

## United Electronic Industries & SpaceX

### WORKING TOGETHER TO FIND SOLUTIONS

SpaceX was founded in 2002 by Tesla's Elon Musk with the end goal of reducing space transportation costs enough to colonize Mars. In 2008, it became the first successful private space launch operator, and in May 2020, it successfully flew humans to the International Space Station on the SpaceX Dragon 2. Most recently, SpaceX has been developing a spacecraft for use in crewed interplanetary spaceflight. With the increasing complexity of each new spacecraft, searching for the right monitoring and control system solution for their ground support equipment was critical to ushering in more successful launches.



### THE IMMEDIATE CHALLENGES

- 1 SpaceX's existing ground support equipment wasn't robust, reliable, and scalable enough to meet the environmental demand of rocket launch for manned flight on such a large, expansive launch pad. In addition, much of the equipment was becoming obsolete.
- 2 The old, obsolete equipment needed twice the amount of wiring and hardware for basic feedback of sensors and controls.
- 3 All new DAQ and control hardware needed to be extremely robust, since launchpads were subject to extreme temperatures, pressure, and vibration and system failure could have extreme consequences.

### UEI'S PATHWAY TO SUCCESS FOR SPACEX

- UEI specialists visited SpaceX's existing launchpads in California and Florida, as well as their rocket production and testing facility in Texas, and found that SpaceX needed feedback on all control points, support for many different sensor types, and the ability to work with existing software infrastructure.
- To make the new system as reliable as possible, UEI hardware allowed SpaceX to change the architecture of their launch pads, moving from a centralized control system to a distributed system with self-diagnostic capabilities for every component.
- UEI replaced SpaceX's old and obsolete ground support equipment with more distributed, robust, reliable, and scalable architecture.

## END RESULT **UEI'S RELIABLE HARDWARE SOLUTIONS ALLOWED SPACEX TO TRUST ITS GROUND SUPPORT SYSTEMS AND FOCUS ON WINNING BACK THE PRIVATE SPACE RACE.**

- [WIN]** UEI's 10 Year Availability Guarantee minimized obsolescence and product acquisition concerns, allowing SpaceX to focus on developing a robust, rugged, and reliable ground support system.
- [WIN]** Flexible hardware allowed UEI to preserve SpaceX's software investment, saving time and money.
- [WIN]** SpaceX has used more than 200 UEI I/O boards in various launchpad applications, including the instrument bay and central control system for aerospace ground equipment, since 2017.

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

