



Automation for a Changing World

# Delta **DIView** SCADA System

## Delta DIAView SCADA System

### Your Best Choice for Data Collection, Factory Visualization, Real-Time Monitoring and Management

To succeed in a highly competitive marketplace, your plants, machines, systems and facilities all require more efficient management to collect, analyze, and monitor real-time factory and production data, achieving high-efficiency factory production and management.

Delta's DIAView SCADA System is an industrial data visualization software designed for smart management of factory equipment and production processes. The system employs automated management function including real-time system monitoring, data acquisition and analytics, to assist users to collect data of whole plant, as well as constructing a management interface for production line visualization, achieving remote monitoring, system management, digitalization of whole plant, and increasing overall factory production efficiency. The DIAView SCADA System is suitable for machinery, metallurgy, water treatment, HVAC, packaging, central heating control, environmental monitoring, textiles, energy management, transportation, smart buildings, and more.

The DIAView SCADA System is easily compatible with Delta's industrial automation products to help customers in a variety of industries establish a complete automation solution for high-efficiency monitoring and managing their factories and every subsystem situation. The DIAView can also optimize production distribution by enhancing data traceability. Delta's DIAView SCADA System, realizing digitalization, visualization, and real-time monitoring, is the best choice for meeting your industry demands and "Automation for a Changing World" !

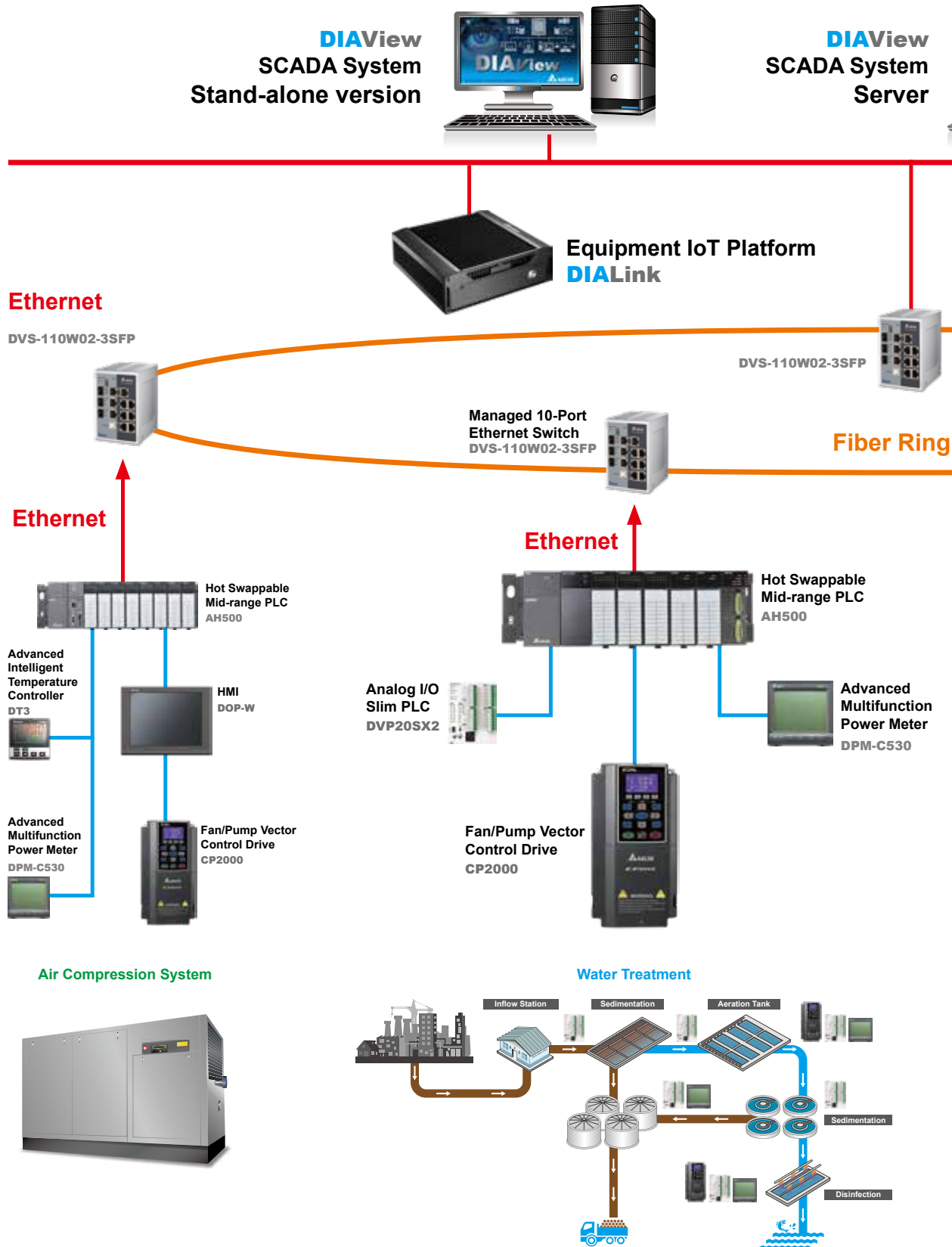
- Stable industrial communication, seamless integration with Delta PLC and I/O products
- WPF technology for intuitive displays and easy-to-navigate interfaces for data and I/O products visualization
- Flexible variables dictionary and batch editing parameters
- A variety of data visualization tools: reports, alarms, charts and trend graphs
- Robust and efficient alarm management
- VBScript language for easy programming
- Easy-to-use and flexible management program
- Reliable user authority management
- Highly real-time database for data visualization and analytics
- Fulfills the needs of various industrial environment when matched with fanless industrial PCs



