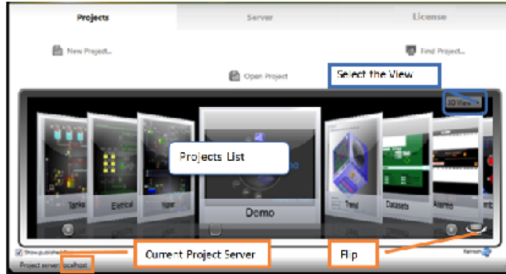


Managing Projects

The applications you develop using FactoryStudio are organized into projects. The following sections explain projects and describe how to create and manage them.



On this page:

- [What is a Project?](#)
- [Viewing Projects](#)
- [Creating and Editing Projects](#)
- [Project Settings](#)
- [Finding Projects](#)
- [Managing Remote Access](#)
- [Running Projects](#)
- [Upgrading Projects](#)

What is a Project?

FactoryStudio is a powerful platform to develop and deliver applications managing real-time information. Applications built with FactoryStudio are organized into projects

When creating an application or custom solution with FactoryStudio, you use the engineering tools to define the configuration of various modules, such as Tags, Alarms, Device mapping, graphical displays, scripts and others.

Each custom solution is defined to be a Project, which stores all the configuration information for a specific application.

All the project configuration items, including display drawings, graphical images, scripts, tag definitions, external devices mapping, and so on, are saved in a single embedded SQL database. That file is encrypted for security and it should be opened and edited using the Project Engineering Tools.

The project configuration is saved in a file with extension ".tproj". Using the Publish procedure, described in the chapter "Run, Test, and Publish Projects", you can also create read-only versions of the project for runtime execution only; these will have the extension ".trun".

The system allows many projects to be opened at the same time. If you already have an open project, just select another project in the Project Selection list and open it. When a second instance of the same project is opened, it will open as read-only.

In order to enable concurrent users you must have a project server licensed to multiple engineers. On the license tab, in the Engineering Group Box, you have the number of concurrent engineering users that can access the selected server or local computer.

The following sections explain more about projects and how to work with them.

Viewing Projects

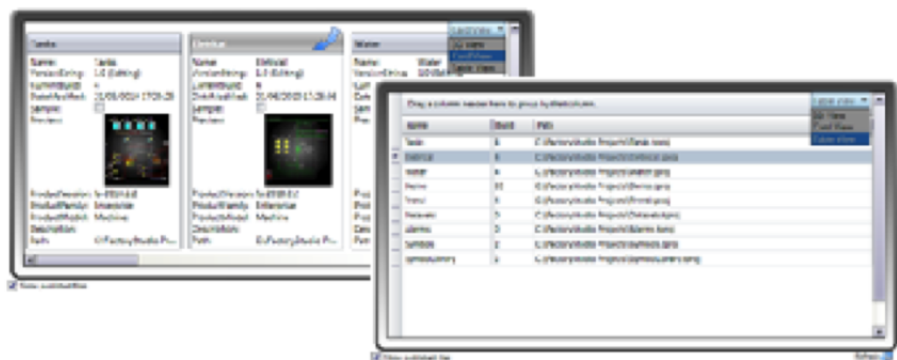
When you start FactoryStudio, the main page shows a list of projects. The projects presented in the list are defined according to the selected Project Server (defined at the Server tab) and the selected search paths (defined with the Find Project button).



If the list is not showing any projects, it is because the system was unable to locate project files on the selected server and search paths. Use "Find Projects" to search for projects in the local computer, use the "Server" tab to connect to a new Project Server, or use "Create Project" to create a new project. If any error has occurred while loading projects, a log will be created in "C:\Users\Public\Documents\TLocalSettings\".

Using the dropdown list you can select 3-D View, Card View or Table View for different views of your project list.

For a quick summary of information about a project, click the symbol in the lower-right corner to rotate the selected project icon showing the Project Information. See "Creating and Editing Projects" below for details about the project metadata information.



