



## I/O Expansion & Data Logger Module

### Features

- Built-in Web Server for IF-THEN-ELSE rule setting
- Built-in IF-THEN-ELSE rule engine for logic operation
- No more programming. Just click and get done!
- Support IO, Counter, Timer, Schedule, Email, Recipe operations
- Data logger and data files send back function supported
- Modbus TCP Protocol for SCADA Software Seamless Integration
- 10/100 Base-TX Ethernet
- Support XW-Board
- Support I-7000 Remote I/O Modules(Up to 16)
- SNTP Time Synchronization Supported



### Introduction

WISE (Web Inside, Smart Engine) is a product series developed by ICP DAS that functions as control units for use in remote logic control and monitoring in various industrial applications. WISE offers a user-friendly and intuitive web site interface that allows users to implement IF-THEN-ELSE control logic on controllers just a few clicks away; no programming is required. With its powerful and easy-to-use features, it will minimize the learning curve, shorten time to market and dramatically reduce the effort and cost spent on system development.

WISE-5800 supports an I/O expansion bus to implement various I/O functions such as D/I, D/O, A/D and D/A according to the XW-Board. In addition, WISE-5800 also support ICP DAS I-7000 remote I/O modules. Based on the variety I/O module of I-7000, WISE-5800 can provide user more flexibility in application field.

WISE-5800 supports Modbus/TCP protocol to make seamless integration with SCADA software available. It include all advantages which WISE series controllers can provide. In addition, WISE-5800 provide data logger function with microSD card, it can record I/O channel value by event trigger or regular time period. The data files can be sent back by Email or FTP. All setting can be completed through browser.

### Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis and Testing Equipment, etc.

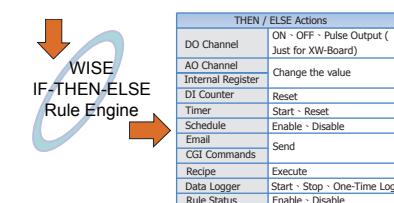
### Specifications

Models	WISE-5800
<b>CPU Module</b>	
CPU	16-bit CPU
SRAM	768 KB
Flash	512 KB
EEPROM	16 KB
NVRAM	31 Bytes
microSD Expansion	Yes, can support 1 to 2 GB microSD
RTC (Real Time Clock)	RTC Provide seconds, minutes, hours, date of week/month; month and year
Watchdog Timers	Yes (0.8 second)
<b>Communication Ports</b>	
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)
COM 1	RS-232 (Reserved, Unsupported by WISE firmware)
COM 2	RS-485 (D2+, D2-), self-tuner ASIC inside, non-isolated, Speed : 115200 bps max.
<b>LED Indicator</b>	
System LED	Yes (Red)
Ethernet Link LED	Yes (Green : Ethernet link detected, Flashing Green : Ethernet packet received)
LED Display	-
<b>Hardware Expansion</b>	
I/O Expansion Bus	Yes
<b>Mechanical</b>	
Dimensions (W x H x D)	91 mm x 123 mm x 52 mm
Installation	DIN-Rail
<b>Environmental</b>	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +80 °C
Ambient Relative Humidity	5 ~ 90% RH (non-condensing)
<b>Power</b>	
Protection	Power reverse polarity protection
Frame Ground	Yes (for ESD Protection)
Input Range	+12 ~ +48 V <sub>dc</sub>
Redundant Power Input	Yes
Power Consumption	2.0 W

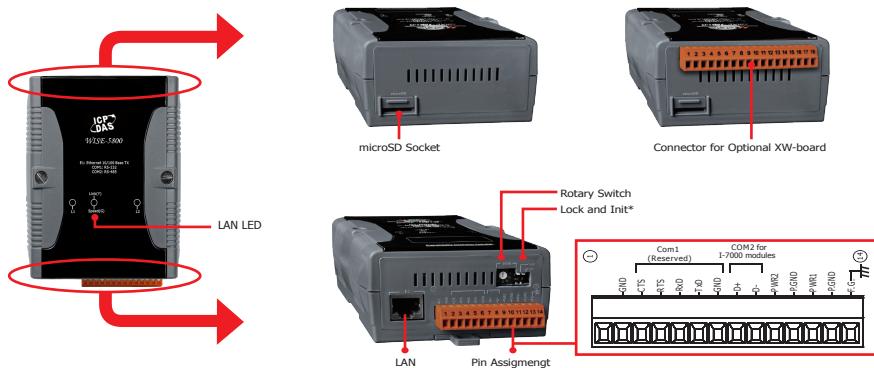
## Software Specifications

Functions	
Rule Configuration Website	Access Web server on WISE controllers to edit and upload logic rules through web browser.
36 IF-THEN-ELSE Logic Rules	3 IF conditions with AND or OR operators 3 THEN actions and 3 ELSE actions
48 Internal Registers	Hold temporary variables and read/write data via Modbus TCP address.
12 Timers	Delay / Timing functions.
12 Schedules	Setup prescheduled routine tasks.
12 Emails	Send Email messages to pre-set Email receivers.
12 CGI Commands	Send pre-set CGI commands.
12 Recipes	Set up THEN/ELSE action groups.
Data Logger	Set up the Data Logger configuration, include the data record format, and date file sending operation.
Modbus TCP Protocol	Real time control and monitoring I/O channels and system status of controllers via SCADA software.