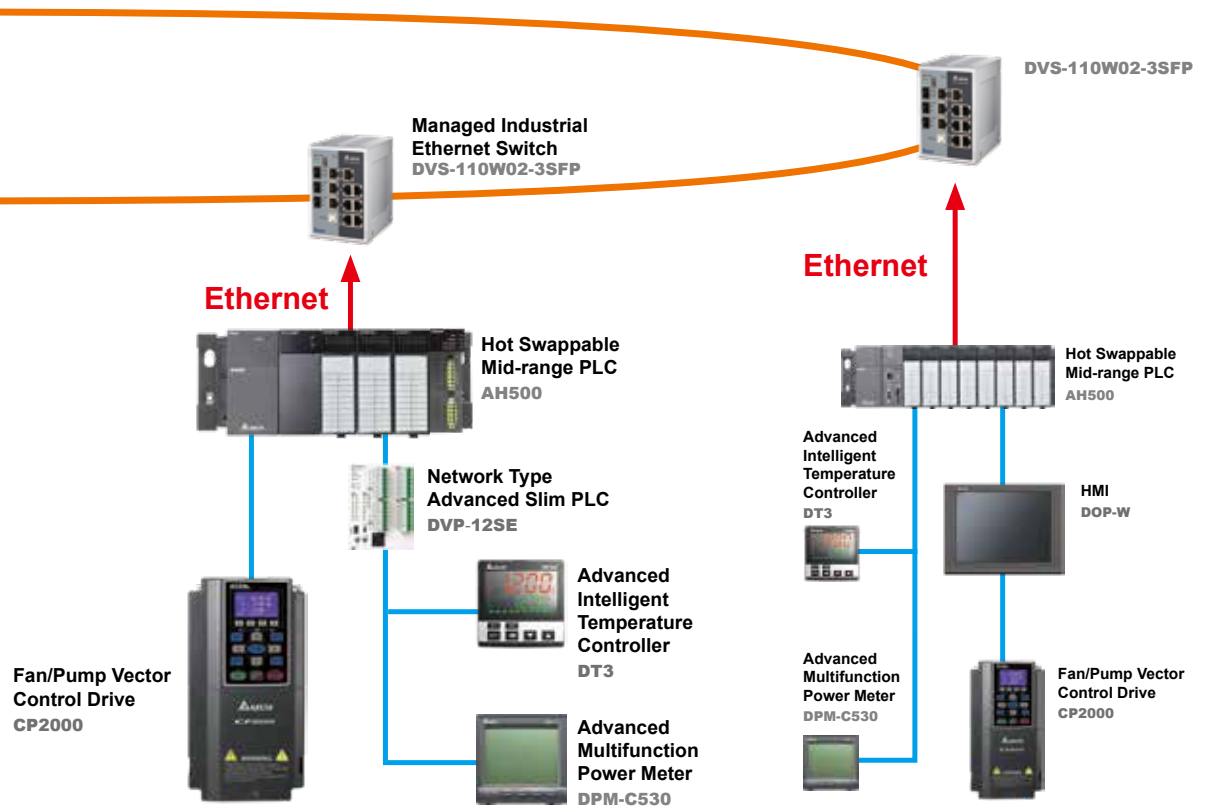
## Content

<b>Preface</b>	1
<b>Delta DIAView SCADA System</b>	2
• DIAView SCADA System for Efficient Facility Monitoring and Management	3
<b>Features</b>	
Stable Industrial Communication	5
Excellent Graphical Demo Platform	6
Flexible Variables Dictionary	7
Flexible User Interface	8
Efficient Recipe Management	8
Data Visualization Tools	9
Robust and Efficient Alarm Management	11
Supports Third-Party Database	11
Reliable User Authority Management	12
Open Software Structure	12
<b>Applications</b>	13
<b>System Requirements</b>	15
<b>Software Licensing (Stand-alone &amp; C/S version)</b>	15
<b>Ordering Information</b>	16
<b>Model Information</b>	16
<b>Global Operations</b>	17

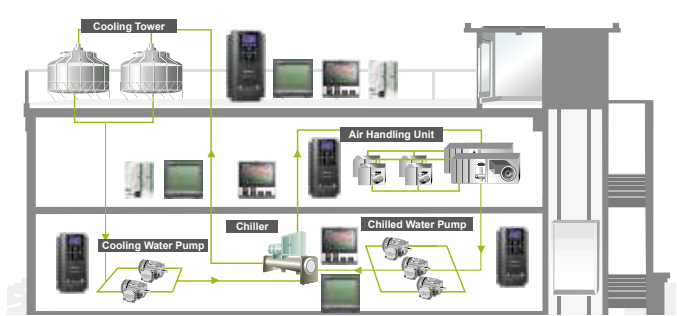
# DIAView SCADA System for Efficient Facility M



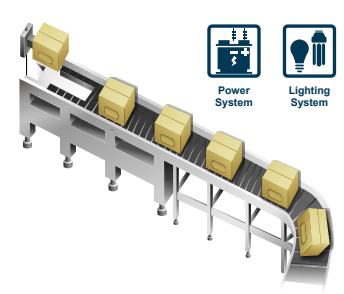
# Monitoring and Management



**HVAC System**



**Production Line & Workshop Environment**



# Features

## Stable and Reliable Industrial Communication

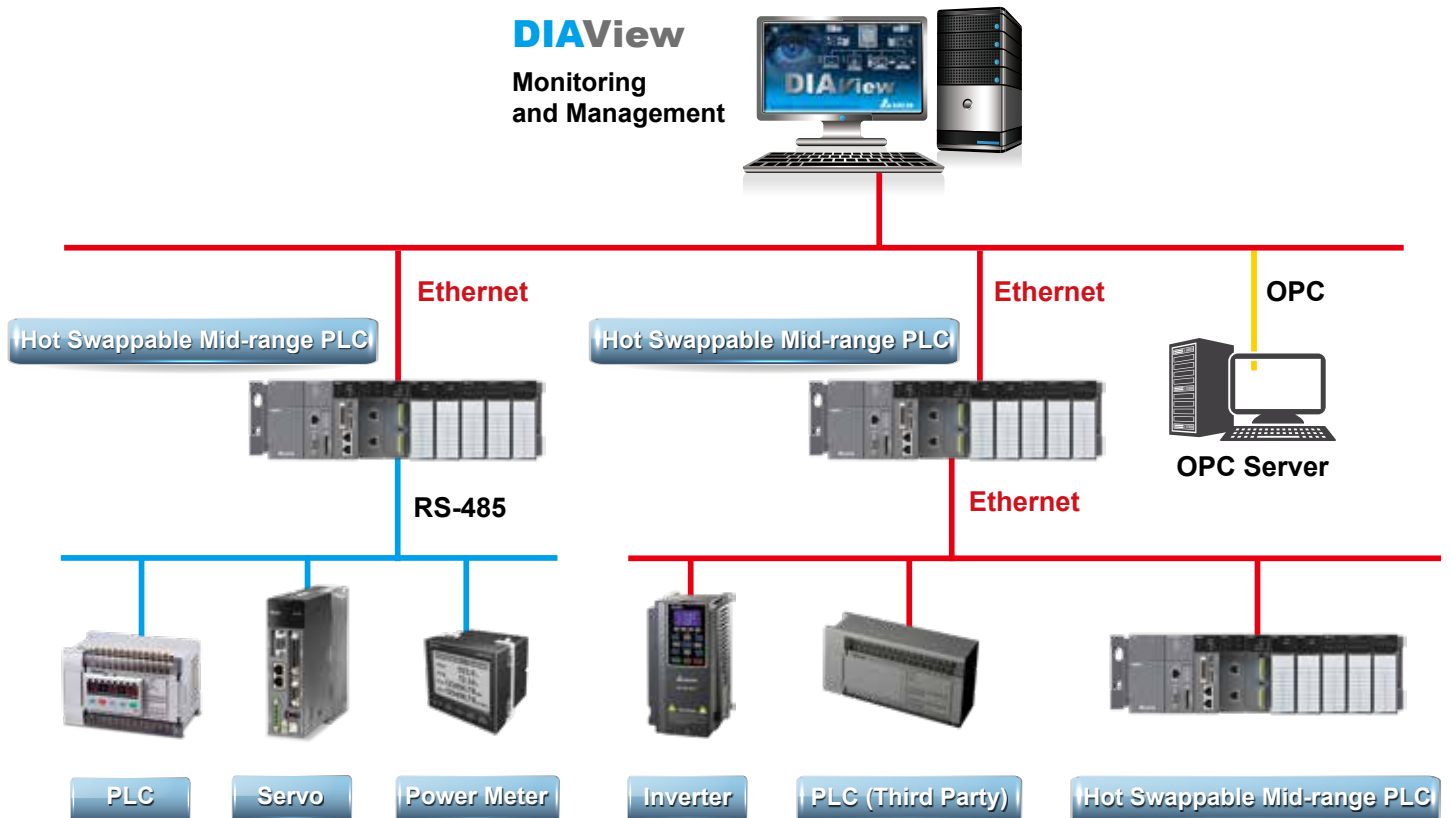
- ▶ Supports Modbus and OPC Server / OPC Client communication
- ▶ Seamless integration with Delta and third-party PLCs
- ▶ Built-in communication gateways
- ▶ Data simulation function
- ▶ Equipment auto turn on/off, sampling and data acquisition optimization, and communication retry function



