

Your Trusted Partner in Automation

## Automation Software



Votre Expert  
France  
01 83 64 64 06  
sales@sphinxfrance.fr

## A Leader and Partner in Automation Solutions

Moxa's commitment to execution, innovation, and collaboration with our partners has fueled our transformative journey to leadership as a solution provider and partner in automation.



### Moxa: Your Trusted Partner in Automation

Founded in 1987, Moxa is now one of the leading manufacturers of industrial networking, computing, and automation solutions. Moxa provides thousands of hardware and software products and draws upon 24 years of accumulated expertise. Moxa's products reflect our constant zeal for improvement, keen eye for innovation, and respect for proven solutions and expertise. We harness these qualities to create solutions that deliver a competitive edge for our customers and partners in adapting to fast-changing network and market environments.

Moxa delivers network-centric automation solutions that integrate automation and IT systems into a single network platform that simplifies management, reduces costs, and achieves greater reliability and efficiency.

### Mission and Vision

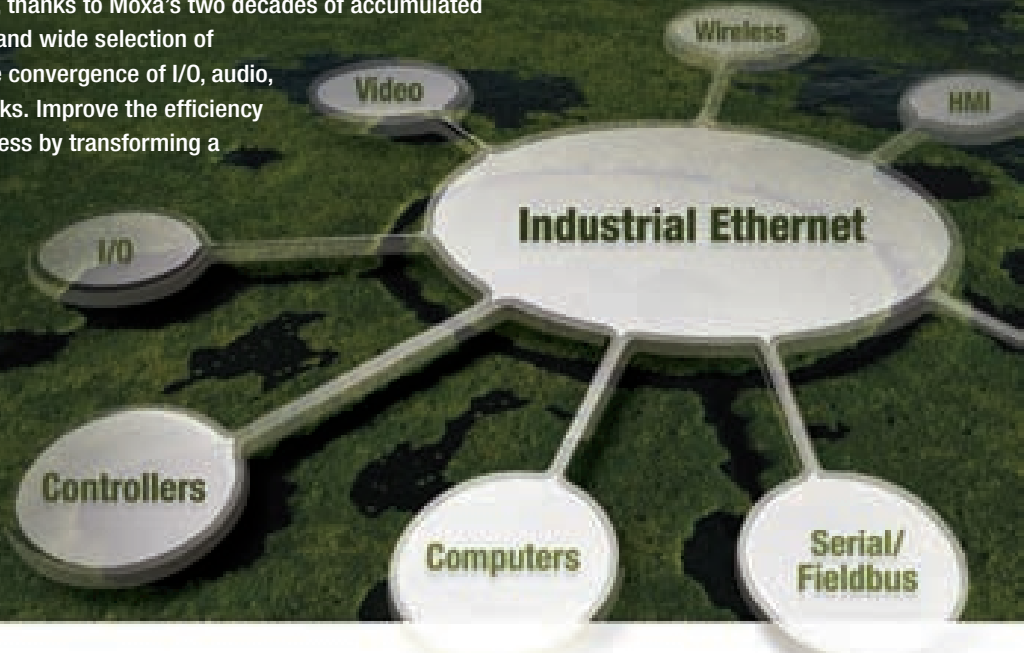
As a world-class leader and a trusted partner in industrial-grade device networking solutions for automation, Moxa proudly provides quality products and value-added service to establish win-win business relationships based on mutual trust and integrity. Moxa works closely as a team with our customers, channel-partners, and solution-partners to achieve and share success.

### Delivering on Commitments

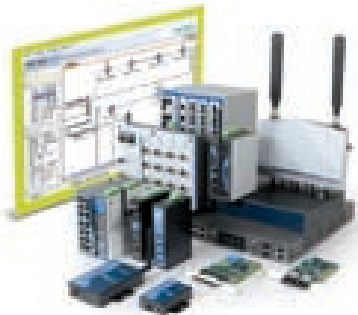
Moxa offers quick, flexible, and comprehensive R&D service to meet our customers' specific expectations and exact requirements with a talented design team experienced in networking technology and solution development. Moxa has close collaborations with our customers to drive advancements and faster time-to-market product delivery. These partnerships keep Moxa in touch with emerging technologies and ensure that new developments and successes are shared with all of Moxa's partners.

