Exhibit P-40, Budget Line Item Justification: FY 2018 Navy	Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 290

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	853.019	118.142	38.365	69.764	0.000	69.764	99.741	98.101	22.528	14.462	69.688	1,383.810
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	853.019	118.142	38.365	69.764	0.000	69.764	99.741	98.101	22.528	14.462	69.688	1,383.810
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**853.019**	**118.142**	**38.365**	**69.764**	**0.000**	**69.764**	**99.741**	**98.101**	**22.528**	**14.462**	**69.688**	**1,383.810**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.143	0.040	0.126	-	0.126	0.355	0.285	-	-	-	0.949
Flyaway Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navy Multiband Terminal (NMT) System provides funds for procurement of ship, submarine, and shore protected and wideband Military Satellite Communications (MILSATCOM) terminals via earth orbiting relay satellites in the Super High Frequency, Ka, and Extremely High Frequency (EHF) bands. The NMT provides warfighters with the assured, jam resistant, secure SATCOM for message traffic, data transfer and secure voice communications. These procurements are scheduled to meet the satellite communications requirements established by the Chief of Naval Operations in the Fleet Communications Planning and Programming documents.

NAVY MULTIBAND TERMINAL (NMT - NS108): The NMT program is the next generation maritime military satellite communications terminal. The NMT Program is the required Navy component to the Advanced Extremely High Frequency (AEHF) Program for enhancing protected and survivable satellite communications to Naval forces. NMT multiband communication capabilities will communicate two way Ka-Band on Wideband Global SATCOM (WGS) and shipboard and submarine terminals to communicate with X-Band using the Defense Satellite Communications System and WGS. NMT is compatible with today's Navy Low Data Rate/Medium Data Rate terminals, X-Band terminals and will sustain the MILSATCOM architecture by providing connectivity across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence. The NMT system will replenish and improve on the capabilities of both the Military Strategic and Tactical Relay System (MILSTAR) and WGS system by equipping the warfighters with the assured, jam resistant, secure communications as described in the Operational Requirements Document (Wideband Gapfiller System ORD, AFSPC ORD 004-99, May 3, 2000) for the joint AEHF Satellite Communications and WGS System.

The NMT protected system AN/WSC-9 V (Variant) is comprised of three configurations for ships, submarines and shore sites known as Communication Groups. Terminal Communication Groups will integrate protected and wideband signal processing to multiband Antenna Groups. The Antenna Groups align to the specific Terminal Variant for ship, submarine and shore platforms and provides the SATCOM capabilities known as Q/Ka and X/Ka assigned to platforms. NMT includes the Advanced Time Division Multiple Access (TDMA) Interface Processor (IP) and supports increased data transfers for the Automated Digital Network System (ADNS) router architecture supporting improved Quality of Service (QoS) capability, smaller form factor and easier integration into operational environments, further supporting network user access to protected MILSATCOM connectivity. Technical refresh of modems and the associated architectures will directly support Assured Command and Control (C2) posture, SATCOM reliability, space resiliency via band diversity and redundancy.

Exhibit P-40, Budget Line Item Justification: FY 2018 Navy	Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 290		

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*
P-40a	3216 Navy Multiband Terminal (NMT) - Ashore				- / 88.835	- / 8.635	- / 5.906	- / 5.738	- / 0.000	- / 5.738
P-40a	X/Ka Backfits				- / 120.008	- / 17.377	- / 3.907	- / 2.365	- / 0.000	- / 2.365
P-40a	NMT Ashore Antennas				- / 13.903	- / 0.000	- / 0.715	- / 5.546	- / 0.000	- / 5.546
P-3a	1 / 3216 Navy Multiband Terminal (NMT) - Afloat (TBD)				- / 604.087	- / 71.319	- / 12.249	- / 32.029	- / 0.000	- / 32.029
P-3a	5 / ATIP (TBD)				- / 26.186	- / 20.811	- / 15.588	- / 13.076	- / 0.000	- / 13.076
P-3a	6 / Assured C2 Modems (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 11.010	- / 0.000	- / 11.010
P-40	**Total Gross/Weapon System Cost**				**- / 853.019**	**- / 118.142**	**- / 38.365**	**- / 69.764**	**- / 0.000**	**- / 69.764**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The NMT Budget has been restructured to identify and break out other costs previously consolidated against procurement and installation line items. FY18 begins procurement and installation of Assured C2 modems, continues the procurement and installations of full NMT capability terminals and continues installation of the Advanced Time Division Multiple Access Interface Processor (ATIP) on ship terminals procured in prior years. X/Ka back-fit and Ashore Antenna installations are provided on separate P3a sheets.

Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Aggregated Items Title:** 3216 Navy Multiband Terminal (NMT) - Ashore

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
B Kits/Recurrring																				
Ashore -- Procurement [(1)]	A		1,621.906	32	51.901	-	-	-	-	-	-	3,573.000	1	3.573	-	-	-	3,573.000	1	3.573
Ashore -- Installation	A		-	-	34.046	-	-	6.860	-	-	4.354	-	-	1.183	-	-	-	-	-	1.183
NMT Integration, Assembly & Test (IA&T)	A		-	-	-	-	-	0.687	-	-	0.476	-	-	-	-	-	-	-	-	-
Production Support - Ashore	A		-	-	2.888	-	-	0.041	-	-	0.029	-	-	0.214	-	-	-	-	-	0.214
Other DSA - Ashore	A		-	-	-	-	-	0.397	-	-	0.397	-	-	0.118	-	-	-	-	-	0.118
NMT System Operational Verification Test (SOVT)	A		-	-	-	-	-	0.650	-	-	0.650	-	-	0.650	-	-	-	-	-	0.650
Subtotal: B Kits/Recurrring			**-**	**-**	***88.835***	**-**	**-**	***8.635***	**-**	**-**	***5.906***	**-**	**-**	***5.738***	**-**	**-**	**-**	**-**	**-**	***5.738***
Total			**-**	**-**	**88.835**	**-**	**-**	**8.635**	**-**	**-**	**5.906**	**-**	**-**	**5.738**	**-**	**-**	**0.000**	**-**	**-**	**5.738**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
Models of Systems Affected: Shore stations

NMT Procurement budget updates include Integration, Assembly and Test (IA&T). IA&T efforts are required once terminals and antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the terminals, antennas and ATIPs required for NMT shore platforms. NMT Installation updates are performed by SSC Atlantic and SSC Pacific, San Diego, CA to provide the System Operational Verification Test (SOVT) required to validate the NMT system is operational post installation on shore sites.
Provides jam resistant, low probability of interception and detection for protected extended rate communications with Advanced Extremely High Frequency (AEHF) capability.

Footnotes:
[(1)] 1. FY17 increased Install Average Unit Cost (IAUC) compared to FY18 IAUC accounts for infrastructure modifications required at NCTAMSPAC (Hawaii), NCTS (Guam) and NRTF (Awase, Japan). 2. Procurement hardware pricing reflects Raytheon current contract pricing. Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) engineering services are required to deliver and install the NMT Terminal System. 3. FY18 Ashore IA&T engineering services cost reflect delivery completion of FY15 procured terminals, For larger quantity buys, the Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12 month period with the last delivery occurring 27 months after award. Apr 2016 marked the delivery of the first terminal and the last terminal delivers in Mar 2017. 4. SOVT engineering services cost represent completion of SOVT reports to coincide with the end of installation at the Shore sites. Prior year equipment installed in FY16-FY18 is due to Fleet directed fielding schedule adjustments. 5. FY18-FY21 Ashore installation updates represent a re-prioritization of hardware units to support Afloat ship availabilities.

Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Aggregated Items Title:** X/Ka Backfits

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
A Kits/Recurrring																				
X/Ka Backfits -- Procurement [(2)]	A		1,426.958	48	68.494	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X/Ka Backfits -- Installation	A		-	-	51.514	-	-	15.176	-	-	2.494	-	-	1.802	-	-	-	-	-	1.802
NMT Integration, Assembly & Test (IA&T)	A		-	-	-	-	-	1.030	-	-	0.357	-	-	0.238	-	-	-	-	-	0.238
NMT System Operational Verification Test (SOVT)	A		-	-	-	-	-	1.171	-	-	1.056	-	-	0.325	-	-	-	-	-	0.325
Subtotal: A Kits/Recurrring			**-**	**-**	***120.008***	**-**	**-**	***17.377***	**-**	**-**	***3.907***	**-**	**-**	***2.365***	**-**	**-**	**-**	**-**	**-**	***2.365***
Total			**-**	**-**	**120.008**	**-**	**-**	**17.377**	**-**	**-**	**3.907**	**-**	**-**	**2.365**	**-**	**-**	**0.000**	**-**	**-**	**2.365**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

X/Ka Backfits comprise of antennas and are aligned to a specific Terminal variant for ship platforms to provide SATCOM capabilities.