**OPC Modbus**

## C/S client/server structure

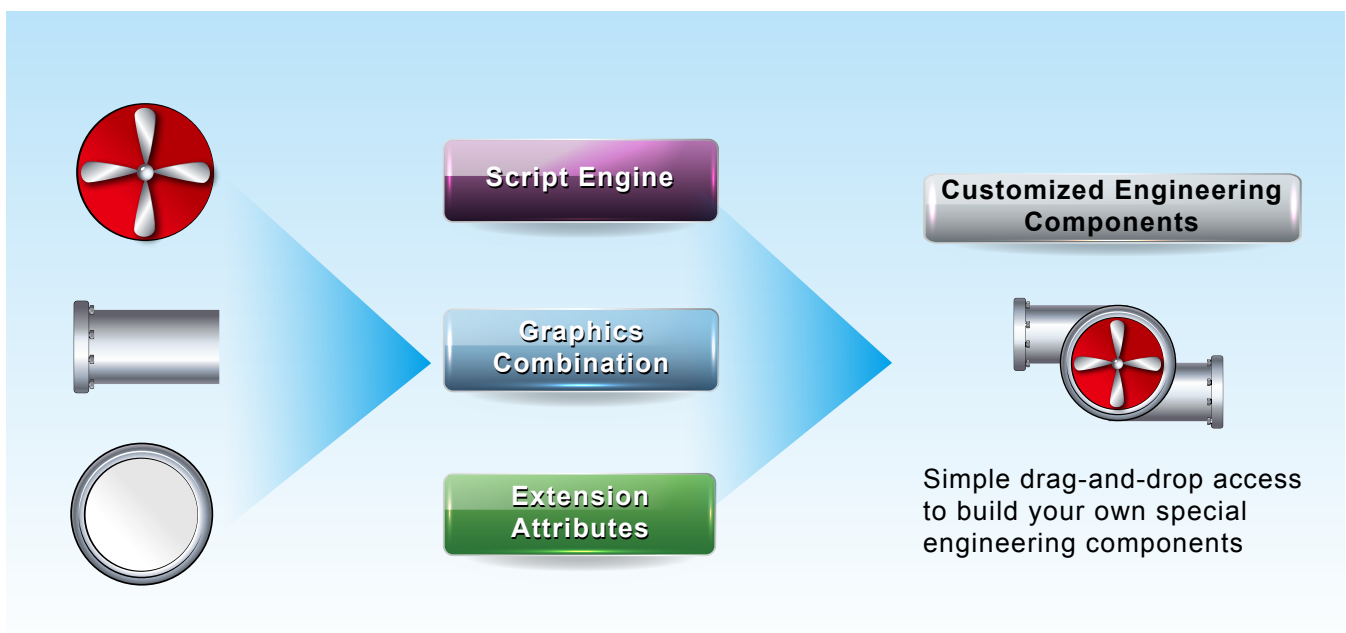
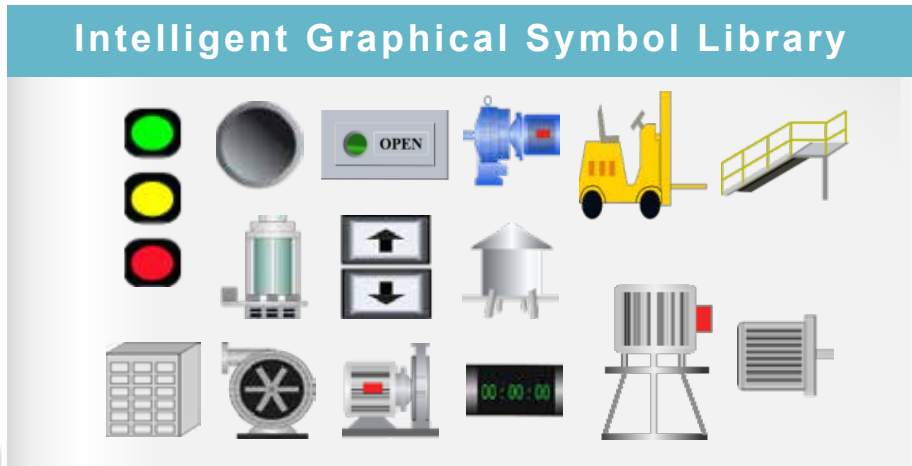
- ▶ C/S client/server structure, it is usually built on a dedicated network, providing connections and data exchange services through servers between the local networks
- ▶ DIAView Server can support 10 clients to access at the same time. The DIAView Server as both a server and a client for local monitoring



## Excellent Graphical Demo Platform

Graphical interface development is a critical factor for the SCADA system. DIAView provides an intelligent graphical symbol library that allows users to quickly create graphical elements and true color objects. It is easy to design an intuitive and easy-to-navigate operator interface for system configuration, and is suitable for facility/production monitoring and management.