## Integrating Automation by Enabling Convergence

Industrial automation users have long anticipated the integration of computer, controller, I/O, video, and audio systems into a single easy-to-manage network. This vision of network-centric automation is possible today, thanks to Moxa's two decades of accumulated knowledge in industrial networking and wide selection of automation solutions that enable the convergence of I/O, audio, and video data over Ethernet networks. Improve the efficiency and reliability of your industrial process by transforming a hodgepodge of controller-centric operations into a single network-centric operation. Moxa provides communication interoperability across the full range of automation devices and modules to seamlessly integrate them with the industrial Ethernet network.



### Industrial Networking Solutions



Moxa offers a wide array of device networking products that feature open Ethernet infrastructure, industry-proven standards, extended temperature tolerance, environmental protection, and network redundancy to ensure network availability and reliability. Product lines range from industrial Ethernet switches, industrial wireless devices, serial cards, serial device servers, and embedded device servers, to USB and fieldbus components. All of our products are designed to stand up to harsh environments and are ideal for deploying mission critical applications in fields such as maritime, oil and gas, power and utilities, rail, and factory automation.

### Industrial Computing Solutions

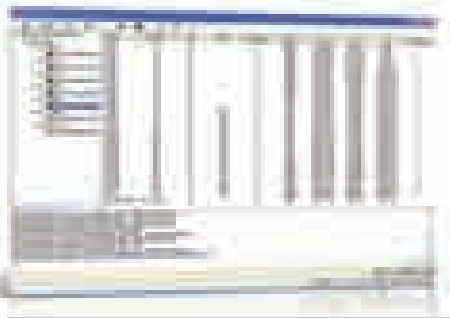


Moxa's industrial embedded solutions are used to construct powerful front-end controllers that can execute onsite data collection and control at widely distributed remote sites through industrial Ethernet or wireless backbones. All of the computers feature rugged reliability and fanless operations with a wide operating temperature range of -40 to 85°C. Our products feature a user-friendly environment that makes application development easy. Moxa provides prompt and extensive customization services in addition to a wide selection of ready-to-run products such as industrial computers, wireless computers, and wide temperature computers.

### Remote Automation Solutions



Active Ethernet I/O solutions featuring intelligent I/O data transmission are the cutting edge of IP-based data acquisition and control technology. Moxa's Active Ethernet I/O and Cellular I/O solutions maximize the real-time accessibility of remote site measurement and control applications. Moxa also offers SCADA-compatible IP surveillance solutions that integrate network video monitoring to implement real-time visual management for SCADA/RTU applications. Our vast selection of automation products includes programmable automation controllers, cellular wireless I/Os, Active Ethernet I/Os, remote Ethernet I/Os, and IP-based video servers and cameras.



## Automation Software

### Automation Software

Active OPC Server Lite: Seamlessly connect ioLogik / ioPAC to your SCADA system.....	15-2
DA-Center: Ready-to-run data gateway between remote devices and databases.....	15-5

# 15

Automation  
Software



# Active OPC Server Lite

*Seamlessly connect ioLogik / ioPAC to your SCADA system*



- > Patented event-driven tag update
  - I/O response that's 7 times faster
  - Save 80% on network bandwidth
- > Firewall-friendly connection from remote ioLogik/ioPAC devices
  - Allows remote ioLogik/ioPAC units to use dynamic IPs
  - Allows remote ioLogik/ioPAC units to use private IPs
- > Download free from Moxa's website
- > OPC DA 3.0 supported

## Introduction

Active OPC Server Lite is a software package provided by Moxa that operates as an OPC driver for an HMI or SCADA system. It offers seamless connection from Moxa's ioLogik/ioPAC series products to

