

# Database and SQL

## SQL to the Core

### Built-in Embedded SQL

Every FactoryStudio system includes a full-featured embedded SQL engine. This provides several advantages including:

- A safe and secure location for your entire project configuration.
- It can be used as the historian database to log tags, alarms and events on small to medium systems (up to 10GB of data).
- On Large systems, it can be used as a local Store and Forward location, when the remote database is not available.
- It provides an ideal system to store local runtime settings, retentive information, local recipes, schedules and tables and queries when preparing reports.

### Multiple Database Connections

FactoryStudio provides seamless integration with any third-party database, including Microsoft SQL Server, Oracle, MySQL, Informix, SQL Lite, PostgreSQL and others.

### Advanced DataGrid

FactoryStudio provides a fully-featured DataGrid object to present tables and queries from databases, as well show contents of any tag, asset or real-time object. Just drop the table, query or tag to the Grid Data Source to create front-end visualization or edit any real-time object or database.

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### Real-time Queries and Tables

Any data source with ODBC, OLE-DB or ADO. NET support can be connected with the application; an easy syntax allows you to create or customize any query or table search with real-time tags.

### Client-Server Architecture

Real-time queries can be processed either at the server or from the client computer, asynchronously or synchronously. To achieve better performance, multiple requests from distributed clients are cached and synchronized at the server.

### Data Gateway

Connecting client queries through Firewall protected security zones, such as moving data between the Automation Network and the IT network, is no longer an issue. FactoryStudio provides a built-in firewall friendly data gateway. Data queries from clients are routed in a secure way through any FactoryStudio system.



**The Convergence of SQL database, HMI software and .NET**

Scheduling, Process Recipes and real-time data consolidation made easy.

In this section...