

APPLICATION STORY

UEI & Tyonek Global Services, LLC

WORKING TOGETHER TO FIND SOLUTIONS

Tyonek Global Services, LLC was awarded a contract to implement <u>Health</u> <u>Usage and Monitoring System (HUMS)</u> 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

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.
 - 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 <u>UEI-HUMS1</u> 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 <u>UEI-HUMS1</u> COTS system; a modified version of UEI's popular <u>DNR-MIL</u> data acquisition chassis.

The I/O provided in the <u>UEI-HUMS1</u> 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.



"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 <u>10-year availability guarantee and</u> <u>5-year warranty</u>.

[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!



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