

Product Information Note

Experion Distributed System Architecture



Honeywell’s patented Distributed System Architecture (DSA) provides unmatched scalability and performance by seamlessly integrating alarms and process data from multiple Experion systems. DSA provides maximum flexibility in system design and superior integration capabilities whether applied within a site or across different geographical locations, between similar or different Experion releases. Experion® PKS – The Knowledge to Make it Possible.

DSA Benefits Summary

- Experion’s Distributed Architecture provides the lowest possible installed and total cost of ownership by requiring almost no configuration initially or on an on-going basis. It removes the need for duplicate databases, data specific configuration or gateways between systems.
- Highly optimized for fast data transfer, DSA does not require expensive high performance or dedicated networks, and is supported over microwave and satellite links.
- Transparent, highly secure access to remote data and alarms for operator and control applications delivers one virtual control system.
- Flexibility and minimum scope of loss is guaranteed with independently engineered and secured clusters, integrated into a single virtual control system for operations.
- Expansions or new assets can be commissioned with new Experion clusters integrated via DSA with a minimum of cost, leaving other clusters at their existing release, by leveraging DSA’s 4-functional release span of interoperability.
- DSA 4-release interoperability is extremely powerful when users upgrade to later releases by allowing portions of a large integrated system to be transparently migrated on-process in the least disruptive, step-wise manner possible.

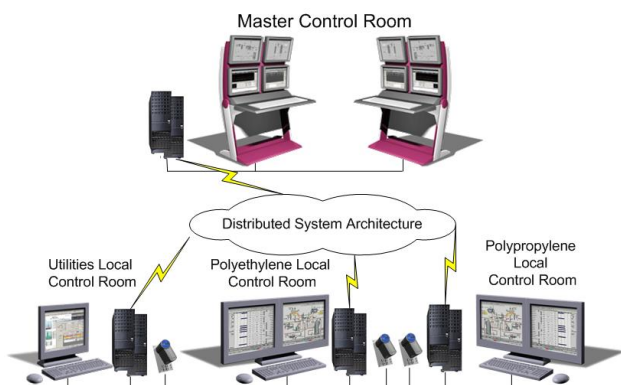
Superior Operations

An Experion cluster is defined as a set of Experion controllers and stations. Using DSA, operators can be given seamless access to points, historical data, alarms, displays and control strategy visualization information from any other Experion cluster.

Delivering on the one control system concept, trend displays assign traces in a consistent manner for both local points and remote points. If the point exists on a remote cluster, the history for that point will be retrieved automatically even if the data for that point has been archived.

Alarms from remote points also appear in the exact same alarm summary as that used for local points providing a consolidated view to all alarms in the operator’s scope of responsibility.

Operator custom displays are automatically distributed between clusters and can be called up on both the local and remote clusters. Intelligence built into DSA determines if a point is local or remote and does not require that information to be embedded into the display, supporting the consolidation of control rooms to reduce costs, space, energy and staffing needs. If control is needed in a remote location, DSA supports having a Central or Master Control Center to oversee operations while also allowing remote access as required. An operator anywhere in the system is able to view data and/or control any part of the distributed system if they’ve been granted access. The Experion Enterprise model provides an intuitive way for users to navigate and manage the entire system.



DSA with Master Control Room at a Polymers Complex

Engineering without Downtime and with Reduced TCO

Configuration takes just minutes, and with automatic discovery of points, engineering costs are reduced while improving system integrity. Costly, error-prone database duplication or gateway management is eliminated.

Once connected, the simple and intuitive global security scheme in Experion systematically manages access rights of operators and stations to the various parts of the system. Individual Experion clusters can be operationally integrated while retaining their own engineering autonomy.

Individual clusters can be upgraded independently because DSA supports seamless connection of clusters of different Experion releases. Upgrades can be planned at a pace that suits the user. Individual clusters can maintain their independence as other clusters are upgraded.

Superior Performance

DSA caching enables data requests made by applications to be addressed to a cluster in the system without the application having to know where the data actually resides. This mechanism greatly simplifies network and security design by only having applications connect to one location in the system. If multiple users or applications are interested in the same data, the request is only sent once.

Controllers in one cluster can access parameters from other clusters for coordination across large distributed areas where direct peer-to-peer control links are not possible. As there is no inter-system polling in the DSA architecture, there is no transmission of data to clusters that don't require it and no transmission of unchanged data. These and other techniques enable DSA to work with very low bandwidth and high latency networks, but also greatly minimize loading when used on a shared networking architecture.

Connect clusters in minutes and leverage existing display and point configuration investments. The unique dynamic optimization mechanisms used by DSA prevents performance decline as the system is expanded.

Experion® is a registered trademark of Honeywell International Inc.

For More Information

Learn more about Honeywell's Experion DSA visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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