

PMA/PMW-101 Multifunctional Information Distribution System (MIDS)



MIDS Program Overview

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WARFIGHTER FIRST!



PMA/PMW-101



Multifunctional Information Distribution System (MIDS)

MISSION AREA

- PMA/PMW 101 MIDS Programs develop, produce and sustain tactical data links that achieve interoperability through common waveforms and message sets
- MIDS-Low Volume Terminal (LVT) and MIDS Joint Tactical Radio System (JTRS) products are fielded to joint, coalition, and international warfighters across the tactical units for ground, sea, and air, including numerous foreign partners

TOP LINE EFFORTS

- Maintain Link 16 as the Navy's critical architectural backbone for communication and data transfer that extends from shore to air and sea
- MIDS JTRS provides Link 16 Concurrent Multi Netting 4 (CMN-4) and TACAN capability, and are equipped with Crypto Modernization (CM), Frequency Remapping (FR), Enhanced Throughput (ET), Concurrent Contention Receive (CCR) and Concurrent Multi-Netting (CMN)
- TTNT provides a low latency and high throughput communications capability that directly supports Navy-wide interoperability requirements
- TTNT delivers additional advanced capabilities that provide critical platform connectivity and throughput within contested environments



FOCUS AREAS

Understand & Implement the Mission

Implement solutions against multi-domain tactical data link threats with MIDS JTRS CMN-4



Capability, Capacity, Interoperability, Security

Enable high-end warfighter capability to be fielded rapidly in support of overarching interoperability

Speed to Capacity

Continue to accelerate development and fielding of MIDS terminals for US coalition partner nations to meet Link 16 CM Mandates





- ACAT Level: ACAT IC
- Program Initiation: MS II DEC 1993
- DoD Designation of Navy Link 16 Lead Service: 1997
- MIDS-Low Volume Terminal (LVT) FRP: 2003
- MIDS Joint Tactical Radio System (JTRS) FP&F: 2012
- ASN(RDA) Desig of From the Air Advanced Tactical Data Link (FTA ATDL) Lead: APR 2012
- DoD CIO designation of Waveform Sponsor: Link 16 and TTNT JUN 2015
- Prime Contractors: Data Link Solutions (DLS - BAE & Collins Aerospace), L3Harris, EuroMIDS

- Develop, produce, and sustain tactical data link products and waveforms, including Link 16 and Tactical Targeting Network Technology (TTNT), that achieve interoperability through common waveforms and message sets.

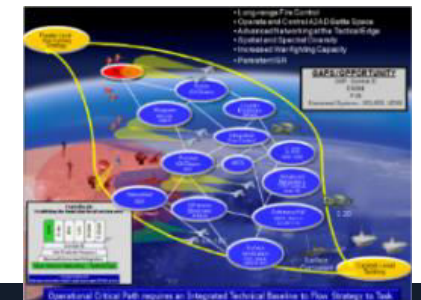
- To rapidly develop, field, and support world-wide interoperable and secure adaptive networking capabilities to ensure sustained tactical data superiority for the joint, coalition, and international warfighter.

- Crypto Modernization (CM),
- Frequency Remapping (FR) & Enhanced Throughput (ET)

- CM, FR, ET; Concurrent Multi-Netting (CMN); Concurrent Contention Receive (CCR)
- MIDS Modernization (Block Upgrade 3 (BU3))

- High-speed, high-capacity, low latency network
- Standard Internet Protocol (IP) compatible
- Adaptive ad hoc networking