NMT Procurement updates include Integration, Assembly and Test (IA&T) efforts and are performed once back-fit antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the antennas required for NMT ship platforms. NMT Installations include System Operational Verification Test (SOVT). SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT system is operational post installation on afloat platforms.

Footnotes:

[(2)] 1. Fielded platforms with the Q/Ka configuration require an X/Ka backfit, which has additional costs dependent on platform (large vs small deck). 2. FY17 increased Installation Average Unit Cost (IAUC) compared to FY18 IAUC is due to a CG Afloat Variant that requires a large antenna group and is double the cost of a small antenna group (ie DDG Ship Platform). 3. FY16-FY18 Procurement Integration, Assembly and Test (IA&T) engineering services cost are required prior to terminal delivery to platforms. For larger quantity buys, the Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12 month period with the last delivery occurring 27 months after award. 4. FY16-FY22 System Operational Verification Test (SOVT) costs represent the effort to operationally verify the capability following the completion of installation and are tied to the end of the installation availability. NMT scheduled installations are dependent on limited ship availabilities as the program nears FOC. 5. Per Fleet Modernization Program (FMP) first quarter installations reflected in the Installation Schedule are funded in the prior year in order to fund the installation contracts 90 days prior to the beginning of shipboard installation work. 90 days are needed to allow sufficient time for the contractor to plan the work schedule, order material, and perform necessary fabrication.

Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Aggregated Items Title:** NMT Ashore Antennas

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
A Kits/Recurrring																				
NMT Ashore Antennas -- Procurement (3)	A		817.824	17	13.903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NMT Ashore Antennas -- Installation	A		-	-	-	-	-	-	-	-	-	-	-	3.911	-	-	-	-	-	3.911
NMT Integration, Assembly & Test (IA&T)	A		-	-	-	-	-	-	-	-	0.715	-	-	1.310	-	-	-	-	-	1.310
NMT System Operational Verification Test (SOVT)	A		-	-	-	-	-	-	-	-	-	-	-	0.325	-	-	-	-	-	0.325
Subtotal: A Kits/Recurrring			**-**	**-**	***13.903***	**-**	**-**	**-**	**-**	**-**	***0.715***	**-**	**-**	***5.546***	**-**	**-**	**-**	**-**	**-**	***5.546***
Total			**-**	**-**	**13.903**	**-**	**-**	**0.000**	**-**	**-**	**0.715**	**-**	**-**	**5.546**	**-**	**-**	**0.000**	**-**	**-**	**5.546**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
NMT Procurement budget updates include Integration, Assembly and Test (IA&T) efforts are performed once Ashore Antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the antennas required for NMT shore platforms. NMT Installations include System Operational Verification Test (SOVT). SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT antenna is operational post installation on shore sites.
Shore Antennas comprise of a Q Band configuration to provide SATCOM capabilities.

Footnotes:
(3) 1. FY17-FY18 Integration, Assembly and Test (IA&T) engineering services are required to complete delivery of the NMT Terminal Antennas procured in FY16. 2. FY18-FY20 System Operational Verification Test (SOVT) costs represent the effort to operationally verify the capability following the completion of the antenna installation at Shore sites.

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 1 / 3216 Navy Multiband Terminal (NMT) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :		**MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	604.087	71.319	12.249	32.029	0.000	32.029
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	604.087	71.319	12.249	32.029	0.000	32.029
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**604.087**	**71.319**	**12.249**	**32.029**	**0.000**	**32.029**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-

Description:

(Afloat Ship) (Afloat Sub): Provides jam resistant, low probability of interception and detection for protected extended data rate communications with Advanced Extremely High Frequency (AEHF) capability.

