



## Data Sheet CODESYS Git

CODESYS Git enables the integrated use of the distributed version control system Git™ for all application objects.

CODESYS Git is part of the tool bundle CODESYS Professional Developer Edition.

### Product description

CODESYS Git seamlessly integrates the use of the distributed version control system Git™ into the CODESYS development environment. The functionality of Git is directly available in CODESYS. A local Git installation is not required.

Git™ is a software for distributed version control. Version control is a class of systems responsible for managing changes to documents, programs, and other information stored in files. It involves logging changes to one or a series of files over time so that a specific version can be reverted to later. In software development, version control systems are also used where a team of developers work together on the managed files.

The main tasks of a version control system are:

- Logging of changes: It can be traced at any time who made which changes and when.
- Restoring old statuses of individual files: Accidental changes can be undone at any time.
- Archiving the individual statuses of a project: All versions can be accessed at any time.
- Coordination of shared access to files by several developers
- Simultaneous development of several development branches of a project

Distributed version control does not use a central repository. Each developer working on the managed project has their own repository and can synchronize it with any other repository. Version history is also distributed. Changes can be tracked locally without having to connect to a server.

Further information on Git can be found at <https://git-scm.com/>.

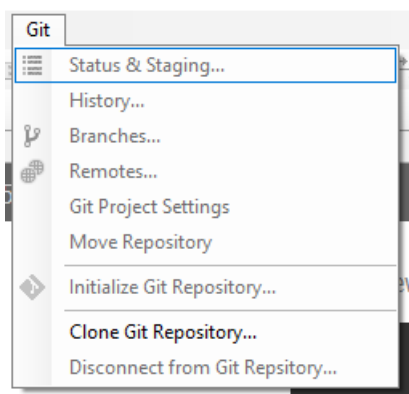
The project storage used by CODESYS is not suitable for use in a version control system. Therefore a special project storage was developed for CODESYS Git. The use of a text format (JSON) ensures the readability of the content of the stored files. In addition, there is a clear allocation between a CODESYS object within the CODESYS project and the storage location of the object's data within the CODESYS Git project storage.

Since CODESYS Git optimally supports ensuring the consistency of CODESYS projects as well as the correct handling of dependencies between CODESYS objects, editing of the stored files outside CODESYS Git should be avoided. This applies in particular to typical Git workflows such as branching and merging.

CODESYS Git supports the use of Git hosting services such as GitHub and GitLab for storing Git repositories. Due to the special CODESYS Git project storage, editing the data using the tools offered by some Git hosting services is only possible to a very limited extent.

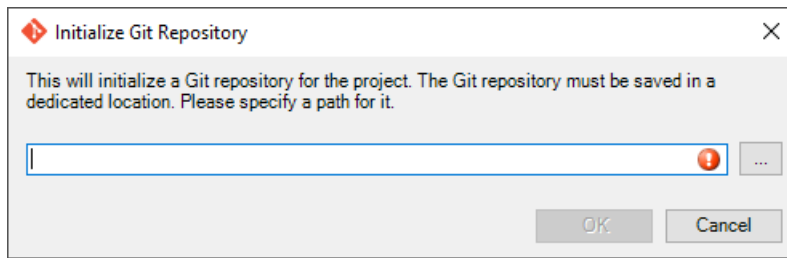
The functions of Git are available via the *Git* menu and in the respective views.

#### Menü Git

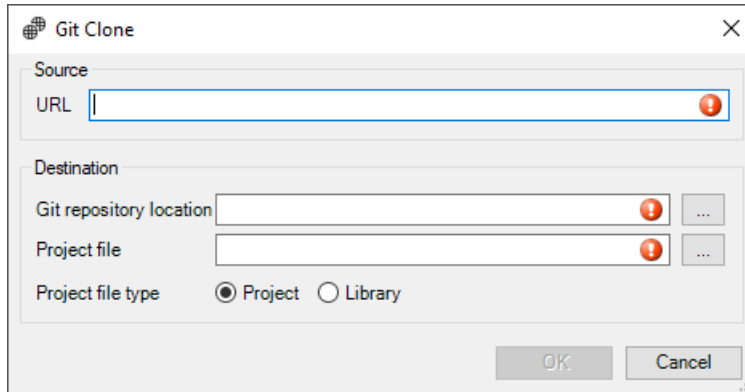


To manage a project in Git, it must be imported into Git or cloned from an existing Git repository.

