



ENHANCING FACTORY AUTOMATION WITH CUTTING-EDGE 5G TECHNOLOGY

Customer

The customer is a global leader in designing, developing, and producing high-quality industrial components. With a strong presence in the market, their offerings are utilized across diverse sectors such as aerospace, automotive, construction, and energy. The product line addresses each industry's distinct requirements, ensuring seamless compatibility, high performance, and ultra-reliability to meet the rigorous demands of our customers.

Challenges

The customer heavily relies on sensors, actuators, and control systems to automate their industrial processes. Previously, these processes were limited by wired connections, which hindered flexibility and scalability. To address these limitations, the company began transitioning to industrial Wi-Fi. However, they encountered various issues during the implementation, including interference from other machinery and limited range, likely due to interference. Moreover, concerns arose regarding Wi-Fi security and overall reliability.

Eventually, the company approached BEC to explore LTE and 5G device solutions. BEC emphasized the advantages of 5G for industrial automation and highlighted how implementing a private network could further offer complete control, enhanced security, increased customization, and a lower total cost of ownership.

Solutions

The customer chose a phased approach to meet their project deadlines, prioritizing Phase 1 for establishing network connectivity with a public tier 1 carrier. This phase involved Proof of Concept (PoC) and extensive testing. Concurrently, they planned Phase 2, which focused on designing and implementing a private network. To fulfill their requirements, they selected the MX-250e 5G Advanced Industrial Router, equipped with dual SIM interfaces that facilitate connectivity for both public and private networks.

Furthermore, the MX-250e is specifically designed for installations with limited space, offering an ultra-compact form factor. In addition, its IP50 enclosure ensures durability in harsh operating conditions, including extreme temperatures, humidity, vibrations, dust, physical impacts, and other environmental stressors.

Results

The successful implementation of Phase 2 of the 5G private network resulted in a reliable, scalable, and secure network that exceeded the customer's expectations. The private network, PLNM, was configured as the primary network, and the MX-250e provided seamless connectivity between the private and public networks with automatic failover and fallback, ensuring no downtime.

The deployment of the MX-250e router and the private 5G network has transformed the manufacturer's industrial automation process. As a result, the manufacturer has substantially enhanced operational efficiency and cost savings.

Customer

Global Manufacturing Company

Application

Industrial IoT/M2M Connectivity

Solution

BEC MXConnect® MX-250e Advanced Industrial Router

Data Connectivity

5G Private Network and Public Carrier Network

Results

Global manufacturer improved their automation capabilities and established redundant connectivity across private and public networks by implementing the BEC MX-250e.