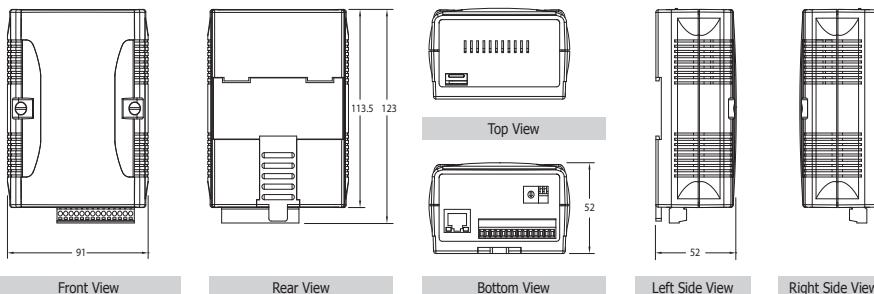
IF Conditions	
DI Channel	ON - OFF - ON to OFF - OFF to ON - Change
AI Channel	= > < > <= <=(value)
Internal Register	= > < > <= <=(value) - Change
DI Counter	= > < > <= <=(value) - Change
Timer	Timeout - Not Timeout
Schedule	In Range - Out of Range
Rule Status	Enable - Disable



## Appearance



## Dimension (Units: mm)



## Ordering Information

WISE-5800 User-defined I/O & Data Logger Module

## Accessories

NS-205 CR	Unmanaged 5-Port Industrial Ethernet Switch (RoHS)
MDR-20-24 CR	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
DIN-KA52F CR	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting (RoHS)
3LMSD-2000 CR	2 GB microSD card (RoHS)

## WISE-5800

### Intelligent Data Logger PAC Controller



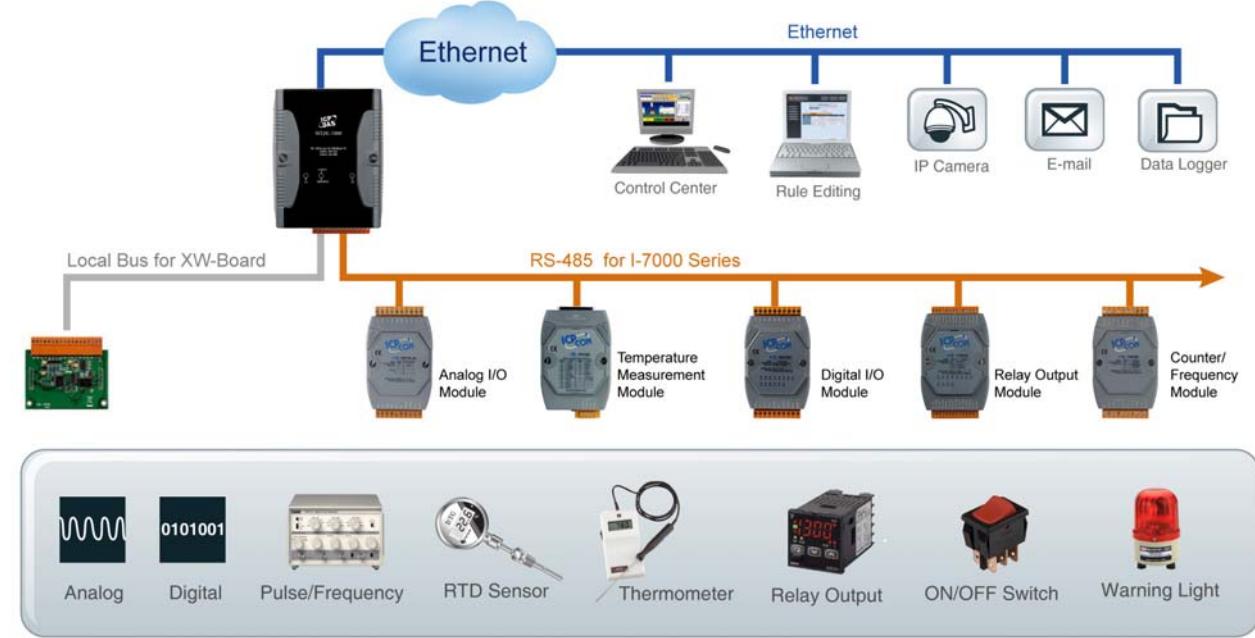
#### Product Features

- IF-THEN-ELSE logic rules execution ability
- No programming is required, implement logic content on controllers via browser
- Provide a wide range of XW-Board and I-7000 I/O module to select from
- Provide Timer and Schedule operation
- Provide Email and CGI command sending functions
- Provide Data Logger and File send back functions
- Support SNTP for Time Synchronization through network
- Support Modbus TCP to make seamless integration with SCADA software