- ▶ Industrial graphical symbol database for abundant animations and control interfaces
- ▶ Supports extension attributes and event functions for users to self-define symbols
- ▶ Supports rich and complex animated effects
- ▶ Adopts WPF and XAML technologies to create professional image quality, as well as complex and delicate user interfaces
- ▶ Image compression technology to automatically adjust symbol size

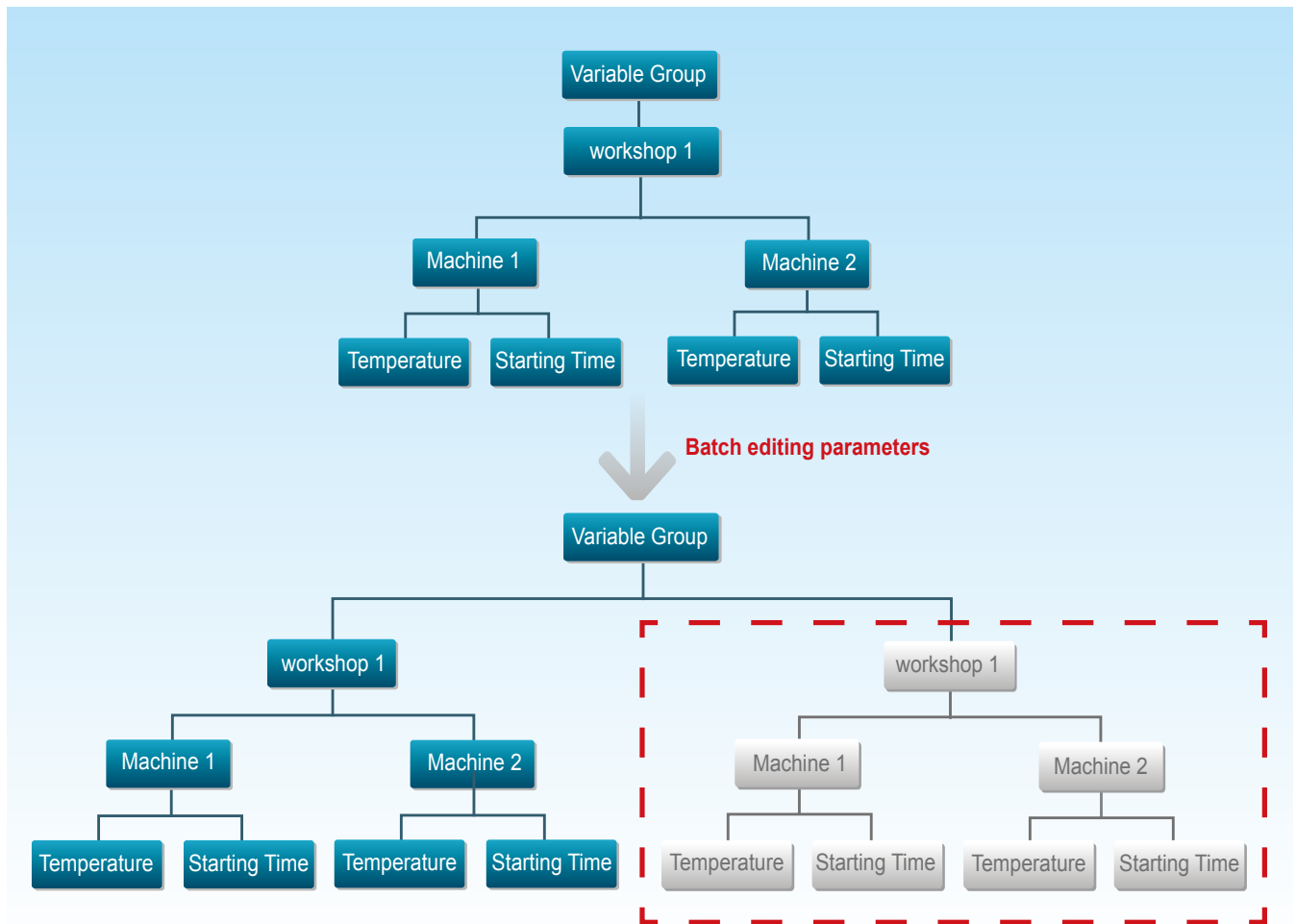
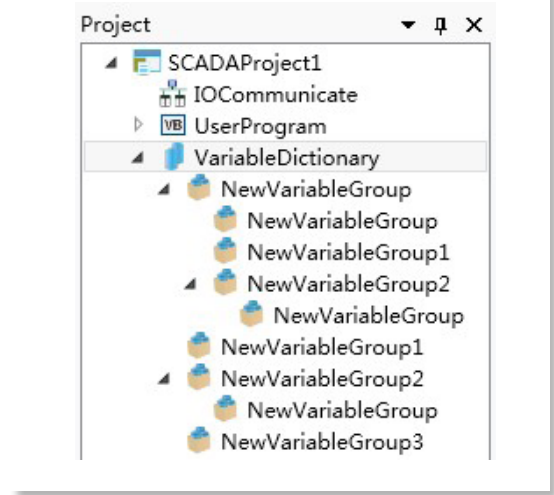


# Features

## Flexible Variables Dictionary

The variables dictionary is a collection of variables in a project, and the variable group is an unit for grouping and managing variables.

- ▶ Easy to add, delete and modify variables
- ▶ Supports variables managing and sorting to classify different variables group
- ▶ Quick and easy variables input/output and batch parameter editing management
- ▶ Variables branching and management via tree structure
- ▶ Batch parameter editing to improve development efficiency
- ▶ Supports smart variables searching/substitution, quotation browsing, usage statistics, and error detection





## Flexible User Interface

Allows users to manage backstage via script, achieving comprehensive logic control

- ▶ Easy, flexible script editing
- ▶ Trigger function allows users to self-define trigger conditions according to system operation
- ▶ Timer trigger function allows automatic system operation based on a schedule defined by users



## Efficient Recipe Management

- ▶ Provides variables browser for fast setting and recipe maintenance
- ▶ Supports VBScript interface for editing
- ▶ Recipe parameter input / output



## Bread Recipe

Recipe Configuration				
Ingredients	Variable	Sweet	Salty	Coffee Flavor
Sugar	Variable1	85	10	30
Cream	Variable2	10	10	10
Salt	Variable3	5	80	10
Coffee Powder	Variable4	0	0	50

