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5 ways to use OPC UA in your production environment

The OPC Unified Architecture (UA) standard plays a key role in modern sheet-metal fabrication. The universal interface technology allows your machines to communicate with connected IT systems in a secure, standardized way. Data received via OPC UA can be used to avoid downtime, improve capacity utilization and identify disruptive factors. Yet TRUMPF's OPC UA interface also offers an assortment of other useful functions that many users could benefit from.

1. Improve the flow of materials

TRUMPF's OPC UA interface can help improve the flow of materials in many of the company's high-tech machines. From 2D laser machines to punch-laser machines and laser tube-cutting machines, OPC UA makes it easy to check which parts are being produced on each machine, and from which materials. But that's only part of the story: OPC UA also tells the IT system whether machines have been loaded or unloaded, and it reports how full the containers are that are used to remove and store parts. In future, OPC UA will also make it possible to automatically process information on which tools are in the tool magazine. Equipped with this kind of machine data, you can avoid the waiting times and idle time that might otherwise occur in production due to retooling, a lack of raw material or other issues.

2. Make planning more reliable

Your TRUMPF machine's OPC UA interface makes it easier to plan production. Checking how many items in a job have already been completed is quick and easy, and you can also see when the machine has finished processing all the parts. This makes it much simpler to check whether the time planned for the job matches the reality on the ground. When delays strike, you can let your customer know in plenty of time and adapt your follow-up processes accordingly.

3. Flexible visualization

Data received from the machine via OPC UA can be visualized in a number of different ways. One possibility is the traditional dashboard on your monitor, but you can also display the data through a manufacturing execution system (MES). The information contained in the data can also be used to generate automated notifications and emails. OPC UA can communicate with any operating system, from Windows and Linux to iOS and Android.

4. Keep data safe

The OPC UA interface offers the highest level of data protection. The OPC UA standard, which was certified in 2015 by the German Federal Office for Information Security (BSI), includes numerous security mechanisms such as electronic certificates and access rights. No additional hardware is needed to exchange production data while adhering to data protection regulations. The standard's security mechanisms are activated by default when your TRUMPF machine is delivered.

5. Give older machines a new lease of life

Do you have an older-style TRUMPF machine that doesn't have an OPC UA interface? Check if the machine has the "Remote Control Interface" function; if it does, you can use our Extension Cube and OPC UA Retrofit software to access the machine's signals.

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