SECURE INTERNET CONNECTIVITY FOR METAL BENDING MACHINERY

SUMMARY

Teltonika Networks partner, Factobotics, received a request from their client for a custom sheet metal bending machine solution. Soon the company discovered a new possible business niche as there were numerous similar requests from other clients. Many manufacturing facilities needed a customized sheet metal bending machine. So, Factobotics came up with an idea to make a standardized robot that clients could adjust without requiring a new one for each project. This is how RoboBend was established.

CHALLENGE

Bent-metal parts are needed everywhere, but the current manufacturing processes make it really expensive to produce them. The machinery is mainly single-purpose and cannot be adapted to change the parameters. As the demand increases for different bent metal parts and constructions, the factories cannot meet their supply. Usually, it is not a sound financial solution to order custom new machines as the return on investment gets comparatively low and takes a lot of time.

Frequently in assembly lines and factories, many different types of machinery need to be interconnected. This means that old and new hardware need an all-encompassing solution, which can be expensive for custom mechanical interfaces. Moreover, the setup requires safe and reliable internet connectivity for gathering diagnostic data and enabling remote control of the apparatus.
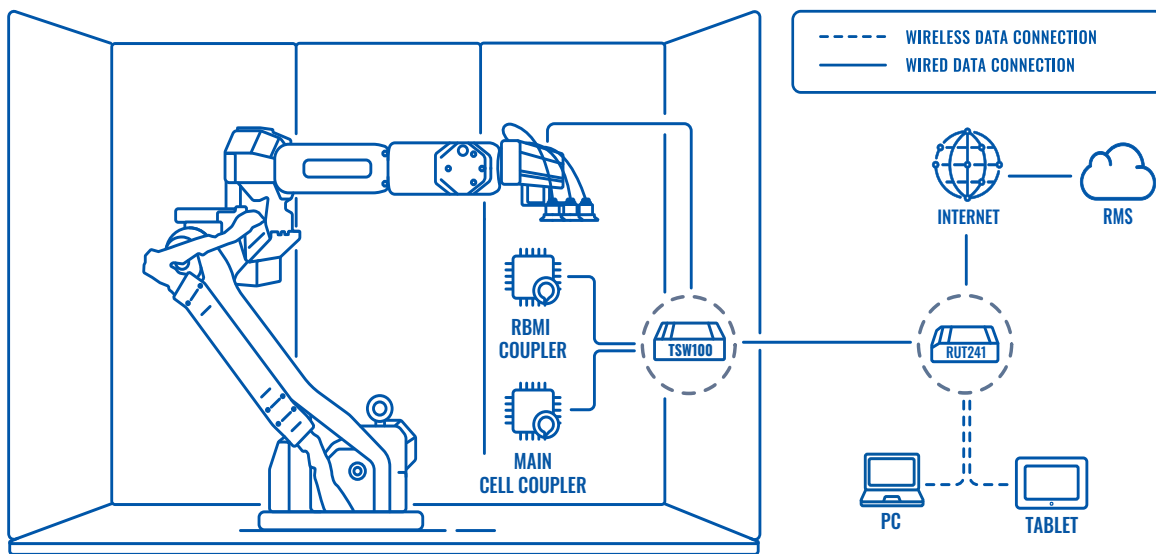
PARTNER - ROBOBEND

Robobend is a Danish company with quarters in Lithuania. They offer high-tech mobile robot cells for sheet metal bending. Robobend has designed a robot compatible with any existing press brakes on the market and solves the problem of finding qualified machine operators. The robot provides higher capacity for the company's machines and lowers production costs while consistently delivering high quality.

SOLUTION

The essentials that Robobend was looking for in their IoT solution were reliable connectivity and security. They found all that covered by Teltonika Networks products — RUT241 industrial cellular router and TSW100 industrial PoE+ switch. RUT241 provides internet connectivity for the entire solution. Robobend uses remote connection through VPN to safely reach the main robot cell. It also lets the company connect to factory setups and gather diagnostic data from the devices.

In this solution, the main robot, RBMI coupler and main cell coupler are connected via the TSW100 industrial PoE+ switch. As stated by the client, the TSW100 switch is a perfect fit because it is a breeze to set up and use, which is essential for Factobotics. It has five LAN ports that can accommodate multiple connected devices and then power them thanks to PoE+ functionality.

TOPOLOGY

Legend:
- - - - WIRELESS DATA CONNECTION
——— WIRED DATA CONNECTION

BENEFITS

- TSW100 can accommodate multiple connected devices, making it a perfect choice for an IoT solution with numerous devices.
- TSW100 has an easy and fast setup and PoE+ functionality, eliminating the need for additional powered connections.
- RUT241 devices come with Wi-Fi and wired connections that accommodate local devices used for monitoring and on-site control.
- RUT241 has a failover function essential to maintaining the internet connection in industrial solutions.
- RutOS offers several different VPN protocols, ensuring that your connection will be safe.

WHY TELTONIKA NETWORKS?

According to Robobend ApS and Factobotics CEO, "Teltonika Networks is the biggest manufacturer in Lithuania. They have leading-edge manufacturing facilities, which allows them to supply the best quality products, crucial for us. Also, they have been on the market for a long time, so they know their customers very well. We have been enjoying outstanding customer service and support."