MatrikonOPC Server for Modbus - Enhanced OPC Connectivity to all Modbus Capable Honeywell Devices

The Modbus OPC Server from MatrikonOPC provides secure and reliable real-time data access between all modbus-capable devices to OPC-enabled applications such as historians, HMIs and SCADA systems, etc. This Modbus OPC Server securely communicates over Ethernet and/or serial based Modbus variants.

Use the OPC Server with 3rd party hardware to connect to Experion® HS through the Experion OPC Client interface. This provides an ideal user experience with user configurable tags, easier management of multiple devices, tag level security, and optional redundancy.

Flexible Deployment
MatrikonOPC Server for Modbus is offered in two editions: Plant and SCADA. The Plant edition is optimized for data transfers over serial and Ethernet, with fewer devices and higher bandwidth networks. The SCADA edition’s advanced polling management enables you to connect with many devices over unreliable, noisy, slow and/or expensive links.

The World’s Most Secure OPC Server
Unlike other Modbus to OPC interfaces, the MatrikonOPC’s OPC Server can grant and deny access to OPC tags based on each user’s login. Such granual access control makes the Modbus OPC Server a powerful tool for securing your control automation systems.

User-Configurable Tags
The OPC Server for Modbus makes it easy to create tag aliases that use user-friendly item names instead of hard-to-decipher register codes. In addition, the OPC server’s support for importing/exporting CSV tag lists created using a program like Excel makes managing large tag counts easy. As needed, tags can be scaled, combined in calculations and alarmed, all in the server – extending beyond the information available in the device.

Device and Channel Level Redundancy
The OPC Server for Modbus supports device level redundancy in the driver - if one device fails, the OPC Server can automatically start polling the secondary device. The OPC server also supports redundancy at the communication channel level. For example, if a primary radio-link fails, the server can poll over dialup.

Compatible Honeywell Products
Use the MatrikonOPC Server to connect any Modbus-capable devices such as the HC900 Controller, MasterLogic PLC, single loop controllers, actuators and analyzers to 3rd party SCADA, historians and HMIs.
The OPC Server for Modbus SCADA edition also supports advanced redundancy management with groupings of multiple devices.

**Works with Your Systems and Devices**
- Works with Experion HS or Experion LS and 3rd party Modbus devices
- Connects Honeywell’s HC900 controller, MasterLogic PLC, controllers, actuators and analyzers to 3rd party control systems such as historians, HMI’s, and other package

**Supported Modbus Protocols**
- Honeywell Modbus
- Bently Nevada
- Daniel Modbus
- Enron Modbus
- Modbus TCP
- Modbus (using RS-232 Serial)
- Modbus Plus using an SA-85 card
- Modbus ASCII
- Modbus RTU (binary)
- More…

**OPC Server for Modbus Plant Edition Features**
- Modbus Ethernet (TCP/IP) using the Modicon NOE module
- Modbus Master
- Modbus Slave configurations
- Various Modbus protocols
- Terminal Server
- Advanced Calculation Engine
- Device exploration: automatic OPC tag generation
- Read and write access to all PLC register types
- Concept style floating point analog registers
- Can run as a Windows service
- Multiple communication channels at the same time:
  - Serial
  - Network (Ethernet TCP/IP and UDP/IP)

**OPC Server for Modbus SCADA Edition Features**
- Modbus Master mode
- Modbus Slave mode
- Modbus RTU, Modbus ASCII, and Modbus TCP protocols
- Multiple communication channels at the same time:
  - Direct Serial (RS-232/422/485)
  - Radio
  - Network (Ethernet TCP/IP and UDP/IP)
  - Terminal servers (TCP/IP and UDP/IP)
  - CDPD (Cellular Digital Packet Data)
  - Dial-up (including dial-in and dial-out)
- Multiple Modbus register support:
  - Read and write all types of Modbus registers
  - 32-bit register support (Enron/Daniels)
  - Single-precision IEEE floating-point analog registers
- Optimized for low-bandwidth and noisy communication channels
- Supervisory control using single-destination and broadcast commands
- Redundancy:
  - Channel redundancy
  - Fail-over and Fail-back
- Comprehensive polling engine:
  - Poll Management:
    - Round-robin polling
    - Interleaved polling
    - Demand polling
    - Configurable polling priorities
  - Port configuration:
    - Multiple ports
    - Configurable baud rate for each port
    - Serial and TCP/IP
    - Same station delay
    - Direct, modem/radio, dial-up
  - External configuration
    - Polling engine control
    - Online changes without data loss
    - Complete access to communication diagnostics
Communication diagnostics
- Status flag
- Poll count
- No-response count
- Incomplete poll
- Fail/retry count
- All station time updates
- Response timeout

- Support for multiple protocols, including Modbus, over the same communication channel:
  - DNP3
  - IEC 60870-5-101
  - IEC 60870-5-104
  - ROC

- Supports unlimited arrays - useful when collecting dynograph card information.
- Supports unlimited slave Modbus definitions.
- Supports on-the-fly devlink configuration via an OPC client.
- Provides bit-writing capabilities; especially useful for working with bit switches packed into large registers for optimized space usage.
- Modbus units can be mapped by node name or unit address
- Supports bitmask read and write

Supported OPC Specifications
- OPC A&E (OPC Alarms and Events) 1.0
- OPC A&E (OPC Alarms and Events) 1.01
- OPC A&E (OPC Alarms and Events) 1.1
- OPC DA (OPC Data Access) 1.0a
- OPC DA (OPC Data Access) 2.0
- OPC DA (OPC Data Access) 2.05a
- OPC DA (OPC Data Access) 3.0
- OPC Security 1.0

More Information
For more information on using MatrikonOPC’s OPC Server with Honeywell products, visit www.honeywellprocess.com, or contact your Honeywell account manager.

For more information on OPC Server for Modbus, visit www.matrikonopc.com

Automation & Control Solutions
Process Solutions
Honeywell
1250 West Sam Houston Parkway South
Houston, TX 77042
Lovelace Road, Southern Industrial Estate
Bracknell, Berkshire, England RG12 8WD

Shanghai City Centre, 100 Junyi Road
Shanghai, China 20051