MB CONNECTLINE

MECHATROLINK

SUCCESS STORY

MECHATROLINK IOT
SYSTEM HEALTH & MACHINE PRODUCTIVITY DATA ACCESS FROM ANYWHERE

MECHATROLINK Members Association (MMA) was established as an organization to promote "MECHA-TROLINK" as an open source industrial network. Mechatrolink is an open source motion fieldbus empowering YASKAWA Robots and servodrives for more than 20 years with huge global success. ∑-LINK II is a deterministic extension of MECHATROLINK to the encoders, sensors, and I/Os. This provides motion control and robotics applications with high-speed communication and data synchronization since the two networks combined can operate with negligible jitter from the host controller down to the actuator and sensor level.

A Smart Factory application demonstration of MECHATROLINK (OT) meeting OPC UA (IT), inside a fully operational industrial automation test-bed lab linking the deterministic power of MECHATROLINK and the information about its devices to the cloud via OPC UA. Having the mbNET.rokey operating as an edge device, we demonstrate an active bi-directional control SCADA system, connected to the cloud pulling information from the MECHATROLINK Lab assets in Eschborn. This Lab demonstrates both Motion Control and Robotics capabilities of MECHATROLINK. This is now a live demonstration of MECHATROLINK Industry 4.0 and digitalization capabilities, and it is shown in full scale operation at SPS 2019.

> *"We appreciated the guidance from MB connect line in making this digitalization project a reality and we were surprised by how quickly and easily it has been done"*
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> *Mazen Youssef, MBA, European Representative MECHATROLINK Members Association*

SPS has a different name since 2019 and is now called Smart Production Solutions, which is precisely what this demo is about. Being a key part of the application setup, mbNET.rokey is the edge gateway connecting the lab machines and the cloud application.

The mbNET.rokey secure remote access router and its mbEDGE software extension acquire local data, process it, display it locally and push it to a cloud application for further analytics and presentation.The mbCONNECT24 remote services portal allows users to securely connect to the site for maintenance or to interact with the process via operational dashboards.

A Node-RED dashboard, running on mbNET.rokey, allows the authorized remote user to control directly the machines, as shown on the MECHATROLINK booth 5-411, while more dashboards are available from our cloud application, to display the KPI's, the productivity information and the assets health. All dashboards are accessible from a plain Internet browser, on a PC, tablet or even smartphone, with all due security.

Being able to trace the Assets Health remotely helps implementing predictive maintenance process and linking it to the ERP system. This is beneficial to avoid production line interruptions by making sure the spare parts are ordered in time and installed before the device failure… It fits the smart production concept, as it allows direct measuring & control of the productivity.

This demo is more than a promotion tool, it demonstrates our capability to build a powerful ecosystem around MECHATROLINK core competences, bringing it at the edge of IT/OT integration and making it ready for users digitalization projects.

"The most amazing thing in this project was how quickly it went from a sketch and a few notes to dashboards with live values. We gave Mechatrolink some guidance about how to structure the project and the proof of concept was done in just a one day workshop."
Jean-Paul Verheylewegen, International Sales Manager, MB connect line GmbH

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