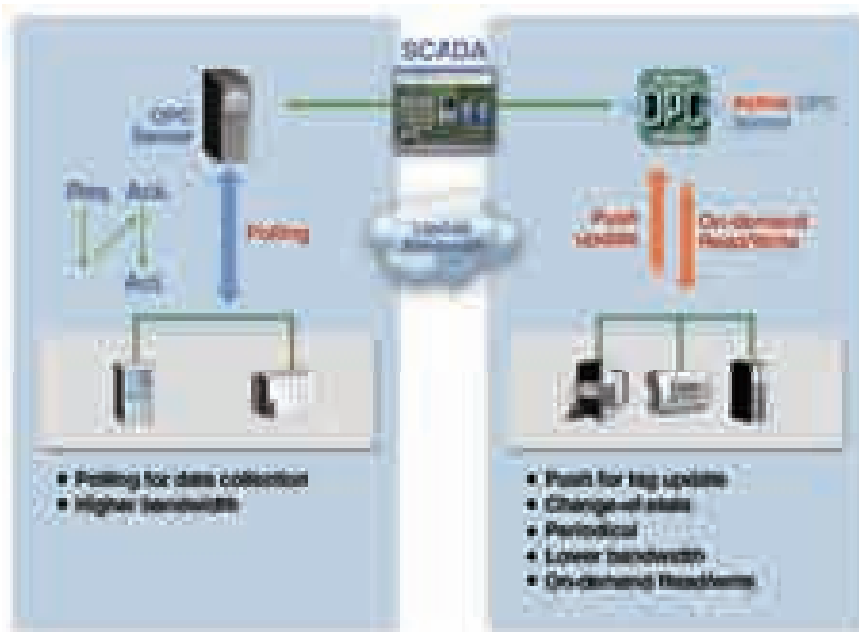
popular SCADA systems, such as Wonderware, Citect, and iFix. Active OPC Server Lite meets the latest standard of OPC DA 3.0, which allows connections to various kinds of devices and host OPC machines.

## Patented, Active Remote Data Acquisition

General OPC servers typically use the "poll/response," or so-called "pull" architecture, to connect to controllers or data acquisition devices, which involves an HMI/SCADA system continuously sending out commands to collect relevant data. Moxa's Active OPC Server, with its non-polling architecture, supports the standard OPC protocol, but also offers active (or "push") communication with Moxa's ioLogik/ioPAC series of RTU controller and remote I/O to HMI/SCADA systems, providing instant I/O status reports. This "active" technology makes data acquisition more efficient, especially when bandwidth is not that high (e.g., land lines, cellular, or via satellite) and the devices and sensors are located at the remote site.

## OPC to Device Connection

	Active Technology	Traditional Polling
Response Time	Event-triggered, faster response	Need to wait for polling and timeout, slower
Bandwidth Usage	Lower	Higher
Internet Friendship	Support Dynamic, and Private IP Address for DAQ device	Requires fixed IP and Public IP Address



## I/O Response that's 7 Times Faster and Provides 80% off Bandwidth Usage with Event-driven Tag Updates

Adding additional I/O channels will tend to bog down an HMI/SCADA system's operation, resulting in a longer response time and high network bandwidth occupation, all because of the traditional "pull" architecture. Active tags created by Active OPC Server Lite and ioLogik/ioPAC series products report the I/O status only by event, which means that the I/O status will be updated to the Active OPC Server when there is an I/O status change, a pre-configured interval is reached, or when requested by the user. The heartbeat design also checks if the connection is alive or not, preventing from no updates from the remote ioLogik/ioPAC devices.



This type of event-driven tag status update results in an I/O response time that is 7 times faster than other OPC Server packages (using a testing environment with 2,560 I/O channels). In a different test of network bandwidth usage, Active OPC Server Lite and the ioLogik/ioPAC caused an apparent 80% reduction in network traffic. The end result is that I/O access is more precise, and the cost of

communicating with remote I/O devices is substantially lower, especially when the remote site has limited bandwidth (e.g., satellite, microwave, and cellular communication). At the same time, the CPU usage of the SCADA/HMI system is also reduced by 35% with this innovative push-based architecture, so that less maintenance effort and lower level hardware devices can be implemented.

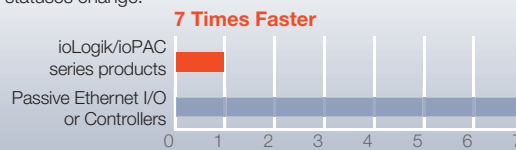
### Test I: Network Traffic Comparison

This test used 32 ioLogik E2210 units with 640 DI/O points. As shown in the figure, ioLogik/ioPAC series products can save 80% on bandwidth consumption compared to passive I/O or controllers.



