

Automating the World

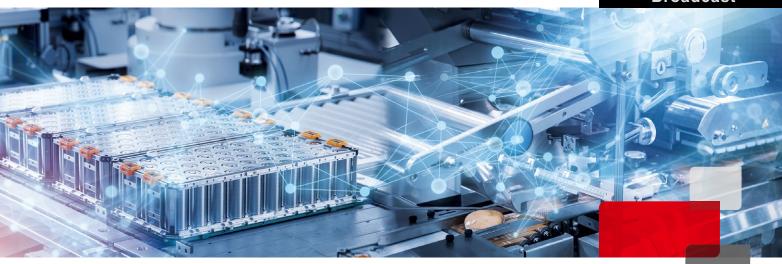
FACTORY AUTOMATION

MELSEC iO-

iQ Platform-compatible PAC **OPC UA Server Module**



Broadcast



OPC UA: Essential to stay ahead with data utilization

Today's manufacturing requires flexible, fast data utilization. The key is to add value to data by seamlessly connecting shop floor and IT systems.

▶OPC UA, anticipated as the standard for supporting digital transformation in manufacturing, is essential for success in data utilization



Open Platform Communications **Unified Architecture**

International data exchange standard for safe, reliable, manufacturer- and platform-independent industrial communication

Integrate the strengths of OPC UA into programmable controller systems

Resolve your concerns about data utilization with the three key strengths of OPC UA!



N1

Adapting to communication protocols for devices from various manufacturers and systems, both old and new, is time-consuming and costly



Unified communication protocol between systems

OPC UA enables communication with a unified protocol between devices and IT systems, thereby creating an open, manufacturer-independent network

Connect devices and IT systems with minimal effort and cost



With large amounts of critical data being exchanged more frequently, how can we 02 prevent data leakage?



Connection destination authentication, communication encryption

 OPC UA ensures highly reliable communication with its robust security features, including certificates, encryption, and signatures

03

Concern

The need for updates on the link application each time new equipment is added complicates data sharing and system coordination



Communicating the meaning and relationships of data OPC UA enhances system interoperability by standardizing data structures and interfaces using information models

Protect data from theft and tampering

 Various information models provided by industry organizations and vendors are planned to be supported

Ensure smooth data sharing and coordination between systems

OPC UA server module hardware specifications

Item	RD81OPC96	
SD memory card slot	SD memory card/SDHC memory card (216 GB)	
Ethernet port		
Number of channels	2	
Interface*1	1000BASE-T, 100BASE-TX, 10BASE-T	
Max. number of cascaded stages*2	2 (100 Mbps), 4 (10 Mbps)	
Max. segment length*3 (m)	100 (between hub and node)	
Interface	RJ45	
Setup software		
MX OPC UA Module Configurator-R	SW1DND-ROPCUA-E	

^{*1.} The OPC UA server module determines 11000BASE-T/100BASE-TX/10BASE-T, and full/half duplex communication modes according to the hub. When connecting to a hub that does not have auto-negotiation feature, configure the hub settings to match the communication mode

OPC UA server module software specifications

Item		Specifications	
Profile		Embedded 2017 UA Server Profile, OPC Spec Version1.04	
Encryption setting (security policy)*4		None: no security Aes256-Sha256-RsaPss: AES 256-bit encryption + SHA-256 Aes128-Sha256-RsaOaep: AES 128-bit encryption + SHA-256 Basic256Sha256: Basic 256-bit encryption + SHA-256 Basic256 (deprecated): Basic 256-bit encryption Basic128Rsa15 (deprecated): Basic 128-bit encryption	
Signature setting (security mode)		 None: no security Sign: add signature Sign & Encrypt: add signature and encryption 	
User authentication setting		Anonymous User name/password Certificate validation	
Connected OPC UA clients			
Maximum number of sessions		15	
Connectable Ethernet port		CH1	
OPC UA communication specif	ications*5		
CreateMonitoredItems ModifyMonitoredItems	SamplingInterval (ms)	20060000	
	Max. number of MonitoredItems	Total for all sessions: 3000	
CreateSubscription ModifySubscription	Max. number of Subscriptions	Per session: 10 Total for all sessions: 150	
Read	MaxNodesPerRead Max. number of nodes per request	25000	
Write	MaxNodesPerWrite Max. number of nodes per request	3000	
Information models and mappi	ng specifications*5		
Namespace	Number of Namespaces	10	
Node	Number of Nodes	50000	
	Number of mappable Variables (total)	25000	

^{*4.} Available security policies differ for each firmware version of the OPC UA server module and software version of the configuration tool. For details, please refer to the "MELSEC iQ-R OPC UA Server Module User's Manual (Application) (SH-081694ENG)".

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This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/).

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♠ For safe use

 To use the products listed in this publication properly, always read the relevant manuals before use.

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^{*2.} Based on use with a repeater hub. For switching hub, refer to the manufacturer's documentation.

^{*3.} For maximum segment length between hubs, refer to switching hub manufacturer documentation.

^{*5.} Either tag mode or information model mode can be selected depending on the use. This specification refers to the information model mode For details on the tag mode, please refer to "MELSEC iQ-R OPC UA Server Module User's Manual (Startup) (SH-081693ENG)". For details on the information model mode, please refer to "MELSEC iQ-R OPC UA Server Module User's Manual (Information Model) (SH-082679ENG)".