Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-298

C-130 AMP

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

C-130 Avionics Modernization Program (AMP)

DoD Component

Air Force

Responsible Office

Responsible Office

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Date Assigned April 1, 2011

References

SAR Baseline (Production Estimate)

Defense Acquisiton Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 18, 2010

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated April 18, 2010

Mission and Description

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated Air Force Navigation/Safety modifications, the Communications Navigation Surveillance/Air Traffic Management (CNS/ATM) capabilities, and the C-130 Broad Area Review requirements on 221 of the Air Force's Combat Delivery C-130s. These mandated modifications are incorporated with various other Reliability, Maintainability, and Sustainability upgrades to include: installation of fleet-wide radars, aircrew displays, dual autopilots, dual flight management systems and HF/UHF/VHF radios/data links. AMP will allow this fleet complete access to the CNS/ATM-mandated national and international air space for the foreseeable future.

This fleet consists of three (3) different mission design series (MDS) aircraft to be modified by the AMP (C-130 H2, H2.5, and H3). Within each of these MDSs multiple variants exist among the aircraft that will be modified with AMP. Today, these different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft scheduling and interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package with a common cockpit layout, thus eliminating many of these significant logistics, interoperability, and training problems.

Executive Summary

The Under Secretary of Defense for Acquisition Technology & Logistics (USD AT&L) convened a November 10, 2010 Overarching Integrated Product Team to establish sufficient schedule that will enable a more robust Source Familiarization Program (SFP) competition, relieve Initial Operational Test & Evaluation (IOT&E) schedule pressures, and address potential Acquisition Program Baseline breaches. USD (AT&L) issued an Acquisition Decision Memo (ADM) December 27, 2010 authorizing the Air Force to add Low Rate Initial Production (LRIP) Lot 5 for eight AMP kit buys in FY 2013. The ADM further approved an increase in LRIP quantity from 20 to 26 and revised entrance criteria for Lots 4, 5 and Full Rate Production (FRP). In addition, the ADM directed a Program Deviation Report, an updated Acquisition Strategy, and Follow-on Operational Test & Evaluation (FOT&E) for software Build 0.2.

The program office released a Request for Proposal (RFP) for SFP in December 2010 to award one contract for one to five kit installations; an amended RFP was released in January 2011 for one to nine installs, incorporating changes consistent with the December 2010 ADM. The SFP contract schedule allows sufficient kit install experience prior to FRP submittal. The subsequent winner will then compete with the LRIP contractor in a limited competition for FRP contract award in FY 2014.

Status of Three AMP Development Aircraft:

AMP #1 Functional Check Flight (FCF) completed February 2, 2011 with an aircraft delivery date of February 11, 2011 to Little Rock AFB (LRAFB). This aircraft will be used for training at LRAFB. After training is complete the aircraft will then be flown to Palmdale for Engineering Change Review Board (ECRB).

AMP #2 completed Programmed Depot Maintenance (PDM) and was delivered to LRAFB to support Initial Operational Test & Evaluation (IOT&E).

AMP #3 completed PDM in December 2010 and flew to Edwards AFB in preparation for flight testing IOT&E software in March 2011.

Status of Low Rate Initial Production:

Both Lot 1 C-130 AMP kits were delivered to Warner-Robins Air Logistics Center in support of aircraft inductions. These aircraft will support IOT&E activities. In an effort to mitigate program delays and hold to schedule, the program office refined the contract strategy for further Lots. Lot 2 aircraft will transition to the warfighter at St. Joseph's Air National Guard unit in Missouri.

On January 5, 2011, Deputy Assistant Secretary of Defense/Portfolio Systems Acquisition gave concurrence on the Air Force recommendation to proceed with awarding LRIP Lot 3, completing an action item from the June 19, 2010 ADM. The Lot 3 award is critical since it includes the SFP installations and is therefore linked to a timely FRP proposal process.

There are no significant software issues with the program at this time.

