

MELFA ROBOT

Cloud Maintenance Solution

Enabling smart factories



The image displays a comprehensive cloud maintenance solution for Mitsubishi Electric MELFA robots. The central focus is a large monitor showing a detailed maintenance dashboard for a specific robot asset (Robot_SIM1). The dashboard includes a sidebar with navigation options like Home, Maintenance Overview, Alarms, and Reporting. The main content area shows the robot's status as 'Online' and 'OPERATING / ALL RUNNING', along with key metrics such as Battery Remaining (388h), Accumulated Time (499h), Remaining Time maintenance parts (2382h), and Remaining Time Servo On Time (2354h). It also displays Total Consumption Maintenance Parts (0.26%) and Total Consumption Overhaul Parts (0.75%).

Below the main dashboard, a laptop shows a 'Global Smart Brewery' overview with various gauges for Availability (85%), Performance (97%), and Quality (92%). A tablet displays production metrics like 'Production by Shift' and 'Average Line Speed'. A smartphone shows a mobile app interface with a QR code and data tables. A smartwatch displays a 'Stock' level of 133.23. A physical Mitsubishi Electric robot arm is positioned on the right side of the collage, symbolizing the integration of physical assets with digital data.

- Manage your assets more intelligently
- Easily integrate with existing equipment
- Future-proof your manufacturing process
- Improve plant uptime

MELFA ROBOT

Cloud Maintenance Solution

At Mitsubishi Electric, we know not all robots are made equal, and each robot on your production line has a very specific and important role to play in the manufacturing process. Regardless of where they came from, they are all there to get the job done, and our new Robot Cloud Maintenance solution helps you manage them more intelligently and more efficiently than ever before.



INTRODUCTORY QUESTIONS

- Do your maintenance technicians struggle with the time it takes to extract diagnostic information from each robot?
- Do you have a mix of different assets from different robot manufacturers?
- Would you like to be able to quickly understand the status and condition of each robot within a unified interface at a glance?
- What if you could shift from a reactive maintenance model to a proactive / predictive one?



MELFA ROBOT

Cloud Maintenance Solution



SOLUTION OVERVIEW

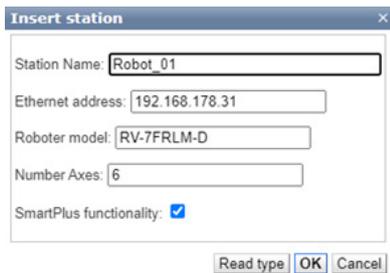
The Robot Cloud Maintenance solution comes complete with hardware and software.

The IoT Gateway is a module of the MELSEC iQ-R series. This industrial hardware can access real-time-data from many robot controllers and various other automation devices and make them available to the unified visualization dashboard that can be deployed on-premises or in a cloud environment.

INTUITIVE CONFIGURATION

Configuration of the IoT Gateway is carried out via an intuitive web interface or Windows software (free of charge).

No PC is required in the plant for secure remote access (additional license fee applies).



INTEGRATION

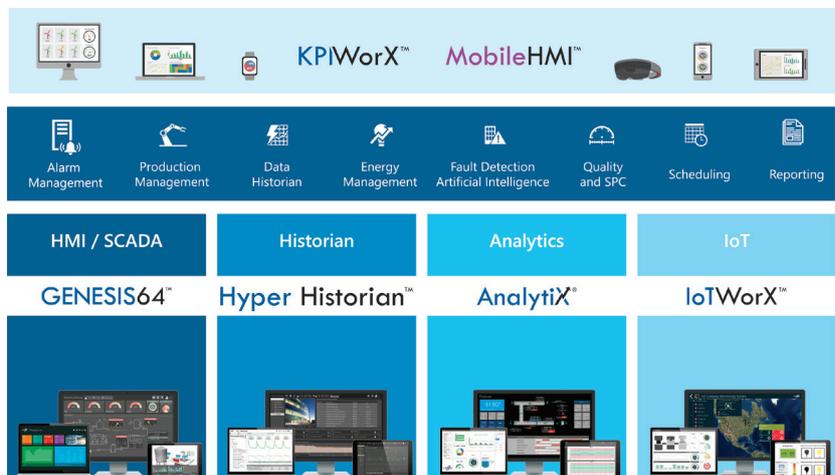
iQ platform variables and data structures can be integrated directly and are available as OPC UA variables. The solution supports the latest OPC UA companion specification for robots.