#### Dialog for initialization of the Git repository

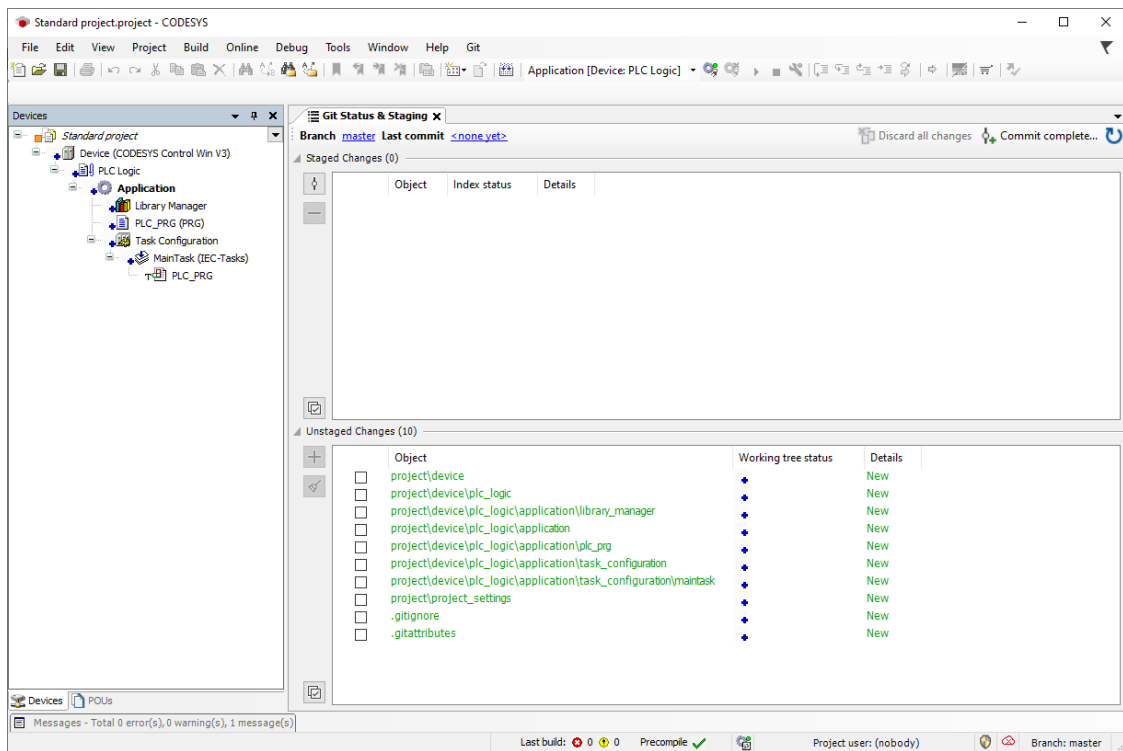


#### Dialog for cloning a Git repository



As soon as the project is running under Git version control, the views relevant to working with Git are available.

#### Status view



#### History view

Standard project.project - CODESYS

File Edit View Project Build Online Debug Tools Window Help Git

Application [Device: PLC Logic]

Devices

- Standard project
  - Device (CODESYS Control Win V3)
    - PLC Logic
      - Application
        - Library Manager
        - PLC\_PRG (PRG)
        - Task Configuration
          - MainTask (IEC-Tasks)
            - PLC\_PRG

Git Status & Staging History

Message	Author	Authored	SHA1
master Commit	Armin Kurz	17.06.2021 12:04:23	4951d0f

Commit Details

SHA1: 4951d0fc0a66c3e1eb12a8b4d40d8973f95c Commit

Author: Armin Kurz <a.kurz@codesys.com> 17.06.2021 12:04:23

Committer: Armin Kurz <a.kurz@codesys.com> 17.06.2021 12:04:23

Path	Object name	Object type	Kind of change
.gitattributes	.gitattributes	.gitattributes	Added
.gitignore	.gitignore	.gitignore	Added
project/device	Device	DeviceObject	Added
project/device/plc_logic	Plc Logic	PlcLogicObject	Added
project/device/plc_logic/application	Application	ApplicationObject	Added
project/device/plc_logic/application/library_manager	Library Manager	LibManObject	Added
project/device/plc_logic/application/plc_prg	PLC_PRG	POUObject	Added
project/device/plc_logic/application/task_configuration	Task Configuration	TaskConfigObject	Added
project/device/plc_logic/application/task_configuration/maintask	MainTask	TaskObject	Added
project/project_settings	Project Settings	WorkspaceObject	Added

Messages - Total 0 error(s), 0 warning(s), 1 message(s)

Last build: 0 0 0 Precompile ✓

Project user: (nobody) Branch: master

### Branch view

Standard project.project - CODESYS

File Edit View Project Build Online Debug Tools Window Help Git

Application [Device: PLC Logic]

Devices

- Standard project
  - Device (CODESYS Control Win V3)
    - PLC Logic
      - Application
        - Library Manager
        - PLC\_PRG (PRG)
        - Task Configuration
          - MainTask (IEC-Tasks)
            - PLC\_PRG

Git Status & Staging History Git Branches

Copy Delete Checkout Merge Upstream Set Clear Track branch Pull Push Filter branches Local (1) Remote (0)

Current	Remote	Tracking	Name	Canonical name	Remote	Upstream branch canonical name	Tracked branch name	Tracked branch canonical name
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	master	refs/heads/master				

Messages - Total 0 error(s), 0 warning(s), 1 message(s)

Last build: 0 0 0 Precompile ✓

Project user: (nobody) Branch: master

## General information

### Supplier:

CODESYS GmbH  
 Memminger Strasse 151  
 87439 Kempten  
 Germany

### Support:

<https://support.codesys.com>

This product includes a CODESYS Support Ticket, i.e. 1 hour of support of CODESYS. More details can be found in the following product that is also available in the CODESYS Store: [CODESYS Support Ticket](#).

### Item:

CODESYS Git

### Item number:

2101000015

### Sales / Source of supply:

CODESYS Store

<https://store.codesys.com>

### Included in delivery:

- Package consisting of the CODESYS Development System including license agreement and online help
- License key

## System requirements and restrictions

<b>Programming System</b>	CODESYS Development System V3.5.18.20 or higher
<b>Runtime System</b>	-
<b>Supported Platforms/ Devices</b>	-
<b>Additional Requirements</b>	Subscription of the CODESYS Professional Developer Edition  In order to enable collaboration in Git, it is recommended to use a Git server.  For information on how to work with Git or how to install the required software, please refer to the IT specialist in your company.
<b>Restrictions</b>	None
<b>Licensing</b>	see CODESYS Professional Developer Edition
<b>Required accessories</b>	Optional: CODESYS Key

### Detailed compatibility information

Version	Programming System Version
1.2.1.0	3.5.18.20 - most recent release
1.1.0.0	3.5.17.0 - most recent release
1.0.0.0	3.5.17.0 - most recent release

*Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact [sales@codesys.com](mailto:sales@codesys.com).*

*Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.*