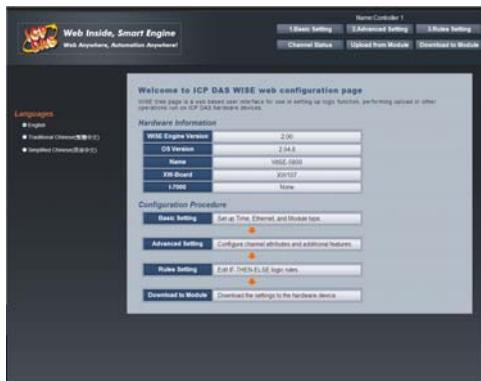
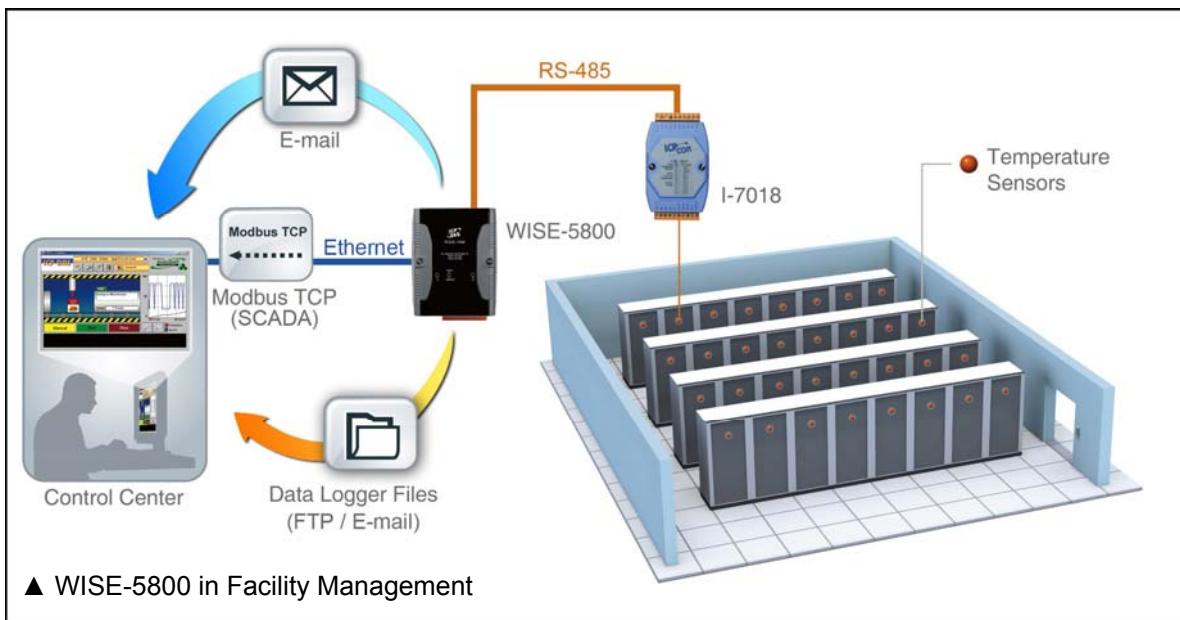
#### Introduction

WISE-5800 is an Intelligent Data Logger PAC controller designed by ICP DAS that features automatic logic control and remote monitoring. It is a Web-based controller that allows users to implement various tasks on controllers such as: IF-THEN-ELSE control logic, I/O module control, Timer/Schedule functions, Email/CGI command sending and communication with SCADA system via Modbus TCP. No programming is required; it takes only a few clicks on web pages via browsers to complete all settings. In addition, WISE-5800 enables real-time recording I/O data and allows to send the data files by FTP or Email to the control center for further administration management or data analysis; the data can be sent at a scheduled time. With its powerful and easy-to-use features, WISE will minimize the learning curve, shorten time to market and dramatically reduce the labor and cost spent on system development.

#### WISE-5800 System Architecture



## Application



▲ WISE-5800 WEB Page



▲ IF-THEN-ELSE Rule Editing

## Specification

### Hardware

- 16-bit CPU
- 768KB/512KB for SRAM/Flash
- Equips microSD storage for Data Logger
- Offers a wide range of I/O modules
  - ◊ Connect to I-7000 modules via RS-485
  - ◊ Connect to XW-Board via Local Bus
- 10/100 Base-TX Ethernet
- Power Consumption : 2 W (Without XW-Board)
- Operating Temperature : -25 ~ +75 °C

### Software

- 36 IF-THEN-ELSE Logic Rules Supported
- **I-7000 modules(Up to 16) & 1 XW-Board Supported**
- 12 Timers/12 Schedules Supported
- 12 Emails/12 CGI Commands Supported
- 48 Internal Registers Supported
- 12 Recipes Supported
- **Data Logger Function Supported**
- **Time Synchronization for SNTP**
- Modbus TCP Protocol Supported

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