

Flight Line Maintenance

U.S. Army Black Hawk Helicopter Program

The Challenge

Valuable aircraft maintenance hours were being lost due to a complicated process for downloading helicopter avionics data for use by pilots and maintenance crews. The process required a technician to carry a laptop to the helicopter, plug it in, and wait for the data to download. Only after those steps were completed could the pilots access aircraft data and complete their debriefing reports — crucial data required for diagnosing maintenance needs and quickly detecting potential failures.

The U.S. Army needed the means to securely and wirelessly transmit data regarding helicopter maintenance status between the flight line and the hangar. A high level of security was needed to prevent critical data from being intercepted by unwanted listeners.

The Solution

3eTI installed a secure 802.11 wireless infrastructure with FIPS 140-2 Validated™ security between the flight line and the hangar, and created a hot spot on the flight lines in Fort Campbell, Kentucky. Real-time transmission of data was achieved using 3eTI's secure access point, which sent data between the flight line and the hangar. Where needed, 3eTI installed rugged equipment suitable for outdoor use. The solution was designed so that data was available in the maintenance area inside the hangar and to mobile maintenance on the flight line, dependent on where it was needed.

With the 3eTI solution, pilots were able to compose their reports on a laptop from inside the aircraft upon landing, feeding aircraft maintenance data across a secure wireless network without waiting for data downloaded by technicians.

The Benefits

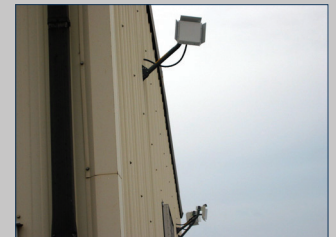
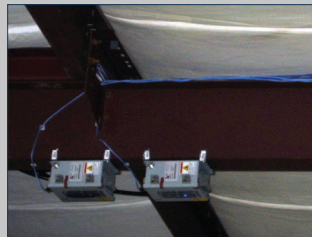
The 3eTI solution provided real-time, as-needed access to maintenance data in the hangar and on the flight line. This enabled pilots to debrief quickly and complete their reports while still in the aircraft. This not only saved time, but also decreased pilots' frustrations. The maintenance crews were able to get the data they needed quickly, saving valuable time and reducing costly maintenance hours. The FIPS 140-2 Validated security ensured this information was limited to those who needed to access it.

Products Used

- Wireless Access Point (3e-531 MP)
- Wireless Security Card for PC / Laptop (3e-110)



Mobile maintenance on the flight line



Secure wireless for the flight line



Secure wireless in hangar



Maintenance in hangar

FIPS 140-2 Validated™ is a Certification Mark of NIST, which does not imply product endorsement by NIST, the U.S. or Canadian government.