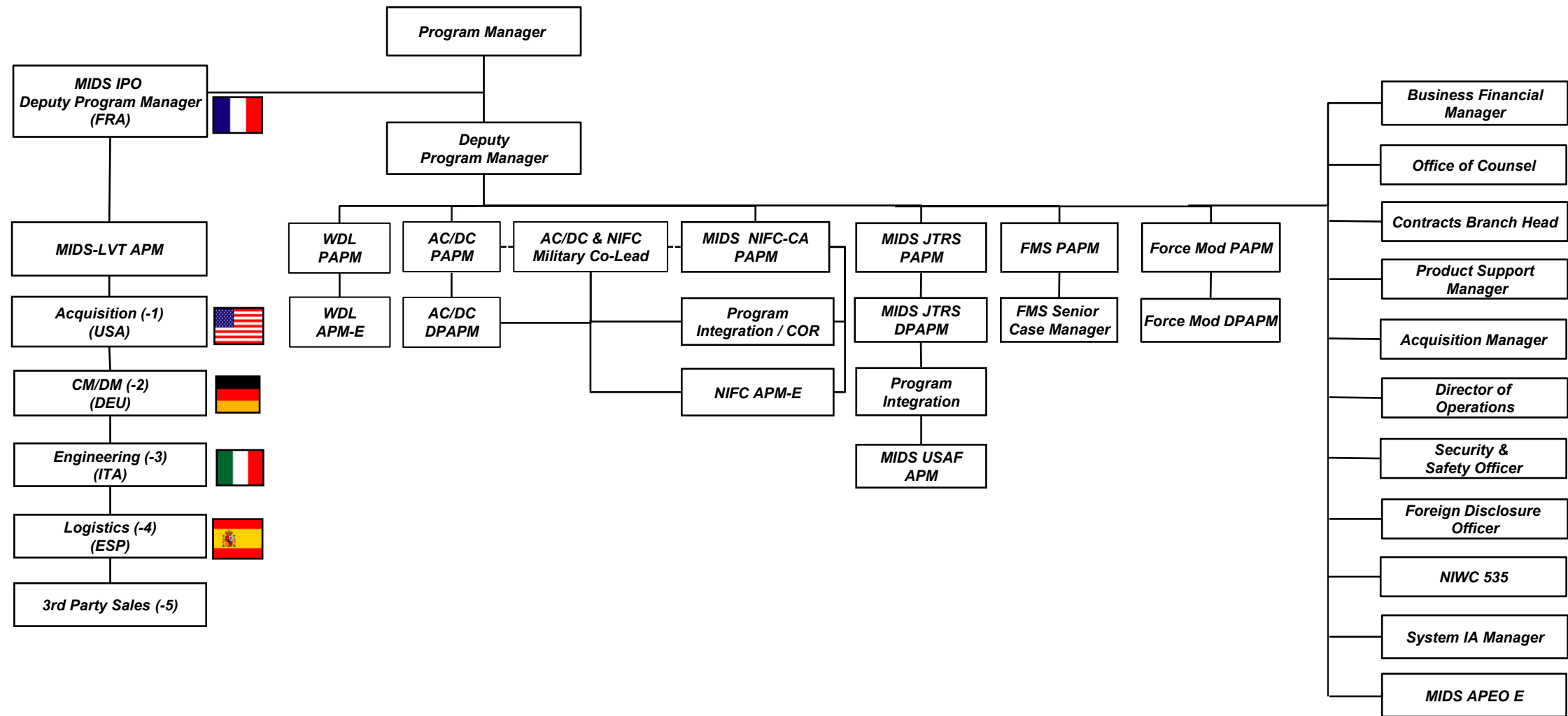
- Coordinated effort of PMA/PMW-101, PMAs 201, 231, 259, 265, 298 to deliver long range firepower in a contested environment





MIDS Program Office (MPO)

PMA/PMW 101





MIDS Form Factor Acquisition Approach

Legend



New Start



ECP
(w/in scope of MIDS AS/AP)



**JTIDS
Legacy Ship
Cabinets with
Link 16**

**New Start for
MIDS-LVT
Development**



**HW Defined Radio
Reduced FF**

MIDS-LVT Variants

MIDS-LVT (1)

MIDS-LVT (2)

MIDS-LVT (3)

