Keeping the Power on with Rugged Mobile Solutions

Industry: Load Bank Manufacturing and Servicing
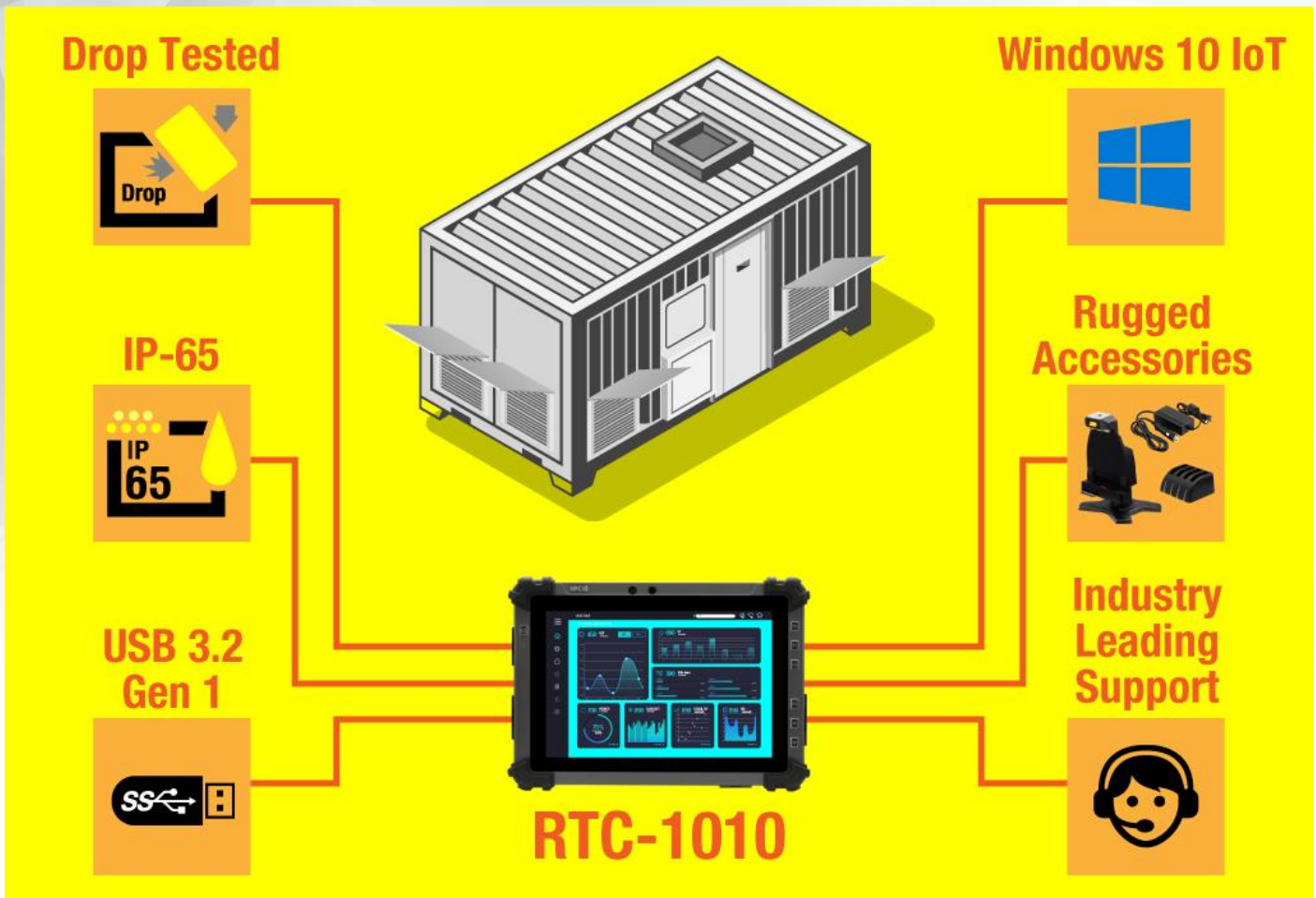
Product: RTC-1010

Introduction

From hospitals and ports to oil and gas, data centers, and other critical infrastructure, performing routine maintenance and checks on power supplies and generators is vital to ensure continued operation during power outages and events such as black outs and brown outs. One tool in this important task is the load bank, a machine which creates an electrical load to test the viability of power supplies and generators safely, without having to actually cut power. Load banks vary in size, some the size of desktop computers, while the largest units rival in size the industrial generators they support. These larger load banks are often permanently installed, and can be controlled remotely thanks to devices such as tablet PCs.

Recently, a world leading load bank manufacturer was looking to replace the tablet-based control interfaces offered with their lineup of products. They needed a rugged tablet system which could not only be used with new load bank installations, but also offer compatibility with existing installations, offering current customers with an upgrade, allowing the manufacturer to fulfill their promise of long-term support and service for their products.

The manufacturer was faced with a critical challenge, to find a rugged tablet PC solution that could easily integrate with existing machinery, operate in the wide range of environments their products were deployed to, and provide a common platform with reliable performance to simplify their supply line and make maintenance as easy as possible. The company reached out to RDS, who partnered with AAEON to provide a rugged mobile computing solution with the RTC-1010 10.1" rugged tablet PC.

Drop Tested

IP-65

USB 3.2 Gen 1

Windows 10 IoT

Rugged Accessories

Industry Leading Support

RTC-1010

Challenges

To meet the needs of a load bank interface and controller, the company needed a rugged tablet solution that could meet several key challenges; operating in wide range of environments and conditions, flexible to allow integration with installed units and new production, and provide compatibility with their software as well as ease of use.

