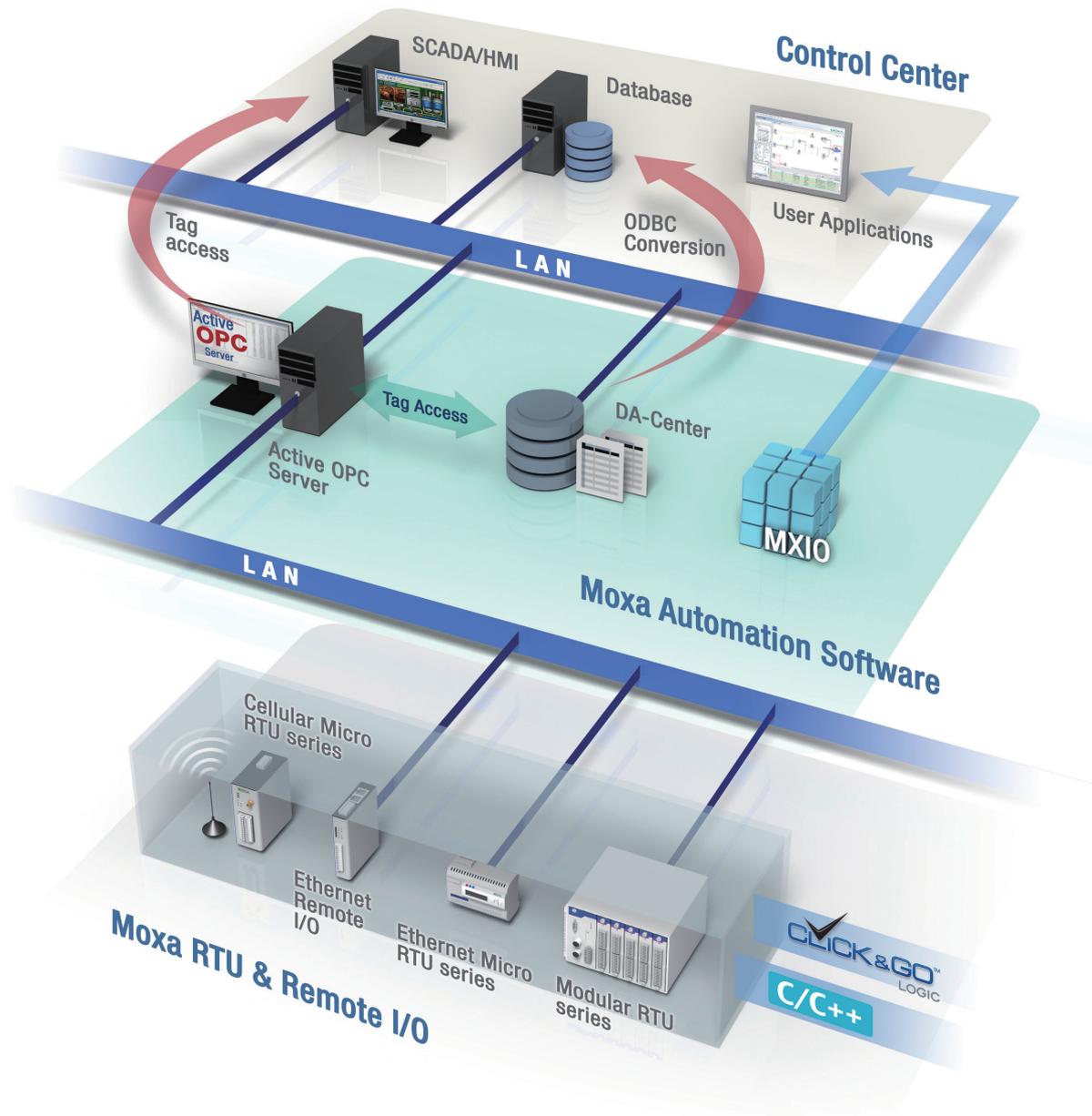


# Introduction to Automation Software

Moxa's automation software includes Active OPC Server, DA-Center, and the MXIO programming library. The patented Active OPC Server enables active communication via push technology from Moxa's RTU or remote I/O devices to SCADA systems. Acting as a gateway to central databases, DA-Center serves as a bridge for Active OPC Server, where real-time or stored data from Moxa's RTUs and remote

I/O devices is automatically collated, converted, and uploaded to the database. The MXIO Library offers a large repository of programming code for users to easily manage Moxa's RTU or remote I/O devices over Ethernet networks. All of this valuable software is included in our product packages, and may be upgraded free of charge from Moxa support sites.