### Test II: Response Time for I/O Status

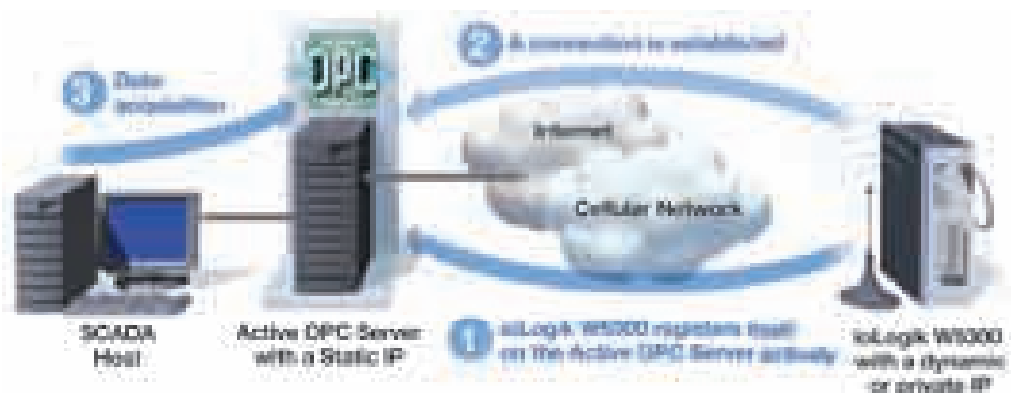
This test used 128 ioLogik E2210 units with 2,560 I/O points. As shown in the figure, the active architecture is 7 times faster than the passive architecture in response time when the I/O or controllers statuses change.



## Solving the Dynamic/Private IP Issue on a Mobile Device or with Cellular Networking

Dynamic/private IP addresses are usually used for remote data acquisition devices, especially when connecting via cellular networks. Active OPC Server Lite and ioLogik/ioPAC products provide the flexibility of configuring the ioLogik/ioPAC to use dynamic IP addresses. The ioLogik/ioPAC connects directly to the Active

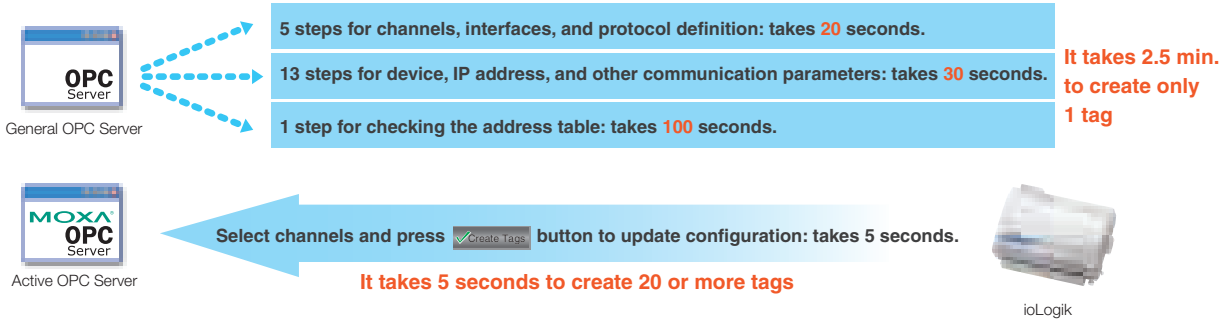
OPC Server Lite instead of being polled, which makes dynamic IP addressing and WAN Access to the RTU and remote I/O device possible, and adds even greater flexibility by allowing connections across firewalls. I/O devices for traditional data acquisition applications are not capable of using this approach.



## Automatic Tag Generation

Active OPC Server Lite and ioLogik/ioPAC series products support “Auto Tag Generation,” which eliminates the headache of specifying target IP addresses, I/O channels, and data formats one by one, or editing and importing configuration text files, since Active OPC Server Lite creates the tags for the target ioLogik/ioPAC automatically. Simply

select the channels that you need to update, and the tags are generated and configured automatically. Generally speaking, tag generation is 50 times faster with Active OPC Server Lite than with traditional OPC server packages. One of the biggest payoffs is that users will no longer need to be trained to install and configure your OPC.