The projects that show in this list are all the ones found in the search paths. These can be defined using the "Find Projects" command. See "Finding Projects" below.

Projects located on remote computers or on cloud servers can also be managed using the server configuration. See "Managing Remote Projects" below.

Projects retain information about the version of FactoryStudio that was used to create the project originally. Unless you upgrade the project to a newer version, the project always opens using the version with which it was created. For more information, see "Upgrading Projects" below.

 Use the Right-click on top of a project to open in Read-only mode, or to Run the project.

Creating and Editing Projects

To create a project:

1. Click **New Project**. The New Project page displays.
2. Enter or select the information, as needed.
3. Press Create Project

Field	Description
Name	Enter a name for the project.
Description	(Optional) Enter a description of the project.
Location	Click the ... button to select or create a new folder for the project  You configure remote access to projects on a folder basis. Be sure to place local projects into a different folder from projects that you permit remote access to
Product Family	Depending on your FactoryStudio license, you may have options here to build applications for a specific version of FactoryStudio. You can change this setting later, if needed.  If you don't have a license, only the Express family will show. Even when you have a license you may want to create Express projects to share demos and tutorials with users who don't have a license installed.
Product Model	Depending on your FactoryStudio license, you may have options here to build applications for a specific product model. The product model is connected with the number of real-time communication points you will be allowed on that project.

Project Settings

When you click "Open Project" you open the project configuration tools. The project configuration user interface is introduced in "Getting Started", and discussed in detail in ["Engineering Workspace"](#). Navigation in the user interface is also introduced in the "Getting Started" guide.

Every project file has embedded metadata with the key project information. When using the engineering tools, that information displays at the **Info-Project-Version** page on the workspace.

The project settings that can be user defined, such as target family and model and default options, can be defined at the **Info-Project-Settings** page.

To view and change project settings, open the Project with the configuration tools and:

1. Go to Info > Project -> Settings.

You can view and change the project settings that you configured when you created the project.

Field	Description
Product	Read-only name of the product used to create the project.
ProjectPath	Read-only path to the project.
Family	A basic description of the product families is • Enterprise—Complete FactoryStudio functionality • Edge HMI—Use for smaller applications and embedded systems. • Express—Use only for test or demonstration purposes. • IIoT Gateway—Create a project to work as an OPC server or Data Acquisition Gateway, providing data to other applications from the native protocol drivers  Changing the family settings may cause some configurations to be invalid. For example, some features are only available in the Enterprise version.
Model	The product model is connected with the number of real-time communication points you will define and maximum allowed to use in that project. Refer to "FactoryStudio Versions and Licenses", for more information about product models.
Target Framework	Read-only. Shows the Microsoft .NET Framework version required for the project.
Culture Info	Select the target language for the runtime application. This setting controls the formatting of dates, numbers, and other information to conform to the selected language. You can change this setting later, if needed.
Default Code	If available, select the language you want to use for writing custom scripts. You can change this setting later, if needed.
Limit values to Min-Max	If checked, you will not be able to set tags outside the Min-Max range
Target Layout size (on Edit Displays Layouts)	Select the default resolution for new layouts in the project. This does not affect existing layouts.
Default Size when creating new Pages	Select the default resolution for new pages in the project. This does not affect existing pages.
Run modules inside runtime process	Runs the following modules on TServer module, if checked: • Script tasks • First device channel

Finding Projects

When accessing your local computer, FactoryStudio looks for projects in the default folder and in any folder where you have created a project. If you copy a project file to a folder, FactoryStudio does not know to look in that folder for a project. You can add that folder to the search path, so FactoryStudio knows to look in the folder.

You can also remove folders from the search path, if you no longer need those folders for FactoryStudio projects or want to reduce the list of folders.

To find projects and manage remote access:

1. Click Find Project. The Find Project page displays with a list of the existing search paths. (If the Find Project button is not visible, check your server configuration).
2. Enter or select the information, as needed.