## : Active OPC Server: The First Active Type OPC Server in the Automation Industry

### Faster, More Accurate Data Collection than Traditional “Pull Technology”

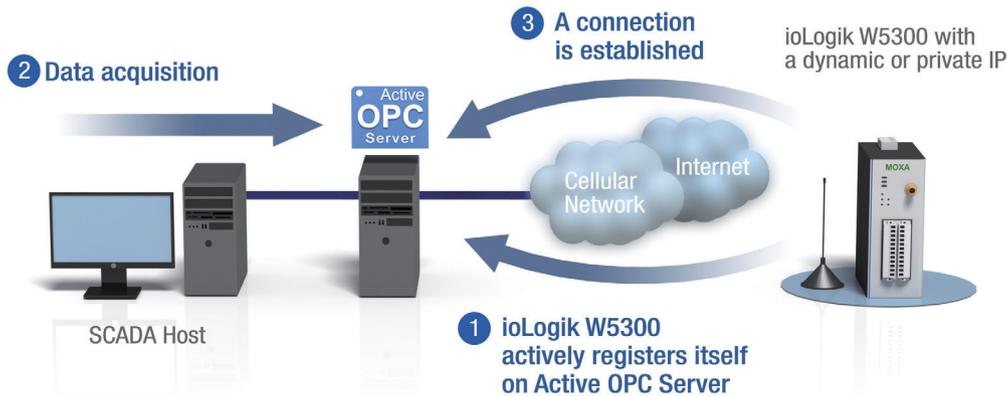
Moxa has pioneered the concept of “active type” OPC software in the automation industry. The patented Active OPC Server offers non-polling architecture alongside the standard OPC protocol, giving users the alternative of active, push-based communication from Moxa’s RTUs and remote I/O devices. This adaptation of push technology means that I/O status will be updated by the Active OPC Server only when there is an I/O status change, a pre-configured interval is reached, or when a request is issued by a user. This application of push technology cuts metadata overhead, resulting in faster I/O response times and more accurate data collection than traditional pull-based architectures. With Moxa’s “active technology” advantage, users can now instantly receive alarms and real time updates allowing for timely risk response.



### Dynamic IP Assignments for Cellular RTUs

For most cellular solutions, remote modems and the central SCADA server are assigned static public IPs when establishing bi-directional communication. Yet cellular network carriers charge higher monthly fees for static, public IPs than dynamic, private ones. Moxa’s ioLogik W5300 series and patented Active OPC Server allow users to

implement dynamic IP assignments for the RTUs. The ioLogik W5300 can automatically establish communications with the Active OPC Server using a fixed IP, and Active OPC Server will receive and register the ioLogik W5300’s IP address and receive or record tag updates accordingly.



### One Simple Click Creates Active Tags

Moxa’s RTUs, remote I/O devices, and Active OPC Servers support automatic tag generation, which eliminates the headache of specifying individual target IP addresses, I/O channels, and data formats, while even eliminating any need for editing and importing configuration files. Working from either of Moxa’s ioAdmin or ioSearch utilities, users only need to select specific I/O channels, set the update criteria, and then click a single button for their active tags to be automatically generated and configured.

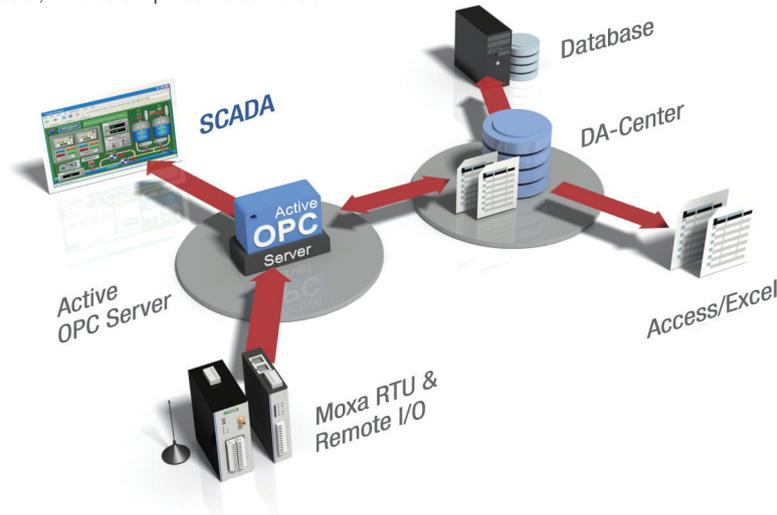


## DA-Center: A Revolution in Data Integrity

### Economize on Database Uploads

With most remote data acquisition systems, during daily operations additional human resources are needed to collect data manually from remote storage devices, and also to load data logs into a database. Even with RTUs remotely collecting data over the network, software must be developed to handle the task of converting and uploading data logs into the database. Moxa's DA-Center not only makes real-time data collection much easier, but also simplifies the conversion

of historical data into database-ready formats. DA-Center's standard OPC interface interacts directly with Moxa Active OPC Server, serving as a bridge between field data and stored databases or spreadsheets. Furthermore, DA-Center can combine tags from individual Moxa RTUs or remote I/O devices into the same database or spreadsheet, freeing users from the need to manipulate data after processing.



