



OPC Enterprise Server

Openness, productivity and connectivity

OPC defines a number of manufacturer-neutral software interfaces for automation (→ www.opcfoundation.org). With OPC Data Access, current states and values (online data) can be exchanged between controllers and software applications, such as visualizations, control systems or production data acquisition. As a pure software interface OPC runs on a PC or IPC under Windows and communicates with the M200 automation systems via Ethernet. Any standard-conformant OPC client which is operated on the PC can exchange data in both directions.

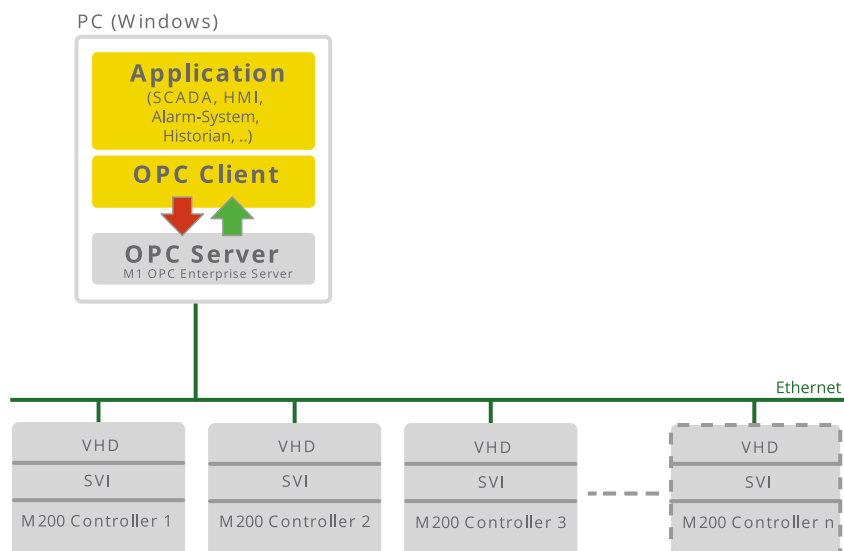
The integrated configuration tool supports the selective disclosure of any variables from the control system under a freely selectable item name for the clients. Configurations can either be created directly in the graphic interface, or transferred from other tools via the import/export function. Convenient copy functions accelerate the configuration or management even for large installations with many connected controllers. The integrated simulation enables communication tests with client applications even without connected M200 systems. Inversely a test client that is likewise integrated in the "OPC Configurator" configuration tool permits checking of the data exchange with underlying controllers without a completely set-up OPC client application. The Bachmann OPC Enterprise Server has been specially developed for large installations with a variety of automation devices, i.e. for large data volumes. In addition to the possibility of handling multiple network connections simultaneously, here the parallelization of queries and the multi-processor support have a particular effect.

Features

- OPC-conformant data server – manufacturer-neutral interface
- Specifications: OPC Data Access 1.0, 2.04, 2.05 and 3.0
- Connection to M200 via Ethernet
- Secure SSL connection to the controllers
- No restriction of the connected M200 systems and data quantity (items)¹⁾
- Multi-processor support
- Powerful configuration tool
- Flat and hierarchical browsing
- Simulation for clients (configuration tool)
- Integrated test client (configuration tool)
- Operation under Microsoft Windows 10, 11 and Windows Server 2016, 2019 and 2022

Part Type Designation	Part Number
OPC-DA-ETP-Server RT	00015632-63
OPC Enterprise Server Download	00015632-90

¹⁾ However there is restriction due to computer performance, network capacity and communication load on the M200 system. The actual achievable throughput depends on the application case.



