

ICP DAS "Home"



Language

中文

Related Products

[OPC UA Solution](#)

» [UA-5000](#)

[NAPOPC.CAN DA Server](#)

Introduction

[NAPOPC\\_ST DA Server](#)

[NAPOPC\\_XPE DA Server](#)

[NAPOPC\\_CE5 DA Server](#)

[NAPOPC\\_CE6 DA Server](#)

[Product Comparison](#)

[Support Module List](#)

Features

[NAPOPC\\_ST DA Server](#)

[NAPOPC\\_XPE DA Server](#)

[NAPOPC\\_CE5 DA Server](#)

[NAPOPC\\_CE6 DA Server](#)

Support

[NAPOPC\\_ST DA Server](#)

[NAPOPC\\_XPE DA Server](#)

[NAPOPC\\_CE5 DA Server](#)

[NAPOPC\\_CE6 DA Server](#)

Applications

Database

» [PC](#)

» [XP-8000](#)

Protocol Conversion

» [PC](#)

» [XP-8000](#)

» [WinCon/WinPAC/ViewPAC](#)

» [XP-8000-CE6](#)

VxComm

» [PC](#)

» [XP-8000](#)

Wireless I/O

» [PC](#)

» [XP-8000](#)

» [WinCon/WinPAC/ViewPAC](#)

» [XP-8000-CE6](#)

Active Server to Client Communication

» [WinCon/WinPAC/ViewPAC](#)

» [XP-8000-CE6](#)

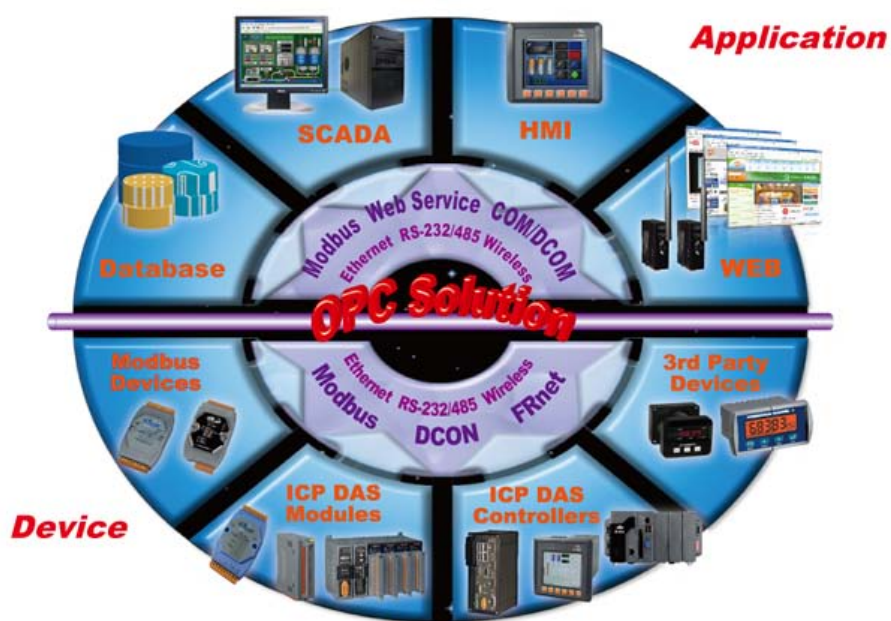
Direct Cross-Process I/O Access

» [WinCon/WinPAC/ViewPAC](#)

» [XP-8000-CE6](#)

Downloads

NAPOPC\_ST DA Server



Introduction

NAPOPC\_ST DA Server is a free OPC DA Server (The "OPC" stands for "OLE for Process Control" and the "DA" stands for "Data Access") for ICP DAS products. NAPOPC\_ST DA Server provides many benefits to users such as reduce time through lower system integration costs, integrate easily with plug-and-play SCADA/HMI/Database, connect and interoperate easily to custom applications, access to data by anyone in the automation hierarchy, reduce troubleshooting and maintenance cost, write to devices synchronously and asynchronously (not possible before OPC).