### Automatic Data Updates from SD Cards Following Network Failures

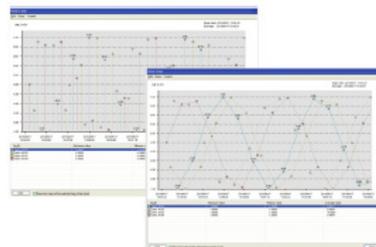
One of the benefits of using RTUs is that data can be collected over a network, from a central site; in an ideal operation, RTUs should be able to transmit data logs collected offline upon network reconnection. Moxa's DA-Center makes this not only possible, but easy. The DA-Center provides a standard OPC interface that interacts with

Active OPC Server for real-time data collection. After each network connection, DA-Center compares historical data stored on the SD cards located in individual devices with real-time data and then supplements any missing data by requesting re-transmission from the RTU.



### Embedded Trend Charts for Historical Analysis

The DA-Center package also includes several stock charts for basic data analysis. Users can retrieve data from a database table or a spreadsheet and automatically convert it into chart format, zooming in or out along the different axes, thus making it extremely easy to display and analyze historical data.



## : MXIO Programming Library: Handy Management of I/O Devices

### Intuitive Method of Obtaining Remote I/O Data

The MXIO Library is a set of programming tools for developing data management applications for use on Ethernet or RS-485 networks linking Moxa's RTUs and remote I/O devices. It includes direct I/O command sets that provide a more intuitive method of obtaining

I/O data. Software developers no longer need to study the complex Modbus protocol to manage I/O monitoring and control functions. Engineers can obtain I/O data by using MXIO's direct I/O commands to access any I/O point or channel with ease.

### Reduce Development Times with a Large Code Repository

The MXIO library includes many examples of sample code to help programmers reduce software development time and get quickly

familiar with the API. Developers can call MXIO functions and demo programs as soon as they have installed the library.

### Fully Exploit the Active Communications of Active OPC Server

The MXIO Library provides active functions for receiving I/O configurations and status updates from Moxa's RTU and remote I/O products. With Active OPC Server's revolutionary push technology, users can benefit from faster and more accurate data collection than the traditional polling type server.



## : Specifications

### Active OPC

#### Hardware Requirements

**CPU:** Intel Pentium 4 or above  
**RAM:** 512 MB (1024 MB recommended)  
**Network Interface:** 10/100M Ethernet

#### Software Requirements

**Operating System:** Microsoft Windows 2000/XP/2003/7  
**Editor (optional):** Microsoft Office 2003 (Access or Excel) or later

#### OPC Server Specifications

**OPC Data Access:** 1.0a, 2.0, 2.05a, 3.0  
**Max. No. of Tags:** 5000 (V1.12 or later)

#### Support Models

ioLogik E1200 series, ioLogik E1200H series, ioLogik E1500 series, ioLogik E2200 series, ioLogik E4200, ioLogik W5300 series, ioPAC 8000 series.

### DA-Center

#### Hardware Requirements

**CPU:** Intel Pentium 4 or above  
**RAM:** 512 MB (1024 MB recommended)  
**Network Interface:** 10/100M Ethernet

#### Software Requirements

**Operating System:** Microsoft Windows 2000/XP/2003/7

#### Support Models

ioLogik E1200 series, ioLogik E1200H series, ioLogik E1500 series, ioLogik E2200 series, ioLogik E4200, ioLogik W5300 series, ioPAC 8000 series.

### MXIO Library

#### Hardware Requirements

**CPU:** Intel Pentium 4 or above  
**RAM:** 512 MB (1024 MB recommended)  
**Network Interface:** 10/100M Ethernet

#### Software Requirements

**Operating System:** Microsoft Windows 2000/XP/2003/7

#### Support Models

ioLogik E1200 series, ioLogik E1200H series, ioLogik E1500 series, ioLogik E2200 series, ioLogik R2100 series, ioLogik E4200, ioLogik W5300 series.