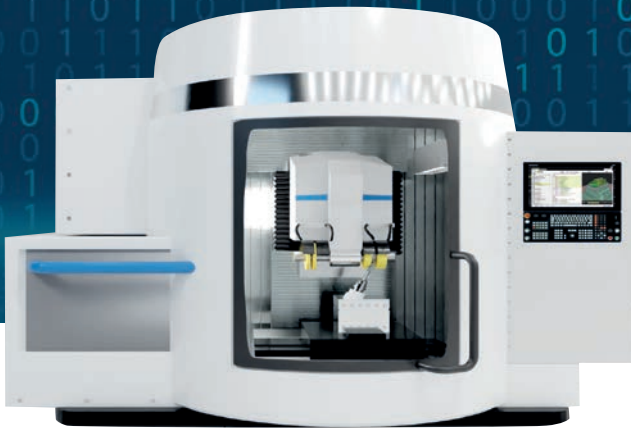# HEIDENHAIN

HEIDENHAIN OPC UA NC Server

The industry standard for machine tools

Application-based monitoring and control

HEIDENHAIN OPC UA NC Server

- **Future-ready communication**

- **Efficient production data collection**

- **Current machine messages**

- **Centralized automation**

- **Versatile extensibility**

- **Virtual testing**

- **Your path to OPC UA applications**

Superior industrial applications

Anyone wishing to digitally network their manufacturing environment needs effective technology with an assured future. Discover the HEIDENHAIN OPC UA NC Server, which provides HEIDENHAIN controls with an interface based on the OPC UA standard. This internationally standardized and widespread communication protocol makes it fast and easy to connect machines to your production IT network.

Effortlessly connect standard software applications, and save considerable time when implementing your own unique solutions.

connected
machining

Future-ready communication

Efficient and secure digital communication in a machine-tool context requires standardized components, application-based information models and adherence to current IT security guidelines.

The HEIDENHAIN Connection Assistant simplifies the process of setting up a certificate-supported connection. Through the authentication, authorization and encryption of all communication, the product's security standard meets the recommendations of the German Federal Office for Information Security (BSI).

The OPC UA NC Server lets you connect applications featuring various operating systems, including Windows, Linux and MacOS, to the HEIDENHAIN control.

You also save time when integrating new functions because the application-based presentation of information considerably reduces programming and configuration effort.

As an open communication standard, OPC UA is also ideal for translation into other protocols, including MQTT or REST, which can be realized via appropriate protocol gateways.

HEIDENHAIN OPC UA NC Server

Standardization and standards compliance

Cross-platform flexibility

Fast setup

State-of-the-art IT security

Application-oriented design

Secure communication

- Security Mode: SignAndEncrypt
- Security Policies: Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss
- User Authentication: Certificate X.509 v3

Current machine messages

Stay informed by knowing when to change out a tool at the end of its service life or when to refill critical fluid levels to avoid program interruptions.

PDC applications use machine messages to notify you of important events within your manufacturing environment. These machine messages are recorded by the HEIDENHAIN OPC UA NC Server and forwarded to the OPC UA application, allowing you to quickly respond to machine downtime or avoid it completely.

Efficient production data collection

Software applications for production data collection (PDC) provide a real-time view of the production status and productivity of your machines.

Is the current job still running, or was there an interruption?
How long did it take to run the job?

For questions like these, your PDC application requires information from your machine's CNC control. The HEIDENHAIN OPC UA NC Server reliably delivers the required information, thus providing a foundation for efficient production data collection. The analysis and presentation of your production data are key factors in attaining process transparency and optimization.

Messenger functions

■ Events during program execution, such as program end or abort

■ Messages derived from the machine status, such as pending maintenance or malfunctions

