## FANUC

# **MT-LINK***i* The easy way to monitor your production

Dawn

Operation management software running on standard PCs. Collect data and monitor the status of your factory's production equipment.

# **MT-LINK***i*

MT-LINK*i* is a PC software that connects machines, robots and peripheral devices in the factory. Data can be collected and visualised to provide more information about manufacturing process and historical data.

Not only machines equipped with FANUC CNC or FANUC robots can be connected, but also machines or robots from other manufacturers as well as PLCs or sensors. MT-LINKi software is one of the first steps to utilise IoT functions of manufacturing machines and devices. Based on data collected and presented in MT-LINK*i* customers can improve their productivity and processes.

#### **MT-LINK***i* benefits:

- Improve productivity due to detailed machine data
- Detect inefficiencies in machine utilisation
- Improve uptime by diagnostic functions
- Save time by automatic custom regular reports
- Have a backup for CNC system and programs



STATUS

PERFORMANCE OPTIMIZATION

#### Easy connectivity

MT-LINK*i* makes it easy to access and transfer data from factory equipment such as machine tools with CNCs, robots and PLCs over a network. MT-LINK*i* allows you to also connect third-party equipment via OPC UA and MTConnect.

#### Quick and easy setup and configuration

MT-LINK*i* is easy to set up and has a scalable system architecture. The data acquisition is managed by a dedicated Collector PC software, whereas the data is stored on a Server PC software. The Server PC also provides a web-based user interface for data access and visualisation that can be accessed from any PC or tablet on the network with a browser. For small systems with only few devices, Collector PC software and Server PC software can run on a single standard personal computer. Up to 100 devices can be handled by one MT-LINK*i* server. The production results of large systems with more than 100 devices can be combined with the MT-LINK*i* Integration Server.

#### Production monitoring

MT-LINK*i* enables you to monitor live the state of the whole factory at a glance. Recognise abnormal states of the equipment such as alarms quickly, allowing you to start countermeasures immediately.

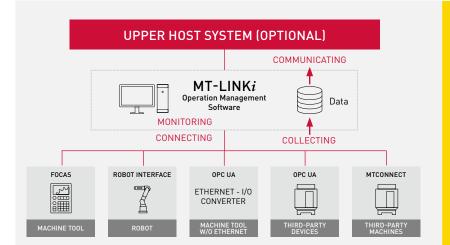
#### Performance overview

MT-LINK*i* allows you to review the operational results on machine level. You can review the production results and compare them against the production plan. You also can check machine utilisation and find machines that are underutilised. This enables you to optimise the factory's resource planning.

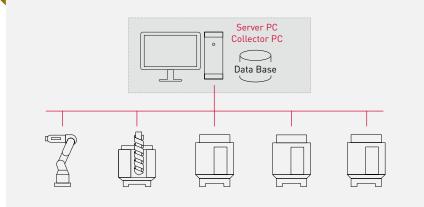


#### Diagnostics

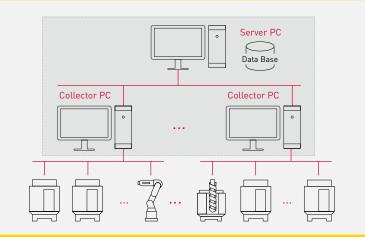
With MT-LINK*i*, it is possible to view various diagnostic data such as alarm history, program history, signal history and macro value history. With this, you are able to identify bottlenecks and optimise the production process. MT-LINKi also enables you to schedule automatically generated reports in CSV file format. The report templates can be customised to suit your needs.