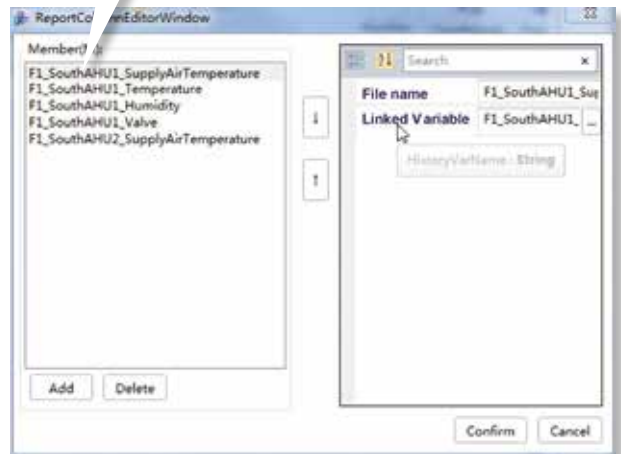
# Features

## Data Visualization Tools

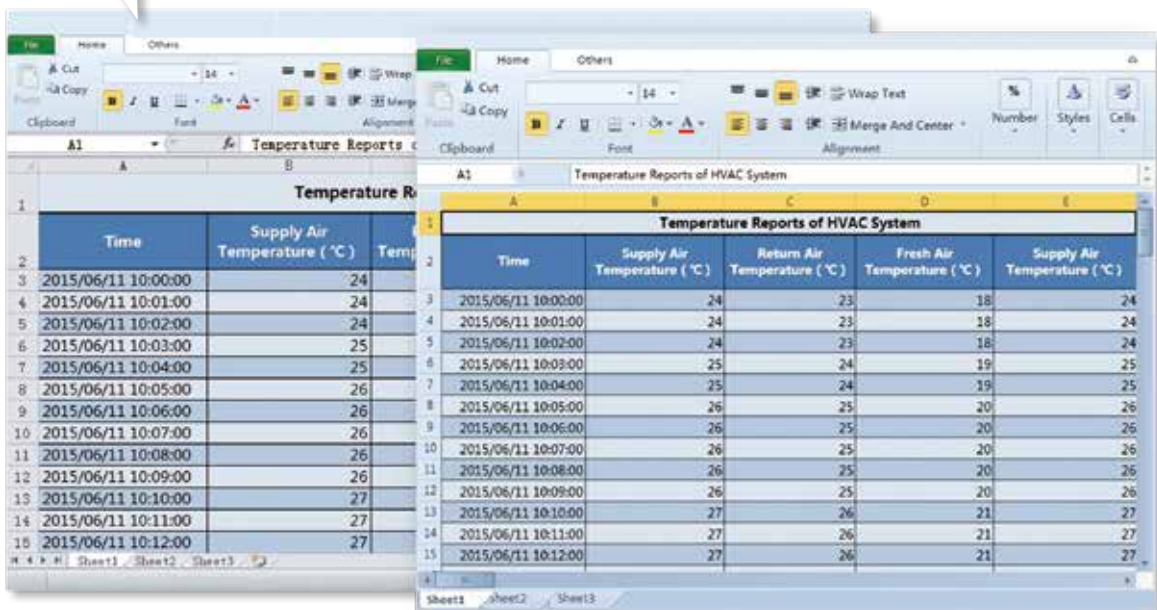
- ▶ Microsoft Office Excel editing interface
- ▶ Provides various sampling templates for users to self-define report formats
- ▶ Batch parameter editing function to enhance development efficiency
- ▶ Reports import and export functions for information print-out and timely analysis
- ▶ Supports VBScript for database editing
- ▶ Provides CRUD (Create, Read, Update, Delete) editing function



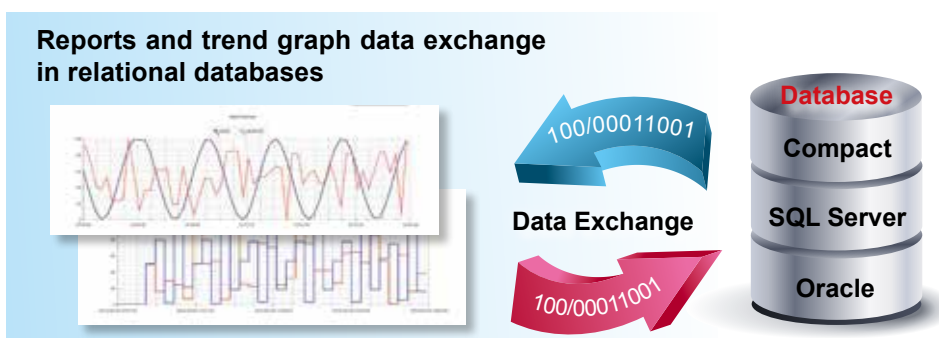
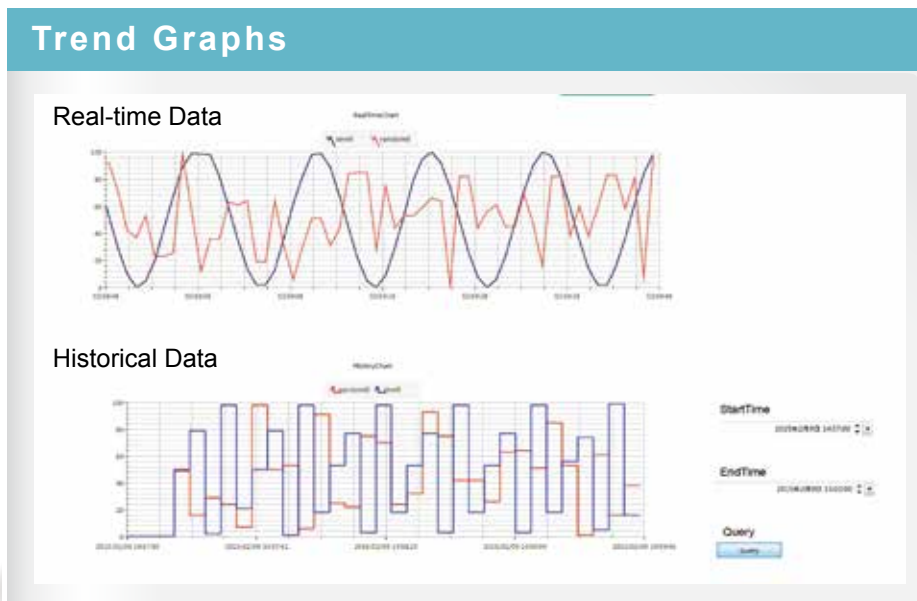
Variables and parameters configuration



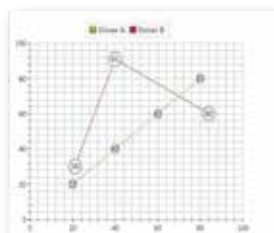
Reports Import and Export



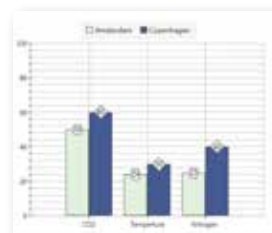
- ▶ Provides real-time data curve, history data curve, and X-Y curve to show various data information
- ▶ Supports 2D / 3D statistical data, including pie charts, bar charts, and more
- ▶ Supports database connection and data exchange
- ▶ Supports data export/import in Microsoft Office Excel format
- ▶ Provides real-time trend graph updates, printing, saving and image zoom in/out



