

SW2024-05-2STEP

Converts SolidWorks 2024 SP05 native files (`.sldprt`, `.sldasm`) to STEP format using the SolidWorks COM API.

Requirements

Requirement	Version
Operating System	Windows
SolidWorks	2024 SP05
Python	>= 3.10 (dev/build only)

For End Users — Standalone Executable

No Python installation required.

1. Download `SW2024-05-2STEP.exe` from the releases page.
2. Double-click to launch the GUI.
3. Select your `.sldprt` or `.sldasm` file and click **Convert to STEP**.

For Developers

Setup

Run `setup.bat` once. It will:

- Install Python 3.11 automatically via `winget` if not already present.
- Create a virtual environment (`.venv`).
- Install all dependencies.

`setup.bat`

Build Standalone Executable

After setup, run `build.bat` to produce `dist\SW2024-05-2STEP.exe`:

`build.bat`

Create a Release

`release.bat` builds the `.exe`, tags the commit, and publishes a GitHub release with the executable attached — all in one step.

Requirements: - `setup.bat` has been run - GitHub CLI is installed and authenticated (`gh auth login`)

`release.bat`

You will be prompted for a version number (e.g. `1.0.0`).

Run in Dev Mode

```
.venv\Scripts\activate
```

```
:: Launch GUI
```

```
python -m src --gui
```

```
:: Convert via CLI
```

```
python -m src path\to\file.sldprt
```

```
python -m src path\to\file.sldprt -o C:\output\result.step
```

Dependencies

Package	Purpose
pywin32	SolidWorks COM API access
PyQt6	Graphical user interface
pyinstaller	Standalone .exe build (dev only)

Project Structure

SW2024-05-2STEP/	
setup.bat	Developer setup (Python + venv + deps)
build.bat	Build standalone .exe via PyInstaller
sw2step.spec	PyInstaller build configuration
pyproject.toml	Package metadata
requirements.txt	Runtime dependencies
requirements-dev.txt	Development dependencies (includes PyInstaller)
README.md	This file
doc.pdf	Generated documentation
src/	
__init__.py	
__main__.py	Entry point (CLI + GUI launcher)
converter.py	SolidWorks COM API conversion logic
gui.py	PyQt6 graphical interface

Notes

- SolidWorks must be **installed and licensed** on the machine.
- The converter attaches to a running SolidWorks instance if one is open, or starts a new one automatically.
- Supported input formats: `.sldprt` (part), `.sldasm` (assembly).
- Output is always a `.step` file (ISO 10303).
- The `dist/` and `build/` folders are excluded from version control.

Version History

Version	Date	Changes
0.3.0	2026-02-20	Add release.bat for one-step local GitHub release
0.2.0	2026-02-20	Add standalone .exe build via PyInstaller, replace install.py with setup.bat
0.1.0	2026-02-20	Initial release — CLI + GUI skeleton