■ Custom-configured messages straight from the NC program, such as after a completed machining step
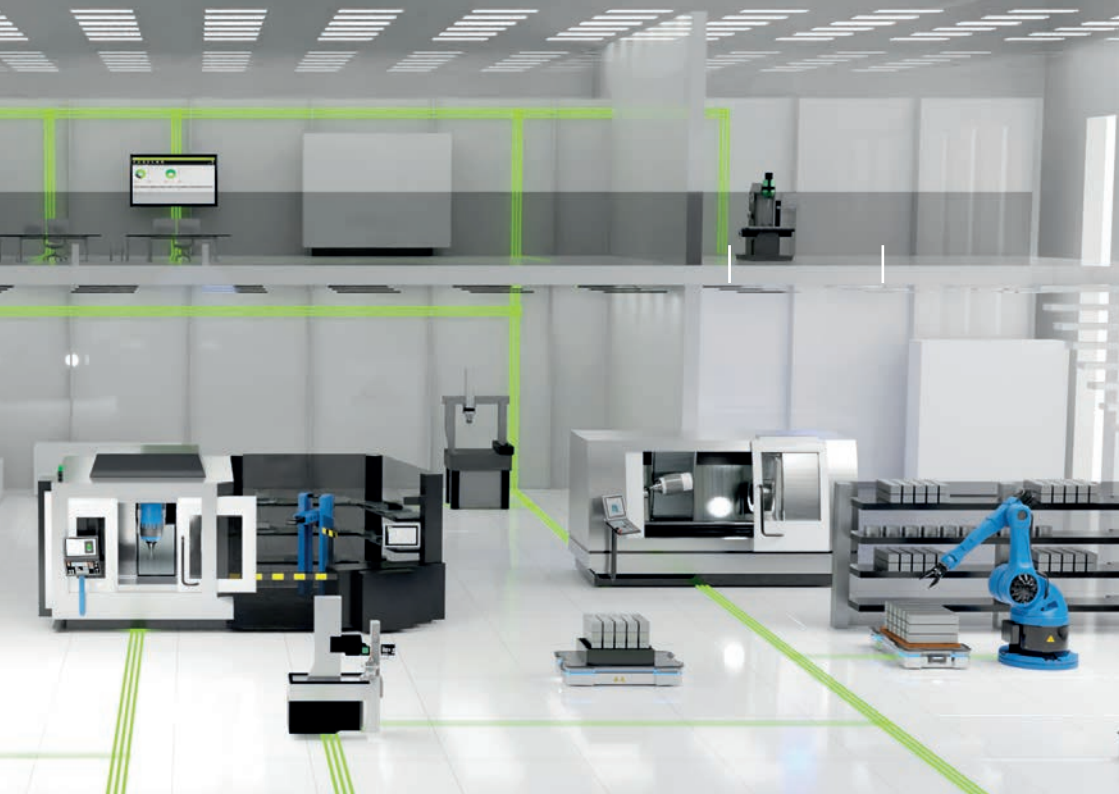
Versatile extensibility

Whether you wish to record your production data, provide maintenance personnel with current machine messages or automate your machine, the HEIDENHAIN OPC UA NC Server provides proven information models to make your job easier.

It's also a fast and flexible solution for obtaining more information. The machine manufacturer can extend the HEIDENHAIN OPC UA NC Server, giving you access to additional sensors, machine subsystems or values from PLC programs. As a result, you can also provide your applications with relevant units of measure, limit values and other information from your machine through OPC UA.

Centralized automation

Efficiently automated machine tools minimize costs and ensure high availability during production. But constant pricing pressure and growing machine variety represent huge challenges for automation solutions.

The HEIDENHAIN OPC UA NC Server provides useful functions for every application: easy transfer of NC programs, control of the running program, transmission of tool data and automatic synchronization with a database.

Should the CAM system automatically transfer the program to the machine?
Should the tool presetter automatically send the tool geometry to the machine?

From the smallest function to an extensive network: save time, and increase your process stability by avoiding manual input.

Enhancements (depending on the machine):

- Temperatures and fill levels (e.g., cooling lubricant)

- Counters and program durations (e.g., for maintenance tasks)

- Statuses and characteristics (e.g., of pallet storage magazines)
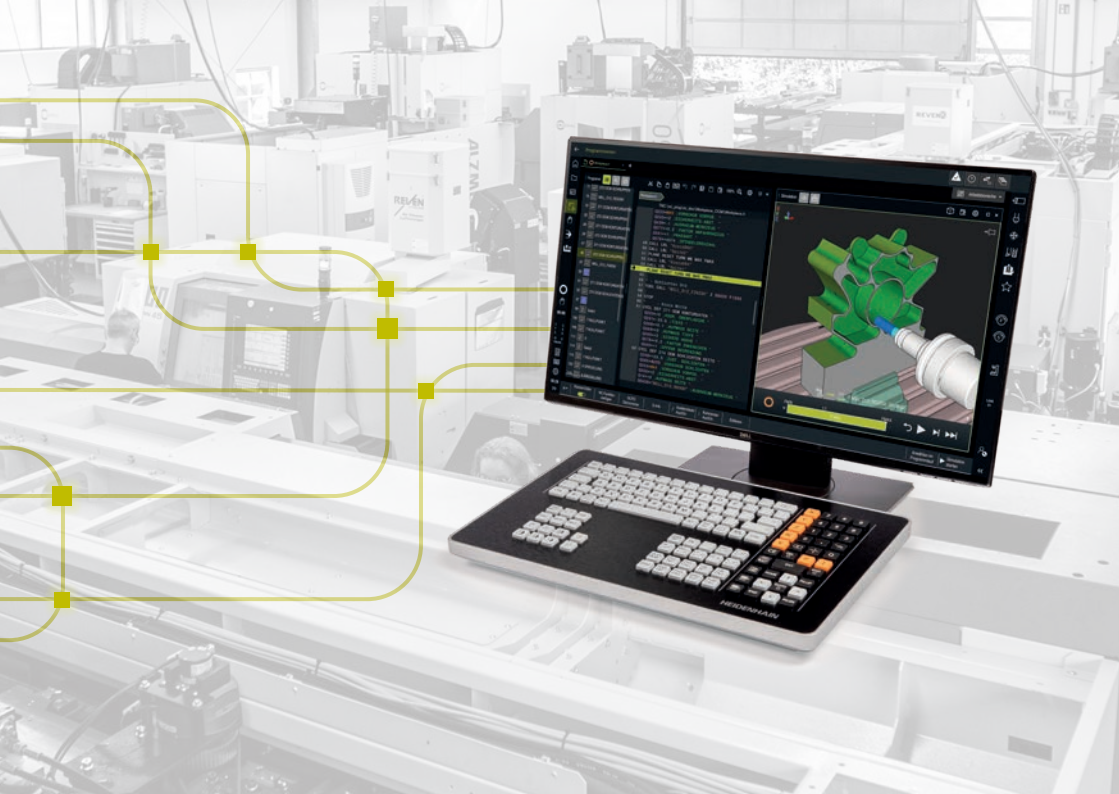
Your path to OPC UA applications