Pie Chart



XY Chart

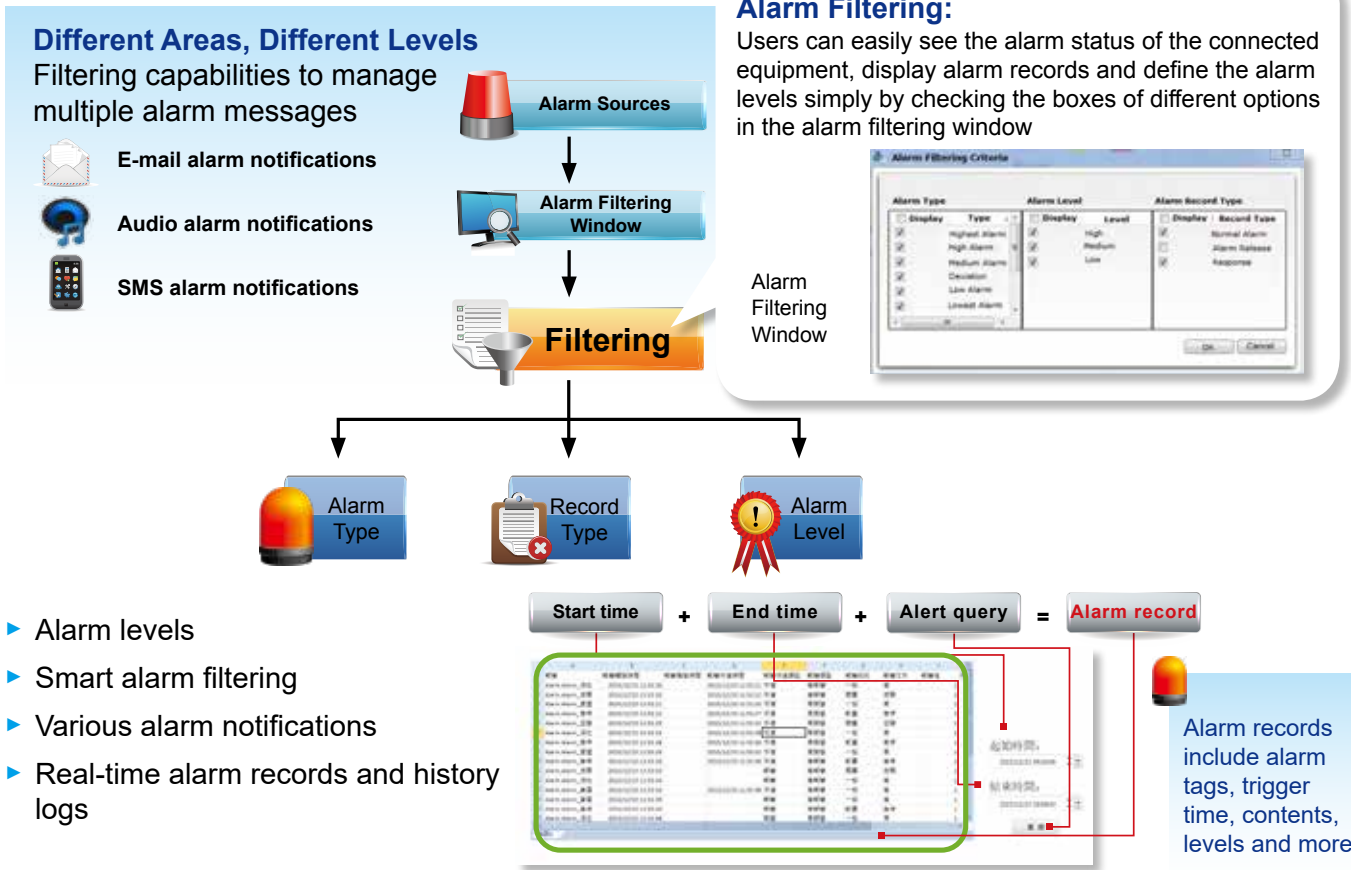


Bar Chart

# Features

## Robust and Efficient Alarm Management

The DIAView provides real-time alarms and early warning for faster response to critical situations. This prevents damage to equipment, ensures a safer working environment, and meets other operational needs.



## Supports Third-party Database

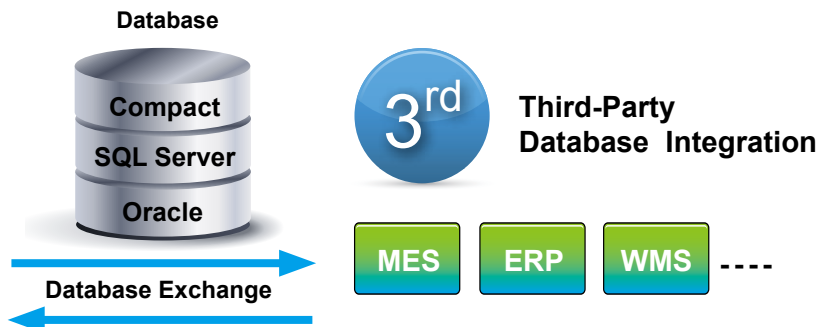


**DIAView SCADA**



**Easy to expand data types**

- ▶ Easy data exchange among different software/systems
- ▶ Supports SQL Server, SQL Compact, MySQL, Oracle Database
- ▶ Integrates with 3<sup>rd</sup> Party Databases



## Reliable User Authority Management

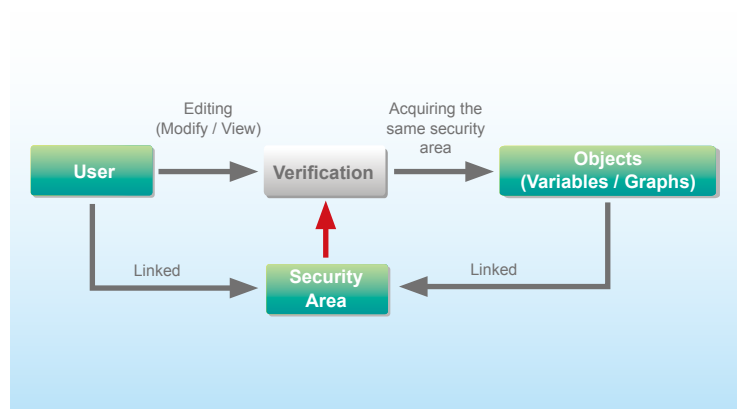
User authority management includes: login, logout, password change , and user adding / delete

- ▶ System administrators can operate in all security sections and manage all user accounts
- ▶ Allows administrating authority to add and delete users, and modify user information
- ▶ Operators can specify the security sections and perform tasks in these sections

