

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASLO)
---	---

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	64.509	4.813	4.647	5.071	-	5.071	5.218	5.208	5.317	5.430	Continuing	Continuing
3192: <i>RQ-21 BLACKJACK</i>	64.509	4.813	4.647	5.071	-	5.071	5.218	5.208	5.317	5.430	Continuing	Continuing

A. Mission Description and Budget Item Justification

The RQ-21A BLACKJACK (formerly known as The Small Tactical Unmanned Aircraft System (STUAS)) is a combined United States Navy (USN) and United States Marine Corps (USMC) program that provides persistent maritime and land-based tactical Intelligence, Surveillance, and Reconnaissance/Target Acquisition support for tactical level maneuver decisions and unit level force defense/force protection for Naval amphibious assault ships (multi-ship classes) and Navy and Marine land forces. This system will support Naval Missions such as building the Recognized Maritime Picture, Maritime Security Operations, Maritime Interdiction Operations, and provide support for Naval Units operating from sea/shore in Overseas Contingency Operations. This submission is the USNs portion of the program and has been coordinated with the USMC budget submission PE 0305239M (RQ-21A).

The RQ-21A BLACKJACK system will continue to evolve and upgrade capabilities to satisfy capabilities shortfalls, new requirements, and reliability, maintainability and safety issues. Upgraded capabilities may include Navy Command and Control integration, Weapons Integration, Heavy Fuel Engine, Laser Designator, Frequency Agile Communications Relay, Digital Common Data Link, and cyclic refresh of the Electro-Optical/Infrared camera. RQ-21A BLACKJACK will also continue to expand its shipboard capability across new ship classes.

This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	4.813	4.647	5.276	-	5.276
Current President's Budget	4.813	4.647	5.071	-	5.071
Total Adjustments	0.000	0.000	-0.205	-	-0.205
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.205	-	-0.205

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)	
Change Summary Explanation Decrease in SMALL (LEVEL 0) TACTICAL UAS (STUASL0) by \$0.211M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015. Schedule: Requirements for training updates identified during Initial Operational Test and Evaluation (IOT&E) delayed the declaration of Marine Corps Initial Operational Capability (IOC) from 3QFY15 to 1QFY16. Limited Low Rate Initial Production (LRIP) procurements in prior years resulted in an immature production line and the need for additional LRIP lots to incorporate correction actions and stabilize the supplier base, pushing Full Rate Production Decision (FRPD) from 4QFY15 to 4QFY16. RQ-21 Full Rate Production Lot 1 (FRP 1) was updated to include options for 4 Navy RQ-21A systems. Technical: N/A		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)				Project (Number/Name) 3192 / RQ-21 BLACKJACK			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
3192: RQ-21 BLACKJACK	64.509	4.813	4.647	5.071	-	5.071	5.218	5.208	5.317	5.430	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The RQ-21A BLACKJACK (formerly known as The Small Tactical Unmanned Aircraft System (STUAS)) is a combined United States Navy (USN) and United States Marine Corps (USMC) program that provides persistent maritime and land-based tactical Intelligence, Surveillance, and Reconnaissance/Target Acquisition support for tactical level maneuver decisions and unit level force defense/force protection for Naval amphibious assault ships (multi-ship classes) and Navy and Marine land forces. This system will support Naval Missions such as building the Recognized Maritime Picture, Maritime Security Operations, Maritime Interdiction Operations, and provide support for Naval Units operating from sea/shore in Overseas Contingency Operations. This submission is the USNs portion of the program and has been coordinated with the USMC budget submission PE 0305239M (RQ-21A).