## Specifications

### Hardware Requirements

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

### Software Requirements

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

### OPC Server Specifications

**OPC Data Access:** 1.0a, 2.0, 2.05a, 3.0  
**Max. No. of Tags:** 1200 (V1.7 and above)

## Ordering Information

### Available Models

**Active OPC Server Lite:** Free software package for integrating with SCADA/HMI systems

### Can be used with the following products

**ioLogik E1200 Series:** Ethernet remote I/O  
**ioLogik E2200 Series:** Ethernet micro RTU controller  
**ioLogik E4200:** Modular Ethernet remote I/O  
**ioLogik W5300 Series:** Cellular micro RTU controller  
**ioPAC 8000 Series:** Modular RTU controller (C and ISaGRAF Models)

# DA-Center

*Ready-to-run data gateway between remote devices and databases*

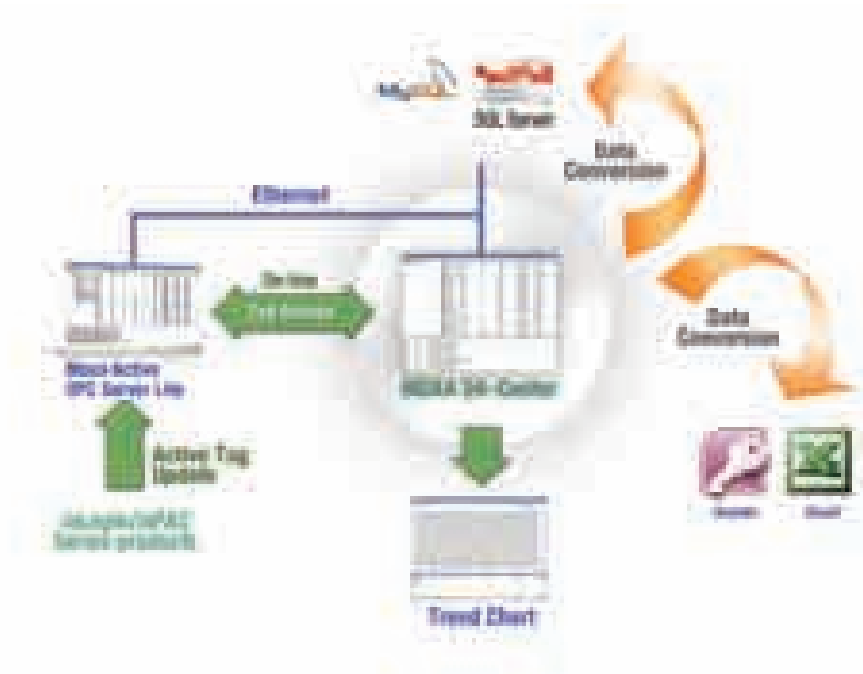


- > Convert field data to ODBC compliant databases
- > Convert field data to Excel or Access spreadsheets
- > Flexible dataset configuration for connecting to multiple remote devices
- > Embedded trend charts for historical analysis

## Introduction

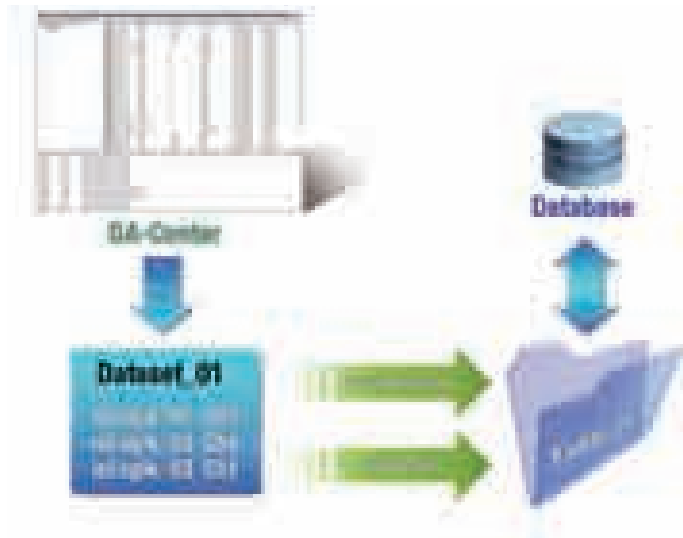
In most remote data acquisition applications, users need additional human resources to collect data manually from remote storage and also to perform data logging and other analyses during daily operations. Moxa DA-Center, a ready-to-run data gateway, makes it must easier to perform these types of tasks. DA-Center provides a

standard OPC interface that interacts with Moxa Active OPC Server for real-time data collection. The interface acts as bridge between field data and IT databases or spreadsheets, and a trend chart tool is also provided to perform historical analysis.