SPECIFICATIONS

- OPC UA server for easy connection to MES and ERP systems
- OPC UA Client for horizontal machine-to-machine communication with other OPC UA servers
- 2 Ethernet ports with firewall for physical and secure separation between process- and IT-level
- Scalable security levels, exchange of digital certificates
- Historical data according to OPC UA specification on an SD card
- Other popular Networks and MODBUS connections (Ethernet)
- Built-in MQTT Publisher
- Secure Microsoft Azure IoT Hub connectivity
- Supports Mitsubishi Electric controllers MELSEC iQ-R and iQ-F series, MELFA robots, Mitsubishi Electric inverters and CNC

UNIFIED VISUALIZATION

- Ideally suited to creating a standardized and easy-to-maintain flexible solution around robot predictive maintenance
- Visualize maintenance information, alarm conditions, and historical data
- Supports not only Mitsubishi Electric Robots but also third-party equipment through standard communications such as OPC UA, MQTT and Azure IoT Hub
- Provides a modern and intuitive user interface
- Maintenance personnel can use any device to view information (cell phones, any web browser, PC, wearable devices).
- Natively integrates with customer ERP systems to create maintenance work orders automatically based on customizable fault rules
- Built-in support for the digital twin concept to speed-up application development and bulk asset configuration based on MS Excel



DETAILED INFORMATION

If you would like to take advantage of the additional preventive and predictive maintenance functionalities of our MELFA Robots or you would like to know more about the ICONICS unified visualization software and the IoT gateway solutions, please contact your local Mitsubishi Electric representative for additional information.

For detailed information, please visit:



<https://emea.mitsubishielectric.com/fa/products/hmi/iconics>



<https://emea.mitsubishielectric.com/fa/products/rbt/robot/msp>



Mitsubishi Electric's e-F@ctory concept utilizes both FA and IT technologies, to reduce the total cost of development, production and maintenance, with the aim of achieving manufacturing that is "a step ahead of the times". It is supported by the e-F@ctory Alliance Partners covering software, devices and systems integration, creating the optimal e-F@ctory architecture to meet the end user's needs and investment plans.



Mitsubishi Electric Europe B.V., Factory Automation, Sales Offices:

Germany
Mitsubishi Electric Europe B.V.
Mitsubishi-Electric-Platz 1
D-40882 Ratingen
Phone: +49 (0)2102 / 486-2048

Czech Rep.
Mitsubishi Electric Europe B.V.
Pekařská 621/7
CZ-155 00 Praha 5
Phone: +420 734 402 587

France
Mitsubishi Electric Europe B.V.
2, rue de l'Union
F-92565 Rueil Malmaison cedex
Phone: +33 1 41 02 83 00

Hungary
Mitsubishi Electric Europe B.V.
Budaörs Office Park, Building A, 3rd Floor,
Szabadság street 117
HU-2040 Budapest
Phone: +36 70 3322 372

Ireland
Mitsubishi Electric Europe B.V.
Westgate Business Park, Ballymount
IRL-Dublin 24
Phone: +353 (0)1 4198800

Italy
Mitsubishi Electric Europe B.V.
Viale Colleoni 7 Palazzo Sirio
I-20864 Agrate Brianza (MB)
Phone: +39 039 / 60 53 1

Netherlands
Mitsubishi Electric Europe B.V.
Capronilaan 46
NL-1119 NS Schiphol-Rijk
Phone: +31 (0) 297 250 350

Poland
Mitsubishi Electric Europe B.V.
ul. Krakowska 48
PL-32-083 Balice
Phone: +48 (0) 12 347 65 00

Romania
Mitsubishi Electric Europe B.V.
22, Tudor Vladimirescu Street, Floor 6, Office
4.2, District 5 – Bucharest
Phone: +40 31 229 0840

Russia
Mitsubishi Electric (Russia) LLC
2 bld. 1, Letnikovskaya st.
RU-115114 Moscow
Phone: +7 495 / 721 2070

Slovakia
Mitsubishi Electric Europe B.V.
Levická 7
SK-949 01 Nitra
Phone.: +421 917 624036

Spain
Mitsubishi Electric Europe B.V.
Carretera de Rubí 76-80 Apdo. 420
E-08190 Sant Cugat del Vallés (Barcelona)
Phone: +34 (0) 93 / 5653131

Sweden
Mitsubishi Electric Europe B.V. (Scandinavia)
Hedvig Möllers gata 6
SE-223 55 Lund
Phone: +46 (0) 8 625 10 00

Turkey
Mitsubishi Electric Turkey Elektrik Ürünleri
A.Ş.
Şerifali Mahallesi Kale Sokak No:41
TR-34775 Ümraniye-İSTANBUL
Phone: +90 (216) 969 25 00

UK
Mitsubishi Electric Europe B.V.
Travellers Lane
UK-Hatfield, Herts. AL10 8XB
Phone: +44 (0)1707 / 28 87 80

Mitsubishi Electric Europe B.V. / Factory Automation
EMEA / Mitsubishi-Electric-Platz 1 / D-40882 Ratingen Germany
Tel.: +49(0)2102-4860 / News-fa-emea@meg.mee.com
emea.mitsubishielectric.com/fa