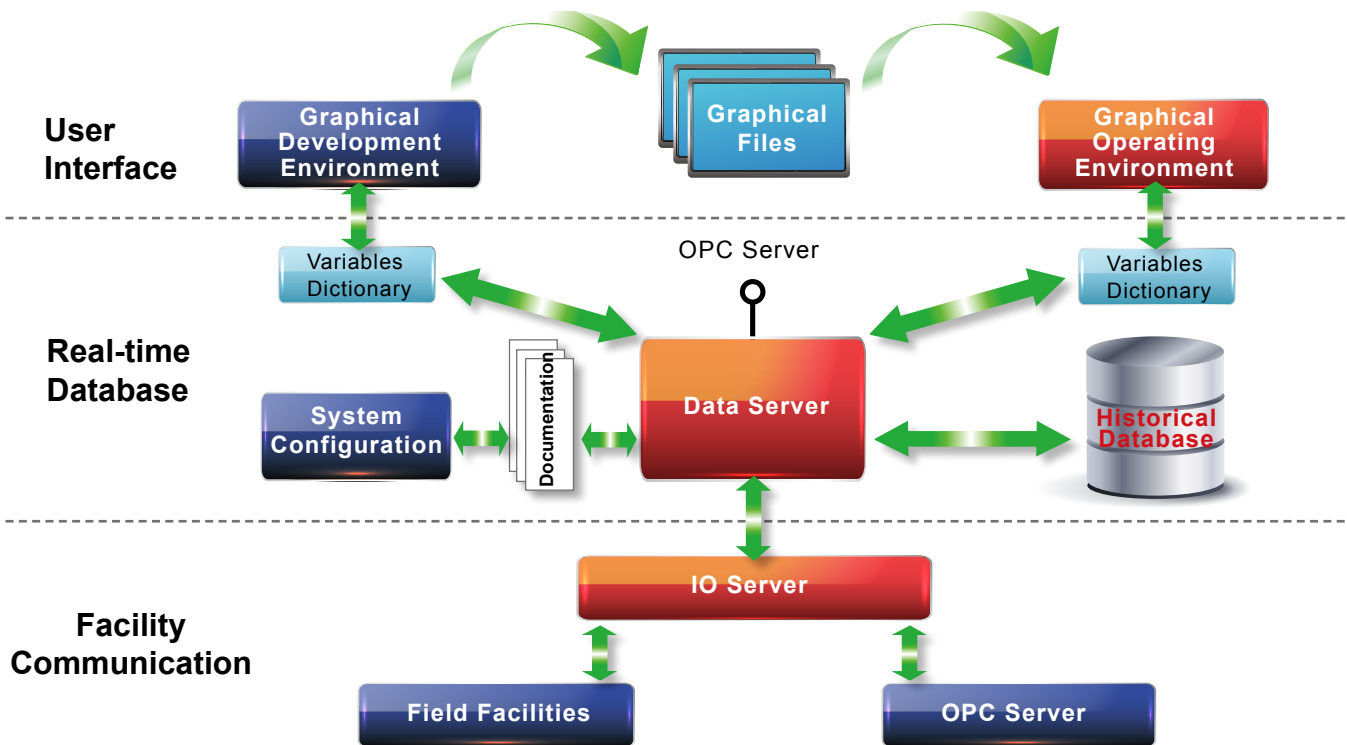
### User Authority Table

Users	Authorities	Remarks
Administrator	Add and remove users, security area management, associated security areas and operator's authority	System default is for a one system administrator
Operator	Login, logout, and edit relevant screens and variables	Objects can only be edited in relevant security areas

### Security Area



## Open Software Structure



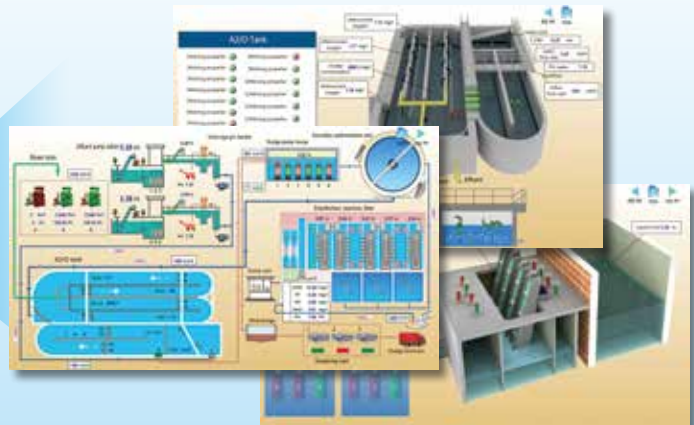
# Applications

## Wastewater Treatment Monitoring & Control System

- With DIAView, control and process monitoring of wastewater plants can be easily managed from the central control room. All process data and historical alarms / events can also be viewed and recorded for enhanced monitoring
- DIAView offers analysis and calculation functions, enabling various aspects of flow analysis and sophisticated water quality analysis and calculation. This helps to properly control chemical feed systems and automatically adjusts the chemical feed pump or valve, reducing associated risks and operation costs



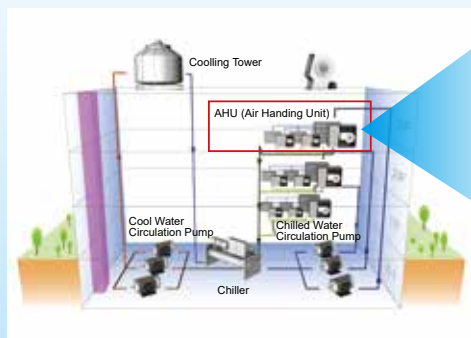
Wastewater Treatment Plants



Control and Process Monitoring of Wastewater Treatment Plants

## HVAC Energy-Saving Monitoring & Control System

- Integrates DIAView, PLC and AC motor drives to fulfill requirements for constructing an intelligent HVAC monitoring and control system, providing energy savings of 20% ~ 60%
- DIAView helps to automatically adjust fan frequency and chiller load according to the indoor temperature and monitor the status of the air conditioning system in real-time for excellent HVAC control and monitoring
- Automatically adjusts fan frequency and the chiller unit according to indoor temperature, and monitors the density of indoor CO<sub>2</sub>; and then lets in fresh outdoor air to reduce reliance on the air conditioning system, saving more energy and creating comfortable indoor environment for users



HVAC System Structure



HVAC System Intelligent Monitoring and Control

## Electronic Equipment Inspection & Monitoring

- Coordinates PLCs, schedules the equipment to perform inspection, and provides group control functions
- Records daily production conditions, identify yield / defect rate, and provides data acquisition and inquiry functions



Electronic Inspection Equipment



Inspection and Monitoring of Electronic Equipment

## Remote Control & Monitoring of 4-Color Printing Machines

- Provides remote and real-time monitoring for printing processes in the entire operation
- Suppliers can use the remote lock function to lock machines remotely for easier management



Actual Printing Machine



Remote Control & Monitoring of 4-Color Printing Machine

## System Requirements of DIAView

Hardware / Software	System Requirements
CPU	Pentium 2.0GHz and above (Intel Core i3 and above is recommended)
Memory	2GB RAM and above is recommended
Hard Disk	Capacity: 20GB and above
Display	Supports resolution: 1024 x 768 or higher full-color display
Operating System	Windows 7 Professional / Ultimate (32-bit & 64-bit) Windows 8 Professional / Ultimate (32-bit & 64-bit) Windows 10 Professional / Ultimate (32-bit & 64-bit) Windows Server 2008 / 2012 (32-bit & 64-bit)
Web Installer	Microsoft .NET Framework 4.0

## Software Licensing (Stand-alone & C/S version)



### Licensing

- ▶ DIAView licensing is calculated based on the I/O tags in customer's connected devices, and the software itself is free of charge
- ▶ When licensing is authorized, users can use a USB dongle key to carry out all authorizations. If unauthorized, trial session can be operated for 2 hours



