MANUFACTURING FACILITY REMOTE MANAGEMENT

SUMMARY

In 2020 there were more than 290 thousand manufacturing plants in the US alone. This number is bound to keep increasing as the world industry is ever-growing in size. Such industrial expansion can be hard to keep up with as hiring and training new personnel takes time. With the increase in the efficiency of their factories, companies resort to manufacturing and assembly line automation.

CHALLENGE

When automating manufacturing lines, the upgrades are gradual. This poses the problem of finding a way to connect old and new technology. You need different connections for different interfaces, and that can increase the cost. Purchasing the latest in technology does not guarantee that it will be compatible with the current factory setup. Many production lines have a mix of complex and straightforward components featuring expensive connectivity solutions. So, if you own machines that support many different connections, you need to invest considerably more.

When a malfunction occurs or the software needs an update, the on-site staff usually has sufficient knowledge and training to resolve the issue. However, if the problem is more complex, especially with custom-made machinery, you will need the manufacturers engineer to tackle it. You may face several obstacles addressing this problem, such as distance, travel cost and lines shutting down while maintenance takes place.

So, one of the biggest challenges here is to find a way to interconnect all systems in the factory. The goal is to have their controls be accessible in one convenient place, where on-site staff can monitor the day-to-day processes and experts can have remote access when needed.

SOLUTION

Does the fact that one device from Teltonika Networks can connect a PLC, HMI, RFID, panic alert button and more intrigue you? That little device is the TRB255 industrial M2M gateway. First of all, this gateway can communicate with various devices responsible for working on the manufacturing line thanks to multiple interface ports.

For the primary connections — PLC can be connected via the RS232 serial communication interface, while HMI can take up the RS485. This setup takes care of the central production line machinery. The Ethernet connects the HVAC (Heating, Ventilation and Conditioning) system, which can be adjusted based on the temperature and humidity sensors' data, connecting to TRB255 through the analog input.

Teltonika industrial gateway can also accommodate all the other supporting systems thanks to its multiple differing connections. Such design can incorporate older components of the assembly line into one system. For example, a panic alert button can connect to one of the digital input/output ports, and another port can accommodate an RFID reader to ensure additional factory security.

While the TRB225 industrial gateway provides a way to incorporate all devices into one network, Teltonika Networks RMS (Remote Management System) lets you access all of it remotely. This setup enables you to reach our products and third-party equipment as if you were there physically and perform troubleshooting, update firmware, and change any settings.

TOPOLOGY
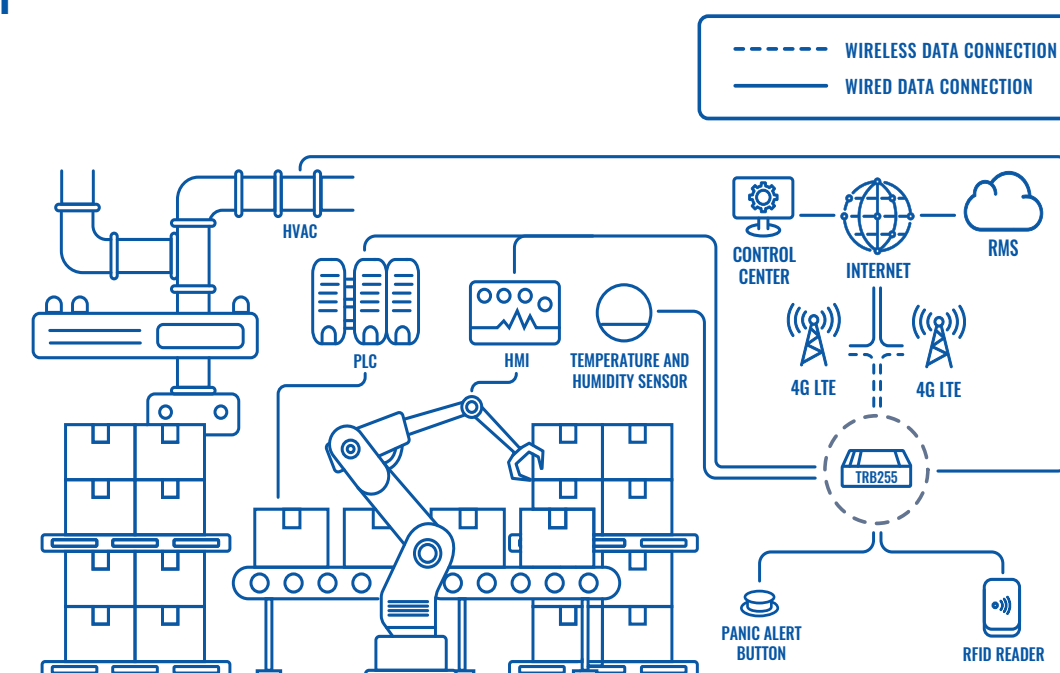
BENEFITS

- Backward compatibility with the 2G network allows for installation in facilities using legacy equipment.
- The supported power supply voltages range from 9 to 30V, allowing easy integration with industrial components.
- Dual-SIM offers automatic failover in case the cellular network connection gets disrupted.
- TRB255 offers multiple interfaces, including RS323 and RS485, letting you connect old and new equipment in the same network.
- This router is compatible with the Teltonika RMS, which allows you to gather data and manage your Teltonika devices remotely.

WHY TELTONIKA NETWORKS?

Teltonika Networks takes notes from the past while looking forward to the future. This mindset lets us deliver the best IoT solution in the present day. We make sure that our devices will integrate with older systems while maintaining the ever-evolving technological edge.