The RQ-21A BLACKJACK system will continue to evolve and upgrade capabilities to satisfy capabilities shortfalls, new requirements, and reliability, maintainability and safety issues. Upgraded capabilities may include Navy Command and Control integration, Weapons Integration, Heavy Fuel Engine, Laser Designator, Frequency Agile Communications Relay, Digital Common Data Link, and cyclic refresh of the Electro-Optical/Infrared camera. RQ-21A BLACKJACK will also continue to expand its shipboard capability across new ship classes.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Upgrade Efforts	1.220	1.673	1.250	0.000	1.250
Articles:	-	-	-	-	-
Description: Provide Upgrade Efforts					
FY 2015 Accomplishments: RQ-21A Blackjack completed ship based Initial Operational Test and Evaluation (IOT&E), and corrected several software deficiencies cited in the IOT&E Report. The program continued software engineering and development for block software updates and began development of the advanced heavy fuel engine to extend the maximum gross takeoff weight.					
FY 2016 Plans: RQ-21A Blackjack will continue correction of deficiencies based on the final FY15 IOT&E Report. The program will continue advanced heavy fuel engine integration and testing. Other upgrades include the cyclic refresh of					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)	Project (Number/Name) 3192 / RQ-21 BLACKJACK

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>the Electro-Optical/Infrared camera, associated turret system, communications relay package, and automated identification system.</p> <p>FY 2017 Base Plans: RQ-21A Blackjack will continue correction of deficiencies for the IOT&E Report. The program will continue software engineering and development for block software updates. The program will complete heavy fuel engine development. Continue other upgrades which includes the cyclic refresh of the Electro-Optical/Infrared camera, associated turret system, communications relay package, and automated identification system.</p> <p>FY 2017 OCO Plans: N/A</p>					
<p>Title: Engineering and Technical Services</p> <p align="right">Articles:</p> <p>Description: Provides for the Government Engineering Technical Support, Logistics Support, Test and Evaluation, other Government Support, Contractor Support Services, Program Management Support, Program related travel in support of the upgrade/payload efforts.</p> <p>FY 2015 Accomplishments: Provided support for the Government Engineering Technical Support, Logistics Support, Test and Evaluation, Contractor Support Services, Program Management Support, and program related travel in support of upgrades and correction of deficiencies.</p> <p>FY 2016 Plans: Continue support for the Government Engineering Technical Support, Logistics Support, Test and Evaluation, Other Government Support, Contract Support Services, Program Management Support, and program related travel in support of correction of deficiencies and upgrade efforts.</p> <p>FY 2017 Base Plans: Provide support for Government Engineering Technical Support, Logistics Support, Test and Evaluation, other Government support, Contractor Services support, Program Management Support, and program related travel in support of upgrades and correction of deficiencies. FY17 includes additional funding for Government Engineering technical support to perform and evaluate correction of deficiencies completed by the Government and Prime contractor based on the Initial Operational Test and Evaluation report released in 3QFY15.</p> <p>FY 2017 OCO Plans:</p>	3.593	2.974	3.821	0.000	3.821
	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASLO)	Project (Number/Name) 3192 / RQ-21 BLACKJACK

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
Accomplishments/Planned Programs Subtotals	4.813	4.647	5.071	0.000	5.071

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APN/0444: STUASLO	45.000	57.298	0.000	70.000	70.000	1.950	0.000	0.000	0.000	0.000	202.448
• RDTEN/0305239M: (U)RQ-21A	7.782	6.251	9.497	-	9.497	9.295	8.736	8.911	9.107	Continuing	Continuing
• PMC/4737: STUAS/RQ-21A	69.315	77.916	80.217	-	80.217	73.004	72.067	82.777	84.379	Continuing	Continuing
• PMC/7000: Spares and Repair Parts	7.242	4.111	5.812	-	5.812	5.718	5.415	5.530	5.638	Continuing	Continuing
• APN/0605: STUASLO Spares	10.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.000

Remarks

D. Acquisition Strategy

The program office has utilized a competitive acquisition approach for award of the Engineering and Manufacturing Development effort to field a capability that meets threshold requirements. Low Rate Initial Production (LRIP) test article was utilized to successfully complete Initial Operational Test and Evaluation (IOT&E). LRIP continues through FY16 to demonstrate production line maturity. Future payload upgrades and development shall be competitively sourced or procured via Government Laboratories with Insitu, the prime contractor, performing integration efforts as required.

