

OGS – Operator Guidance System



OPERATOR GUIDANCE TO SUPPORT FLEXIBLE PRODUCTION

Overview

Industry 4.0, diversified production, batch size of one: The smaller the quantities and the more complex the operation, the more demanding are the requirements for the operators. It is getting more important to provide an infrastructure, which supports the operator to minimize errors, improve process reliability and product quality as well as keeping cycle times low.

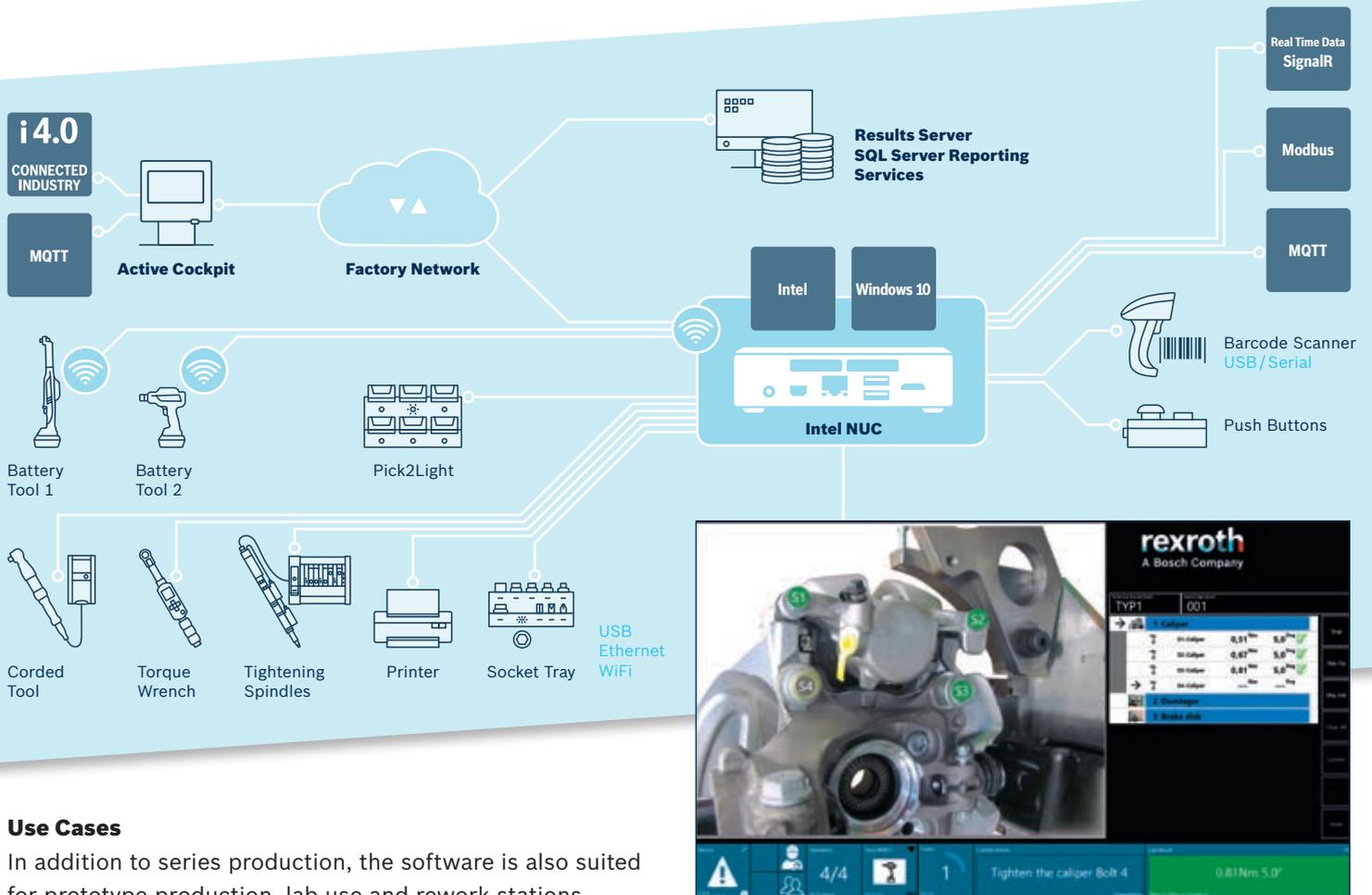
OGS is a Windows®-based software package, that is especially optimized for use with the Rexroth tightening systems. With a clear visual representation of the work at hand, the software guides the operator and controls connected tools. Included is an easy to use GUI to edit the workflow definitions. Flexible interfaces allow for connecting various components (e.g. ID readers) and seamless integration into the Industry 4.0 infrastructure. The system can send detailed information about the process steps, the tools (e.g. battery charge levels) and process result data (including measurement curves). This even allows tools without i4.0 connectivity (e.g. torque wrenches) to be integrated into the modern IT world.

BENEFITS

- ▶ Higher Quality
- ▶ More Efficiency
- ▶ Higher Flexibility
- ▶ Less Errors
- ▶ Higher Throughput

TOOLS & PROCESSES

- ▶ Nexo cordless DC tool
- ▶ CS351 tightening system
- ▶ Torque wrenches SCS, GWK, Crane
- ▶ Scanner & ID-Systems (RFID, Euchner Key)
- ▶ Ext. enable, Pick2Light and positioning systems
- ▶ NOK-rework strategies and multi-step processes
- ▶ Quality processes (4-eye witness, operator/supervisor/admin)
- ▶ „Continue where you left off“



Use Cases

In addition to series production, the software is also suited for prototype production, lab use and rework stations. With the easy to use workflow configuration, it allows businesses without a lot of production expertise to implement reliable processes to assemble high quality products. Additional features like „continue where you left off“ provide solutions for typical challenges from the “real world”, especially in low-volume or prototype production: if an already started process for a part cannot be finished (e.g. due to missing parts), then it can be stopped and restarted later. The internal database remembers the parts state, so when work on the part is continued, the operator can immediately continue where he left off. The station is not blocked, other work on other parts can be done in between.

Features

Behind the main concept of the software is a simple configuration and an easy to use GUI (e.g. it provides clearly visible information and a touch optimized screen). OGS provides many powerful features, e.g. multistep tightening parameters and processes, industry 4.0-interfaces like MQTT or SignalR. Wide hardware support (Scanner, socket trays, Pick2Light, ...) and data interfaces providing full traceability for all process results. The scripting-interface allows integrating existing/custom hardware and connecting to existing IT-infrastructures.

INTERFACES

- ▶ Industrie 4.0, ActiveCockpit, PQM, PPMP, MQTT, SignalR
- ▶ Data output: all tools and events through common protocol
- ▶ LUA-Scripting for all interfaces, data, control and checks (e.g. barcode processing)
- ▶ Interface to Sys3xxGateway and QualityR

