Estimate (December - 2022)
This program's Significant Schedule Risks are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control

Technologies and Systems Engineering

Significant Technology Risks
Current Estimate (December - 2022)
This program's Significant Schedule Risks are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control

Low Rate Initial Production

FAB-T CPT

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	07/05/2009	02/07/2019
Approved Quantity	101	84
Reference	Acquisition Strategy Production Phase Addendum	FAB-T CPT ADM
Start Year	2010	2015
End Year	2012	2022

Rationale if quantity exceeds 10% of the total number of articles to be procured:

The Current Total LRIP Quantity is more than 10% of the total production quantity and was increased from 53 to 84 units by the MDA on February 7, 2019, to avoid program impacts and additional cost of a break in production.

Contracts & Efforts

Contract Data	
Contract Number	FA8307-12-C-0013
Effort Number	
Modification Number	
Award Date	09/07/2012
Definitization Date	04/10/2013
Order Number	
CAGE Code/CAGE Legal Name	7Y193/Raytheon Company
Contract Title	FAB-T CPT Development
Contract Address	Marlborough, MA
Contracting Office	
Supported Phase	Development
Contract Strategy	
Contract Type	Firm-Fixed-Price
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

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

Initial Target Price	Current Target Price	
\$70	\$230.2	
Initial Ceiling Price	Current Ceiling Price	
N/A	N/A	
Contractor EAC	PM EAC	
\$230.2	\$230.2	
Initial Quantity	Current Quantity	Delivered Quantity
13	13	7
BAC	BCWP	ACWP
N/A	N/A	N/A

BCWS	Cost Variance	Schedule Variance
N/A	N/A	N/A

Contract Note:

Total Quantity for the Development contract is 13 Raytheon EDMs. Seven of the Raytheon EDMs have been delivered to the Government, and six EDMs have been retained by Raytheon for testing purposes. The Development contract Period of Performance completed September 30, 2020.

Contract Data	
Contract Number	FA8705-13-C-0005
Effort Number	
Modification Number	P00238
Award Date	09/27/2013
Definitization Date	06/02/2014
Order Number	
CAGE Code/CAGE Legal Name	7Y193/Raytheon Company
Contract Title	FAB-T CPT Production
Contract Address	Marlborough, MA
Contracting Office	AFNWC/PZHS
Supported Phase	Production
Contract Strategy	
Contract Type	Firm-Fixed-Price
Modification Date	August 03, 2022
Work Start Date	
Technical Data Rights	
Work Completed	

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

Initial Target Price	Current Target Price	
\$298.5	\$480	
Initial Ceiling Price	Current Ceiling Price	
N/A	N/A	
Contractor EAC	PM EAC	
\$480	\$480	
Initial Quantity	Current Quantity	Delivered Quantity
84	84	78

Contract Note:

Production Contract delivered quantity reflects completed deliveries as of January 13, 2023.

Deliveries and Expenditures

FAB-T CPT

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	25	25	25	100.00%
Production	78	78	84	92.85%
Total Program Quantity Delivered	103	103	109	94.49%

Expended and Appropriated (TY \$M)

Years Appropriated to date: 23

Total Years Appropriated Funding (Current Baseline): 28

Percent Years Appropriated: 82.14%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 96.92%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: This Data has been marked as CUI and has been removed

Total Acquisition Cost: \$1,876.4

Deliveries and Expenditures Note

For CPT there is a total of 109 systems, which includes 25 Engineering Development Models (EDMs) (12 Boeing and 13 Raytheon) and 84 production systems. 78 Production terminals have been delivered under the Raytheon contract. All quantities shown reflect the program baseline as approved in the Milestone C ADM.

NOTE: Some of this program's expended and appropriated amounts are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

Operating and Support Costs

FAB-T CPT

O&S Cost Breakdown:

Category (BY\$ Million)	FAB-T CPT
Unit-Level Manpower	This Data has been marked as CUI and has been removed
Unit Operations	
Maintenance	
Sustaining Support	
Continued System Improvements	
Other	
Total	

Cost Estimate Source: POE dated January 31, 2022

Total Program O&S Cost Compared with Baseline					
	Current Baseline		Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
	Objective (BY\$M)	Threshold (BY\$M)			
Total O&S	\$1,059.5	\$1,165.5	This Data has been marked as CUI and has been removed	This Data has been marked as CUI and has been removed	This Data has been marked as CUI and has been removed

O&S Cost Deviation Explanation

NOTE: The O&S Cost Deviation Explanation contains Controlled Unclassified Information (CUI) data and has been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control.

FAB-T CPT

Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:

Sustainment Factors	System Name: FAB-T CPT	Antecedent System Name:
Quantity to Sustain	This Data has been marked as CUI and has been removed	
Unit of Measure		
Unit Expected Service Life		

Base Year: 2015

	System Name:	Antecedent System Name:
Unit-Level Manpower	This Data has been marked as CUI and has been removed	
Unit Operations		
Maintenance		
Sustaining Support		
Continued System Improvements		
Other		
Total O&S		

Disposal/Demilitarization Cost Estimate

(BY\$M)	System Name:	Antecedent System Name:
Total Disposal	This Data has been marked as CUI and has been removed	

Cost Estimate Source - Disposal	
Type:	Program Office Estimate
Approval Authority and Date:	AFNWC 12/31/2022
Note:	
<p>NOTE: Some of this program's operating and support costs are Controlled Unclassified Information (CUI) and have been removed per paragraph (i) of title 10 United States Code 4351 which required the SAR be submitted without any designation relation to dissemination control. Annualized Unit Cost does not apply.</p>	