Threshold Breaches

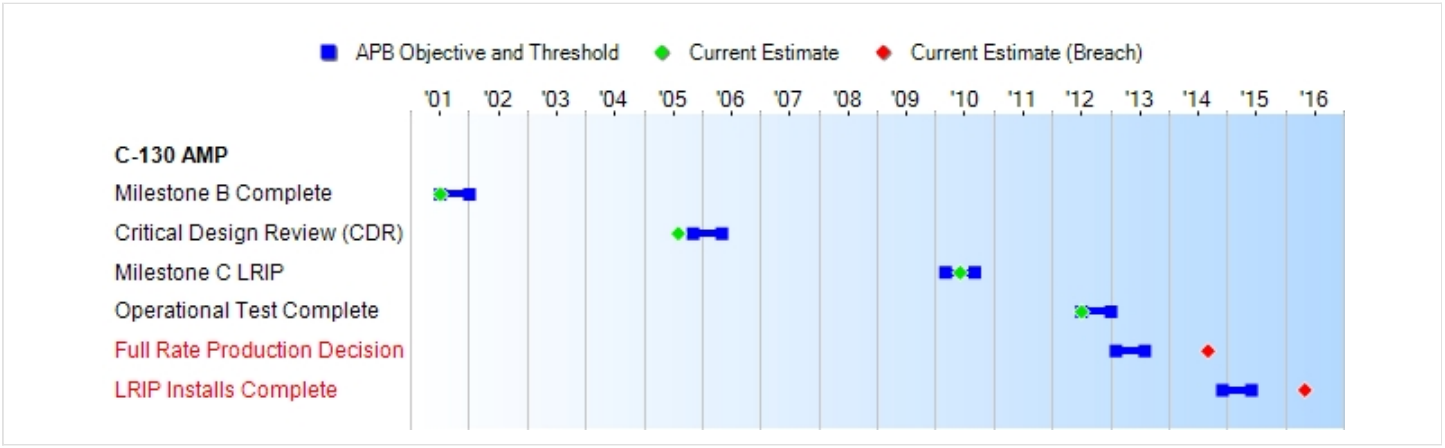
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

C-130 AMP required schedule adjustments to facilitate additional hands-on experience for the Source Familiarization Phase (SFP) contractor. As a result of schedule changes in the SFP, the program will experience schedule breaches to the April 19, 2010 Acquisition Program Baseline. A Department of Defense Overarching Integrated Product Team concurred with the schedule adjustments and the Milestone Decision Authority issued an Acquisition Decision Memorandum on December 27, 2010 authorizing adjustments.

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	
Milestone B Complete	JUL 2001	JUL 2001	JAN 2002	JUL 2001	
Critical Design Review (CDR)	NOV 2005	NOV 2005	MAY 2006	AUG 2005	
Milestone C LRIP	MAR 2010	MAR 2010	SEP 2010	JUN 2010	
Operational Test Complete	JUL 2012	JUL 2012	JAN 2013	JUL 2012	
Full Rate Production Decision	FEB 2013	FEB 2013	AUG 2013	**SEP 2014**[1]	(Ch-1)
LRIP Installs Complete	DEC 2014	DEC 2014	JUN 2015	**MAY 2016**[1]	(Ch-1)

[1] *APB Breach*

Acronyms And Abbreviations

LRIP - Low Rate Initial Production

Change Explanations

(Ch-1) Full Rate Production Decision changed from Feb 2013 to Sep 2014 and LRIP Installs Complete changed from Dec 2014 to May 2016 to allow time for additional contractor experience for the Source Familiarization Program.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
CNS/ATM & Nav-Safety Compliance	Meet technical performance based standards for RNP and RNAV airspace IAW 2005 world- wide CNS/ATM standards as they apply to C-130 operations. Comply with Air Force Nav- Safety Master Plan require-ments.	Meet technical performance based standards for RNP and RNAV airspace IAW 2005 world- wide CNS/ATM standards as they apply to C-130 operations. Comply with Air Force Nav- Safety Master Plan require-ments.	Meet technical performance based standards for RNP and RNAV airspace IAW 2005 world- wide CNS/ATM standards as they apply to C-130 operations. Comply with Air Force Nav- Safety Master Plan require-ments.	Navigation system Accuracy Criteria: Cross track and along-track error of <1 nautical miles 95% of the time, meets RNP-1, Basic RNAV, and precision area navigation operations. Result: Parameters met on the ground. Ref: 2 May 08 AFOTEC OA Report	Meet technical performance based standards for RNP and RNAV airspace IAW 2005 world-wide CNS/ATM standards as they apply to C-130 operations. Comply with Air Force Nav-Safety Master Plan require-ments.
Baseline Cockpit Configuration	The cockpit avionics architecture on all combat delivery aircraft shall be optimized to ensure the aircraft can effectively execute current missions throughout the world with a basic cockpit crew of no greater than two pilots and one flight engineer	The cockpit avionics architecture on all combat delivery aircraft shall be optimized to ensure the aircraft can effectively execute current missions throughout the world with a basic cockpit crew of no greater than two pilots and one flight engineer	The cockpit avionics architecture on all combat delivery aircraft shall be optimized to ensure the aircraft can effectively execute current missions throughout the world with a basic cockpit crew of no greater than two pilots and one flight engineer	Percentage of Successful Arrivals Criteria: > or = to 90% of missons meet AMC Instruction 10-202, Vol 6 requirements and applicable AF Instructions. Result: 85% successful. Ref: 2 May 08 AFOTEC OA report. Human factor	The cockpit avionics architecture on all combat delivery aircraft shall be optimized to ensure the aircraft can effectively execute current missions throughout the world with a basic cockpit crew of no greater than two pilots and one flight engineer