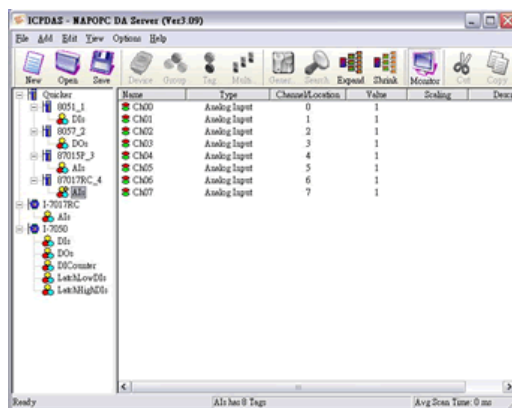
Using SCADA/HMI/Database software program, system contacts and obtains data from NAPOPC\_ST DA Server either on the same computer or on another computer. SCADA/HMI/Database makes a request and NAPOPC\_ST DA Server fulfills the request by gathering the data of ICP DAS modules and third-party devices to SCADA/HMI/ Database.

Features

» User Interface

NAPOPC\_ST DA Server is an out-of-process OPC Server which provides an Explorer-style user interface. The left side region of IDE is the tree type structure showing equipments in the Device/Group/Tag tree structure; the right side region is the attribute description for each Group and Tag, all the attributes even those hidden in the setting up dialog box can be displayed in the table, clearly and conveniently. The up side region is a tool icon bar for the functions often used, user can see the graph to know the

- Download Center
- Ordering Information
- NAPOPC HardKey
- FAQ
- NAPOPC\_ST DA Server
- NAPOPC\_XPE DA Server
- NAPOPC\_CE5 DA Server
- NAPOPC\_CE6 DA Server
- NEWS
- About NAPOPC



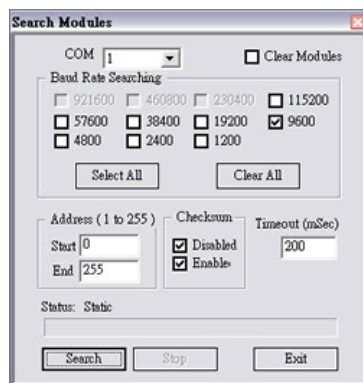
function of that icon and directly select the needed function.

### Multi-Thread Communication

**NAPOPC\_ST DA Server**, besides single-thread communication in the equipment communication mechanism, provides multi-thread communication to communicate with each COM Port and each socket in independent thread service. It increases the speed of equipments data integration, and also provides users a flexible planning possibility that users can set the idle time for individual equipment so that equipment polling frequency on the same communication backbone can be regulated according to the actual requirements.



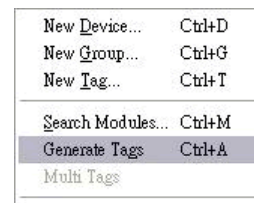
### Auto Search



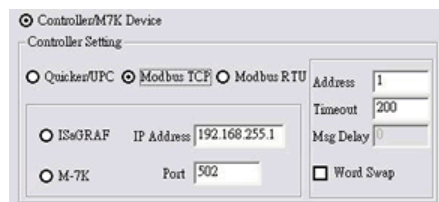
When users setup the DCON I/O modules (I-7K; I-87K; I-8K; RU/USB-87Pn) that supported by ICP DAS, **NAPOPC\_ST DA Server** provides the "Auto Search" function for users' convenience. If the equipments are on-line, the users can just enable the "Auto Search" function, and then the **NAPOPC\_ST DA Server** will automatically scan and identify the linked DCON I/O modules and list modules in Device/Group/Tag structure. The **NAPOPC\_ST DA Server** provides a "Monitor" function for users real-time monitoring/controlling the equipments.

### Auto Generate

If the equipments are off-line, users can directly select the names of I/O modules from the "Device" dialog, and then click on "Generate Tags" function, the **NAPOPC\_ST DA Server** will automatically setup the DCON I/O modules' attributes in the Device/Group/Tag structure. It is easy to generate a whole set configuration, and doesn't need to bother about checking each attribute of the DCON I/O modules or setting the corresponding structure.



### Support Modbus Device



**NAPOPC\_ST DA Server**, besides the DCON I/O modules of ICP DAS, supports Modbus based communication I/O modules (M-7K; ET-6000/7000) and programmable automation controllers (PAC: XP-8000 ; XP-8000-CE6 ; WinCon; WinPAC; μPAC; iPAC) by ICP DAS. Through **NAPOPC\_ST DA Server**, the integration with I/O modules and controllers of ICP DAS becomes pretty convenient.

### Unique Design

In addition to above functions that support the DCON and Modbus I/O modules of ICP DAS, **NAPOPC\_ST DA Server** also provides two unique designs that users can apply **NAPOPC\_ST DA Server** with more flexibility.

