# tria

Industrial environments present much harsher conditions than those found in typical office environments. They face extreme temperatures, humidity, and large amounts of dirt and soot and corrosive materials that can ruin IT equipment. They can also contain devices such as motors and mechanical switches, which emit a substantial amount of electromagnetic interference (EMI).

Black Box has a full range of solutions designed to automatically perform, distribute signals, and visualize processes in the toughest environments.

# Solutions



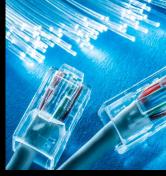
Redundant and Remote Networks



Data Visualization and Real-Time Process Control



Industry 4.0 Automation through Sensors



Cabling and Infrastructure

# **Case Study: Monitoring Crucial Environmental Conditions for EDF**

The electric utility company EDF (Électricité de France S.A.) covers every sector of the energy business and is a global leader in low-carbon energy. Most of their substations are located at high points to guard against flooding and intrusion. Because of the geographical position and circumstances, the Corsica plant required remote supervision, crucial switching, and protection and control equipment. They also requested a monitoring tool to view the status of different environmental conditions, such as temperature and humidity.

The customer partnered with Black Box and started a test phase with our AlertWerks product. The system consists of base units, or ServSensor hubs, and probes or intelligent sensors. After successfully completing the test phase, EDF Corsica decided to equip 24 remote substations with the AlertWerks solution, sending data from temperature, humidity, and AC/DC sensors to central hubs connected to supervisor sites via IP

EDF is pleased with Black Box because now they no longer need to go onsite to troubleshoot equipment. Supervisors get real-time alerts by email or SMS when issues are detected.

# **Featured Products**



#### AlertWerks AW3000

This IoT gateway works over LoRaWAN, Wi-Fi<sup>®</sup>, and BLE to automate, visualize, and perform analytics for sensor data. It prevents failures by recognizing errors and sending early alerts about equipment malfunctions.



#### **Industrial Media Converters**

Choose from a wide variety of industrial media converters designed to provide the utmost performance in the toughest environments. They are ideal for extending the distance of copper devices such as IP cameras and wireless access points.



#### **Industrial Ethernet Switch**

This extensive range of hardened Ethernet switches provides reliable performance in demanding security/ surveillance and automation applications. It includes managed, unmanaged, and PoE switches.



## Freedom II KM Switches

Switch between four or eight computers by moving a mouse from screen to screen. Perform functions that would normally require eight separate keyboard/mouse sets with one keyboard and mouse, freeing up desk space.



#### Emerald<sup>®</sup> KVM over IP

This KVM-over-IP system extends and switches pixelperfect video over an IP network. Access and control remote systems, visualize and monitor process data in real time to allow operators easy workflows with great situational awareness and instant responses.



## iCompel® Digital Signage Player

Unique application-based digital signage player stores data locally, ensuring you're covered if the network connection is lost due to extreme conditions.