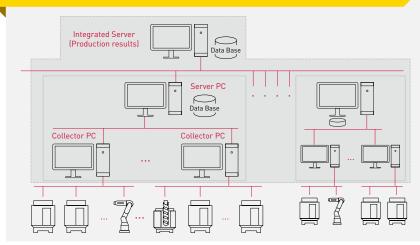
#### Small system with few devices



#### Medium system with up to 100 devices

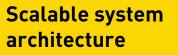


#### Large system with more than 100 devices

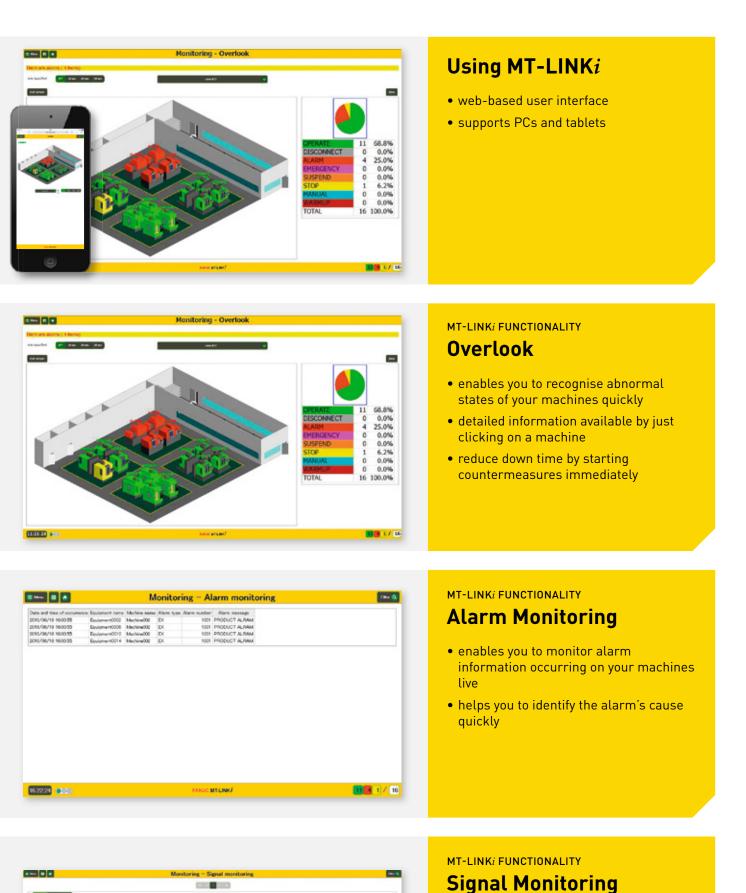


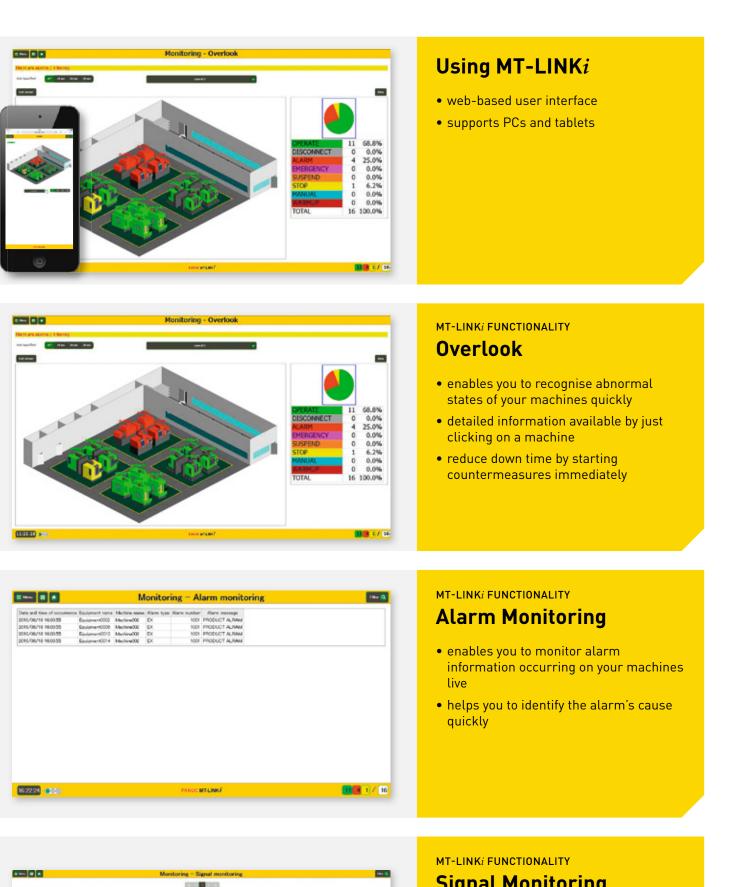
## **Connecting MT-LINK***i*

- connect machine tools with FANUC CNC via FOCAS
- connect FANUC robots via Robot Interface
- connect machines without Ethernet via Ethernet I/O converter
- connect third-party devices via OPC UA protocol
- connect third-party machines via MTConnect protocol

