

## United Electronic Industries & Avionics Heads-Up Displays

### WORKING TOGETHER TO FIND SOLUTIONS

An innovative aviation accessories manufacturer that develops hardware solutions for pilots and strives to push the boundaries of flight technologies designed an innovative HUD (Head-Up Display) as part of an effort to help make flying simpler and safer. The new HUD is a smart in-flight display system that includes a projection unit, clear glass display combiner and a display processor unit, allowing pilots to see critical flight data in the same line of sight as outside terrain. To complete the new HUD, the manufacturer needed reliable DAQ and control hardware.



### THE IMMEDIATE CHALLENGES

- 1 The HUD not only displays typical in-flight metrics, but also includes terrain avoidance software that can display surrounding terrain and obstacles based on aircraft position and direction. To be a truly serviceable product, the HUD needed DAQ and control hardware that could guarantee precise data collection for an accurate display.
- 2 The HUD needed to be small, lightweight, and rugged enough to be easily mounted in light military aircraft and jets, but with all the functionality of larger legacy HUDs used in business and commercial aviation.
- 3 Additionally, the aviation accessories manufacturer wanted the HUD's hardware and software to be flexible to support compatibility with a variety of modern and legacy avionics systems.

### UEI'S PATHWAY TO SUCCESS FOR THE MANUFACTURER

- UEI's hardware and software tools made it easy to iterate over the design process, including prototyping and production. The result was a system that weighed less than two pounds and met all of the design requirements.
- The completed HUD includes a lightweight and compact UEI COTS (Commercial Off The Shelf) PowerDNA Cube chassis, which acts as an avionics bridge, routing all avionics signals from native aircraft equipment to the HUD's processing system, then directing them to various displays, including modern tablets and the projection unit.

## END RESULT UEI PROVIDED THE NEW HUD WITH A LIGHTWEIGHT, COMPACT, AND RELIABLE HARDWARE SOLUTION, HELPING MAKE AIRCRAFT FLIGHT SIMPLER AND SAFER.

**[WIN]** Using UEI COTS products rather than custom hardware allowed the manufacturer to price the HUD at \$10,000, with all the functionality but a fraction of the price of legacy HUD systems.

**[WIN]** UEI hardware and custom HUD software work together to provide pilots with real-time flight data.

**[WIN]** The new HUD helps minimize the chances of incidents like runway incursions and disorienting feelings of vertigo from looking down during descent, keeping pilots and passengers safe.

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