### I/O Tags

- ▶ Eight standard options: 64, 128, 256, 512, 1000, 1500, 3000 and unlimited
- ▶ C/S version: 5, 10 clients



### Cost of I/O Tags

- ▶ The DIAView SCADA System is charged by I/O tags (Please refer to ordering information)

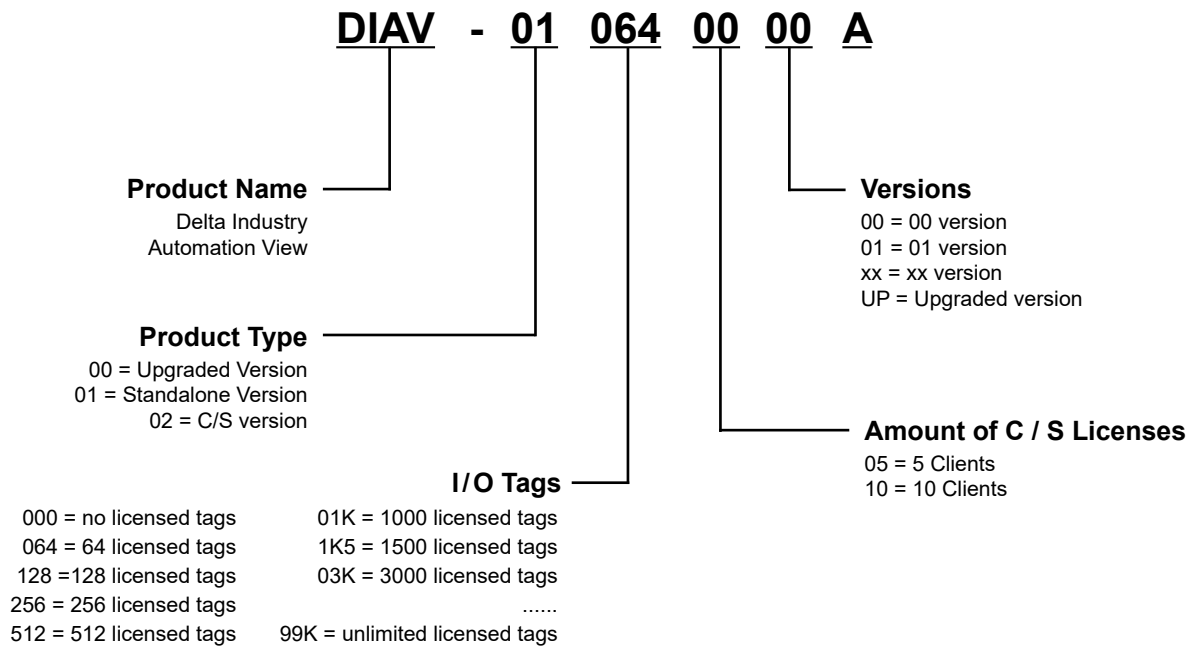


# Ordering Information

Product type		Model Name	Descriptions
Standalone Version	Standard Version	DIAV-010640000A	DIAMView SCADA standalone version, 64 tags, USB dongle key
		DIAV-011280000A	DIAMView SCADA standalone version, 128 tags, USB dongle key
		DIAV-012560000A	DIAMView SCADA standalone version, 256 tags, USB dongle key
		DIAV-015120000A	DIAMView SCADA standalone version, 512 tags, USB dongle key
		DIAV-0101K0000A	DIAMView SCADA standalone version, 1000 tags, USB dongle key
		DIAV-011K50000A	DIAMView SCADA standalone version, 1500 tags, USB dongle key
		DIAV-0103K0000A	DIAMView SCADA standalone version, 3000 tags, USB dongle key
	DIAV-0199K0000A	DIAMView SCADA standalone version, unlimited tags, USB dongle key	
	Upgraded Version	DIAV-0012800UPC	DIAMView SCADA standalone version, 64 upgraded to 128 tags, USB dongle key
		DIAV-0025600UPC	DIAMView SCADA standalone version, 128 upgraded to 256 tags, USB dongle key
		DIAV-0051200UPC	DIAMView SCADA standalone version, 256 upgraded to 512 tags, USB dongle key
		DIAV-0001K00UPC	DIAMView SCADA standalone version, 128 upgraded to 1000 tags, USB dongle key
		DIAV-001K500UPC	DIAMView SCADA standalone version, 1000 upgraded to 1500 tags, USB dongle key
		DIAV-0003K00UPC	DIAMView SCADA standalone version, 1500 upgraded to 3000 tags, USB dongle key
DIAV-0099K00UPC		DIAMView SCADA standalone version, 3000 upgraded to unlimited tags, USB dongle key	
C/S Version	Standard Version	DIAV-020640500C	DIAMView SCADA C/S version (English), 5 clients, 64 tags, USB dongle key
		DIAV-021280500C	DIAMView SCADA C/S version (English), 5 clients, 128 tags, USB dongle key
		DIAV-022560500C	DIAMView SCADA C/S version (English), 5 clients, 256 tags, USB dongle key
		DIAV-025120500C	DIAMView SCADA C/S version (English), 5 clients, 512 tags, USB dongle key
		DIAV-0201K0500C	DIAMView SCADA C/S version (English), 5 clients, 1,000 tags, USB dongle key
		DIAV-021K50500C	DIAMView SCADA C/S version (English), 5 clients, 1,500 tags, USB dongle key
		DIAV-0203K0500C	DIAMView SCADA C/S version (English), 5 clients, 3,000 tags, USB dongle key
		DIAV-0299K0500C	DIAMView SCADA C/S version (English), 5 clients, unlimited tags, USB dongle key
		DIAV-020641000C	DIAMView SCADA C/S version (English), 10 clients, 64 tags, USB dongle key
		DIAV-021281000C	DIAMView SCADA C/S version (English), 10 clients, 128 tags, USB dongle key
		DIAV-022561000C	DIAMView SCADA C/S version (English), 10 clients, 256 tags, USB dongle key
		DIAV-025121000C	DIAMView SCADA C/S version (English), 10 clients, 512 tags, USB dongle key
		DIAV-0201K1000C	DIAMView SCADA C/S version (English), 10 clients, 1,000 tags, USB dongle key
		DIAV-021K51000C	DIAMView SCADA C/S version (English), 10 clients, 1,500 tags, USB dongle key
		DIAV-0203K1000C	DIAMView SCADA C/S version (English), 10 clients, 3,000 tags, USB dongle key
	DIAV-0299K1000C	DIAMView SCADA C/S version (English), 5 clients, unlimited tags, USB dongle key	
	Upgraded Version	DIAV-0000005UPC	DIAMView SCADA C/S version, upgraded to 5 clients, USB dongle key
		DIAV-0000010UPC	DIAMView SCADA C/S version, upgraded to 10 clients, USB dongle key



## Model Information





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Smarter. Greener. Together.

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