

Product Information Note

Experion SmartPlant Instrumentation (SPI) Adapter



The Experion SPI Adapter provides bi-directional data exchange between Intergraph SmartPlant Instrumentation (powered by INtools) and the Experion® PKS Control Builder engineering tool. Jointly developed by Honeywell and Intergraph, the adapter provides significant engineering productivity and extends the benefits across the lifecycle of the facility

This Intergraph SmartPlant Instrumentation (SPI) is a leading design software solution for instrumentation and control system engineering. SPI has been adopted by many engineering contractors and end users as the standard tool to be used across the life cycle of projects – from detailed engineering to plant operations.

Through direct integration of the SPI design and Experion configuration tools, project workflows can be streamlined and data can flow seamlessly from one system to the other. This integration brings many benefits in the areas of project efficiency and data integrity.

The SPI Adapter enables the data exchange between Experion and SPI using native xml files without the need of using excel or excel addins in the system reducing the chances of errors in data exchange.

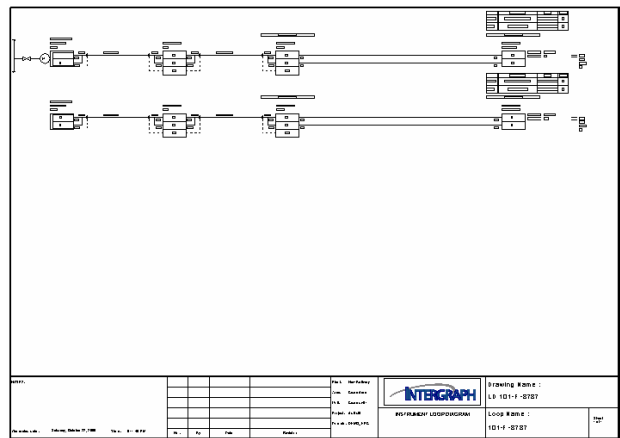
The Experion SPI adapter has been jointly developed by Honeywell and Intergraph using SmartPlant Foundation technologies and has been tested and certified by Intergraph under the SmartPlant Alliance.

Benefits of Data Integration

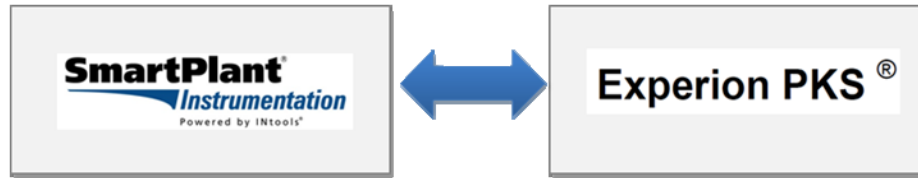
The benefits of data integration between SPI and Experion databases include:

Reduced engineering effort

- Reduce duplicate data entry by removing the need to manually enter the same data into different engineering tools in order to complete a single consistent design.
- Ensure documented design matches system configuration by easily comparing and updating the Experion or SPI database to match the configuration master.
- The bi-directional data exchange support allows parallel activities for design and configuration to be executed on the project, reducing project lead times.
- The support for parallel engineering activities also enables the late binding of physical and logical designs.



SPI Enhanced SmartLoop Report



Standard representation of Experion within SPI

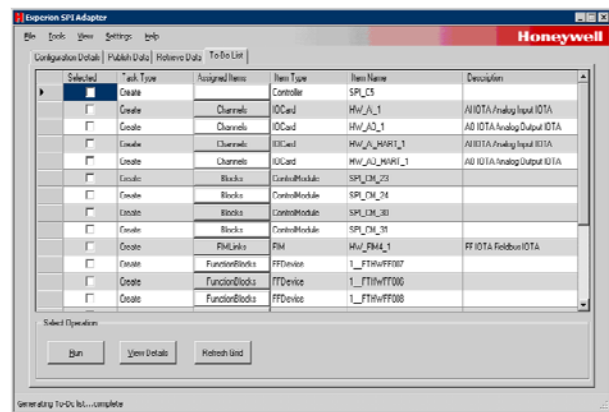
- Consistent loop diagrams can be produced across different projects and sites to ensure a common understanding and best practices.
- Pre- defined I/O module and termination assemblies for all Experion I/O libraries can be imported into SPI to ensure accurate and consistent wiring details

Maintain data integrity

- By applying the tool SPI Integration across the system lifecycle, consistency can be maintained and design tool investments can be leveraged for the entire life of the facility.
- Documentation discrepancies can be easily identified supporting efficient change management and overall asset integrity.

