DIGITAL SHOP FLOOR

HEIDENHAIN

+ **Advanced energy monitoring**
+ **Automatic importing of ERP data**

StateMonitor

Track, analyze and optimize production processes

www.digital-shop-floor.heidenhain.com

Expand functionality as needed

HEIDENHAIN
StateMonitor

Collect, visualize and analyze machine data:
- Machine statuses
- Machine messages
- Tool data
- NC program data
- Energy data

Messenger for e-mail notifications

Expandable functionality through software options

**Connectivity for five machines
(expandable for up to 30 machines)**

Exchange data with higher-level systems

+ **HEIDENHAIN MaintenanceManager**
- **+** Maintenance planning
- **+** Tracking and analysis of error messages

+ **HEIDENHAIN JobTerminal**
- **+** Tracking and analysis of job times
- **+** Quantity reporting

+ **HEIDENHAIN 5 Signals**
- **+** Tracking and analysis of five machine-specific signals[1]

+ **HEIDENHAIN 5 Machines**
- **+** Connectivity for 5 additional machines[1]

+ **HEIDENHAIN Interface**
- **+** Enabling of the following interfaces (depending on the control): HEIDENHAIN DNC, OPC UA, MTConnect, ModbusTCP and FOCAS[1]

[1] These options can be ordered multiple times to expand functionality as needed
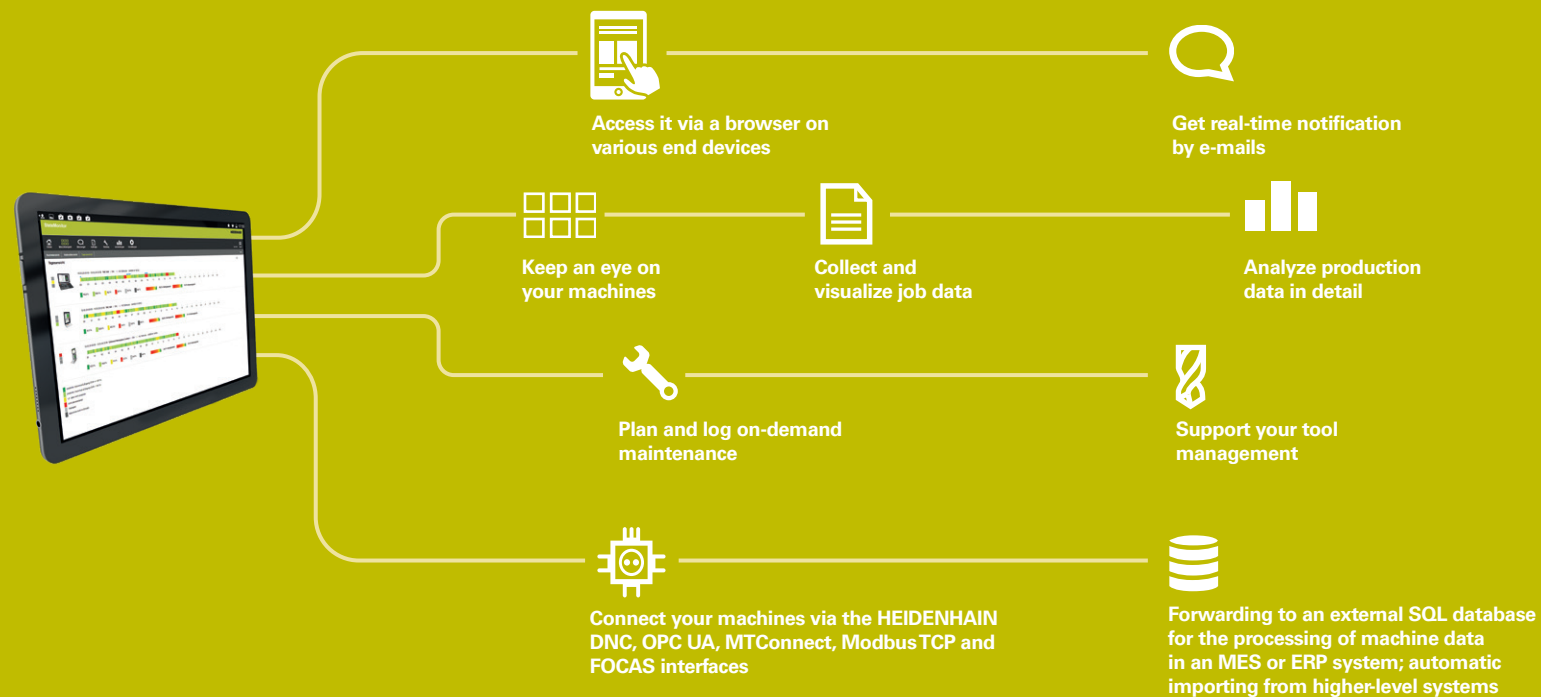
Optimize production processes