NMT Procurement budget updates include Integration, Assembly and Test (IA&T). IA&T efforts are performed once terminals and antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the terminals, antennas and ATIPs required for NMT ship and submarine afloat platforms. NMT Installation updates include System Operational Verification Test (SOVT). SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT system is operational post installation on afloat platforms.

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 1 / 3216 Navy Multiband Terminal (NMT) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Ships, submarines	**Modification Type:** TBD	**Related RDT&E PEs:** 0303109N

Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement						
Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat						
B Kits						
Recurring						
1.1.1) Afloat Ship - NonOrganic [4]	110 / 281.706	8 / 29.512	- / -	1 / 8.476	- / -	1 / 8.476
1.1.2) Afloat Sub - NonOrganic	63 / 58.083	4 / 3.026	2 / 2.985	- / -	- / -	- / -
1.1.3) NMT Integration, Assembly & Test (IA&T) - Organic	- / -	- / 2.748	- / 2.263	- / 0.715	- / -	- / 0.715
1.1.4) Production Support - Ship - NonOrganic	- / 15.641	- / 1.881	- / 0.107	- / 0.537	- / -	- / 0.537
1.1.5) Production Support - Sub - NonOrganic	- / 3.426	- / 0.237	- / 0.208	- / 0.014	- / -	- / 0.014
1.1.6) Other DSA - Ship - NonOrganic	- / 28.753	- / 1.320	- / 1.532	- / 2.740	- / -	- / 2.740
1.1.7) Other DSA - Sub - NonOrganic	- / 6.773	- / 0.323	- / 0.188	- / 0.335	- / -	- / 0.335
1.1.8) NMT System Operational Verification Test (SOVT) - Organic	- / -	- / 2.108	- / 3.005	- / 0.650	- / -	- / 0.650
Subtotal: Recurring	*- / 394.382*	*- / 41.155*	*- / 10.288*	*- / 13.467*	*- / -*	*- / 13.467*
Subtotal: 3216 Navy Multiband Terminal (NMT) - Afloat	*173 / 394.382*	*12 / 41.155*	*2 / 10.288*	*1 / 13.467*	*- / -*	*1 / 13.467*
Subtotal: Procurement, All Modification Items	*- / 394.382*	*- / 41.155*	*- / 10.288*	*- / 13.467*	*- / -*	*- / 13.467*
Installation						
Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat	- / 209.705	- / 30.164	- / 1.961	- / 18.562	- / 0.000	- / 18.562
Subtotal: Installation	*- / 209.705*	*- / 30.164*	*- / 1.961*	*- / 18.562*	*- / -*	*- / 18.562*
Total						
Total Cost (Procurement + Support + Installation)	**604.087**	**71.319**	**12.249**	**32.029**	**0.000**	**32.029**

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 1 / 3216 Navy Multiband Terminal (NMT) - Afloat

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:

Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Marlborough, MA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 15

Dates	FY 2016	FY 2017	FY 2018
Contract Dates	Dec 2015	Jan 2017	Jan 2018
Delivery Dates	Mar 2017	Apr 2018	Apr 2019

Installation Information

Method of Implementation: Method:: Installation Name: Navy Multiband Terminal (NMT) - Afloat

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	134 / 209.705	20 / 30.164	4 / 1.961	13 / 18.161	0 / 0.000	13 / 18.161
FY 2016	- / -	- / -	- / -	1 / 0.401	0 / 0.000	1 / 0.401
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -
Total	134 / 209.705	20 / 30.164	4 / 1.961	14 / 18.562	0 / 0.000	14 / 18.562

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	133	1	1	-	5	7	2	5	3	1	6	2	6
Out	131	1	2	1	-	5	7	2	5	6	1	6	2

Footnotes:

(4) 1. FY18-FY22 continues the procurement of NMT terminals and installation of Advanced Time Division Multiple Access Interface Processors (ATIP) hardware. Costs reflect Raytheon current contract pricing. Installation costs are based on current program office estimates. Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) engineering services are required to deliver and install the NMT Terminal System. 2. IA&T costs are budgeted in the year of the hardware delivery and support the completion of delivered terminals associated with larger quantity buys procured in prior years. Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12 month period with the last delivery occurring 27 months after award. For example, the last terminal delivery from the FY15 prior year buy is scheduled March 2017. FY18-FY21 IA&T costs support delivered terminals associated with FY16-FY20 procured terminals. 3. The FY18 Ship Procurement Average Unit Cost (PAUC) is higher due to a single buy and reduced Economic Order Quantity (EOQ) savings. 4. FY16-FY22 System Operational Verification Test (SOVT) costs represent the effort to operationally verify the system capability following the completion of installation and is tied to the end of the installation availability. NMT scheduled installations are dependent on limited ship availabilities as the program nears FOC. 5. Per Fleet Modernization Program (FMP) first quarter installations reflected in the Installation Schedule are funded in the prior year in order to fund the installation contracts 90 days prior to the beginning of shipboard installation work. 90 days are needed to allow sufficient time for the contractor to plan the work schedule, order material, and perform necessary fabrication. 6. Install cost fluctuations are driven by the configuration of the NMT system and the platform type. For example, estimated installation cost for a LHD 1 class (large deck) platform with dual Q/X/Ka capability is approximately three times greater than

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 1 / 3216 Navy Multiband Terminal (NMT) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

a DDG 51 class platform (small deck) with the same Q/X/Ka capability. Large deck ships consist of 2 Terminal Communication Groups with 4, 5, or 6 antennas. The antenna mix ties to the specific configuration requirement for each ship. Small deck ships consist of 1 Terminal Communication Group with 2, 3, or 4 antennas. There are 13 variants of the NMT and antenna size varies by class (ranging from 54" to 96").

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 5 / ATIP
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	26.186	20.811	15.588	13.076	0.000	13.076
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	26.186	20.811	15.588	13.076	0.000	13.076
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**26.186**	**20.811**	**15.588**	**13.076**	**0.000**	**13.076**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-

Description:

NMT includes the Advanced Time Division Multiple Access (TDMA) Interface Processor (IP) and supports increased data transfers for the Automated Digital Network System (ADNS) router architecture supporting improved Quality of Service (QoS) capability, smaller form factor and easier integration into operational environments, further supporting network user access to protected MILSATCOM connectivity.

[Advanced TDMA Interface Processors (ATIP)] The NMT Terminal includes the Advanced Time Division Multiple Access (TDMA) Interface Processor (IP) Modems. ATIP supports increased data transfers for the Automated Digital Network System (ADNS) router architecture supporting improved Quality of Service (QoS) capability, smaller form factor and easier integration into operational environments, further supporting network user access to protected MILSATCOM connectivity.

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 5 / ATIP
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement						
Modification Item 1 of 1: ATIP						
A Kits						
Recurring						
1.1.1) Advanced TDMA Interface Processors (ATIP) - NonOrganic [5]	222 / 21.090	75 / 7.150	15 / 2.304	- / -	- / -	- / -
Subtotal: Recurring	*- / 21.090*	*- / 7.150*	*- / 2.304*	*- / -*	*- / -*	*- / -*
Subtotal: ATIP	*222 / 21.090*	*75 / 7.150*	*15 / 2.304*	*- / -*	*- / -*	*- / -*
Subtotal: Procurement, All Modification Items	*- / 21.090*	*- / 7.150*	*- / 2.304*	*- / -*	*- / -*	*- / -*
Installation						
Modification Item 1 of 1: ATIP	- / 5.096	- / 13.661	- / 13.284	- / 13.076	- / 0.000	- / 13.076
Subtotal: Installation	*- / 5.096*	*- / 13.661*	*- / 13.284*	*- / 13.076*	*- / -*	*- / 13.076*
Total						
Total Cost (Procurement + Support + Installation)	**26.186**	**20.811**	**15.588**	**13.076**	**0.000**	**13.076**

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 5 / ATIP
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ATIP

Manufacturer Information

Manufacturer Name: COMTECH [6]	Manufacturer Location: Tempe, AZ
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 3

Dates	FY 2016	FY 2017	FY 2018
Contract Dates	Jan 2016	Jan 2017	
Delivery Dates	Apr 2016	Apr 2017	

Installation Information

Method of Implementation: [none specified]:: Installation Name: Advanced TDMA Interface Processors (ATIP)