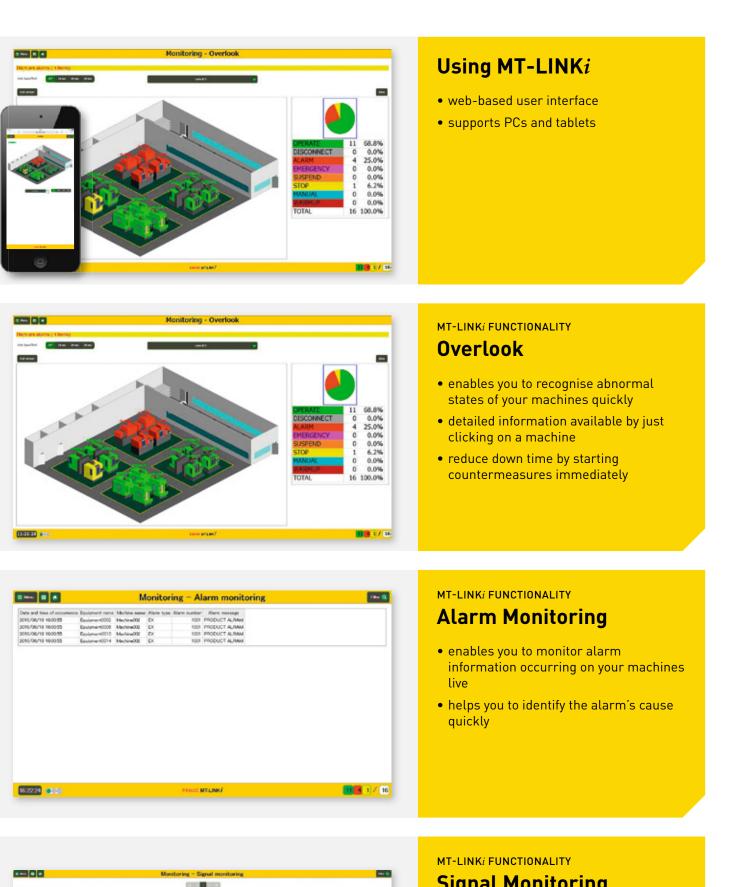


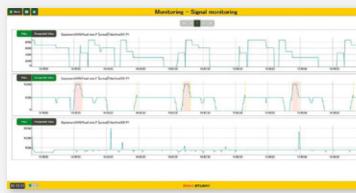
- for small systems with less than 25 devices only one PC is required
- in MT-LINK*i* up to 100 devices are considered as a medium system where multiple collector PCs provide all machine data to one central server PC
- large systems with more than 100 connected devices can be centralized using the MT-LINK*i* Integration Server





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2016/06/18 16:00:55	Equipment0006	Machine 202	EX.	1004	PRODUCT ALRAM
2010/06/18 16:00:55	Equipment0010	Machine 202	DC .	1004	PRODUCT ALRAM
2010/36/10 10:00:55	Equipment0014	Machine002	EX.	1001	PRODUCT ALRAM





• enables you to monitor signals such as feed rates, spindle/servo load and temperature, override and so on live



MT-LINK*i* FUNCTIONALITY

## **Operational Results**

- provides you with graphs displaying the machines' operational states such as OPERATE, ALARM or STOP
- data can be output to CSV file
- helps you to check machine utilization and detect unused production capacity



Nagnosis - Alarm Histor

Set by ince

#### MT-LINK: FUNCTIONALITY Production Results

- shows you the production results and production plans of your machines
- data can be output to CSV file
- allows you to easily identify deviations from the production plans

#### MT-LINK*i* FUNCTIONALITY

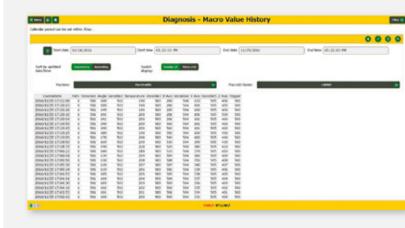
## **Alarm History**

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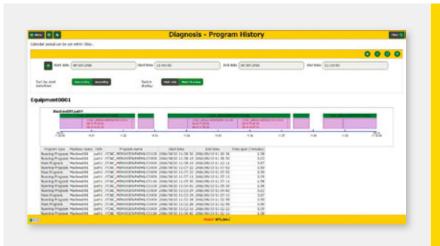
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- shows you information on alarms that occurred in the past
- data can be output to CSV file
- helps you to identify common alarms, analyse alarm causes and eliminate them









## MT-LINK: FUNCTIONALITY Program History

- shows you information on programs that ran in the past
- checks the cycle time of your programs
- data can be output to CSV file
- helps you to check machine utilisation and machine productivity

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### MT-LINK*i* FUNCTIONALITY Signal History

- shows you the signal history of various machine signals
- data can be output to CSV file
- allows you to identify correlations between machine signals
- enables you to check the condition of batteries, fans and motors' leakage resistances based on their signals and replace worn-out components in time

### MT-LINK*i* FUNCTIONALITY

## Macro Value History

- shows you stored values of given macro variables from the past
- data can be output to CSV file
- can be used to collect and store various kinds of data, e.g. measurement data of tools and workpieces

#### MT-LINK*i* FUNCTIONALITY

## **Report Output**

- enables you to schedule automatically generated daily, weekly and monthly reports in Excel file format
- report templates can be customised
- allows you to save time with automatic reports



#### MT-LINK*i* FUNCTIONALITY

### **File Transfer**

- download/upload NC data (NC programs, parameter files etc.) between CNC and MT-LINK*i* Server PC
- manage your NC programs efficiently
- enables you to create backups easily and store the backup data in a central place
- manages your archived files and shows differences between archived backup versions

## One common servo and control platform – Infinite opportunities THAT's FANUC!

FA CNCs, Servo Motors and Lasers

## ROBOTS

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Industrial Robots, Accessories and Software ROBOCUT CNC Wire-Cut Electric Discharge Machines

## ROBODRILL

Compact CNC Machining Centres

### ROBOSHOT

Electric CNC Injection Moulding Machines **IoT** Industry 4.0 solutions