	from their respective crew positions.	from their respective crew positions.	from their respective crew positions.	workload assess-ments; Integrated System Evaluation Jul - Aug 09 Boeing final human factors test complete - Aug 09 Final Air Force Flight Test Center Human Factors complete - Dec 09	from their respective crew positions.
Net Ready	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs	TBD	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in

	the KIP declaration table, 3) NCOW RM Enterprise Services 4) Information assurance requirements including availability, integrity, authen-tication, confiden-tiality, and non-repudiation, and issuance of an ATO by the DAA and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	the KIP declaration table, 3) NCOW RM Enterprise Services 4) Information assurance requirements including availability, integrity, authen-tication, confiden-tiality, and non-repudiation, and issuance of an ATO by the DAA and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) Information assurance requirements including availability, integrity, authen-tication, confiden-tiality, and non-repudiation, and issuance of an IATO by the DAA and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.		the KIP declaration table, 3) NCOW RM Enterprise Services 4) Information assurance requirements including availability, integrity, authen-tication, confiden-tiality, and non-repudiation, and issuance of an ATO by the DAA and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
Integrated Defensive System Situational Awareness	Use inputs from the AAR-47	Use inputs from the AAR-47	Use inputs from the AAR-47	Initial ground and range flight testing	Use inputs from the AAR-47

	MWS, ALE-47 CMDS, and ALR-69 RWR to generate an integrated defensive systems capability that displays proper signal detection, provides appropriate audio tones and advisory messages, triggers the correct automatic dispense responses, and provides a centralized defensive systems resource status.	MWS, ALE-47 CMDS, and ALR-69 RWR to generate an integrated defensive systems capability that displays proper signal detection, provides appropriate audio tones and advisory messages, triggers the correct automatic dispense responses, and provides a centralized defensive systems resource status.	MWS, ALE-47 CMDS, and ALR-69 RWR to generate an integrated defensive systems capability that displays proper signal detection, provides appropriate audio tones and advisory messages, triggers the correct automatic dispense responses, and provides a centralized defensive systems resource status.	completed.	MWS, ALE-47 CMDS, and ALR-69 RWR to generate an integrated defensive systems capability that displays proper signal detection, provides appropriate audio tones and advisory messages, triggers the correct automatic dispense responses, and provides a centralized defensive systems resource status.
Operations in a Chemical/Biological Environment	Aircraft controls and systems modified by AMP shall be operable without degradation or operational constraints in a chemical/ biological environment with aircrew Chemical/ Biological protective clothing	Aircraft controls and systems modified by AMP shall be operable without degradation or operational constraints in a chemical/ biological environment with aircrew Chemical/ Biological protective clothing	Aircraft controls and systems modified by AMP shall be operable without degradation or operational constraints in a chemical/ biological environment with aircrew Chemical/ Biological protective clothing	Chem/Bio gear test accom-plished successfully (per AFOTEC). Ref: 4 December 2008 test on AMP 1 at EAFB.	Aircraft controls and systems modified by AMP shall be operable without degradation or operational constraints in a chemical / biological environment with aircrew Chemical / Biological protective clothing.
Material Availability	AMP NMCAMP rate shall be less than or equal to 2.2	AMP NMCAMP rate shall be less than or equal to 2.2	AMP NMCAMP rate shall be less than or equal to 2.2	AFOTEC assessment exceeds requirement; 1.4%	AMP NMCAMP rate shall be less than or equal to 2.2

