

Seiki Monitoring

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SYSTEMS

The collection of live and accurate data is a key element to achieving consistently high quality and efficiency. It enables you to quickly identify, evaluate and respond to important events whilst increasing equipment availability and reliability. It can also be used to protect your previous investments as well as inform future purchasing decisions.

Managing Manufacturing Process Performance

Whilst traditional paper based methods can be used to collect and collate manufacturing data, they are often based on historical records and are likely to be inaccurate. Seiki Monitoring provides users with the ability to manually or automatically record the status of your manufacturing resources and report on machine performance, both in real time and historically.

Status Selection for Data Collection

Automatic and manual collection of productive and non-productive events occurring on CNC and manual machine tools can be both captured and selected using Seiki Monitoring software. Each operation and status change can be derived automatically (e.g. cycle start or alarm condition) via digital signals received from the machine tool, providing continuous recording of production times. The machine operator is also able to manually enter operating conditions and status changes using a simple HMI, offering a selection of 64 user defined activities on the local shop floor terminal, providing a record of the time and reasons for lost productivity.

All machine activities are recorded with a date and time stamp, as well the duration of each event in a Log Book. The results can then be viewed as an event list or exported for evaluation and further analysis to identify reasons for inefficiency and lost productivity. The data can also be used to help reduce maintenance costs.

Real Time Visibility

Having overall visibility of the production process facilitates the control and flexibility required to focus on being responsive to customer demands and adding value through the production process. The Seiki Factory View software can be configured to provide a dynamic real time view of the shop environment that is accessible from anywhere on the LAN/WAN.

Offering a number of viewing options, such as drawing, line diagram or photograph of the shop floor as a background screen to create a realistic view of the shop floor layout, Seiki Factory View enables you to quickly identify the live status of each individual monitored resource as it is updated on the terminal by the Operator.

Seiki Monitoring | Data Collection

Introducing Seiki Monitoring...

Seiki Monitoring is a complete resource monitoring solution designed to automatically or manually record resource status as derived from the machine's communication interface.

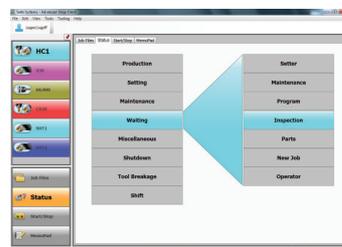


The Features

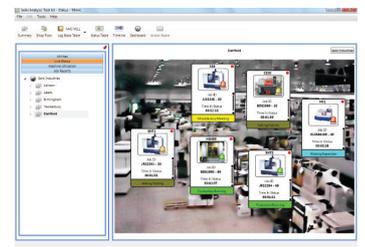
- Automatic and/or manual data collection
- User defineable statuses
- Remote live views of individual machine activity
- Highly configurable
- Graphical display of machine utilisation & productivity trends
- Export data as .csv, .bmp or HTML format for easy distribution
- Digital I/O connectivity with optional DPRNT support
- Automatic generation of alarms condition alerts

The Benefits

- Simple, accurate and reliable data collection of machine activities
- Eliminates inaccurate & time consuming manual methods
- Enables users to identify potential problems and take a proactive approach to maximising throughput
- Supports unmanned operations with live status and alert warnings 24/7
- Maximise the utilisation of your existing resources and base decisions for investment on real data
- Real time access to shop floor information



Simple and accurate automatic and/or manual data collection



Remote live views of individual machine status and activity

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The simple colour coding of each individual resource icon indicates which of the core 8 monitoring status options is currently selected, e.g. in production, shut down or waiting. From this screen it is also possible to drill down into a cell or individual resource to view additional job information pertaining to the current job. Seiki Factory Status can extend this real time information availability, facilitating company wide communication to deliver essential manufacturing data directly to management or supervisory personnel anywhere in your organisation.

Resource Alarm Status Alert

In addition to viewing resource activity remotely, alarm status alerts can be configured to pass an alarm condition message to supervisory personnel via HTTP to external system such as MS Outlook, SMS, pager, etc. The main business benefit of an alert system is increased manufacturing uptime by facilitating an immediate response to any machine activities that can ultimately have a negative effect on your overall productivity. The system can support your 24/7 machining, providing confidence that unmanned operations are fully supervised.

Machine Utilisation Analysis

Seiki machine utilisation software acts upon a central data repository to generate reports comprising of relevant management information based on real time data collection. This information can then be used to inform strategies to optimise machine uptime, throughput and ROI. Identifying the reasons for lost productivity can help to reduce costs and improve manufacturing efficiency.

The system provides detailed analysis of the productivity of each machine, together with non-productive reasons, displaying the results in pie chart, bar chart and text table format. The information includes accumulative % and total hours for each event that has occurred during the selected period and for those requiring a more detailed analysis, an event listing displays each works order in sequence and duration. Individual events or groups of events can also be displayed chronologically and analysed for trends in production to enable corrective action to be taken if required or for evidence of productivity improvements.

Note: The addition of our optional shop floor communications modules Seiki DNC or Seiki Jobpack enables configured job folders containing the manufacturing data stored on the remote server (NC programs, drawings, tool lists, etc) to be directly accessed on the shop floor terminal by the machine operator.

The Seiki Solution

Seiki has over 20 years experience in the development and implementation of real time manufacturing systems that provide live production management information and visibility to maintain a controlled and flexible approach to the manufacturing process.

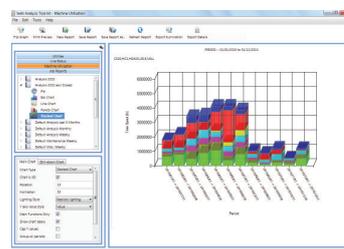
Seiki Monitoring software is available as a stand alone solution or as an integral part of the Seiki Networked Manufacturing System (NMS). Seiki NMS combines the following modules:-

- Seiki Jobpack DNC
- Seiki Monitoring
- Seiki SFDC

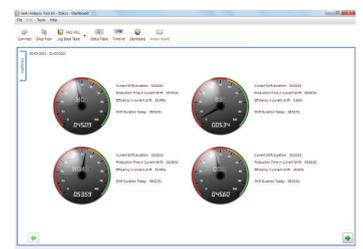
Each of these packages are also available separately. The modularity of Seiki software provides manufacturers with a flexible solution and progressive upgrade path. Furthermore the Seiki solution is scalable. One of the key advantages is the ability to address your most critical areas first with the option to expand the system as your business grows.

We offer a complete service including planning, installation, implementation, customisation, training and after sales support.

Giving internal stakeholders access to real time, actionable data direct from the shop floor will enable them to make informed decisions and take action to resolve downtime issues that could be costing you money. This level of visibility can lead to measureable business improvements and supports lean initiatives by reducing time spent searching for reasons for lost productivity and actively working to resolve/prevent the identified causes.



Machine utilisation and lost productivity trends



A productivity dashboard forms part of the Seiki Analysis Toolkit

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Seiki Systems' suite of manufacturing execution software can be utilised for planning, controlling and improving the works order lifecycle - from top floor to shop floor - of any manufacturing company. Visibility and control of all stages of the manufacturing process is essential. Creating a leaner systematic approach can result in significant capacity and efficiency improvements that can lead to real cost reductions.