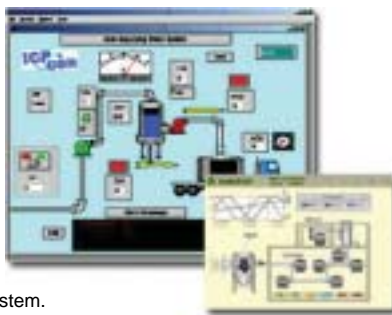


Software *SCADA Solution*

Introduction

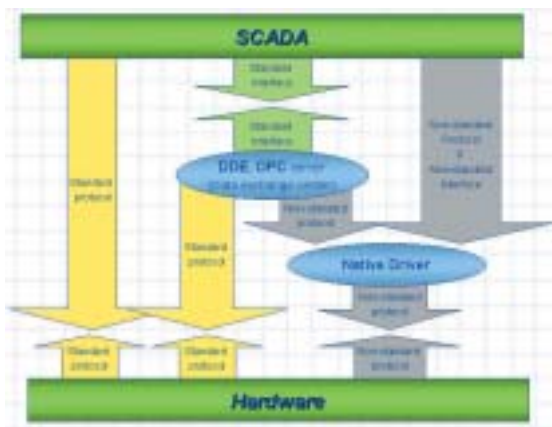
SCADA stands for **S**upervisor **C**ontrol **A**nd **D**ata **A**cquisition. It is a production automation and control system based on PCs. It is widely used in many fields: e.g. power generation, water system, oil industry, chemistry, automobile industry. Different fields need different functions, but they all have below features:

- * Graphic interface
- * Process simulation
- * Real time and historic trend logging
- * Alarm system
- * Data acquisition and recording
- * Data analysis
- * Report generation



Using SCADA software, users can easily integrate many different hardware devices to build a huge system.

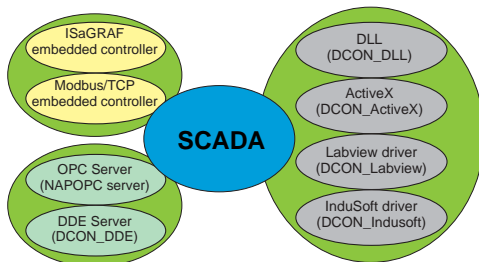
SCADA software accesses to hardware devices



Famous SCADA software

Citect, ICONICS, iFix, InduSoft, Intouch, Entity Studio, Entity Live, Entity VLC, Trace Mode, Wizcon, Wonderware, ... etc.

Resources from ICPDAS





Indusoft Web Studio

Main Functions:

- ¥ Multi-Function HMI with Graphics, Alarms, Trending, Recipes and Reports.
- ¥ Allow to save the HMI in HTML format and export them to Internet Browsers.
- ¥ Include more than 150 different protocols for different devices.
- ¥ Support Microsoft.NET, OPC(Client & Server), DDE(Client & Server), ODBC, XML, SOAP and ActiveX.
- ¥ TCP/IP Client and TCP/IP Server modules to exchange tag values and configure redundancy systems.
- ¥ Automatic e-mail support (SMTP).
- ¥ Intuitive script language.

Controller supported:

- ¥ I-7000 series.
- ¥ I-8000 series.
- ¥ I-87K series.

Application:

- ¥ Environment and facility monitoring.
- ¥ Industrial automation.
- ¥ Building automation.
- ¥ Remote Data Acquisition.

OS supported:

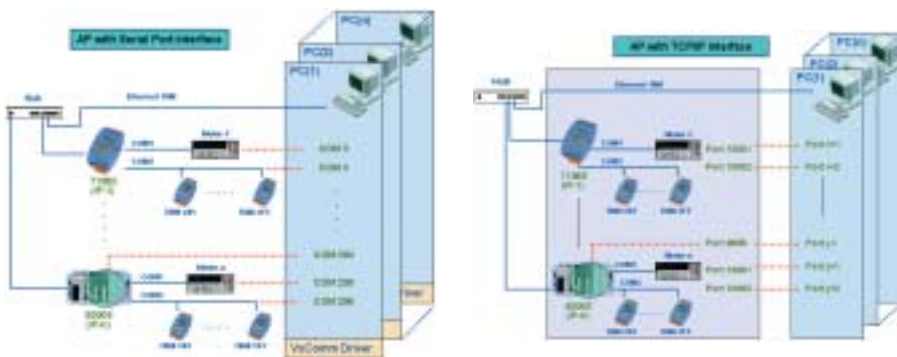
- ¥ Windows NT/2000/XP for development.
- ¥ Windows NT/2000/XP or Windows CE(v2.12,v3.x and v4.0) and Windows CE.NET operating system for runtime.

Note: Visit "<http://www.indusoft.com/>" for more information.

Software *VxComm technique & Xserver*

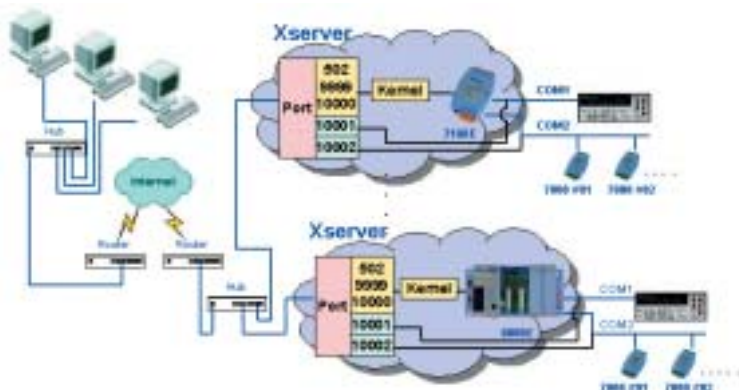
What is VxComm technique?

