

## United Electronic Industries & WHOI

### WORKING TOGETHER TO FIND SOLUTIONS

The WHOI (Wood Hole Oceanographic Institution) is an independent non-profit organization dedicated to ocean research, exploration, and education. As part of a recent project by a U.S. Navy lab to study ice cracking events in the Arctic circle, SIDEx (Sea Ice Dynamics Experiment), WHOI researchers developed a cabled DAQ system that would collect seismo-acoustic measurements and help better understand sea ice strength and behavior. The experiment was located at Camp Seadragon, a temporary ice camp that could be endangered by unexpected ice cracking events. To help ensure SIDEx's success, WHOI researchers needed hardware that could withstand Arctic temperatures and reliably collect data.

### THE IMMEDIATE CHALLENGES

- 1 WHOI's DAQ system needed to be lightweight and compact but robust, able to receive and securely store inputs from multiple sources such as hydrophones and geophones.
- 2 All hardware used in WHOI's DAQ solution needed to be capable of withstanding the extreme weather of the Arctic circle, as Camp Seadragon was located on a sheet of ice in the Arctic Ocean.



### UEI'S PATHWAY TO SUCCESS FOR WHOI

- UEI provided WHOI researchers with two standalone COTS (Commerical Off The Shelf) UEIPAC Cubes, which were cheaper than custom DAQ and control hardware and standardized to work well with a variety of data analysis software. The UEIPACs would collect and store inputs from seismic and acoustic sensors.
- The UEIPAC Cubes are light and compact, at less than five cubic inches and under two pounds each, and have been proven to withstand 5g Vibration, 100g Shock, and -40 to 85 C; this made them more than a match for the Arctic circle.

## END RESULT UEI EQUIPPED WHOI'S SYSTEM WITH THE HARDWARE IT NEEDS TO SUCCESSFULLY WITHSTAND ARCTIC CONDITIONS AND COLLECT KEY ICE CRACKING DATA.

- [WIN]** Thanks to UEI's rugged hardware, WHOI researchers can be confident that the DAQ system can handle the extremes of Arctic waters and collect accurate, informative data.
- [WIN]** UEI's 10 Year Availability Guarantee on all COTS hardware makes it quick, easy, and cheap for WHOI to acquire replacement parts, additional UEIPAC units, and compatible I/O boards.
- [WIN]** The data collected helps WHOI, the U.S. Navy, and researchers all over the world to better predict ice cracking events and ensure the safety of ice camps like Camp Seadragon in the Arctic circle.

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