The HEIDENHAIN OPC UA NC Server is available on the following controls:

- TNC7: software version 81762x-16 or later
- TNC7 basic: software version 81762x-18 or later
- TNC 640: software version 34059x-10 or later
- TNC 620: software version 81760x-08 or later

You can connect up to ten OPC UA applications with one TNC control, and each application with one software option. If you have an OPC UA-capable industrial application and a network-connected machine, you can carry out a one-time, 90 trial of the software option.

More information:

www.heidenhain.de/opcua-nc-server

Virtual testing

HEIDENHAIN programming stations are based on the same software as the controls. They permit the creation, testing and optimization of programs away from the machine.

Explore the HEIDENHAIN OPC UA NC Server live for yourself, or test new OPC UA applications on a virtual machine such as a HEIDENHAIN programming station. Current versions of the programming station feature a free, full-version demo of the OPC UA NC Server.

Free download:

www.heidenhain.com/programming-stations
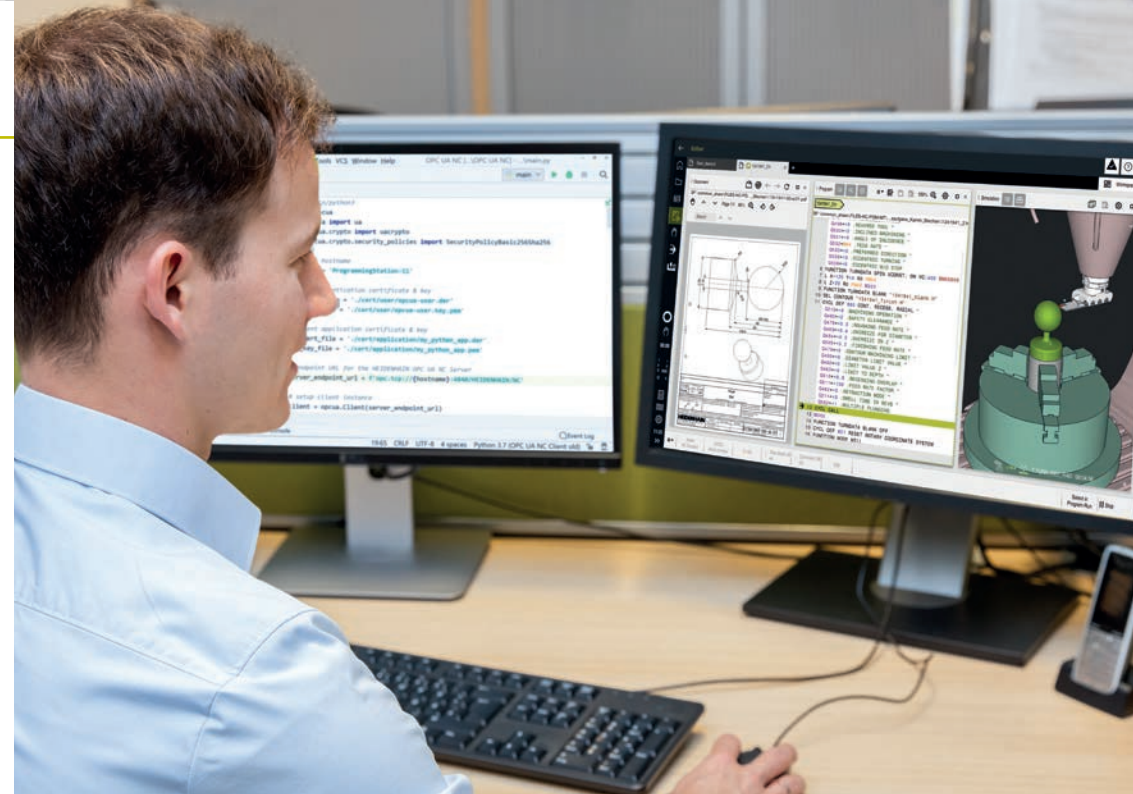
One platform with everything B2B users need

HEIDENHAIN
SHOP

HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH
Dr.-Johannes-Heidenhain-Straße 5
83301 Traunreut, Germany
☎ +49 8669 31-0
FAX +49 8669 32-5061
info@heidenhain.de

www.heidenhain.com

**HEIDENHAIN
worldwide**