

Lockheed Martin Begins Modernizing Receivers For U.S. Air Force's GPS Signal Monitoring Stations



1st Lt Mark Skinner discusses GPS operations with General David Goldfein (photo credit: US Air Force)

COLORADO SPRINGS, Colo., Aug. 7, 2017– Three of six new Lockheed Martin (NYSE: LMT) developed, state-of-the-art receivers are now deployed to help the U.S. Air Force maintain the accuracy of Global Positioning System (GPS) satellite signals.

In June, the first new Monitor Station Technology Improvement Capability (MSTIC) receiver became operational at Cape Canaveral Air Force Station, Florida. The upgrades continued at Air Force Monitoring Stations on the Kwajalein Atoll and Hawaii. These critical upgrades of the GPS Monitoring Stations from early 1990s technology are part of an overall effort to modernize and maintain the current GPS ground control system, known as the

Architecture Evolution Plan Operational Control Segment.

GPS Monitoring stations are globally-dispersed, fixed-position sites that monitor GPS satellite signals and help maintain their navigation and positioning accuracy for users around the world.

Under Lockheed Martin's GPS Control Segment (GCS) Sustainment contract, the company utilized an agile development methodology to develop and deploy the first MSTIC receiver on schedule in under 36 months. The three remaining Air Force GPS Monitoring Stations will be upgraded with MSTIC receivers by the end of 2017.

"Taking advantage of current commercial technology trends has allowed us to provide the Air Force with a monitoring capability that can support the Air Force's GPS mission for years to come," said Vinny Sica, vice president and general manager of Mission Solutions for Lockheed Martin. "The MSTIC receiver addresses today's obsolescence problem while providing the opportunity for the monitoring of modernized navigation signals in the future."

The new MSTIC receiver's Software Defined Radio (SDR) technology will replace the legacy Monitor Station Receiver Element (MSRE)'s hardware-based ASIC (application-specific integrated circuit) platform originally deployed almost two decades ago. MSTIC leverages Commercial Off-the-Shelf hardware without the need for custom firmware. Standard interfaces and the inherent configurability of the architecture simplifies sustainment and enables MSTIC software to migrate to new hardware platforms as commercial vendors increase processing power, improve reliability and enhance cybersecurity."

"MSTIC's new SDR technology enables the remote application of mission specific software updates which will improve performance and enable reception of modernized GPS signals," adds Sica.

The [Global Positioning Systems Directorate](#) at the U.S. Air Force Space and Missiles Systems Center contracted the MSTIC upgrade. [Air Force Space Command's 2nd Space Operations Squadron](#) (2SOPS), based at Schriever Air Force Base, Colorado, manages and operates the GPS constellation for both civil and military users.

For additional GPS Ground Control System information, photos and video visit:
<http://www.lockheedmartin.com/us/products/gpsgcs.html>.

About Lockheed Martin

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