	percent for C-130 H2/H2.5/ H3 fleet avionics work unit codes.	percent for C-130 H2/H2.5/ H3 fleet avionics work unit codes.	percent for C-130 H2/H2.5/ H3 fleet avionics work unit codes.	preliminary verification by AFOTEC.	percent for C-130 H2/H2.5/H3 fleet avionics work unit codes.

Requirements Source:
Capabilities Production Document (CPD) for C-130 AMP Initial Increment (V 3.1) March 4, 2008 (Joint Requirements Oversight Council Memo 051-08)

Acronyms And Abbreviations

AFOTEC - Air Force Operational Test & Evaluation Center
AFROCC - Air Force Requirements for Operational Capability Council
AMC - Air Mobility Command
ASACM - Advanced Situational Awareness and Countermeasures
ATO - Approval to Operate
CJCSI - Chairman Joint Chief of Staff Instruction
CMDS - Countermeasures Dispenser System
CNS/ATM - Communications, Navigation Surveillance/Air Traffic Management
CPD - Capabilities Production Document
DAA - Designated Approval Authority
DISR - DOD Information Technology Standards and Profile Registry
GIG - Global Information Grid
IATO - Interim Approval to Operate
IER - Information Exchange Requirement
IP - Internet Protocol
IT - Information Technology
JITC - Joint Interoperability Test Command
JTRS - Joint Tactical Radio System
KIP - Key Interface Profiles
KPP - Key Performance Parameter
NCOW RM - Net Centric Operations and Warfare Reference Model
NMCAMP - Not Mission Capable AMP
OA - Operational Assessment
RNAV - Area Navigation
RNP - Required Navigation Performance

Change Explanations

None

Memo

OSD (AT&L) Acquisition Decision Memorandum (June 4, 2007) directed restructure of C-130 AMP to modernize C-130H3, C-130H2 and C-130H2.5 Mission Design Series only, eliminating Special Mission aircraft requirements. As a result, Performance Characteristics specifically related to Special Mission requirements have been deleted.

AMC's Capability Production Document (CPD) for C-130 AMP [Capability Production Document for C-130 AMP Initial Increment (V 3.1)], prepared for Milestone C Decision, identifies six Key Performance Parameters (KPPs) essential to mission accomplishment (Ref Table 6.1 in CPD) and are updates to existing KPPs. The existing APB Performance Characteristics have been deleted and replaced with the six KPPs identified in the CPD.

Time and Accuracy Standards defined in AFI 11-2C-130, Vol 2; cockpits shall meet the requirements of the USAF flight instrumentation endorsement process outlined in AFI 11-202 Vol. III, April 5, 2006.

Net Ready KPP: Defined in CJCSI 6212.01D, March 8, 2006. C-130 AMP will not meet the full intent of the Net-Ready KPP until an IP-enabled radio (e.g. JTRS) is developed, validated and integrated into the architecture. However, 85-90% of the requirement can be met with the AMP design as currently exists and budgeted. In addition, the architecture has been designed to accommodate JTRS integration in the future. The incremental approach to satisfying this requirement has been coordinated with JITC, AFOTEC, the Joint Staff, and AMC.

Material Availability KPP: Not Mission Capable rate is calculated for the AMP work unit codes as described in AMC Supplement 1 to AFI 21-101 using the following formula: Not Mission Capable AMP (NMCAMP) is equal to the NMCMAMP (maintenance) hours plus NMCBAMP (both) hours plus NMCSAMP (supply) hours divided by possessed hours times 100. AFOTEC assessment exceeds requirement; 1.4% preliminary verification.

Track To Budget

RDT&E				
APPN 3600	BA 07	PE 0401115F	(Air Force)	
	Project 4885	Air Force/Avionics Modernization Program (AMP)		
APPN 0400	BA 07	PE 0406404D	(DoD)	
	Project F100CA	DoD (SOF)		(Sunk)
	2006 was final year of 0400.			