OPC Enterprise Server

Server					
Protocol for client application	OPC Data Access				
Supported specifications	V1.0, 2.04, 2.05a, 3.0				
Data exchange direction	Bidirectional				
Supported data types	<table border="0"> <tr> <td>Basis types</td> <td>UINT1, UINT8, SINT8, UINT16, SINT16, UINT32, SINT32, REAL32, BOOL8, CHAR8, CHAR16, MIXED, REAL64, UINT64, SINT64</td> </tr> <tr> <td>Block types</td> <td>All basis types; basis type + BLK (e.g. CHAR8 + BLK = STRING)</td> </tr> </table>	Basis types	UINT1, UINT8, SINT8, UINT16, SINT16, UINT32, SINT32, REAL32, BOOL8, CHAR8, CHAR16, MIXED, REAL64, UINT64, SINT64	Block types	All basis types; basis type + BLK (e.g. CHAR8 + BLK = STRING)
Basis types	UINT1, UINT8, SINT8, UINT16, SINT16, UINT32, SINT32, REAL32, BOOL8, CHAR8, CHAR16, MIXED, REAL64, UINT64, SINT64				
Block types	All basis types; basis type + BLK (e.g. CHAR8 + BLK = STRING)				
Data type mapping	SVI on OPC (automatic)				
Number of variables (items)	User-defined ¹⁾				
Time stamp on the server	Yes				
Time stamp from controller	Yes (per group one time item possible)				
Quality attribute on the server	Yes				
Quality attribute from controller	Yes (per group one quality item possible)				
Display of connection loss	Yes (affected items show quality=BAD)				
Type of installation	OUT_PROCESS or SERVICE				
Operation without GUI	Yes				
Flat browsing	Yes				
Hierarchical browsing	Yes				
Refresh rates	Dynamically adjustable per group (from 50 ms) ¹⁾				
Multi-processor support	Yes				
Simulation mode	Yes				

¹⁾ Update rates depend on the data volume and the computer performance, (Free) controller performance and network topology / network load.

Interfaces to the controller	
Physical interface to the M200	Ethernet
Basis protocols	TCP/IP UDP/IP QSOAP
Protocol	SMI/VHD
Multiple connections per controller	Yes
Simultaneous queries	Yes
Number of connected controllers	User-defined ¹⁾
Access protection	Yes, can be configured
Supported security levels	0 to 4
Encryption	OpenSSL

¹⁾ No program-technical restriction. Limit value depends on performance of the computer, the network and the capacity utilization of the controllers.

Configuration	
Graphic interface	Yes (OPC Configurator)
Browsing of controllers	Yes
Browsing of controller variables (SVI)	Yes
Import/Export	Yes (CSV)
Templates	Yes
Clones (with enumeration)	Yes
Restricted access	Yes (only on configured items)
Item names	OPC side can be freely configured ("renaming")
Item access rights	OPC side can be freely restricted
Integrated test client	Yes
Configurations can be saved	Yes
Access protection on configuration	Yes (different user levels)

Diagnostics	
Error logging	Yes (log file)
Debug mode	Yes (several can be set)
Diagnostics on items	Yes (static items)
Statistics on items	Yes (static items)

Installation	
Installation medium	Installer, available as DVD or download
Installation can be automated ("silent")	Yes
License basis	Per installation (single-license obligation)
Licence protection	Hardware-dependent software key
Configured installation	Yes (items / controller configuration as well as configuration users can be preset)

System requirements for Server

Operating system (OPC Server)	Windows 10 Windows 11 Windows Server 2016 Windows Server 2019 Windows Server 2022
Hardware	According to the requirements of the operating system, 2 GB free memory recommended
Microsoft .NET Framework	3.5SP1 or higher

System requirements M200

M200 automation devices	Series ME, MX, MPC, MPE, MH, MC
System software	MSys V2.11 or higher (for full function scope)

Order Data

Part Type Designation	Part Number	Description
OPC-DA-ETP-Server RT	00015632-63	License to operate one instance of the M200 OPC Enterprise Server on a Windows PC. Provides variable communication with M200 automation systems over the ethernet interface and offers an OPC Data Access interface according to specifications 1.0, 2.04, 2.05 and 3.0 accessible by standards-compliant client software via COM/DCOM. No license restrictions on the number of connected M200 systems or process variables.
OPC Enterprise Server Download	00015632-90	OPC-DA-ETP-Server software package installer