**JTRS ECP to
MIDS-LVT**



**SW Defined Radio
Same FF**

MIDS JTRS Variants

JTRS Core

JTRS CMN-4

JTRS CMN-4/ MMI 1

JTRS CMN-4 w/IFF

JTRS CMN-4/TTNT

**Next
Transformation
for MIDS**



PMA/PMW-101 MIDS

Contractors and Government

Field Activities

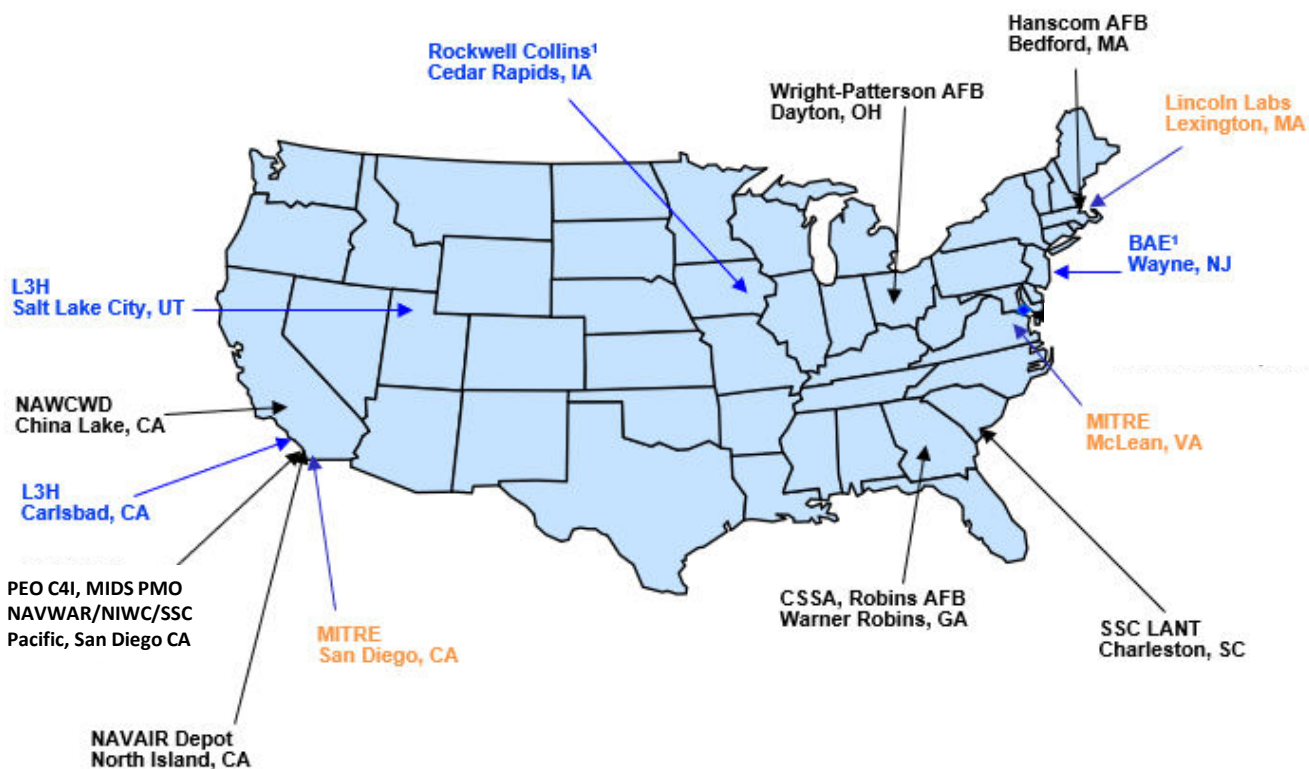
Prime Contractor	Location	Role
DLS LLC	Cedar Rapids, IA	Terminal design/production
L3Harris	Salt Lake City, UT	Terminal design/production
BAE	Wayne, NJ	Systems engineering
Collins Aerospace	Cedar Rapids, IA	Terminal design/production
EuroMIDS -Thales -Indra -Hensoldt -Leonardo	Paris, FR Paris, FR Madrid, SP Hamburg, GE Rome, IT	
Government Field Activities	Location	Role
NIWC PAC	San Diego, CA	HW/SW Engineer Support
NIWC LANT	Charleston, SC	Contracts Support
NAWCWD	China Lake, CA	Testing
CSSA Robbins	Warner Robbins, GA	Testing
FFRDC	Location	Role
MITRE	McLean, VA	Engineering Support
MIT Lincoln Labs	Lexington, MA	Modeling and Simulation

SBIR Vendor	Location	Role
ACT	Lancaster, PA	Science and Technology
ADI	San Diego, CA	Science and Technology
Caliola	Colorado Springs, CO	Science and Technology
Critical Frequency Design	Melbourne, FL	Science and Technology
NSS	Honolulu, HI	Science and Technology
GIRD	Cincinnati, OH	Science and Technology
Maxentrics	San Diego, CA	Science and Technology
Next Gen Federal	Morgantown, WV	Science and Technology
Pacific Antenna Systems	Camarillo, CA	Science and Technology
Pareto Frontier	Palm Harbor, FL	Science and Technology
Sabel Systems Technology	Beavercreek, OH	Science and Technology



