



MILITARY

DATAPATH | Case Study

RAMSTEIN AIR BASE TELEPORT: PIONEERING NET-CENTRIC OPERATIONS

U.S. Air Force Europe Enables a Seamless Broadband Network That Joins the Frontlines with Distant Command and Intelligence Centers

From high-altitude reconnaissance and ground support to space-based communications and global disaster relief, the U.S. Air Force (USAF) stands at the forefront of war-fighting, peacekeeping and humanitarian aid initiatives around the globe. During combat operations in Iraq and Afghanistan from June 2002 to June 2003, the airmen of the USAF Europe’s (USAFE) 435th Communications Squadron at Ramstein Air Base in Germany served as “virtual wingmen” to warfighters based in Europe, Southwest Asia and the Middle East. The unit provided satellite communications support to nearly 300,000 airmen and enabled commanders in the United States and Europe to coordinate nearly 18,000 combat sorties.

Net-Centric Operations Require Increased Bandwidth

The military transformation to network-centric operations has led to advances in military information technology such as widespread use of broadband communications and lighter, more mobile hardware. U.S. military commanders view network-centric operations as an important strategic advantage for U.S. forces responding to full-scale conflicts and nonconventional terrorist threats.

Solution at a Glance: RAMSTEIN TELEPORT

Challenge	USAFE needed to improve bandwidth scalability rapidly and significantly to support global operations.
Solution	Deploy a DataPath ET 7000 Fixed™ network to link military X band networks to commercial Ku and C band networks.
Impact	Since 2001, the DataPath solution has ensured scalability, increased capabilities and provided near-constant connectivity between remote combat forces and decision-makers in the United States.

The move to network-centric warfare posed a challenge for USAFE. Its legacy satellite earth terminal infrastructure could not provide sufficient scalability to support the requirements of today's bandwidth-intensive applications. As a result, USAFE and the United States Transportation Command designed the Ramstein Air Base Telecommunications Port to meet new network-centric requirements rapidly.

The Ramstein Teleport provides a lifeline between remote frontline combat forces and decision-makers in the United States.

The Ramstein Teleport is a communications gateway connecting military and commercial satellite networks with a terrestrial fiber optic and wireless infrastructure. The integrated network supplements the bandwidth provided by the military X band network to provide enhanced communications capabilities without requiring additional military satellite inventory. DataPath, known for their ability to quickly deploy specialized satellite and wireless communication networks, earth terminals and network solutions, supplied an earth-station solution based on commercial off-the-shelf technology to link the military X band system to existing commercial Ku and C band networks.

“With the large number of commercial satellites already in orbit, it made sense for USAFE to leverage the readily available secure communications provided by the private sector,” said SMSgt. Kyle Hawthorne, USAFE’s satellite communications systems manager. “By incorporating commercial satellites into USAFE’s comprehensive communications network, we empower warfighters to communicate over traditional military X band or utilize commercial Ku or C bands.”



Empowering Communications Flexibility on the Frontline

The Ramstein Teleport is the centerpiece of a greater Department of Defense (DoD) Teleport System operated by the Defense Information Systems Agency. The system provides deployed forces anywhere in the world with multi-band and multimedia connectivity to online Service Delivery Nodes and legacy command control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems. Ultimately, the system will link multiple SATCOM systems and deployed tactical networks, creating a seamless user interface into the Defense Information Systems Network and legacy C4ISR systems.

The Ramstein Teleport provides a lifeline between remote frontline combat forces and decision-makers in the United States, making 24 by 7 operational functionality critical. DataPath satellite communications specialists work as part of the USAFE team to help ensure that everyday operations run smoothly.

During Operation Iraqi Freedom, the system was put to the test when a key military satellite unexpectedly went out of service. To prevent loss of connectivity to the deployed warfighters, the DataPath/USAFE team quickly switched over from Ku to C band via a commercial satellite, an option not available with the military X band system.

“The Ramstein Air Base Teleport allows warfighters to communicate on both commercial and military satellite bands, ensuring near constant connectivity,” said SMSgt. Hawthorne. “The teleport empowers the rapid dissemination of critical battlefield intelligence on one end of the network and provides warfighters with rapid, actionable analysis on the other – enhancing command and control capabilities theater-wide.”

Mission Impact: Reliable, Ongoing Communications Availability

Mission success means achieving operation objectives and preserving the safety of the warfighters involved. For the Ramstein Teleport team, the secure communications network and full support they provide plays a daily role in accomplishing this goal, delivering reliable communications availability since the project’s inception in 2001.

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SMSgt. Kyle Hawthorne
 USAFE's satellite communications systems manager

The Future: Greater Capacity, Greater Flexibility

“Looking to the future, we are focused on expanding our connectivity capabilities,” said SMSgt. Hawthorne. “To provide warfighters with more communications capacity we are implementing extremely high frequency (EHF) and ultra high frequency capabilities at the teleport and are researching possibilities to develop new Ka and advanced EHF capabilities. These advancements will empower us to provide even greater capacity and more flexible coverage to aid warfighters than ever before.”



About DataPath

Founded in 1996, DataPath designs and delivers satellite and wireless communications networks around the world. The company is known for rapidly delivering reliable, mobile communications that operate in even the most extreme conditions to support customers that include the U.S. Army, the U.S. Marine Corps and emergency first responders. Headquartered in Duluth, Ga., DataPath maintains offices in Fort Monmouth, N.J., Nashua, N.H., San Diego, Calif. and Tampa, Fla. For more information, visit www.datapath.com or call 866-855-3800.



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