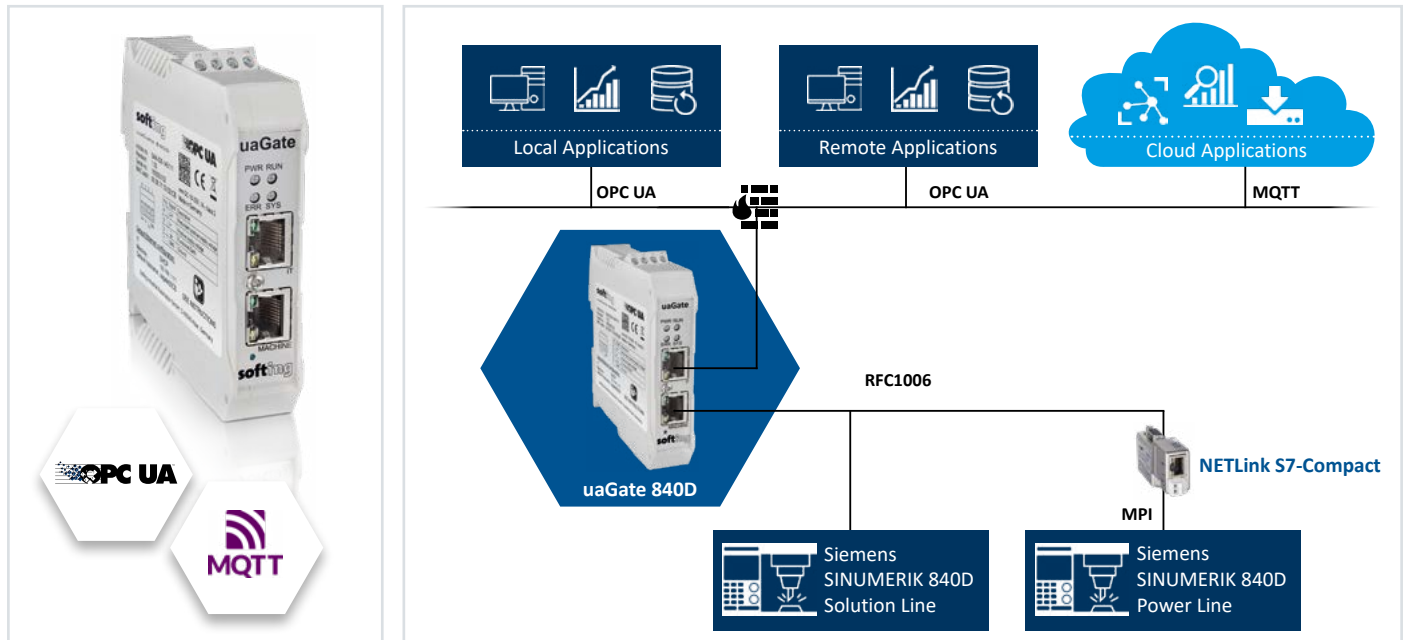# uaGate 840D

## OPC UA Server Gateway for Siemens SINUMERIK 840D SL/PL Controllers

- **Data Collection from Siemens SINUMERIK Controllers for Condition Monitoring**
- **Further Data Processing in Applications via OPC UA or MQTT Interface**
- **Easy and Secure OPC UA Retrofit for Existing and New Numeric Controllers**
- **Use of High Security Standards for Protecting Transferred Data**



### Access to Data in PLC, NC, and Drives Areas from Siemens SINUMERIK 840D SL/PL

- Access to many different Siemens SINUMERIK 840D Solution Line and Power Line controllers
- Data integration into higher level management tools like ERP, MES, or SCADA systems
- Embedded OPC UA Server providing open, platform independent communication
- Access to NC area containing axis, tool, program, drive data and specific alarms
- Automatic tool recognition and listing of all available magazines and tools
- Use of data for analysis, condition monitoring, predictive maintenance, or data logging purposes
- No additional Siemens licenses necessary
- Initial configuration without requiring PLC or NC programming

