cab and the Smart Factory

Networked labeling

cab
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Requirements

In the industrial sectors, more and more productional and logistic environments are based on digital process control systems. Machines exchange information with human beings or with other machines, process manufacture-relevant data autonomously, feed data or forward it. Individualization, scalability, lean and traceable processes as well as reliable devices and components are key requirements.

Most of the applications or services on which the control systems are based are hosted on the Internet. Data from sensors, devices or software are transferred to the Cloud and can easily be exchanged between printers or labeling systems, robots and IT systems - provided that they all speak the same language and understand one other.

The protocol

Open Platform Communications Unified Architecture, abbr. OPC UA, creates the basis for interacting machines and components from different manufacturers in an industrial surrounding. In the OPC UA, various specifications have been united to a consistent data model, thus creating a new interface standard. OPC UA triggers networking in industrial manufacturing, as we know it from network and USB interfaces in offices.

Connected with cab devices

You put a production plant into operation? Or you plan to network your material warehouses according to Industry 4.0? If an IP-ready network is available, OPC UA can already be used as a consistent framework for machine-to-machine information access. In the matter of marking components, products or packaging within a plant, cab label printers of the current generation as well as IXOR labeling devices are already OPC UA-ready. They are able to cooperate with superior control units.

Event-driven labeling

Asking a label printer at the press of a button how he is doing is outfashioned. Today, smart devices automatically indicate that they want to be maintained or that the material to be printed resp. the ribbon are running short and must be replaced. Labels can be loaded remotely, as well as label characteristics can be read and variable data can be exchanged for printing. Operating parameters such as the print head’s running performance so far, its temperature or the number of labels still to be printed in the current job are displayed just in time. Information is transferred by the printer to the plant control system, which identifies and interprets the information and directly initiates the appropriate measure.

OPC UA as a superior control system offers the advantage of bringing together production data, alarms, events and data history controlled by software under one roof. It integrates and unifies various address spaces and the interfaces to be accessed.

Highlights at a glance

- On demand production
- Automated processes
- Device configuration
- Remote device control
- Device monitoring
- Interoperability
- Prognostics and analysis
- Traceability
- Inventory resp. stock optimization
- Shortening of distances
- Transparency
OPC UA with cab printers

OPC UA features that are at present supported by cab devices* are as followed:

- **Communication Stack**
  - OPC UA binary protocol

- **Encryption**
  - none
  - Basic128Rsa15
  - Basic256Sha256

- **Authentication**
  - anonymous
  - user name/password

While fully authenticated users may have full access to the provided data model, anonymous users may only access printer nodes read-only and are not granted to call any method, even if the method does not change the printer’s configuration or state.

- **OPC UA Services**
  - SecureChannel Service Set
  - Session Service Set
  - Attribute Service Set: reading/writing of attributes, events, no historical data access
  - Method Service Set
  - MonitoredItem Service Set
  - Subscription Service Set
  - View Service Set

* cab label printers SQUIX, MACH 4S, EOS2, EOS5, labeling heads IXOR
cab // 820 distribution partners in more than 80 countries