MIDS US Field Activities

MIDS-LVT and MIDS JTRS



Government Organization

- PEO C4I; MIDS PMO NAVWAR/NIWC/SSC Pacific, San Diego CA
- NAWCWD China Lake, CA
- Wright Patterson AFB, Dayton, OH
- Hanscom AFB, Bedford, MA
- CSSA, Robins AFB, Warner Robins, GA
- SSC LANT, Charleston, SC

US Vendors

- L3H, Salt Lake City, UT
- L3H, Carlsbad, CA
- Rockwell Collins, Cedar Rapids, IA
 - Data Link Solutions is a consortium of Rockwell Collins and BAE
- BAE, Wayne, NJ

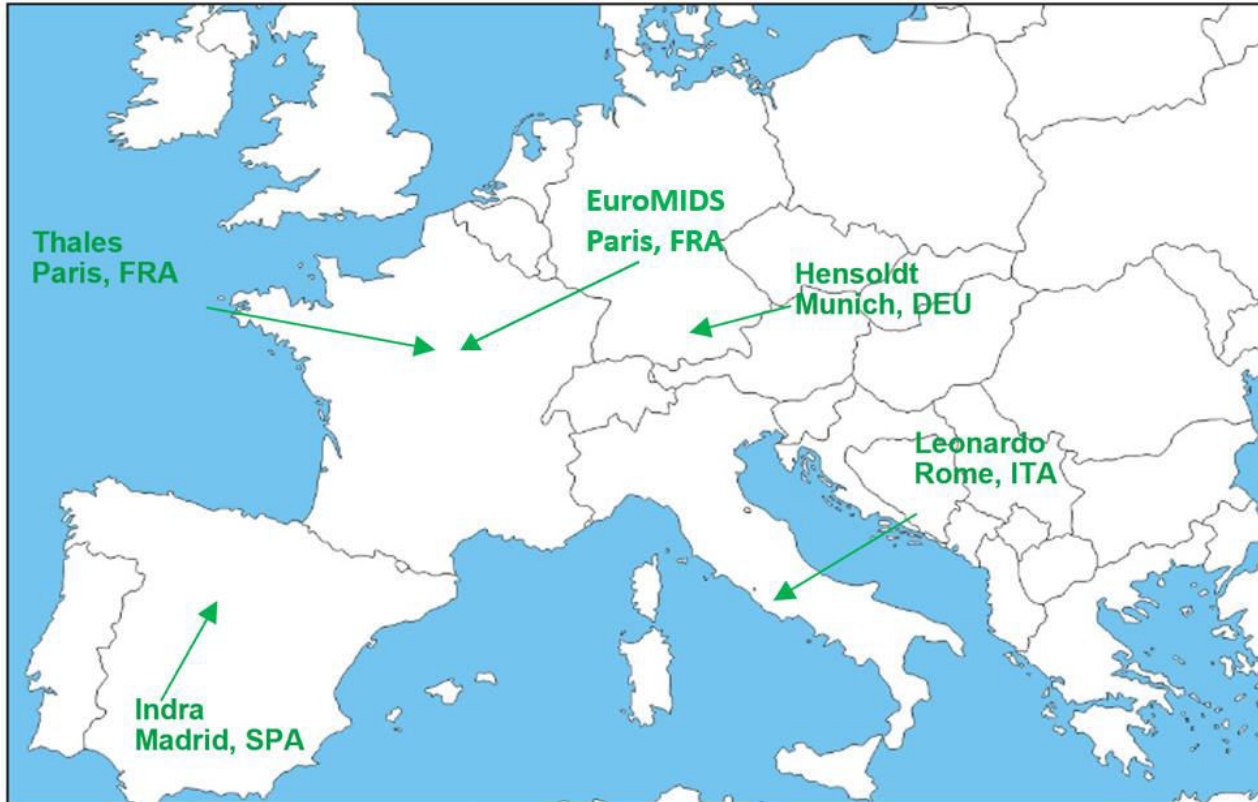
Federally Funded Research and Development Centers (FFRDCs)

- MITRE, San Diego, CA
- Lincoln Labs, Lexington, MA
- MITRE, McLean, VA



MIDS International Vendors

MIDS-LVT International Vendors



International Vendors

- EuroMIDS, Paris, France
 - EuroMIDS is a consortium of Thales, Indra, Leonardo, and Hensoldt
- Thales, Paris, France
- Indra, Madrid, Spain
- Hensoldt, Munich, Germany
- Leonardo, Rome, Italy