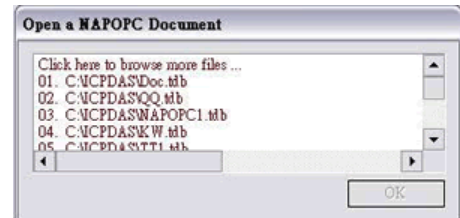
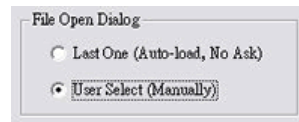
#### Active data transmission mechanism (Client side)

Traditionally, OPC Server acquires equipment data by the way of polling. In **NAPOPC\_ST DA Server**, if processing with the **NAPOPC\_CE5 DA Server** or the UPC equipments, the **NAPOPC\_ST DA Server** is able to actively receive the data from the **NAPOPC\_CE5 DA Server** or UPC equipments. Data transmitted by such an active way can significantly shorten the information update time!



■ **OPC Client can select the document in the NAPOPC\_ST DA Server during runtime**

According to the scenarios of the OPC Client for different equipment needs, the users may save the different scenario configurations to the separate documents. When the OPC Client launches the **NAPOPC\_ST DA Server** in runtime, OPC Client can select which document to be loaded, not only by **NAPOPC\_ST DA Server** like other OPC Server. This function gives users more flexibility when setting configuration in the OPC Client.

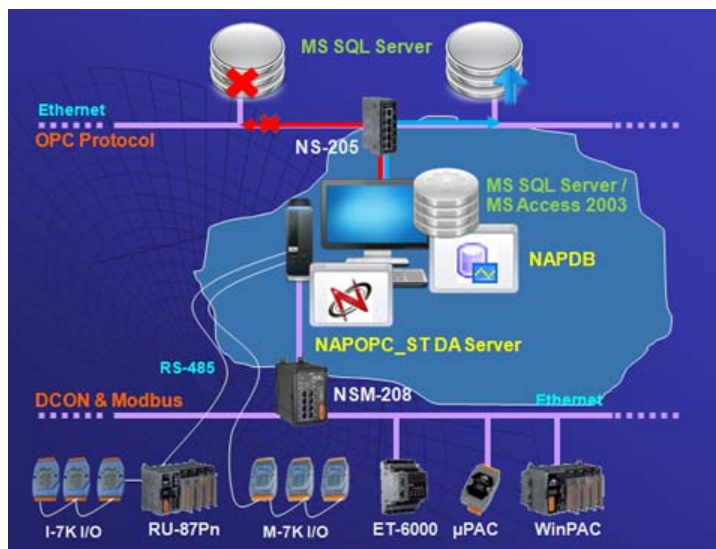


## Support

- Windows 95/98/ME/2000/NT/XP/7 operating system
- Support Remote Procedure Call (RPC) with NAPOPC\_CE5 DA Server
- ICP DAS I-7K/I-8K/I-87K I/O modules
- ICP DAS Ethernet I/O
- ICP DAS FRnet Remote I/O
- ICP DAS ZigBee modules
- ICP DAS Embedded Controllers which support Modbus protocol
  - ICP DAS μPAC
  - ICP DAS iPAC
  - ICP DAS WinCon/WinPAC
  - ICP DAS LinPAC
  - ICP DAS ViewPAC
  - ICP DAS XP-8000/XP-8000-CE6
- Compatible with most development platforms (Visual C++ · Visual Basic, Visual Studio .Net)
- Compatible with all local and remote OPC Client (Remote Accessing using DCOM technique)
- We have tested the servers with the following packages:
  - Client program provided by Factory Soft Inc. (Visual Basic 5.0 Demo)
  - LabVIEW (<http://www.ni.com/labview/>)
  - Server Explore provided by National Instruments (<http://www.ni.com/>)
  - WIZCON (<http://www.wizcon.com/>)
  - iFix (<http://www.gefanuautomation.com/>)
  - InduSoft (<http://www.indusoft.com/>)
  - CitectSCADA (<http://www.citect.com/>)
- Compliant with OPC specification V2.0

