The key to an extended intelligent age

WebField™ ECS-700
The core platform of InPlant solution
Designed to help you prepare for expandable capacities in future
The industry is constantly facing changing and growing demands. Production process gets increasingly complex as your business move toward larger scales or upgrade existing ones. But how to manage all that comes? Bigger energy bill, limited personnel, higher operating costs...

As the idea-walker of InPlant, the innovative total solution for Intelligent Plants, SUPCON treasures its 20 years of experience from user needs: accurate and timely access to useful information through a single platform.

WebField™ ECS-700 is here to help you prepare for expandable capacities in near future. As the core platform of InPlant solution, WebField™ ECS-700 hands over the key to an intelligent large-scale plant right to you. With this key, you can easily manage both production and resource with unprecedented efficiency.

We believe you can achieve success in the future as you plan it today. Lead your industry with our WebField™ ECS-700.
The WebField™ ECS-700 Advantages

WebField™ ECS-700 brings powerful operational functions that are highly reliable for complex control, friendly openness for third-party integration, and manage your project with maximum efficiency.

Large-scale unified application

WebField™ ECS-700 ensures stable operation through standard modularization and flexible configurations of networks, hardware and software platforms. It improves smoothness of project commissioning, and protect the unified engineering design and operating specifications. With the organic networks, hardware and software platform, WebField™ ECS-700 realizes your plant-wide supervisory and integrated management.

Highly reliable control platform

WebField™ ECS-700 delivers high reliability and availability of the control system. The stable operation throughout the whole process is completely free from failure of any single component.

Safe and efficient project management

WebField™ ECS-700 enables Multi-Engineering so as to reduce commissioning period and startup time. The innovative Multi-Engineering feature allows simultaneous configuring on a unified platform by online configuration management. WebField™ ECS-700 provides electronic signatures and history inquiries, and support online upgrades and expansion.

Open application environment

WebField™ ECS-700 supports interconnection of hardware and software at all levels. It provides open interfaces to third-party systems for information exchange with Excel, VBA, OPC, TCP/IP, etc. Meanwhile, a variety of hardware interfaces allow reliable third-party devices that comply with different protocols, and seamlessly integrate plant-wide equipments under centralized management and maintenance.

Convenient operation and maintenance

WebField™ ECS-700 improves personnel’s handling ability of emergency with the powerful operation and maintenance functions such as the friendly operating environment, alarm domain management, real-time global database platform, complete and system-wide self-diagnosis, general business networking components and hardware systems, hot-swapping and online maintenance to a greater extent.

Integration of various fieldbus

WebField™ ECS-700 supports a variety of popular fieldbus, such as HART, FF, Profibus, EPA, etc. with a unified asset management platform.
Network Architecture

WebField™ ECS-700 employs a clearly-layered network architecture based on 100/1000M industrial Ethernet and supports a variety of topologies with considerable transmission speed and distance.

WebField™ ECS-700 supports 16 control domains and 16 operation domains. Each control domain supports 60 control stations, and each operating domain supports 60 operator stations. The maximum number of tag supported by single domain is 85,000.

Process Information Network (SOnet) connects all operation nodes (including engineer station, operator station, data server, etc.), of the control system, and transfers history data, alarm information and operation record among operation nodes. It supports a variety of topologies such as bus, star and ring topology with maximum transmission distance of 20 km.

The Process Control Network (SCnet) connects operation nodes and control nodes, and transfers real-time data and operation commands among operation nodes and control nodes. It is characterized by high-speed, reliability, and scalability.

- Support 1:1 redundancy configuration; A# and B# redundant networks working synchronously without switching time.
- Adopt domain decomposition design to divide control domain and operation domain, so as to realize not only data sharing but also data isolation, and to prevent Net-storm and ensure system reliability.
- Real-time data transmission is realized by timed-driven mechanism for stable data traffic.
- Controller has built-in firewall to isolate fault and irrelevant data.
- Fault diagnosis software supports real-time monitoring and alarm on status of network and node.

I/O BUS

I/O bus includes local I/O bus (L-BUS) and extended I/O bus (E-BUS). Both E-BUS and L-BUS support redundancy. The E-BUS is based on 100M industrial Ethernet with maximum transmission distance of 20 km.
**Safety & Reliability**

WebField™ ECS-700 is rigorously designed to guarantee its reliability. It supports system expansion or upgrading online without shutdown to the process.

- High-speed redundant I/O bus, flexible configuration
- Total redundant configuration that ensures stable operation throughout the whole process is completely free from failure of any single component
- Self-diagnosis cover the whole system, and online maintenance that precisely locates the fault and fix at once
- I/O module features:
  - High precision, 24-bit AD/DA conversion
  - Fail-safe functionality
  - Extended overrange measurement
  - Hot-swapping supports online replacement
  - Anti-corrosion designs comply with ISA-G3 Standard
  - Operating ambient temperature of -20°C to +70°C

**Openness**

WebField™ ECS-700 is a system with outstanding expandability and openness. It's easy to expand your system capacity by adding nodes and tags. It also can be connected to third-party system that comply with standard protocols.

The open data interface OPC Data Access, supports OPC local connection and remote connection, and transmit real-time data to the MIS through OPC. OPC Data Access achieves easy interaction between process control and information management.

WebField™ ECS-700 provides various interfaces to connect with third-party devices at different levels via RS485 and Ethernet, etc. It makes maximum use of existing facilities and integrate with existing equipment.

The system provides seamless I/O level connection of fieldbus such as HART, FF, Profield and EPA etc., and manage various fieldbus devices on a unified assets management platform. For any equipment of standard fieldbus protocol, the system is able to read parameters from various device that comply with standard fieldbus protocols, so as to save maintenance cost.
**Operation and Engineering Application**

A good control system is largely defined by operational excellence. This is the criteria that WebField™ ECS-700 was designed by.

- A unified plant-wide operation platform, support a global database for industrial complex application
- The complete alarming management system, include association function, priority and division-based alarming and individual alarm shielding and inhibition
- Support multi-monitor technology
- The innovative Multi-Engineering allows collaborative engineering to configure and modify online
- Mega capacity of history trend records, convenient query and statistics
- Automatic scanning of system hardware online and upload
- Intelligent fault identification and analysis; SOE record’s time stamp has minimum resolution of 0.5ms
- Batch Management Software compatible with the ISA-88, allows batch process data to be evaluated in terms of productivity, equipment, and recipes

**Lifecycle Service Management**

SUPCON’s industry-leading competency can provide total solutions not only in technologies, but more importantly, to satisfy a customer’s lifecycle needs. We present unique and full-scope services that concern the interests of our customers.

**System update and value-added service**

We support system expansion and network integration online, and effectively protect user investment. By using technologies such as domain management, Multi-configuration, online downloading and publishing, it achieves online expansion without disturbance to the process. WebField™ ECS-700 supports online expansion of new-type module without shutdown of system so that latest technologies can be applied to the existing system and user's competitiveness can be improved continuously.

SUPCON provides professional add-value service along system lifecycle, including IO check points, lightning protection, optimization, migration and customized training services, etc.

**Remote diagnosis and maintenance**

SUPCON provides remote diagnosis and maintenance service according to user needs.

SUPCON can establish a specific, independent and secure Internet to the site control system with user authorization. Our professional remote diagnosis and maintenance services include: online fault diagnosis, online technical support, and software updates, etc. SUPCON can reduce your maintenance costs to a maximum.