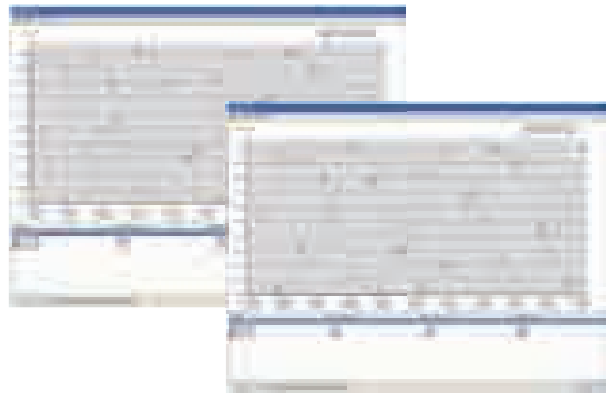
## Smart Dataset Configuration to Log Multiple Devices and Channels at the Same Time

A DA-Center dataset defines an integration of selected tags from Active OPC Server, and converts this set of tags into tabular format for export to a database or spreadsheet. In other words, a dataset combines the selected remote I/O channels for different ioLogik/ ioPAC devices for application use. The mapping of the dataset to the database or spreadsheet can be configured to update automatically when there is a change in the mapped I/O channels, or periodically.



## Embedded Trend Chart for Easy Historical Data Analysis

The DA-Center package includes several trend charts for historical data analysis. Users can retrieve data from a database table or a spreadsheet and convert it into chart format. In addition, charts can be zoomed in or out along the different axes, making it extremely easy to display and analyze historical data.



## Specifications

### Hardware Requirements

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

### Software Requirements

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

## Ordering Information

### Available Models

**DA-Center:** Free software package for integrating with Active OPC Server Lite

### Can be used with the following products

**ioLogik E1200 Series:** Ethernet remote I/O  
**ioLogik E2200 Series:** Ethernet micro RTU controller  
**ioLogik E4200:** Modular Ethernet remote I/O  
**ioLogik W5300 Series:** Cellular micro RTU controller  
**ioPAC 8000 Series:** Modular RTU controller (C and ISaGRAF Models)

Every effort is made to ensure that the information in this catalog is accurate. However, please note that no guarantee or legal contract is implied with the presentation of this information. This catalog is intended for informational purposes only, and Moxa reserves the right to update or modify this information at any time.

- > **The latest product information can be found here: [www.moxa.com/product](http://www.moxa.com/product)**
- > **Send comments or corrections to: [twc@moxa.com](mailto:twc@moxa.com)**



 [www.moxa.com](http://www.moxa.com)

# MOXA®

## Moxa Headquarters

4F., No.135, Lane 235,  
Pao-Chiao Rd., Shing-Tien Dist.,  
New Taipei City 231, Taiwan  
Tel: +886-2-8919-1230  
Fax: +886-2-8919-1231  
info@moxa.com

## Moxa Americas

USA  
Toll Free: 1-888-MOXA-USA  
(1-888-669-2872)  
Tel: +1-714-528-6777  
Fax: +1-714-528-6778  
usa@moxa.com

## Moxa Europe

Germany  
Tel: +49 89 3 70 03 99-0  
Fax: +49 89 3 70 03 99-99  
europe@moxa.com

## Moxa Asia-Pacific

Taiwan  
Tel: +886-2-8919-1230  
Fax: +886-2-8919-1231  
asia@moxa.com  
taiwan@moxa.com  
japan@moxa.com

## Moxa China

Shanghai  
Tel: +86-21-5258-9955  
Fax: +86-21-5258-5505  
china@moxa.com

## Beijing

Tel: +86-10-6782-3959/60/61  
Fax: +86-10-6872-3958  
china@moxa.com

## Shenzhen

Tel: +86-755-8368-4084/94  
Fax: +86-755-8368-4148  
china@moxa.com



Votre Expert  
France  
01 83 64 64 06  
sales@sphinxfrance.fr