## Applications

- **Database Application - NAPDB**

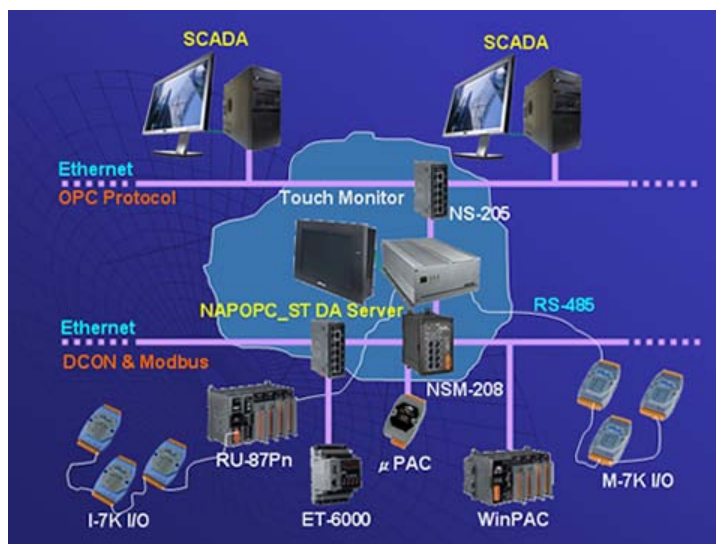


NAPDB, the database system developed by ICP DAS, can be used with the **NAPOPC\_ST DA Server**. The **NAPOPC\_ST DA Server** is ideal integrate with the hardware devices based on various transmission formats (like Modbus TCP, Modbus RTU, DCON, etc.) which are provided by ICP DAS. The device information will be converted to OPC format and then stored in the database by NAPDB. Without any complex programming, the user can easily access the information in the database by NAPDB.

**The features of NAPDB :**

- Easy to use without any programming.
- Support NAPOPC DA Server by using an OPC standard communication protocol.
- Support MS SQL Server and MS Access 2003.
- Support x86 CPU as the work platform (like a PC or XPAC).
- Support the host backup mechanism when the connection is failed:  
If the data cannot be stored in the remote MS SQL Server database due to disconnection, you can backup the data on the local side.
- Support to view the real-time and historical data.
- Support to query the real-time and historical trend data.

» **Protocol Conversion Application**

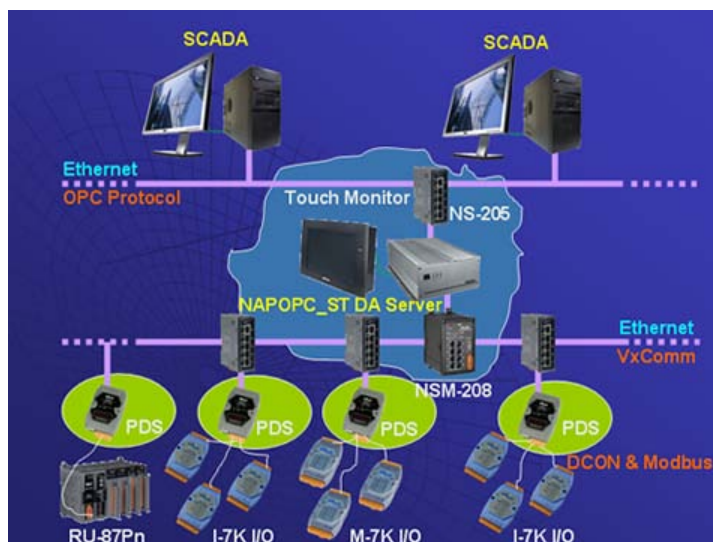


This application architecture is a **NAPOPC\_ST DA Server** centric Client-Server monitor/control system. By the **NAPOPC\_ST DA Server**, the data of equipments are collected together and provides for use of several clients. It reduces the loading that equipments service for the different clients, and also improves the stability and reliability of the system. There are three perspectives to be considered in such systems:

- **Down to the equipment end:**  
**NAPOPC\_ST DA Server** is used to integrate the ICP DAS I/O modules and controllers (PACs) that based on DCON & Modbus protocols, including I-7K, I-8K, I-87K, M-7K, ET-6000/7000, RU-87Pn I/O units/modules, and PAC, iPAC, WinCon, WinPAC, XP-8000, XP-8000-CE6 Modbus controllers.
- **Communication backbone:**  
The common communication backbone is the RS-232, RS-485 and 10/100M Ethernet networks. The system uses NS-205/208, the industrial switch provided by ICP DAS, to connect with every system units through Ethernet, down to integrate with the ICP DAS equipments via DCON & Modbus protocols, up to service the application programs in the client end by the COM/DCOM technology.
- **Up to the client end:**  
Users can select the VC, VC #, VB or .NET languages to program the SCADA graphic control applications, or can select the third-party SCADA software that based on OPC Client, such as InduSoft, citect, etc, for the

top-level client applications.

