MELFA ROBOT
Cloud Maintenance Solution

Enabling smart factories

- Manage your assets more intelligently
- Future-proof your manufacturing process
- Easily integrate with existing equipment
- Improve plant uptime
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?
- 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?
- Do you have a mix of different assets from different robot manufacturers?
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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).

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

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.
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:


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.