Rugged Design

Large scale load banks are usually installed outdoors and in conditions that aren't favorable to most electronic devices. The RTC-1010 is certified MIL-STD-810G for drop and vibration testing as well as IP65 rated environmental sealing. This means the RTC-1010 can stand up to the rigors of working in the field where load banks are deployed.

Flexible I/O Features

The load bank manufacturer needed a rugged mobile solution which could not only help keep new product at the leading edge of technology, but also allow them to keep their commitment to existing clients with load banks already deployed in field. The RTC-1010 provides this flexibility with I/O and expansion ports including USB 3.2 Gen 1, COM and RJ45, as well as optional add-ons including barcode scanner and RFID/Smart Card readers.

Ease of Use

The company needed a system that was not only compatible with their proprietary control software, but one which could provide a familiar and easy to use interface. The RTC-1010 comes default with Windows 10 IoT Enterprise SAC, and in addition to touchscreen interface, provides physical keys which provide quick access to common functions.

AAEON Solution

In addition to meeting these challenges, the RTC-1010 rugged tablet offered several key advantages, putting it above the competition and offering an unbeatable solution for the manufacturer.

Excellent Value

The RTC-1010 provided the manufacturer with the best combination of functionality, looks and ruggedness as well as a great value and price to enable them to replace a greater number of units without worrying about breaking their budget.

Customization

From accessories to add-ons and software, AAEON manufacturer services provide a range of customization options to tailor their rugged mobile computing solutions to better meet the needs of any application. Additionally, RDS provided guidance for the manufacturer to choose the right accessories for the job to make replacing their customer's units even easier and more appealing to the end users.

Partner Support

AAEON fosters partnerships with systems integrators and suppliers including RDS to provide a greater level of support and service to ensure the unique needs of each customer

are met. Through AAEON's partnership with RDS, the load bank manufacturer could rest assured they were receiving the best solution for the job with dedicated long-term industry leading support.

Impact

With the help of RDS and the RTC-1010 rugged tablet PC from AAEON, the manufacturer is able to not only keep their product lines at the front of technological progress, but they are able to keep the promises made to their clients to ensure their load banks remain operational for years to come. Utilizing the RTC-1010 with rugged design, easy to use interface and excellent value and support, regular testing and maintenance of power supply facilities for critical infrastructure can continue unabated.

From hospitals to oil rigs, mines and shipbuilding, load banks are a critical component to ensuring important facilities can keep operating even when electrical lines are down. The impact and importance of this preventative application are almost immeasurable to the lives and businesses it helps to protect during storms or other calamities that affect energy infrastructure.

Product

The RTC-1010 rugged tablet PC offers a range of features perfect for operating anytime and anywhere it's needed. Powered by Intel Pentium and Celeron processors with 4GB of RAM, 64GB eMMC storage (up to 512GB with mSATA Mini-Card), the RTC-1010 features Windows 10 IoT Enterprise SAC operating system, providing customers with a powerful platform that's easy to configure to their needs. Its rugged design is MIL-STD-810G certified (drop tested 122cm) and offers IP65 environmental sealing. On top of that, the RTC-1010 can operate in temperatures ranging from -20°C up to 50°C and can be configured for operating with gloves.

The RTC-1010 also offers a range of I/O features from 2MP front camera and 8MP rear camera, USB 3.2 Gen 1 and USB 2.0 ports, COM ports, and RJ45 LAN. It also supports Wi-Fi and Bluetooth, and can be expanded to support 4G/LTE. The RTC-1010 supports navigation with GPS, Beidou and can be configured for others. The RTC-1010 is also supported by a range of accessories and add-on features from 2D barcode scanners and Smart Card/NFC readers, to a range of ergonomic accessories including hand straps, docking stations and extra hot-swappable battery packs.

AAEON also offers customization and manufacturer support both directly and through partnerships with suppliers like RDS, to ensure the RTC-1010 is not only configured for the job, but will provide long-lasting operation no matter where it's deployed. The RTC-1010's rugged specifications, flexibility, and usability make it an indispensable tool for industries, tough factory automation applications, and people who spend their working days out in the field.

About RDS

Review Display Systems Ltd. has over thirty years of experience in dealing with the specialist needs of engineers and designers requiring displays, touch panels and embedded hardware solutions.

Representing the world's leading manufacturers, RDS ensures that we offer the best possible technical and commercial solution to any embedded computing and display system requirement.

For more information, visit the RDS website at: https://www.review-displays.co.uk/

About AAEON

Established in 1992, AAEON has become one of the leading designers and manufacturers of advanced industrial and embedded computing platforms. Committed to innovative engineering, AAEON provides Industry 4.0 integrated solutions, hardware and intelligent automated services for premier OEM/ODMs and system integrators worldwide, as well as IoT solution platforms that seamlessly consolidate virtual and physical networks. Reliable and high-quality computing platforms include industrial motherboards and systems, industrial displays, rugged tablets, PC/104, PICMG and COM modules, embedded SBCs, embedded controllers, network appliances and related accessories. AAEON also offers customized end-to-end services from initial product conceptualization and product development through to volume manufacturing and after-sales service programs. It is also committed to continuously redefining and harmonizing the management and development processes of the industry.

With its constant pursuit of innovation and excellence, AAEON became a member of the ASUS group in 2011, enabling the company to further strengthen its leadership, access advanced technology from ASUS, and leverage resources from within the group. AAEON is poised to offer more diversified embedded products and solutions at higher quality standards to meet world-class design and manufacturing demands in the years to come.

AAEON is an Associate member of the Intel® Internet of Things Solutions Alliance.

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