Link 16 Community is Growing



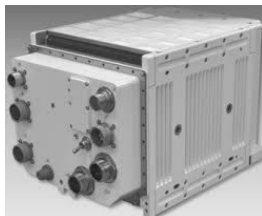
STT: KOR-24A
(L3 Harris)

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Small Adaptable Form Factor (SAFF) Modular Data Link Set (MDLS) (BAE)

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Freedom 550 Joint Enterprise Terminal (Northrop Grumman)

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Program Of Record



MIDS-LVT
(MIDS)



MIDS JTRS
(MIDS)



(PMW-150)



AN/URC-138(V)1(C)
(DLS: Rockwell Collins/BAE)

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TacNet Tactical Radio (TTR)
(DLS: Rockwell Collins/BAE)

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BATS-D AN/PRC-161 Handheld Link 16 Radio
(L3 Harris)

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MIDS Program Summary

Mission

To rapidly develop, field, and support world-wide interoperable and secure adaptive networking capabilities to ensure sustained tactical data superiority for the joint, coalition, and international warfighter.

International Program Office (IPO)



Five nations working towards one mission: to develop, field, and support interoperable, affordable, and secure MIDS tactical data link and programmable networking technologies and capabilities for the joint, coalition, and international warfighter.

MIDS-Low Volume Terminals (LVT)

Developed as a pre-planned hardware-defined radio for improvement of the JTIDS Class 2 terminal. It provides Link 16 capability for space and weight constrained platforms.

Foreign Military Sales (FMS)



Acquires and delivers MIDS-LVT, MIDS JTRS, and Small Form Factor Link 16 terminals, and associated articles and services to 58 nations and NATO.



MIDS Joint Tactical Radio Systems (JTRS)

A multi-channel, software defined variant of MIDS-LVT. Provides Link 16 concurrent Multi Netting (CMN-4) and TTNT. MIDS JTRS is a multidomain terminal that is capable of being integrated into air, ground, and maritime platforms.

Tactical Targeting Network Technology (TTNT)

A secure and robust IP-based waveform that delivers the fastest ad hoc mesh network at the tactical edge. Delivers capabilities that provide critical platform connectivity, throughput, and netted sensors applications within challenging operational scenarios and theaters.

Force Modernization of Link 16 & TTNT Waveform Management

Performs Link 16 Lead Service and related TTNT activities that include providing analysis on modernization strategies, support to MIDS terminal fielding/integration, waveform governance and fleet introduction training.

WARFIGHTER FIRST!



Appendix



Appendix A – MIDS Organizational Chart

- Program Manager
 - MIDS IPO Deputy Program Manager (France)
 - MIDS LVT APM
 - Acquisition (-1), USA
 - CM/DM (-2), Germany
 - Engineering (-3), Italy
 - Logistics (-4), Spain
 - Third Party Sales
 - Principal Deputy Program Manager
 - MIDS JTRS PAMP
 - MIDS JTRS DPAMP
 - Program Integration
 - MIDS USAF APM
 - FMS PAMP
 - FMS DPAMP
 - MIDS NIFC-CA PAMP
 - MIDS NIFC-CA APM
 - Program Integration/COR
 - Force Mod PAMP
 - Force Mod APM
 - MIDS APEO-E
 - Business Financial Manager
 - Office of Counsel
 - Contracts Branch Head
 - Product Support Manager
 - Acquisition Manager
 - Director of Operations
 - Security and Safety Officer
 - Foreign Disclosure Officer
 - NIWC 535
 - System IA Manager



Appendix B - Link 16 Community is Growing

- Program Origins
 - PMW-150
 - Ship Cabinet Group
 - High Power Amplifier Group
 - Data Processor Group
 - Receiver – Transmitter
 - MIDS LVT
 - MIDS JTRS
- Program Product Growth
 - STT: KOR-24A
 - Vendo – L3Harris
 - Small Adaptable Form Factor (SAFE) Modular Data Link Set (MDLS),
 - Vendor – BAE
 - Freedom 550 Joint Enterprise Terminal
 - Vendor – Northrup Grumman
 - AN/URC-138(V)1(C)
 - Vendors – DLS: Rockwell Collins/BAE)
 - TacNet Tactical Radio (TTR)
 - Vendors – DLS: Rockwell Collins/BAE)
 - BATS-D AN/PRC-161 Handheld Link 16 Radio
 - Vendor – L3 Harris