E. Performance Metrics

Attainment of Full Rate Production, correction of deficiencies from the IOT&E Report, and attainment of United States Marine Corps and United States Navy Full Operational Capability in accordance with the approved schedule.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)	Project (Number/Name) 3192 / RQ-21 BLACKJACK
--	--	--

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Upgrade Efforts/Correction of Deficiencies	C/BOA	Insitu, Inc : Bingen, WA	1.520	1.220	Jul 2015	1.093	Jan 2016	1.250	Mar 2017	-		1.250	Continuing	Continuing	Continuing
Mission Training Device	MIPR	JTC/SIL : Redstone Arsenal, AL	2.136	0.000		0.580	Mar 2016	0.000		-		0.000	0.000	2.716	2.716
Prior year Prod Devt no longer funded in the FYDP	Various	Various : Various	26.989	0.000		0.000		0.000		-		0.000	0.000	26.989	26.989
Subtotal			30.645	1.220		1.673		1.250		-		1.250	-	-	-

Remarks
Product development corresponds to R-2A Upgrade Efforts.

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Integrated Logistics Support	WR	NAWC-AD : Patuxent River, MD	4.521	0.100	Dec 2014	0.000		0.100	Dec 2016	-		0.100	Continuing	Continuing	Continuing
Training Support	WR	NAWC-TSD : Orlando, FL	3.306	0.555	Dec 2014	0.440	Feb 2016	0.490	Dec 2016	-		0.490	Continuing	Continuing	Continuing
Software Engineering Support	WR	NAWC-WD : China Lake, CA	7.170	1.225	Dec 2014	1.200	Feb 2016	1.200	Dec 2016	-		1.200	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWC-AD : Patuxent River, MD	11.139	1.021	Dec 2014	0.392	Dec 2015	0.990	Dec 2016	-		0.990	Continuing	Continuing	Continuing
Subtotal			26.136	2.901		2.032		2.780		-		2.780	-	-	-

Remarks
Support is included within R-2A Engineering and Technical Services.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASLO)	Project (Number/Name) 3192 / RQ-21 BLACKJACK
--	--	--

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Developmental Test & Evaluation	C/CPFF	OPTEVFOR : Norfolk, VA	2.528	0.000		0.385	Jan 2016	0.370	Jan 2017	-		0.370	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	OPTEVFOR : Norfolk, VA	0.135	0.016	Mar 2015	0.135	Dec 2015	0.015	Dec 2016	-		0.015	Continuing	Continuing	Continuing
Subtotal			2.663	0.016		0.520		0.385		-		0.385	-	-	-

Remarks
Test and Evaluation is included within R-2A Engineering and Technical Services.

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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			
Contractor Engineering Support	MIPR	DTIC : FT. Belvoir, VA	2.356	0.225	Mar 2015	0.225	Mar 2016	0.230	Mar 2017	-		0.230	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Bowhead : Patuxent River, MD	0.150	0.359	Jan 2015	0.149	Feb 2016	0.366	Jan 2017	-		0.366	Continuing	Continuing	Continuing
Travel	WR	Various : Various	0.210	0.092	Nov 2014	0.048	Nov 2015	0.060	Oct 2016	-		0.060	Continuing	Continuing	Continuing
Prior Year Mgmt Svcs no longer funded in the FYDP	Various	Various : Various	2.349	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			5.065	0.676		0.422		0.656		-		0.656	-	-	-

Remarks
Management Services is included within R-2A Engineering and Technical Services.