Procurement				
APPN 3010	BA 05	PE 0401115F	(Air Force)	
	ICN C13000	Air Force	(Shared)	(Sunk)
	ICN C1300A	Air Force		

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2010 $M			BY2010 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	1874.9	1874.9	2062.4	1896.7	1753.3	1753.3	1779.3
Procurement	4055.3	4055.3	4460.8	4143.2	4547.0	4547.0	4676.4
Flyaway	3602.3	--	--	3654.8	4043.4	--	4139.7
Recurring	3602.3	--	--	3654.8	4043.4	--	4139.7
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	453.0	--	--	488.4	503.6	--	536.7
Other Support	362.9	--	--	381.8	402.4	--	416.3
Initial Spares	90.1	--	--	106.6	101.2	--	120.4
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5930.2	5930.2	N/A	6039.9	6300.3	6300.3	6455.7

Confidence Levels: In March 2010, the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) assessed both the development and production programs as relatively low risk: the C-130 AMP has entered Low Rate Initial Production with little technology risk, all technology readiness ratings seven or higher, and the requirements well defined. The independent cost estimate to support C-130 AMP Milestone C approval aimed to provide sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule, and programmatic risk and external interference. It is consistent with expenditures on historical efforts of similar size, scope, and complexity.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	3	3	3
Procurement	218	218	218
Total	221	221	221

The unit of measure is a modified aircraft.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	1692.9	43.5	24.5	18.4	0.0	0.0	0.0	0.0	1779.3
Procurement	193.9	170.5	235.6	248.7	372.8	557.2	699.5	2198.2	4676.4
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	1886.8	214.0	260.1	267.1	372.8	557.2	699.5	2198.2	6455.7
PB 2011 Total	1908.5	213.3	265.6	376.9	494.3	645.0	715.4	1733.9	6352.9
Delta	-21.7	0.7	-5.5	-109.8	-121.5	-87.8	-15.9	464.3	102.8

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	3	0	0	0	0	0	0	0	0	3
Production	0	4	6	8	8	20	32	39	101	218
PB 2012 Total	3	4	6	8	8	20	32	39	101	221
PB 2011 Total	3	4	6	10	16	28	38	39	77	221
Delta	0	0	0	-2	-8	-8	-6	0	24	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2001	--	--	--	--	--	--	6.7
2002	--	--	--	--	--	--	13.0
2003	--	--	--	--	--	--	49.1
2004	--	--	--	--	--	--	62.4
2005	--	--	--	--	--	--	65.3
2006	--	--	--	--	--	--	61.4
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**257.9**

Annual Funding BY$
0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2001	--	--	--	--	--	--	7.9
2002	--	--	--	--	--	--	15.1
2003	--	--	--	--	--	--	56.3
2004	--	--	--	--	--	--	69.9
2005	--	--	--	--	--	--	71.1
2006	--	--	--	--	--	--	64.9
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**285.2**

Annual Funding TY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1999	--	--	--	--	--	--	1.7
2000	--	--	--	--	--	--	8.6
2001	--	--	--	--	--	--	60.3
2002	--	--	--	--	--	--	49.2
2003	--	--	--	--	--	--	122.7
2004	--	--	--	--	--	--	111.8
2005	--	--	--	--	--	--	155.9
2006	--	--	--	--	--	--	248.5
2007	--	--	--	--	--	--	182.4
2008	--	--	--	--	--	--	229.8
2009	--	--	--	--	--	--	161.8
2010	--	--	--	--	--	--	102.3
2011	--	--	--	--	--	--	43.5
2012	--	--	--	--	--	--	24.5
2013	--	--	--	--	--	--	18.4
Subtotal	**3**	**--**	**--**	**--**	**--**	**--**	**1521.4**

Annual Funding BY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
1999	--	--	--	--	--	--	2.1
2000	--	--	--	--	--	--	10.3
2001	--	--	--	--	--	--	71.1
2002	--	--	--	--	--	--	57.4
2003	--	--	--	--	--	--	141.1
2004	--	--	--	--	--	--	125.5
2005	--	--	--	--	--	--	170.6
2006	--	--	--	--	--	--	264.0
2007	--	--	--	--	--	--	188.8
2008	--	--	--	--	--	--	233.2
2009	--	--	--	--	--	--	162.2
2010	--	--	--	--	--	--	101.5
2011	--	--	--	--	--	--	42.6
2012	--	--	--	--	--	--	23.6
2013	--	--	--	--	--	--	17.5
Subtotal	**3**	**--**	**--**	**--**	**--**	**--**	**1611.5**