## » VxComm Application

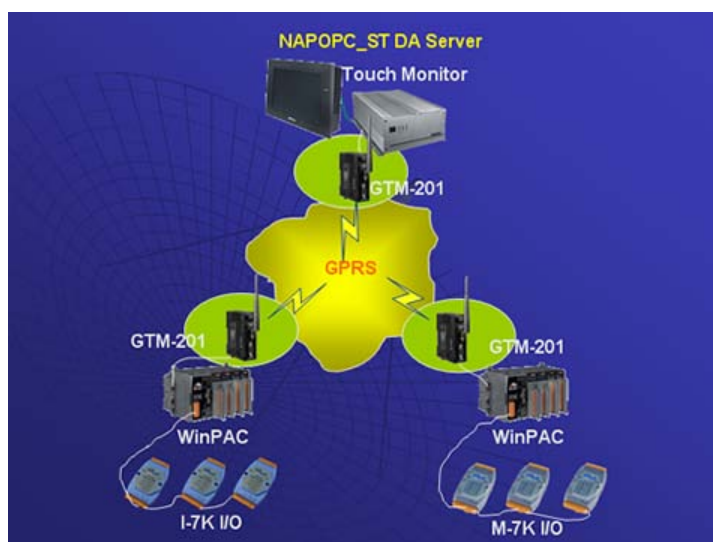


Similarly, this application architecture is a **NAPOPC\_ST DA Server** centric Client-Server monitor/control system. The **NAPOPC\_ST DA Server** collects the equipment data together and provides the data for use of several clients. It reduces the loading that equipments servicing for different clients, and also improves the stability and reliability of the system.

In many cases that are different from above typical protocol conversion application, the **NAPOPC\_ST DA Server** often needs to apply communication through several COM Ports with hundreds of ICP DAS DCON I/O modules and those modules, however, are dispersed in many places. If the system directly wires by RS-485, the signal will be attenuated and the cost will be very high. Therefore, in some applications such as community building monitoring, users can take advantage of the existing Ethernet network as the communication backbone and apply some converters to have a number of virtual COM Ports for use of **NAPOPC\_ST DA Server**.

This kind of application combines the DS/PDS-700 Device Server and the VxComm technology to allow maximum 255 virtual COM ports for the communications when the **NAPOPC\_ST DA Server** applies the DCON & Modbus communication. Wherein the communication between the **NAPOPC\_ST DA Server** and the DS/PDS-700 is through the Ethernet network; the communication within DS/PDS-700, I/O modules and controllers is through the RS-232/RS-485 network.

## » Wireless I/O Application



Similarly, this application architecture is a **NAPOPC\_ST DA Server** centric Client-Server monitor/control system. The **NAPOPC\_ST DA Server** collects the equipment data together and provides the data for use of several clients. It reduces the loading that the equipments servicing for different client programs, and also improves the stability and reliability of the system.

In this application, being different from above typical protocol conversion application, the **NAPOPC\_ST DA Server** collects the equipments data by the way of wireless communication and provides them for use of client end. It is time to apply this wireless I/O application, when I/O equipments are located in an area that no Ethernet connection but still near the ISP stations so that it can communicate through the wireless network, such as the environmental monitoring system in the remote mountain.

In this architecture, the users can apply the GSM/GPRS (GTM-201 series) modem and WinPAC controllers provided by ICP DAS. In the [NAPOPC\\_ST DA Server](#) end, the users can use the Ethernet directly, if available. If there is no Ethernet, users can get a public IP via the GPRS of the GTM-201 series. In the WinPAC end, the WinPAC controller not only collects various I/O data, gets the public IP via the GPRS of GTM-201 series, but also transmits the data by batches via Modbus TCP protocol. However, this architecture cannot guarantee the real-time transmission due to the transmission limitation of ISP.



## Ordering Information

To order NAPOPC license, please contact your [distributor](#).


### License



[Data Sheet](#)

RUN-TIME LICENSE	
NAPOPC-MB-E	Support Third Party Modbus Devices (Modbus TCP Master), one HardKey included.
NAPOPC-MB-S	Support Third Party Modbus Devices (Modbus ASCII/RTU Master), one HardKey included.
NAPOPC-MB-ALL	Support Third Party Modbus Devices (Modbus TCP/RTU/ASCII Master), one HardKey included.

### HardKey

HardKey	
	<b>NAPOPC HardKey</b> is an encapsulated chip that must be physically connected to the USB Port of the local computer on which NAPOPC_ST DA Server is installed.

