



Thinklogical Selected for US NAVY BAMS Program

Thinklogical supplies key fiber-based infrastructure solutions on the U.S. Navy's Broad Area Maritime Surveillance Unmanned Aircraft System (BAMS UAS). The BAMS program is designed to support a variety of all-weather maritime ISR (intelligence, surveillance and reconnaissance) missions.



Thinklogical's VX Router Series

Customer

Northrop Grumman - BAMS UAS Program

Application

Routing and extension of all desktop peripherals and video in order to provide seamless interaction between flight control and sensory data.

Solutions Provided

- **VX 160 Router**
- **Velocitykvm Extension System - 24**
DVI two displays
with USB 2.0 and multi-mode fiber option
- **Velocitykvm Extension System - 28**
Dual & Single-link DVI
with USB 2.0 and multi-mode fiber option

Northrop Grumman chose Thinklogical solutions in order to provide an infrastructure that was fiber-based, 6.25 gigabit, single thread, resolution agnostic, and could deliver every pixel and refresh frame from end-to-end. Since Thinklogical systems are accredited for Information Assurance by the (NSA) Common Criteria, EAL 4, and for use in NATO multi-classification environments, it was clear that this system would be ideal for deployment throughout the BAMS program. Thinklogical was able to meet their requirement for creating a homogeneous infrastructure with sufficient bandwidth to handle any uncompressed video, peripheral or secure computing challenge. In addition, Thinklogical solutions are deployed around the world at many military and intelligence facilities, ships, and SCIFs.

The U.S. Navy is Moving Pilots Out of the Cockpit and into the Control Room – How Thinklogical is Providing Real-Time Key Infrastructure Solutions

Before making any decisions on a routing and extension solution, Sam Guinto, Northrop Grumman's BAMS UAS MCS System Integration and Test lead conducted the proper due diligence and researched other manufacturers' products, just to be sure they were making the right decision.

"We did a very thorough job, working closely with Thinklogical to design the BAMS computer infrastructure," said Guinto. "We based our design decisions on Thinklogical's system performance, interface routing capability and functionality. Ultimately, the Thinklogical system provided the BAMS Mission Control System operators with a user experience that is not compromised, even when accessing multiple systems, this is key."

Northrop Grumman was awarded \$1.16 billion contract in order to develop a persistent maritime intelligence, surveillance and reconnaissance (ISR) data collection and dissemination capability that fulfills the maritime war fighter's requirement for continuous battle-space awareness.

BAMS represents the Navy's largest investment in unmanned aircraft systems to date. "The BAMS UAS program will begin to develop a persistent ISR capability never before available to the fleet," said Capt. Bob Dishman, program manager for the BAMS UAS program. "This is a significant milestone for the BAMS UAS program, concluding a deliberate and meticulous source selection process that adhered to stringent Federal Acquisition Regulation and Naval Air System Command source selection processes and documentation requirements."

The Broad Area Maritime Surveillance (BAMS) UAV was intended to provide persistent, maritime surveillance and reconnaissance capability with worldwide access. The Broad Area Maritime Surveillance UAV would be a multi-mission ISR system to support strike, signals intelligence, and communications relay while operating independently or in direct collaboration with other assets in the maritime environment. BAMS would operate at altitudes over 40,000 feet, above the weather and most air traffic to conduct continuous open-ocean and littoral surveillance of targets as small as exposed submarine periscopes. BAMS would be fully integrated into the joint ISR architecture, providing the information to the joint force in near real time. Long-endurance BAMS UAVs would be able to provide a continuous on-station presence at ranges of 1000-3000 nautical miles from the launch point. BAMS would thus play a key role in providing the commander with a persistent, reliable picture of surface threats while minimizing the need to put manned assets in harms way to execute surveillance and reconnaissance tasks.



Secure Switching and Routing with Fiber Optic KVM and Video Extension for Government, Military and Secure Data Environments

Northrop Grumman understands that Thinklogical has deep experience in meeting the unique needs and requirements of government and military securing switching applications, particularly in complex, multi-layered "Red/Black" environments. In addition, they were aware that Thinklogical was the only supplier who has established an Information Assurance (IA) methodology across high-end video switching equipment to meet all EAL-4 certification requirements. This was key when evaluating other routing and extension solutions.

Thinklogical VX Router Series provides the BAMS program with secure routing within a single system

The VX Routing system will be deployed to provide protocol agnostic, modular, non-blocking switching for complete, end-to-end routing of video and peripheral signals over multi-mode or single-mode fiber optic cables. This will add simplicity and control in a very sophisticated video and KVM visual computing environment. The VX Routers will support any video format, at any resolution, with no frame or pixel loss, as well as any computer or video related peripheral data. When deployed with Thinklogical's Velocitykvm Extenders, the resulting system is the only Common Criteria, EAL-4 certified solution providing multi-classification secure computing and video routing within the same chassis.



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The BAMS program will deploy the Velocitykvm fiber extension system, which is powered by Thinklogical's patent-pending MRTS technology. This will provide end-to-end data transmission with unparalleled performance. This technology is key when real-time collaboration applications are in place and eliminating dropped frames and latency is of paramount importance.

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100 Washington Street
Milford, CT 06460 USA

Contact a Thinklogical Sales Representative at
sales@thinklogical.com or (203) 647-8700