Field	Description
Current Project Server	Display-only. Lists where the current project is running.
Include Sample Projects	Selected by default. Deselect to exclude sample projects from the list.
Include Published Projects	Selected by default. Deselect to exclude published projects from the list.
Find	Click to navigate to a project. The folder for the project you select is automatically added to the Search Paths list and all the Projects on that folder will be presented at the list.
Search Paths	Select the folder whose remote settings you want to change, then change the settings below.

3. Click Back to return to the main window.

This page also contains the settings to allow users on remote computers to access the projects, as described in the next section.



When adding a project, or a folder, all the projects in the selected folder are added to the Project List at the main page.

Managing Remote Access

Allowing Remote Access

Remote users can only see and access projects from your local computer if you configure them for remote access. If you want to permit remote access to one or more projects, but not to other projects, be sure to place those projects in separate folders. When you configure remote access (either for project editing or the runtime), you configure it for an entire folder. All projects in a folder configured to permit remote access will be accessible to remote users.

The software installation includes a web server (TWebServer) that permits remote access between computers with FactoryStudio installed. No other configuration is needed.

If you are using the Microsoft IIS web server, see ["Installing services on IIS"](#) in the ["Getting Started"](#) guide.

To manage remote access to your projects:

1. Click Find Project.
2. Select the folder in the Search Paths list where you want to view and modify the permissions.
3. select the information, as needed.

Field	Description
Allow Remote Access	Selected by default. De-select to deny remote access to the selected folder for editing FactoryStudio projects.
Allow Remote Run	Selected by default. De-select to deny remote access to the selected folder for running a FactoryStudio runtime.
Virtual Path	Enter to provide access to just the selected folder. Anyone accessing your computer remotely through FactoryStudio can see all folders that are configured for remote access and that do <i>not</i> have a Virtual Path.

4. Click **Back** to return to the main window.

Accessing Remote Projects

You can access and edit projects that are configured for remote access. Projects can be on any computer or server that you can access. If you subscribe to the cloud service, you can access projects configured on it as well. The Find Project function is not available when accessing a remote computer.

You can also upload a project to a remote computer.

To access a project remotely:

1. Click the Server tab. This tab lets you configure and access remote projects.
2. Do one of the following:

To access a project on a remote computer	To access a project on the cloud service
• Select the Remote option. • Enter the IP address of the computer where the project is located. • If configured, enter the Virtual Path of the folder (The person who created the project may have configured the virtual path)	• Select the Cloud option. • Enter your Account and Password.

3. Click Connect
4. If you want to upload a project, click Upload Project.
5. Click the Projects tab.

The list of projects available from the computer you accessed displays. The projects available must be in folders that are configured for remote access.

If you did not enter a virtual path, you see all projects in folders configured for remote access, but not projects in folders that have a virtual path configured. If you did enter a virtual path, you see all projects in the folders configured with the virtual path you entered.

6. Double-click the project you want to open.

Running Projects

You can run a project in any of the following ways:

- From the FactoryStudio welcome window and project list, right-click the project and select Run Project.
- When configuring the project, go to Run > Startup and click Run Startup.
- The project can be run automatically using the auto-startup settings on the Server tab.

For more information, see "Running the Application" in the chapter ["Run, Test and Publish Projects"](#).

Upgrading Projects

Projects retain information about the version of FactoryStudio that was used to create the project. Unless you upgrade the project to a newer version, the project always opens using the version it was created with.

If you now have a newer version of FactoryStudio, you can upgrade a project to use the newer version.

To upgrade a project:

1. Start FactoryStudio. The main page displays. Any existing projects display in the lower part of the page.
2. Select the project you want.
3. For any project that displays a ProductVersion that is older than your current version, right-click and select Upgrade Project.

If this option is not available, the project is already on the same version as the current version of FactoryStudio.

The system keeps the original project and adds the original version number to the file name, so you can still open and run it with the product version with which the project was developed. The system creates a new project with the original project name, importing all the configurations to the latest product release.