### Easy Configuration

- Usage of predefined symbol files for standard configurations for easy commissioning
- Upload of AWL file created from user defined NCVar Selector symbol files for NCK connection
- Easy symbol import from SIMATIC STEP 7/TIA Portal projects for S7 PLC connection
- Gateway configuration using integrated web server and standard web browser

### Industry-proven Security

- Physically separated interfaces and separate configuration rights for OT and IT networks preventing intrusions
- Supporting security standards as SSL/TLS and X.509 certificates
- OPC UA compliant data encryption and user authentication
- Security supported for MQTT communication with private and public clouds

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# uaGate 840D

## Technical Data

| | | |
|---|---|---|
| **Hardware** | Processor | Altera Cyclone V SoC with Dual-core ARM Cortex-A9 |
| | Connectors | 2 x IEEE 802.3 100BASE-TX/10BASE-T (independent interfaces) |
| | Status LEDs | PWR (power supply), RUN (running), ERR (error), SYS (configuration) |
| | Dimensions (H x W x D) | 100 mm x 22.5 mm x 105 mm |
| | Power Supply | 18 VDC ... 32 VDC, SELV/PELV supply mandatory<br>Typically 200 mA, maximum 1 A at switch-on |
| | Operating Temperature, Horizontal DIN Rail Installation | -40 °C ... 50 °C (0 mm minimum distance)<br>-40 °C ... 55 °C (22.5 mm minimum distance) |
| | Operating Temperature, Vertical DIN Rail Installation | -40 °C ... 35 °C (0 mm minimum distance)<br>-40 °C ... 40 °C (22.5 mm minimum distance) |
| | Storage Temperature | -40 °C ... 85 °C |
| | Relative Humidity | 10 % ... 90 %, non-condensing |
| | Weight | About 0.2 kg |
| | Mounting | DIN Rail (35 mm) |
| | Housing | Phoenix Contact ME MAX |
| | Protection Class | IP20 |
| **Software** | Protocols | SIMATIC S7, RFC1006, SINUMERIK, OPC UA (Server, up to 20,000 OPC UA Nodes),<br>MQTT (Publisher, up to 1,000 topics) |
| | Supported Controllers | Siemens SINUMERIK 840D Solution Line, software version V2.7 and higher<br>Siemens SINUMERIK 840D Power Line, software version V5.3 and higher |
| | Supported Engineering Tools | Siemens NCVar Selector |
| **Conformity** | Emission | EC Directive 2004/108/EC "Electromagnetic Compatibility", EN 55011, Group 1, Class A<br>EC Directive 2004/108/EC "Electromagnetic Compatibility", EN 55022, Class A<br>EC Directive 2004/108/EC "Electromagnetic Compatibility", EN 61000, Part 6-4<br>FCC CFR45, Part 15 Section 15.107 and 15.109 (Class A),<br>VCCI Class A Information Technology Equipment 2002 |
| | Immunity | EC Directive 2004/108/EC "Electromagnetic Compatibility", EN 61000, Part 6-2 |
| **Certifications** | | CE, FCC, RoHS |

## Scope of Delivery

| | |
|---|---|
| Hardware | uaGate 840D |
| Software | Tool for configuration over integrated web interface |
| Documentation | Quick Startup Guide (printed documentation) |

## Order Numbers

| | |
|---|---|
| GAA-YX-145144 | uaGate 840D |

## Additional Products and Services

| | |
|---|---|
| 6FC5851-1XC45-4YA8 | SINUMERIK 840D SL CNC software and SINUMERIK Operate, toolbox including NCVar Selector (please order directly from Siemens) |
| GPA-CS-041000 | NETLink S7-Compact<br>(PROFIBUS/MPI to Ethernet adapter for communication with SINUMERIK 840D Power Line) |

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