

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Air Force **Date:** March 2023

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	40.713	20.170	16.842	0.000	16.842	0.000	0.000	0.000	0.000	0.000	77.725
674820: <i>Sensor Development</i>	-	40.713	20.170	16.842	0.000	16.842	0.000	0.000	0.000	0.000	0.000	77.725
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

The U-2S Dragon Lady platform is a high-demand/low-density aircraft equipped with modular sensor and data link systems providing flexible and mission essential Intelligence, Surveillance, and Reconnaissance [ISR] to the Combatant Commands, Joint and Combined forces, and the Intelligence Community in peacetime and wartime. The program supports core missions such as Sensitive Reconnaissance Operations [outlined in CJCSI 3250.01] supporting the National Defense Strategy, in addition to other missions that include execution of CCMD OPLANs and CONPLANs, Humanitarian Assistance/Disaster Response [HADR], Counter Violent Extremist Organizations, and third-party treaty verification/monitoring via the OLIVE HARVEST mission.

In the FY24 budget, the Air Force will maintain operational capability of the U-2 platform. Furthermore, FY24 efforts largely continue contracted efforts, which address safety of flight issues, reliability, Diminishing Manufacturing Sources and Material Shortages [DMSMS], maintainability, supportability, flight test, and integration of capability development activities in support of the broader ISR portfolio.

These efforts include, but are not limited to:

- completing flight test of Advanced Synthetic Aperture Radar System [ASARS] -2B/C, a high-altitude deep-look SAR system--ASARS 2B/C mitigates DMSMS with the current U-2 SAR sensor and processor, is multi-mode capable, and implements an open architecture radar environment. Processor development accomplishes risk reduction in a common effort with other programs and the ASARS-2C system is transferable to the broader ISR enterprise
- Avionics Technical Refresh phase 1 flight test and installation, which will partially resolve avionics DMSMS and safety of flight issues and establishes the Open Mission Systems (OMS) backbone needed to employ IP-based OMS sensors such as ASARS-2C and SYERS-2C OMS.
- mission planning software and quick reaction capabilities [QRCs]

Additionally, the U-2 program will continue to support emergent and/or experimental RDT&E efforts in support of Joint All-Domain Command and Control [JADC2] and Advanced Battle Management System [ABMS] as a platform surrogate for risk reduction in support of SECAF's Operational Imperative-2.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Air Force	<b>Date:</b> March 2023
--	-------------------------

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>
--	---

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	35.846	20.170	20.604	0.000	20.604
Current President's Budget	40.713	20.170	16.842	0.000	16.842
Total Adjustments	4.867	0.000	-3.762	0.000	-3.762
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	4.867	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-3.762	0.000	-3.762

**Change Summary Explanation**

RDT&E funding has been decreased to only fund Avionics Technical Refresh Phase 1 efforts for the U-2. Expectations are for protective NDAA language to be waived during FY 2023 allowing the USAF to move forward with U-2 divestment in FY 2026. In anticipation of this, U-2 RDT&E is funded at a level sufficient to ensure fleet viability through the end of FY 2025.

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
---	----------------	----------------	----------------

<b>Title:</b> U-2 Aircraft Update Block 20.1	18.000	13.670	14.942
<b>Description:</b> Aircraft sustainment and/or enhancement efforts includes activities such as, but not limited to: trade studies, analysis, preliminary system engineering, system and subsystem testing or demonstrations, sensor specification development, avionics system upgrades, emergency egress system sustainability and suitability effort, mission planning system software and infrastructure migration, navigation system sustainability, advanced and agile systems, Open Mission Systems and Unmanned Aerospace Systems Command and Control Standard Initiative [OMS/UCI] standards compliance and integration, navigational technical refresh, helmet and Full Pressure Suit technical refresh, quick reaction capability [QRC] development, enhanced communications/SIGINT system sustainability and modernization, and tactical data-link [L-16, IBS, IFDL, MADL, etc.] efforts to meet operational requirements.			
<b>FY 2023 Plans:</b> Aircraft sustainment and/or enhancement development includes activities such as, but not limited to:			

