

United Electronic Industries & Aurora Flight Sciences

WORKING TOGETHER TO FIND SOLUTIONS

Aurora Flight Sciences is a company that seeks to create advanced aircrafts by utilizing autonomous systems and composite manufacturing. The Aurora Centaur aircraft offers the option for piloted, remote, or hybrid operation which improves safety and control capabilities, which is strengthened further by the triplex and duplex redundancy in its critical flight systems. The Centaur also has a small footprint and boasts a low life-cycle cost while still providing a high quality of performance. This optional “pilot-in-the-loop” approach is ideal for controlled and uncontrolled airspace. Safety and redundancy are primary design considerations and UEI equipment is central to the unmanned operations.



THE IMMEDIATE CHALLENGES

- 1 The Centaur’s autonomous piloting function controls a wide range of sensitive tasks, such as waypoint navigation and mission action commands. In order to ensure the successful and safe operation of the aircraft, a precise and reliable data acquisition (DAQ) system was needed to collect real-time data and send out accurate response commands.
- 2 The DAQ system had to be small and light enough to mount in the aircraft’s open architecture in addition to being rugged enough to withstand high altitudes, long distance flights, and military applications.

UEI’S PATHWAY TO SUCCESS FOR AURORA

- The Centaur, in autonomous mode, utilizes multiple UEI PowerDNA Cubes that are time synchronized and tethered to the flight controller via Ethernet to rapidly and reliably collect the necessary data to operate.
- The UEI system allowed for a vast array of I/O, including Analog, Digital, Serial and Counter/Timer, for a complete I/O system solution.
- UEI’s flexible and compact hardware options allowed Aurora to find the perfect fit to support the Centaur’s low footprint structure as well as the ability to carry out a wide range of aerospace applications.

END RESULT AURORA’S CENTAUR WAS ABLE TO COLLECT AND STORE DATA AS WELL AS SEND REAL-TIME CONTROLS TO PROVIDE MANNED AND REMOTE PILOTING.

- [WIN]** The flexibility of UEI’s hardware and I/O allow Aurora to optimize data and control systems, protect their investment, and stay true to their low acquisition and life-cycle cost promise to their customers.
- [WIN]** UEI’s 10-Year Availability Guarantee minimizes obsolescence of Aurora’s new DAQ system, allowing for it to quickly and easily replace parts so it can deliver quality service to their customers for years to come.
- [WIN]** The Centaur is a key player in unmanned aircraft integration in the US and garners demand from customers at home and abroad.

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