Annual Funding TY$
3010 | Procurement | Aircraft Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2008	2	19.3	--	--	19.3	1.9	21.2
2009	2	102.8	--	--	102.8	69.9	172.7
2010	--	--	--	--	--	--	--
2011	6	108.7	--	--	108.7	61.8	170.5
2012	8	192.5	--	--	192.5	43.1	235.6
2013	8	202.6	--	--	202.6	46.1	248.7
2014	20	320.5	--	--	320.5	52.3	372.8
2015	32	513.6	--	--	513.6	43.6	557.2
2016	39	646.7	--	--	646.7	52.8	699.5
2017	39	682.2	--	--	682.2	56.9	739.1
2018	39	684.9	--	--	684.9	56.2	741.1
2019	23	501.8	--	--	501.8	42.2	544.0
2020	--	164.1	--	--	164.1	9.9	174.0
Subtotal	**218**	**4139.7**	**--**	**--**	**4139.7**	**536.7**	**4676.4**

Annual Funding BY$
3010 | Procurement | Aircraft Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2008	2	19.4	--	--	19.4	1.9	21.3
2009	2	101.7	--	--	101.7	69.2	170.9
2010	--	--	--	--	--	--	--
2011	6	104.4	--	--	104.4	59.3	163.7
2012	8	181.9	--	--	181.9	40.7	222.6
2013	8	188.2	--	--	188.2	42.8	231.0
2014	20	292.8	--	--	292.8	47.7	340.5
2015	32	461.3	--	--	461.3	39.2	500.5
2016	39	571.1	--	--	571.1	46.7	617.8
2017	39	592.4	--	--	592.4	49.4	641.8
2018	39	584.8	--	--	584.8	48.0	632.8
2019	23	421.3	--	--	421.3	35.4	456.7
2020	--	135.5	--	--	135.5	8.1	143.6
Subtotal	**218**	**3654.8**	**--**	**--**	**3654.8**	**488.4**	**4143.2**

Cost Quantity Information
3010 | Procurement | Aircraft Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M
2008	2	19.4
2009	2	101.7
2010	--	--
2011	6	104.4
2012	8	181.9
2013	8	188.2
2014	20	292.8
2015	32	461.3
2016	39	571.1
2017	39	592.4
2018	39	584.8
2019	23	556.8
2020	--	--
Subtotal	**218**	**3654.8**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	7/27/2001	12/27/2010
Approved Quantity	50	26
Reference	Milestone B ADM	Milestone C ADM
Start Year	2005	2008
End Year	2010	2014

The initial LRIP quantity of 50 kits at Milestone B represented approximately 10% of the total procurement buy of 519. Nunn-McCurdy program restructure in 2007 reduced total quantities to 222 resulting in an LRIP quantity of 20 and slip in start and end years. The December 27, 2010 Acquisition Decision Memo (ADM) approved an increase in LRIP quantity from 20 to 26 which exceeds 10 percent of the total production quantity. The rationale for exceeding 10 percent is to minimize funding phasing issues and production gaps which would have occurred as a result of increasing Source Familiarization Phase (SFP) hands-on experience prior to Full Rate Production (FRP) Request For Proposal (RFP) release. The December 2010 ADM amended the June 19, 2010 ADM and authorized the addition of LRIP Lot 5, requiring the increase in quantity. This adjustment to schedule will also permit an orderly increase in the production rate for the C-130 AMP sufficient to lead to FRP.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
Sweden	1/31/2005	8	99.9	On July 1, 2009 Sweden's Defense Materiel Administration sent an informal notification to the Assistant Secretary of the Air Force for International Affairs (SAF/IA) that the program had been cancelled. The Program Office telephoned Boeing Long Beach in July 2009 to alert them of informal notification. The Program Office received a formal letter via SAF/IA in July 2009 and issued the termination letter to Boeing Long Beach in August 2009. Boeing issued a Termination Settlement Proposal in June 2010 in amount of $25M.

