SYSTEM302 as DCS and integration with High Level Software Tools

Characteristics:

- SYSTEM302 is scalable, from few to thousands of I/Os
- Use of OPC standard as integration standard
- Availability of several digital protocols

SMAR's SYSTEM302 has gained prominence as a "best-in-class" industrial automation solution in installations around the world. In addition, it includes one of the industry's widest selections of field devices, interfaces, integrated circuits and software.

With SYSTEM302, Control Distribution, System Configuration, Asset Management, Network Management and System Documentation are all available in one, easy-to-use, integrated control system. Interoperable with all major network protocols, this open, scalable solution is designed to protect your installed assets and co-exist with any legacy system.

SYSTEM302 provides competitive advantage with an open and safe digital platform, as well as operational excellence standards working to improve your plant's performance.

SYSTEM302, through its transparent integration with advanced information systems such as MES (Manufacturing Execution System), PIMS (Process Information Management System) and ERP (Enterprise Resource Planning), transforms advanced field data into business intelligence. This automation structure, hierarchically well positioned to the enterprise, enables the connection of many different data sources – including commercial, supply chain and production. Business portals with production performance identification and tracking, such as KPI (Key Performance Indicator) and OEE (Overall Equipment Effectiveness), may also be built-in. The information is available on networks in a versatile and safe way to support wireless devices or Internet services.

Such integration is possible due to openness of System302, which is based on standards such as OPC, Modbus, DNP3 and HSE, enabling smooth integration with MES/PIMS and also with Auto Tuning and MPC (Modelbase Predictive Control) software. Integration is also possible with Legacy Systems and dedicated Systems, such as SIS (Safety Instrumented Systems) and Packages.

SYSTEM302 is scalable to meet any industrial need, as a true DCS. Most solutions on the market use a concentration of data in a single or few CPUs, connecting all process data through I/O and network cards.
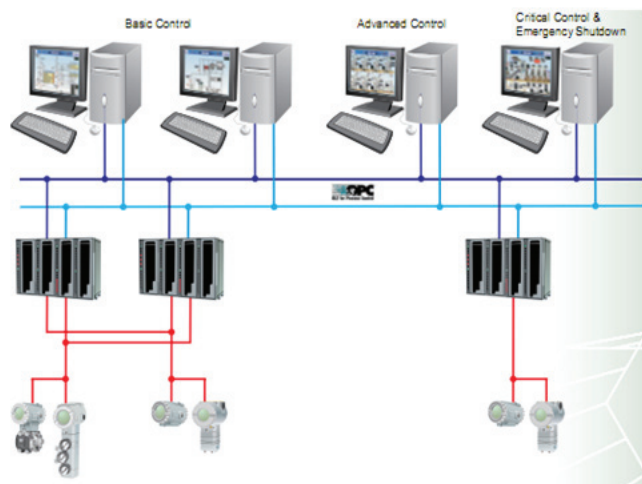
SYSTEM302 uses a concept of task distribution among different CPUs, each specialized in a different function. All CPUs are linked together into a single process network, based on Ethernet, and data is available for all controllers and computers connected to it. This concept allows architectures to grow as needed, from a single CPU with few I/O, to several CPUs, making a complete and true DCS (Distributed Control System).

As SYSTEM302 has an Ethernet-based infrastructure, it can employ non-proprietary, standard communication protocols such as HSE (High Speed Ethernet). Connectivity with the Internet/Intranet supports the complete management of units from a central control room, regardless of whether they are in a local network, throughout a region or around the world. In addition, SYSTEM302's comprehensive and fully digital platform supports both conventional technologies and global-standard fieldbus protocols such as:

- FOUNDATION fieldbus
- HART
- MODBUS
- PROFIBUS-DP and PROFIBUS-PA.

The entire SYSTEM302 architecture focuses on the convergence of automation and information technologies. The result is a robust, safe and integrated technology. Full collaboration in a multi-user environment facilitates and reduces the time required for project planning, design and execution. In order to make the engineering process more efficient, SYSTEM302 offers a large template library for equipment and control strategies. In addition, users may perform both interlocking and continuous control in the same environment thanks to the powerful resources of the DFI302 control platform.

SYSTEM302 centralizes the management of processes, equipment and devices. Digital communication and data mining facilitate plant information handling and allow data to be stored in a single database. Therefore, essential information is available anywhere in the company, at any time it is needed, through workstations with user-friendly interfaces. SYSTEM302 offers optimal conditions so that user decisions are made with greater confidence.

Integration Method	SYSTEM302 Availability
Modbus-RTU	Yes
Modbus-TCP/IP	Yes
DNP3 serial	Yes
DNP3 TCP/UDP	Yes
OPC support	Yes
Foundation Fieldbus HSE	Yes
Foundation Fieldbus H1	Yes
Profibus	Yes

Software Tools	SYSTEM302 Integration
PID Auto Tuning	Yes
MPC	Yes
Batch	Yes
Performance Monitoring	Yes
MES	Yes
PIMS	Yes
Leak Detection	Yes

For additional information please contact us.

Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

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