The StateMonitor software delivers real-time insight into what your machines are doing and helps you analyze the collected data. You can also use StateMonitor with mobile devices, even outside of your corporate network, thus allowing you to keep an eye on your machines anytime and anywhere.

Your benefits:

- Minimize machine downtime
- Discover ways to optimize your processes
- Save costs
- Shorten your response time and walking distances
- Monitor machine statuses in real time
- Reduce setup and maintenance time

StateMonitor
+ **Improve productivity**
+ **Reduce idle time**
+ **Increase process quality**

Access it via a browser on various end devices

Get real-time notification by e-mails

Keep an eye on your machines

Collect and visualize job data

Analyze production data in detail

Plan and log on-demand maintenance

Support your tool management

Connect your machines via the HEIDENHAIN DNC, OPC UA, MTConnect, Modbus TCP and FOCAS interfaces

Forwarding to an external SQL database for the processing of machine data in an MES or ERP system; automatic importing from higher-level systems

Keep track of your machines anytime

StateMonitor simplifies the simultaneous operation of multiple machines and helps you shorten machine idle and response times. Simply access the software via your browser to track machines while on and off the shop floor, including during unattended shifts. This gives you the following capabilities:
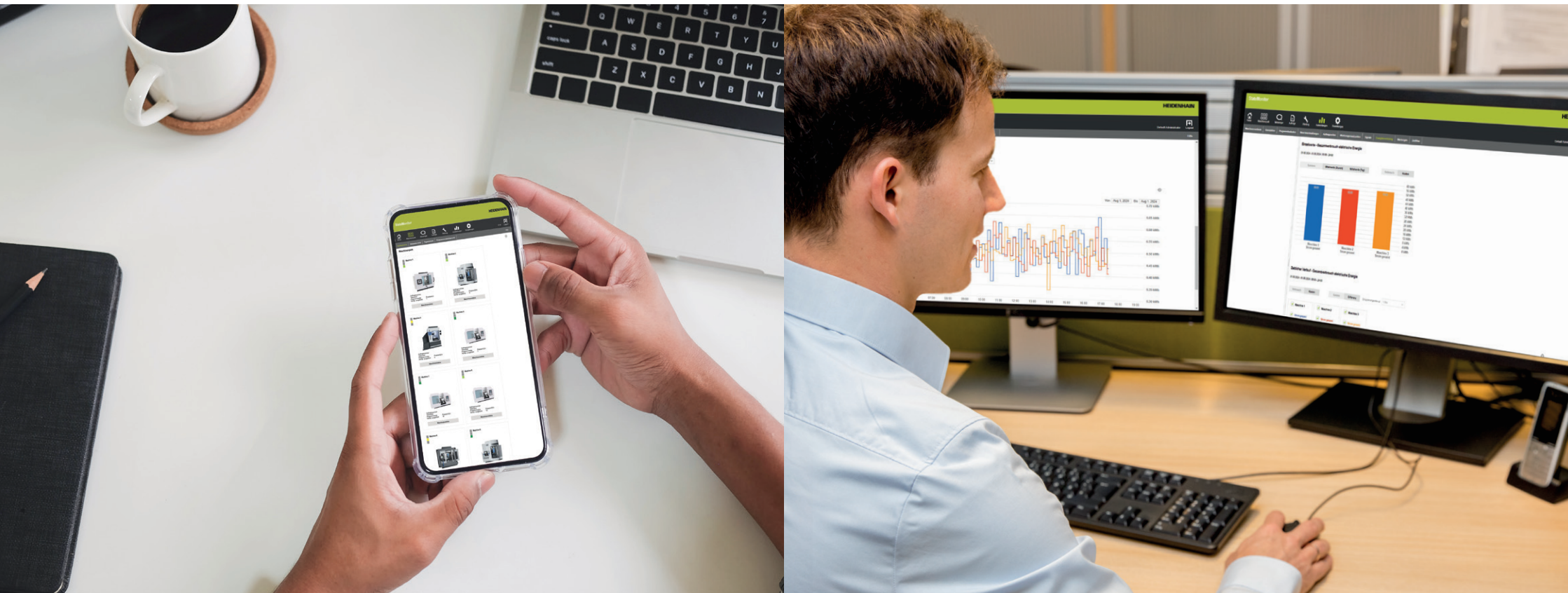
- Monitor machine statuses in real time
- Display detailed information about machine statuses and their causes
- Track your program status with a progress bar
- See the tool currently in use
- Send real-time notifications, such as machine messages
- Access the software via a browser from various mobile devices