Nuclear Cost

None

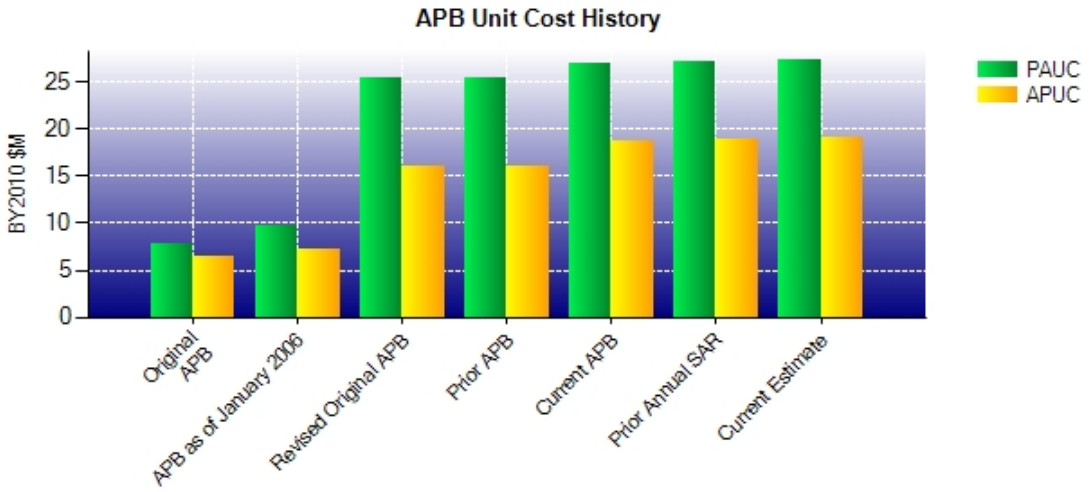
Unit Cost

Unit Cost Report

Unit Cost	BY2010 $M Current UCR Baseline (APR 2010 APB)	BY2010 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5930.2	6039.9	
Quantity	221	221	
Unit Cost	26.833	27.330	+1.85
Average Procurement Unit Cost (APUC)			
Cost	4055.3	4143.2	
Quantity	218	218	
Unit Cost	18.602	19.006	+2.17

Unit Cost	BY2010 $M Revised Original UCR Baseline (FEB 2008 APB)	BY2010 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5610.8	6039.9	
Quantity	222	221	
Unit Cost	25.274	27.330	+8.13
Average Procurement Unit Cost (APUC)			
Cost	3510.2	4143.2	
Quantity	219	218	
Unit Cost	16.028	19.006	+18.58

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JUL 2001	7.767	6.497	7.640	6.538
APB as of January 2006	MAR 2003	9.662	7.201	9.376	7.208
Revised Original APB	FEB 2008	25.274	16.028	26.622	18.186
Prior APB	FEB 2008	25.274	16.028	26.622	18.186
Current APB	APR 2010	26.833	18.602	28.508	20.858
Prior Annual SAR	DEC 2009	27.115	18.892	28.746	21.113
Current Estimate	DEC 2010	27.330	19.006	29.211	21.451

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
7.640	-1.388	5.276	1.385	0.351	13.615	0.000	1.629	20.868	28.508

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
28.508	-0.010	0.000	0.364	0.029	0.168	0.000	0.152	0.703	29.211

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
6.538	-1.456	3.351	0.858	0.000	9.917	0.000	1.651	14.320	20.858

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
20.858	-0.024	0.000	0.279	0.000	0.184	0.000	0.154	0.594	21.451

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	JUL 2001	JUL 2001
Milestone C	N/A	JAN 2007	MAR 2010	JUN 2010
IOC	N/A	N/A	N/A	N/A
Total Cost (TY $M)	N/A	3965.4	6300.3	6455.7
Total Quantity	N/A	519	221	221
Prog. Acq. Unit Cost (PAUC)	N/A	7.640	28.508	29.211