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	28 / 5.096	75 / 13.661	65 / 13.284	54 / 10.233	0 / 0.000	54 / 10.233
FY 2016	- / -	- / -	- / -	15 / 2.843	0 / 0.000	15 / 2.843
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 5.096	75 / 13.661	65 / 13.284	69 / 13.076	0 / 0.000	69 / 13.076

Installation Schedule

		FY 2016				FY 2017				FY 2018			
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	28	-	-	25	25	25	-	22	22	21	-	23	23
Out	28	-	-	-	25	25	25	-	22	22	21	-	23

Footnotes:

[5] 1. ATIP modem installations will take place during a Window of Opportunity (WOO) availability that includes a 14 day window to perform and complete the installation. 2. Per Fleet Modernization Program (FMP) first quarter installations reflected in the Installation Schedule are funded in the prior year in order to fund the installation contracts 90 days prior to the beginning of shipboard installation work. 90 days are needed to allow sufficient time for the contractor to plan the work schedule, order material, and perform necessary fabrication.

[6] ATIP procurements completed in 2017.

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 6 / Assured C2 Modems
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	11.010	0.000	11.010
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	11.010	0.000	11.010
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**11.010**	**0.000**	**11.010**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-

Description:

Assured C2 Modems: Directly support Assured Command and Control (C2) posture, SATCOM reliability, space resiliency via band diversity and redundancy for MILSATCOM.

Beginning in FY18, Assured C2 Modems will provide Modem Technical Refresh required to directly support Assured Command and Control (C2) posture.

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 6 / Assured C2 Modems
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Shore Stations, Ships	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement						
Modification Item 1 of 1: Assured C2 Modems						
A Kits						
Recurring						
1.1.1) Assured C2 Modems - NonOrganic [7]	- / -	- / -	- / -	64 / 2.154	- / -	64 / 2.154
1.1.2) Production Support - Assured C2 Modems - Organic	- / -	- / -	- / -	- / 0.129	- / -	- / 0.129
1.1.3) Other DSA - Assured C2 Modems - Organic [8]	- / -	- / -	- / -	- / 6.442	- / -	- / 6.442
Subtotal: Recurring	*- / 0.000*	- / -	- / -	*- / 8.725*	- / -	*- / 8.725*
Subtotal: Assured C2 Modems	- / -	- / -	- / -	*64 / 8.725*	- / -	*64 / 8.725*
Subtotal: Procurement, All Modification Items	*- / 0.000*	- / -	- / -	*- / 8.725*	- / -	*- / 8.725*
Installation						
Modification Item 1 of 1: Assured C2 Modems	- / 0.000	- / 0.000	- / 0.000	- / 2.285	- / 0.000	- / 2.285
Subtotal: Installation	*- / 0.000*	- / -	- / -	*- / 2.285*	- / -	*- / 2.285*
Total						
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**11.010**	**0.000**	**11.010**

Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	**P-1 Line Item Number / Title:** 3216 / Navy Multiband Terminal (NMT)	**Modification Number / Title:** 6 / Assured C2 Modems
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Assured C2 Modems

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 3

Dates	FY 2016	FY 2017	FY 2018
Contract Dates			Jan 2018
Delivery Dates			Apr 2018

Installation Information

Method of Implementation: [none specified]:: Installation Name: Assured C2 Modems

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	64 / 2.285	0 / 0.000	64 / 2.285
Total	- / -	- / -	- / -	64 / 2.285	0 / 0.000	64 / 2.285

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	-	-	16	48
Out	-	-	-	-	-	-	-	-	-	-	-	-	16

Footnotes:

(7) 1. Ship Modem installations will take place during a Window of Opportunity (WOO) availability that includes a 14 day window to perform and complete the installation.

(8) 1. FY18 DSA costs are required to support 100% of the drawings and installation planning requirements associated with all 64 FY18 modem installations. Additionally, the FY18 DSA costs include partial DSA requirements (75%) required for pre-planning and design of the FY19 installations where 365 modem installations are planned. Typically DSA requirements are budgeted 75% the year prior to the installation and 25% the year of the installation. DSA for the FY18 installations were budgeted at 100% in FY18 due to the urgent nature of the requirement.