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		64.509	4.813	4.647	5.071	5.071	-	-	-

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy

Date: February 2016

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0305234N / (U)SMALL (LEVEL 0)
TACTICAL UAS (STUASL0)

Project (Number/Name)
3192 / RQ-21 BLACKJACK

RQ-21A	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquisition Milestones						USMC IOC ▲	PCA ▲	FRPD ◆																				
Test and Evaluation																												
Operational Evaluation	IOT&E Ship		IOT&E RPT ▼	BLRIP RPT ▼																								
Production Milestones																												
Contract Awards	LRIP III (3 USMC) ●		LRIP IV (3 USMC/3 USN) ●			LRIP V (3 USMC/3 USN) ●						FRP I (4 USMC/4 USN) ●				FRP II (4 USMC) ●				FRP III (5 USMC) ●				FRP IV (5 USMC) ●				
			ICS II ●				ICS III ●					ICS IV ●																
Deliveries																												
						LRIP III (3 USMC) ▼	LRIP IV (2 USMC, 1 USN) ▼	LRIP IV (1 USMC, 2 USN) ▼					LRIP V (4 USMC) ▼															
														FRP I (4 USMC) ▼	FRP I (4 USN) ▼							FRP III (5 USMC) ▼					FRP IV (5 USMC) ▼	

2017PB - 0305234N - 3192

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)	Project (Number/Name) 3192 / RQ-21 BLACKJACK

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
RQ-21A				
Acquisition Milestones: Milestones: USMC Initial Operational Capability (IOC)	2	2016	2	2016
Acquisition Milestones: Milestones: Physical Configuration Audit	3	2016	3	2016
Acquisition Milestones: Milestones: Full-Rate Production Decision	4	2016	4	2016
Test and Evaluation: Operational Evaluation: IOT&E Report	3	2015	3	2015
Test and Evaluation: Operational Evaluation: Initial Operational Test & Evaluation (IOT&E) Ship	1	2015	1	2015
Test and Evaluation: Operational Evaluation: Beyond LRIP Report (BLRIP)	4	2015	4	2015
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 1	4	2015	1	2016
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 2	3	2016	4	2016
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 3	3	2017	4	2017
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 4	3	2018	4	2018
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 5	3	2019	4	2019
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 6	3	2020	4	2020
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation 7	3	2021	4	2021
Production Milestones: Contract Awards: LRIP Lot 3	1	2015	1	2015
Production Milestones: Contract Awards: LRIP Lot 4	3	2015	3	2015
Production Milestones: Contract Awards: LRIP Lot 5	2	2016	2	2016
Production Milestones: Contract Awards: Full-Rate Production Contract Award 1	2	2017	2	2017
Production Milestones: Contract Awards: Full-Rate Production Contract Award 2	2	2018	2	2018
Production Milestones: Contract Awards: Full-Rate Production Contract Award 3	2	2019	2	2019
Production Milestones: Contract Awards: Full-Rate Production Contract Award 4	2	2020	2	2020

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305234N / (U)SMALL (LEVEL 0) TACTICAL UAS (STUASL0)	Project (Number/Name) 3192 / RQ-21 BLACKJACK
--	--	--

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Milestones: Contract Awards: Full-Rate Production Contract Award 5	1	2021	1	2021
Production Milestones: Contract Awards: ICS Contract Award 2	3	2015	3	2015
Production Milestones: Contract Awards: ICS Option Award 1	3	2016	3	2016
Production Milestones: Contract Awards: ICS Option Award 2	2	2017	2	2017
Deliveries: LRIP Lot 3 USMC	4	2015	4	2015
Deliveries: LRIP Lot 4 USMC	1	2016	1	2016
Deliveries: LRIP Lot 4 USN	2	2016	2	2016
Deliveries: LRIP Lot 5 USMC	1	2017	1	2017
Deliveries: LRIP Lot 5 USN	4	2017	4	2017
Deliveries: FRP Lot 1 USMC	4	2017	4	2017
Deliveries: FRP Lot 1 USN	1	2018	1	2018
Deliveries: FRP Lot 2	4	2018	4	2018
Deliveries: FRP Lot 3	4	2019	4	2019
Deliveries: FRP Lot 4	4	2020	4	2020
Deliveries: FRP Lot 5	4	2021	4	2021