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	1753.3	4547.0	--	6300.3
Previous Changes				
Economic	+1.2	-0.2	--	+1.0
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-1.2	+0.2	--	-1.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	+1.9	-5.0	--	-3.1
Quantity	--	--	--	--
Schedule	+19.5	+60.9	--	+80.4
Engineering	+6.5	--	--	+6.5
Estimating	-1.9	+40.0	--	+38.1
Other	--	--	--	--
Support	--	+33.5	--	+33.5
Subtotal	+26.0	+129.4	--	+155.4
Total Changes	+26.0	+129.4	--	+155.4
CE - Cost Variance	1779.3	4676.4	--	6455.7
CE - Cost & Funding	1779.3	4676.4	--	6455.7

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	1874.9	4055.3	--	5930.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-1.2	+0.2	--	-1.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-1.2	+0.2	--	-1.0
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+18.4	+17.7	--	+36.1
Engineering	+6.5	--	--	+6.5
Estimating	-1.9	+34.6	--	+32.7
Other	--	--	--	--
Support	--	+35.4	--	+35.4
Subtotal	+23.0	+87.7	--	+110.7
Total Changes	+21.8	+87.9	--	+109.7
CE - Cost Variance	1896.7	4143.2	--	6039.9
CE - Cost & Funding	1896.7	4143.2	--	6039.9

Previous Estimate: June 2010

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+1.9
Adjustment for current and prior escalation. (Estimating)	-1.9	-1.9
Increase due to cost growth related to slip in Initial Operational Test & Evaluation and Systems Design & Development contract closure activities. (Schedule)	+18.4	+19.5
Increase due to Software Build 0.2 upgrade to address development testing issues related to pilot workload efficiency in the cockpit. (Engineering)	+6.5	+6.5
RDT&E Subtotal	+23.0	+26.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-5.0
Increase due to stretch-out of procurement buy profile to fund higher Air Force priorities. (Schedule)	0.0	+39.6
Increase in kit fabrication and assembly estimate due to program restructure. (Estimating)	+34.6	+39.9
Increase in Other Government Costs due to schedule extension. (Schedule)	+17.7	+21.3
Adjustment for current and prior escalation. (Estimating)	0.0	+0.1
Adjustment for current and prior escalation. (Support)	0.0	-0.1
Increase in Other Support due to stretch-out of procurement buy profile. (Support)	+18.9	+14.4
Increase in Initial Spares due to refinement in estimating methodology. (Support)	+16.5	+19.2
Procurement Subtotal	+87.7	+129.4

Contracts

Appropriation: Procurement

Contract Name	**C-130 AMP (LRIP)**
Contractor	THE BOEING COMPANY
Contractor Location	LONG BEACH, CA 90807-5309
Contract Number, Type	FA8625-08-C-6481, FFP
Award Date	September 30, 2008
Definitization Date	March 02, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
36.7	N/A	2	62.5	N/A	2	62.5	62.5

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this FFP contract.

Contract Comments

Prior SAR (June 2010) noted $47.1M in the Initial Contract Price ceiling. This is an FFP contract and has no ceiling; this entry has been changed to N/A. Change from Initial to Current Contract Target Price of $25.8M reflects modifications adding LRIP Lot 1 and Lot 2 Part 1 efforts.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	3	3	3	100.00%
Production	0	0	218	0.00%
Total Program Quantities Delivered	3	3	221	1.36%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	6455.7	Years Appropriated	13
Expenditures To Date	1654.9	Percent Years Appropriated	59.09%
Percent Expended	25.63%	Appropriated to Date	2100.8
Total Funding Years	22	Percent Appropriated	32.54%

Operating and Support Cost

Assumptions And Ground Rules

Operating and Support (O&S) costs are included in overall operational costs for the existing fleet managed by Warner-Robins Air Logistics Center (WR-ALC).

Costs shown are deltas to the existing O&S costs for the C-130 Combat Delivery fleet of 221 aircraft.

C-130 AMP O&S estimate update provided February 2010 by Air Force Cost Analysis Agency for the Service Cost Position:

Unit Cost Breakout
Mission Personnel ($482M) (Savings)
Unit Level Consumption $513.5M
Sustaining Support $157.7M
Total: $189.2M

There is no antecedent system for this modernization.

Costs BY2010 $M		
Cost Element	**C-130 AMP All Aircraft**	**No Antecedent**
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	--	--
Sustaining Support	--	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	--	--
Total Unitized Cost (Base Year 2010 $)	--	--

Total O&S Costs $M	C-130 AMP	No Antecedent
Base Year	189.2	--
Then Year	195.5	--