

UEI & Tyonek Global Services, LLC

WORKING TOGETHER TO FIND SOLUTIONS

[Tyonek Global Services, LLC](#) was awarded a contract to implement [Health Usage and Monitoring System \(HUMS\)](#) on the U.S. Air Force's fleet of Bell UH-1N Huey helicopters. Tyonek needed a flexible, rugged, and accurate data acquisition device that will be used to collect the information from the various sensors on the UH-1N. Tyonek partnered with UEI to develop, test, and install the perfect end-to-end solution for USAF.



THE IMMEDIATE CHALLENGES

- 1 Tyonek needed Commercial Off-The-Shelf (COTS) hardware to collect both standard and signal information from sensor to data from the avionics.
- 2 Standard information to be collected includes the status of aircraft safety equipment (signal lights, warnings, indicators, etc.), oil temperature, engine speed and acceleration.
- 3 More advanced signals to be collected includes engine torque, heading, pitch angle, roll angle, ground speed, latitude/longitude and date/time reference.
- 4 System needed to be rugged to withstand the temperature, shock, and vibration encountered in use in a helicopter, but also fit a [very specific area of the helicopter](#).

UEI'S PATHWAY TO SUCCESS FOR TYONEK & USAF

- The [UEI-HUMS1](#) solution *simplifies* life cycle management and increases reliability by providing a single Line Replacable Unit (LRU) replacing two separate LRUs of the previous design *which saved the USAF millions of dollars*.
- UEI developed the [UEI-HUMS1](#) COTS system; a modified version of UEI's popular [DNR-MIL](#) data acquisition chassis.
- The I/O provided in the [UEI-HUMS1](#) includes *dozens* of **Analog, Digital, Synchro/Resolver, Speed/Rotation and ARINC-429** interfaces which monitor critical aircraft systems including engine, transmission, flight control positions, fuel and hydraulic systems and more.

END RESULT

"UEI's data aggregation system enables us to deliver a system design for the **USAF** with **superior data accuracy** and **processing power**. The ability to customize the UEI component allows us to effectively match the signal and processing and size constraints to the program's requirements," [said Andy Gignilliat, Senior Aviation Program Manager, Tyonek Services Group, Inc.](#) "The UEI system offers these **enhanced capabilities** while reducing material costs and increasing the ease of integration."

[WIN] UEI-HUMS1 is now a COTS chassis and is part of our line of military solutions which includes our [10-year availability guarantee and 5-year warranty](#).

[WIN] UEI optimizes the size, weight and power at the best cost.

[WIN] UEI-HUMS1 is MIL-STD-810G and MIL-STD-461 tested as required by the USAF for deployment on the Bell UH-1N Huey helicopter.

ASK US HOW UEI CAN DO THE SAME FOR YOUR COMPANY!

