

## United Electronic Industries & BAE Systems

### WORKING TOGETHER TO FIND SOLUTIONS

BAE Systems has been a major player in the defense industry for over fifty years and has recently expanded into hybrid/electric transportation systems. One of their most successful products, the [HybriDrive® Propulsion System](#), is a smart electric drive propulsion system that can power inner-city transit at lower costs than traditional diesel propulsion systems. These Hybrid Buses are used in cities all over the world, including London, Toronto, and Seattle, and operate at zero emissions, allowing cities to achieve efficient energy and clean air goals.



Photo courtesy of Billy Cabic

### THE IMMEDIATE CHALLENGES

- 1 BAE was looking for a cost-effective solution that would allow them to provide a reliable and consistent real-time health and usage monitoring (HUMS) data for predictive maintenance for all Hybrid Bus systems.
- 2 With existing DAQ hardware, all performance data collected was stuck on the bus while it was in use and could only be transmitted when the bus arrived at a station; this meant that extracting data was costly and time-consuming.
- 3 All DAQ and control hardware needed to be able to withstand the harsh environment on the bus, including elevated temperatures and vibration, for extended periods of time while the bus was in operation.

### UEI'S PATHWAY TO SUCCESS FOR BAE SYSTEMS

- UEI's hardware was integral for BAE's Hybrid Bus to effectively implement its automatic energy conservation system. BAE Systems needed hardware that could provide real-time streaming of vehicle data for preventative maintenance, which would allow BAE to maximize the hybrid bus fleet's efficiency.
- In order to meet BAE's requirements, UEI developed a rugged and compact in-vehicle data acquisition system based on existing UEI products. The new DAQ system could be paired with any of UEI's other standardized hardware.
- UEI's hardware solution is wirelessly connected to BAE's Fleet Health Management Network and could provide real-time vehicle health updates critical to efficiency diagnostics and engine health monitoring.

## END RESULT **UEI'S HARDWARE SOLUTION HELPS BAE'S HYBRID BUSES MAXIMIZE EFFICIENCY AND MONITOR ENGINE SYSTEM HEALTH IN REAL TIME.**

**[WIN]** BAE Systems sold thousands of Hybrid Buses to cities across the world, with UEI monitoring the HybriDrive, the ion battery pack, and even the doors!

**[WIN]** UEI's DAQ hardware allows accurate decisions to be made quickly based on real-time data, dramatically improving results and decreasing costs.

**[WIN]** BAE's vehicle uptime was significantly improved and maintenance costs were reduced by up to 13%.

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