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Air Force		<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
development work to upgrade existing MFDs, expand capabilities of the avionics processor, common mission computers, cockpit displays, multi-level network attached storage devices, aircraft certification required to transmit Link 16 J-series messages, and other DMSMS components  <b>FY 2024 Plans:</b> Aircraft sustainment and/or enhancement development includes activities such as, but not limited to:  development work to upgrade existing MFDs, expand capabilities of the avionics processor, common mission computers, cockpit displays, multi-level network attached storage devices, and other DMSMS components  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding decreased due to USAF planned divestiture of U-2 in FY 2026				
<b>Title:</b> U-2 Payload Update Block 20.1  <b>Description:</b> Aircraft payload development supports sustainment and/or enhancement development includes activities such as, but not limited to: trade studies, analysis, preliminary system engineering, system and subsystem testing or demonstrations, sensor specification development, Advanced Synthetic Aperture Radar System [ASARS] development and test, SIGINT and multi-spectral sensor technical refresh integration and test, defensive systems, sensor range improvements, strategic and tactical data link [L-16, IBS, IFDL, MADL, etc.] design and integration.  <b>FY 2023 Plans:</b> Integration and test of advanced backend processor with a new radar front end array / develops exportable advanced modes primarily focused on the highly contested environment  <b>FY 2024 Plans:</b> Integration and test of advanced backend processor with a new radar front end array / develops exportable advanced modes primarily focused on the highly contested environment  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increased to support higher labor costs.		22.713	6.500	1.900
<b>Accomplishments/Planned Programs Subtotals</b>		40.713	20.170	16.842
<b>D. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Air Force **Date:** March 2023

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>
--	---

**E. Acquisition Strategy**  
Acquisition strategy for efforts to support aircraft modification and/or enhancement efforts will be assessed as required, based on current program activities.

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>	<b>Project (Number/Name)</b> 674820 / <i>Sensor Development</i>
--	---	--

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	0.000	0.000	-
ASARS Phase 1 Enhancements Design	SS/CPFF	Raytheon/Lockheed Martin : El Segundo, CA	-	19.900	Nov 2021	-		-		-		-	0.000	19.900	0.000
ASARS Phase 2 Integration & Demonstration	SS/CPFF	Raytheon/Lockheed Martin Aeronautics : El Segundo, CA	-	1.613	Dec 2021	5.370	Dec 2022	-		-		-	0.000	6.983	0.000
Flight Test Support	SS/CPFF	Lockheed Martin Aeronautics : Palmdale, CA	-	-		-		-		-		-	0.000	0.000	0.000
Data Links Modernization	SS/CPFF	L3 Communications : Salt Lake City, UT	-	1.300	Jan 2022	3.400	Dec 2022	-		-		-	0.000	4.700	0.000
Navigation System	SS/CPFF	Lockheed Martin Aeronautics : Palmdale, CA	-	-		-		-		-		-	0.000	0.000	0.000
Emergency Egress System Sustainability and Suitability Effort	SS/CPFF	Lockheed Martin Aeronautics : Palmdale, CA	-	-		-		-		-		-	0.000	0.000	0.000
Avionics Technical Refresh	SS/CPFF	LMA : Palmdale, CA	-	17.600	Nov 2021	11.400	Nov 2022	16.842	Dec 2023	-		16.842	0.000	45.842	0.000
Loads and Environment Spectra Survey [L/ESS] Compliance and Flight Data Recorder Installation	SS/CPFF	LMA : Palmdale, CA	-	-		-		-		-		-	0.000	0.000	0.000
Electro-Optical/Infrared Sensor Technical Refresh	SS/CPFF	Lockheed Martin Aeronautics : Palmdale, CA	-	-		-		-		-		-	0.000	0.000	0.000
Mission Planning Software Technical Refresh	TBD	TBD : TBD	-	-		-		-		-		-	0.000	0.000	0.000
Electronic Warfare Suite [EWS] Advanced Threat	SS/CPFF	BAE : Nashua, NY	-	0.300	Nov 2021	-		-		-		-	0.000	0.300	22.100
SIGINT Modernization	C/CPAF	SwRI : Dayton, OH	-	-		-		-		-		-	Continuing	Continuing	-
<b>Subtotal</b>			-	40.713		20.170		16.842		-		16.842	Continuing	Continuing	N/A



**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>	<b>Project (Number/Name)</b> 674820 / <i>Sensor Development</i>
--	---	--

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<b><i>U-2 Dragon Lady</i></b>	
Advanced Synthetic Aperture Radars System (ASARS)	
Data Links Modernization	
Navigation System	
Avionics Tech Refresh Ph1	

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Air Force		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305202F / <i>Dragon U-2</i>	<b>Project (Number/Name)</b> 674820 / <i>Sensor Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>U-2 Dragon Lady</i></b>				
Advanced Synthetic Aperture Radars System (ASARS)	1	2022	4	2026
Data Links Modernization	1	2022	4	2024
Navigation System	1	2022	3	2023
Avionics Tech Refresh Ph1	1	2022	4	2024