Monitor energy consumption

StateMonitor is capable of monitoring more than just the status of a machine. It can also monitor the associated energy consumption (electricity, compressed air and process water). This information can be acquired either directly through the machine's numerical control or very easily as a retrofit solution using the SignalBroker feature of StateMonitor.
Energy monitoring offers various possibilities for evaluation:

- Ascertain machine-specific energy consumption and costs
- Compare overall consumption and costs between machines
- Identify peak times
- Ascertain energy consumption and costs of individual program runs
- Observe energy consumption and costs over time

Plan on-demand maintenance

Functioning machines are essential for smooth manufacturing operations. The MaintenanceManager software option supports maintenance and error management:

- Plan maintenance based on operating hours, machine messages and fixed intervals
- Automatically send error and maintenance messages to the right staff member
- Analyze error messages, and uncover optimization potential
- Compare planned and actual maintenance durations
- Reduce costs through on-demand maintenance
- Minimize machine failure and downtime

Collect and analyze job data

The JobTerminal software option allows you to collect and analyze job data. Machine messages are leveraged to automatically gather job data. JobTerminal provides optimal support for job evaluation:

- Track, analyze and visualize actual setup and production times
- Determine finished part quality as either "OK", "Rework" or "Scrap"
- Calculate costs for a production job or work step based on real data
- Detect any deviations from planning
- Export job data
- Import job data from higher-level systems automatically (such as ERP or MES)

Now automatically transfer from your ERP system

Detailed analyses for greater transparency

Informative analyses are essential for improving productivity by uncovering optimization potential and for finding the cause of errors. StateMonitor offers a number of extensive analyses:

- Machine statuses, availability and utilization rate
- Program run time, as well as the proportion of productive time, spindle usage, rapid traverse and cutting time
- Machine messages, such as emergency stop, program abort and warnings
- Job times
- Tool data
- Machine-specific signals, such as temperatures, fill levels and workpiece counters
- Energy monitoring

What our customers say

Sebastian Pöckl

Head of Production, RO-RA Aviation Systems GmbH, Schörfling (Austria)

"At RO-RA Aviation Systems GmbH, we use StateMonitor on nine milling machines. We use it especially to track cycle times for faster delivery, for example. We also use StateMonitor to digitally analyze the cause of faults. This massively simplifies daily shopfloor management. Now we don't just think we know something; we know it for sure based on clear data and can optimize processes as a team. That's why we're currently starting two additional StateMonitor projects."
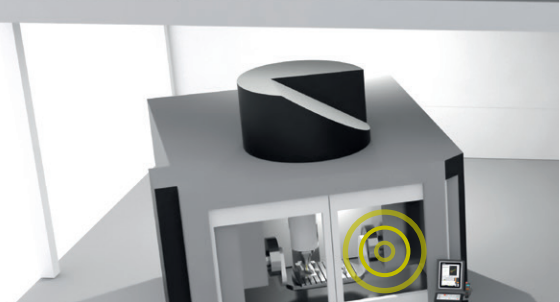
Cavid Güler

Managing Director, GÜMATEC, Remscheid (Germany)

"To enhance tool loading speed, we use a solution from TCmobil GmbH&Co.KG. The key elements are a tool trolley with a special space-saving tool arrangement, along with the StateMonitor software. To ensure that machine setup is efficient, StateMonitor accesses the machine's tool pocket table and, on a tablet PC on the trolley, displays which tools are missing from which pockets. This combination has enabled us to significantly reduce setup times and gain more time for production."

- ▶ **We provide advisory support for all products and services of the Digital Shop Floor:**
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- ▶ **For more information about Digital Shop Floor products, visit us online:**
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Everything for B2B users on a single platform

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