VxComm is a technique that stands for "Virtual Communication Port". It provides two software interfaces to access remote COM ports of the 7188E/8000E via the Ethernet, one is serial port interface, and another one is the TCP/IP interface. For the serial port interface, we provide a VxComm driver for Windows OS. It is used to create virtual COM ports to map to the COM ports and I/O module of the 7188E/8000E. After creating virtual COM ports, you can easily upgrade serial devices to with Ethernet communication ability, and the original software only need to link to a virtual COM port. It doesn't need any source code modification.



What is Xserver?

Xserver is a programmable TCP/IP server template (in C language) for the 7188E/8000E base on the VxComm technique. It has an open and flexible programming architecture. With the help of the Xserver, you can easily develop a powerful embedded controller system with the TCP/IP and serial communication ability.



Software *DCON Protocol*



What is DCON protocol?

DCON protocol is a request/reply communication protocol for the I-7000/8000/87K series. It defines a simple ASCII format protocol, like \$AAN, \$AASi6, #AAN, ... ,etc. The hardware interface to access the I-7000/8000/87K series can be divided to:

- * RS-232: I-8000 MCU with 8K232.exe firmware
- * RS-485: I-7000/87K and I-8000 MCU with 8K485.exe firmware
- * Ethernet: I-8000 MCU with 8KE10.exe firmware

Even the I-7000/87K series doesn't be equipped any Ethernet interface, by using the I-7188E/8000E and the VxComm technique, you can still access the I-7000/87K series via the Ethernet.

Note 1: The I-8000 and I-87K series I/O module can be plugged in the I-8000 MCU together.

Note 2: When the I-87K series I/O module is plugged in the I-8000 MCU, it talks same commands as the I-8000 series I/O does.

Note 3: The I-87K series I/O module talks different command when it is plugged in the I-8000 MCU and the 87K expansion unit.



Modbus Utility

Main Functions:

- On-line configuration via Ethernet
- On-line help
- Automatically generate register mapping tables
- Configuration export/import

Controllers supported:

- I-8430 -MTCP, I-8431 -MTCP
- I-8830 -MTCP, I-8831 -MTCP
- I-7188E -MTCP

OS supported:

- Windows 98/NT/2000/XP



DCON Utility

Main functions:

- Configuring modules
 - Baudrate
 - Address
 - Checksum
 - Power on value
 - Safe value
 - etc.

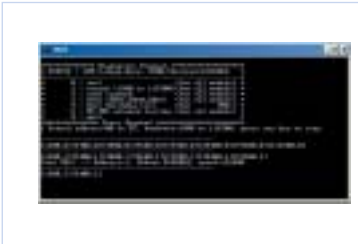
- Testing I/O action

Module supported:

- I-7000/8000/87K series (with DCON protocol)

OS supported:

- Windows 98/NT/2000/XP



DCON Utility (DOS)

Main functions:

- Diagnostic (Source code included)
- Learning
- Performance test

Module supported:

- I-7000/8000/87K series (with DCON protocol)

OS supported:

- DOS



VxComm Utility

Main functions:

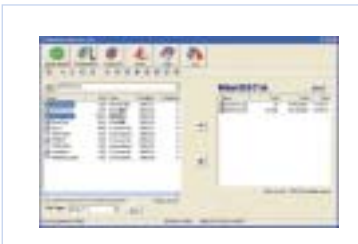
- Creating Virtual COM ports on PC

Controllers supported:

- 7188E/8000E with VxComm technique

OS supported:

- Windows 95/98/NT/2000/XP



MiniOS7 utility

Main functions:

- Download files
- Update MiniOS7
- Configures COM port settings
- Configures network settings

Controllers supported

- Support all embedded controllers with MimiOS7 (7188, 7188X, 7188E, 8000, i-View 100..., etc)

OS supported

- Windows 95/98/NT/2000/XP

Software *Utility and development tool kit*



DCON_Labview

Bundled driver for Labview

Module supported:

I-7000/8000/87K series (with DCON protocol)

OS supported:

Windows 98/NT/2000/XP



DCON_Indusoft

Bundled driver for Indusoft

Module supported:

I-7000/8000/87K series (with DCON protocol)

OS supported:

Windows 98/NT/2000/XP/CE



DCON_DLL

DLL library

Module supported:

I-7000/8000/87K series (with DCON protocol)

Demo supported:

VB/VC/BCB/Delphi (Source code included)

OS supported:

Windows 98/NT/2000/XP



DCON_ActiveX

ActiveX (OCX) component

Module supported:

I-7000/8000/87K series (with DCON protocol)

Demo supported:

VB/VC/BCB/Delphi (Source code included)

OS supported:

Windows 98/NT/2000/XP



DCON_Linux

Libraries for Linux platform

Module supported:

I-7000/8000/87K series (with DCON protocol)

OS supported:

Linux



DCON_DDE

DDE server

Module supported:

I-7000/8000/87K series (with DCON protocol)

OS supported:

Windows 98/NT/2000/XP



NAPOPC Server

OPC server

Module/Controller supported:

I-7000/8000/87K series (with DCON protocol)

Modbus embedded controller

ISaGRAF embedded controller

OS supported:

Windows 98/NT/2000/XP