Streamlining Project Processes

Through the application of the bi-directional SPI adapter , traditional project processes can be significantly streamlined. These processes would include creating and assigning of controllers and I/O modules within SPI or Experion, assignment of I/O channels to control system tags and synchronization of instrument and control system tags parameters across the design and configuration databases.



Managing Lifecycle Activities

Often, significant investments are made by operating companies to support and maintain the SPI design database throughout the lifecycle of the facility. The SPI adapter tool streamlines the support of these systems enabling the “As-bBuilt” designs to be always up-to-date with the operating online control system. This helps to ensure the integrity of the design database, and as such maximizes the usage in day-to-day operations, fully leveraging the operational investment in SPI.

Support for Universal Channel Technology

In support of the Experion PKS Orion release, the SPI Adapter also supports I/O modules utilizing Universal Channel Technology. Universal Channel Technology enables any instrument type(AI, AO, DI or DO) to be connected to any channel. The definition of the I/O type is then defined by software configuration.

Using this capability, the design engineer using SPI does not need to know the specific details for the Experion panels and can connect any instrument to any available I/O channel. This also eliminates the need for custom marshalling and I/O cabinets allowing the use of standard cabinet designs across an entire project.



Universal Process I/O

Support for Fieldbus Designs

Along with conventional and universal I/O types, the tool also supports the exchange of field device information associated with HART and Foundation Fieldbus designs.

This support extends to the configuration of virtual tags and device resident functions blocks within Experion and SPI. Along with the Honeywell I/O Catalog, catalogs are also available for Honeywell Fieldbus and HART instruments. These catalogs correspond to the standard format Device Description files utilized by the Experion engineering tools.

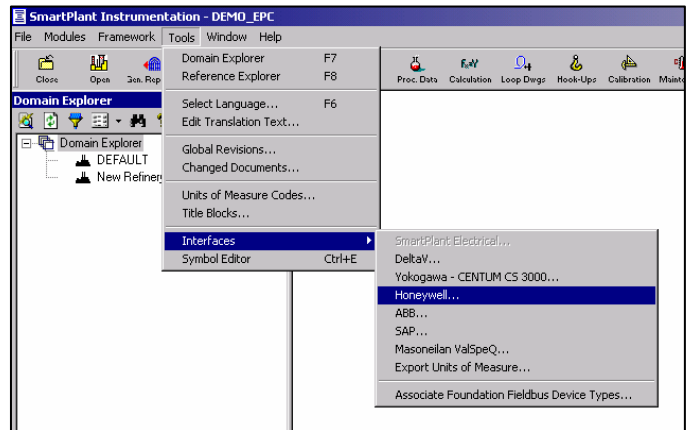
Honeywell I/O Catalog

The Honeywell I/O Catalog provides the full connection details for all Experion and Safety Manager I/O types directly from the SPI Reference Explorer. The catalog includes I/O model numbers, channel sizing and termination details for Series C I/O termination assemblies (IOTA) and Process Manager IO(PMIO), Safety Manager and Fail Safe Controller(FSC) field terminal assemblies (FTA).

A full range of I/O modules is available supporting HART, Foundation Fieldbus, RTD/TC and conventional instruments.

Specialized I/O Module and termination assemblies include:

- Integrated galvanically isolated / intrinsically safe modules
- Non-incendive I/O terminations
- Integrated fire and gas device interfaces
- Universal I/O for both Control and Safety systems



SPI Honeywell Interface Import Menu

For More Information

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