

SmartUI User Manual

Rev: 3

31/3 2026

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1 Revisions

| Revision | Date | Responsible | Description |
|----------|------------|-------------|--|
| 1 | 23/05-2025 | JLA | SmartUI v2.0 guide |
| 2 | 28/11-2026 | JLA | Updated entire guide with new graphics, getting started section and added changelog |
| 3 | 31/03-2026 | JLA | Added section about converting message popups in existing sequences to SmartUI compatible embedded dialogs |

2 About SmartUI

SmartUI is a modern user interface designed for National Instruments' TestStand. It provides a streamlined experience for operators, technicians, and engineers working in automated test environments.

Built with usability and scalability in mind, SmartUI allows users to load, run, and monitor test sequences with minimal training. It supports custom configuration, real-time status updates with distinct visual cues, and easy integration with larger enterprise test systems.

Besides the application itself, SmartUI integrates seamlessly with toolkits for both LabVIEW and TestStand that allows the user to easily make their own custom dialog or alter their test sequences to show additional information in the interface. These toolkits are developed and maintained by GPower and can be downloaded for free from www.gpower.io/en.

It is also designed to work together with the larger GPower product suite including GPower's Smart Flow product, that will enhance the process flow in TestStand with embedded, custom dialogs and alternative workflow. To read more about how Smart Flow can enhance your SmartUI application, visit www.gpower.io/SmartUI

SmartUI is developed and maintained by GPower; Made for testers, by testers.

3 System Requirements

SmartUI and Smart Flow run on Windows and require TestStand 2024 (or newer) runtime engine.

To use GPower's SmartUI LabVIEW toolkit, LabVIEW 2024 or newer is required.

To use GPower's SmartUI TestStand toolkit, TestStand 2024 or newer is required.

To install the products NI package manager must be installed on the computer.

4 Installation

SmartUI, SmartUI LabVIEW toolkit, SmartUI TestStand toolkit and Smart Flow are all packaged as NI packages.

The packages can be downloaded from www.gpower.io and installed using NI package manager.

5 Licensing and Activation

SmartUI TS toolkit and SmartUI LV toolkit can be downloaded and used for free without the purchase of a license.

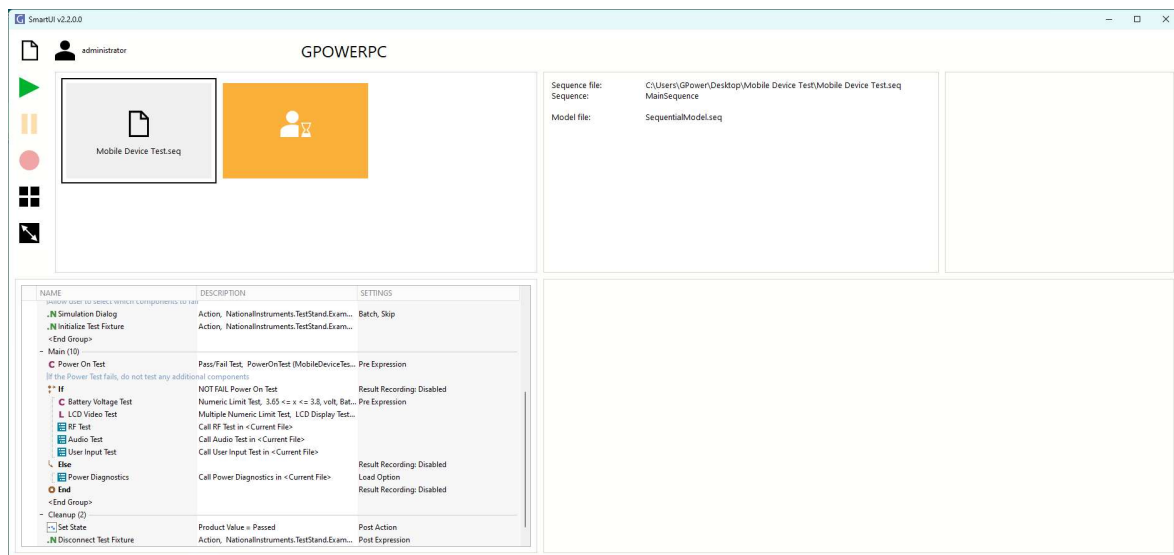
For queries regarding licensing of SmartUI and Smart Flow visit www.gpower.io/SmartUI.

SmartUI is available in a free trial period for 90 days, whereafter activation of the license is required.

After the trial expires, a dialog will prompt the user to enter an activation key provided by GPower.

6 Getting Started

Welcome to SmartUI! This section will guide you through the first steps to get the software up and running.



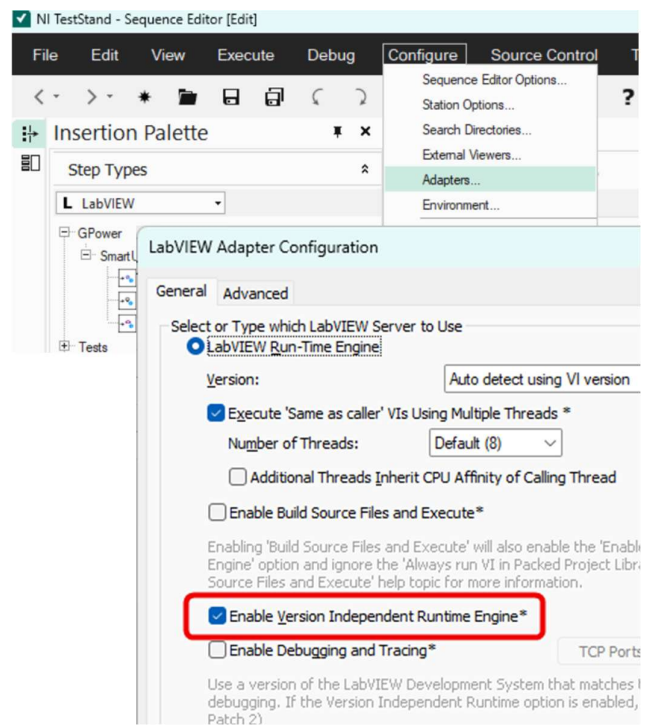
SmartUI is a user interface designed to execute TestStand test sequences, and following this guide it is expected that the sequence file already exists.

1. Install the Application

- Download the desired NI packages from www.gpower.io/SmartUI.
- Run the installer and follow the on-screen instructions.

2. Configure TestStand


- Open Adapter configuration
- Select LabVIEW adapter
- Enable the “Version Independent Runtime Engine” flag

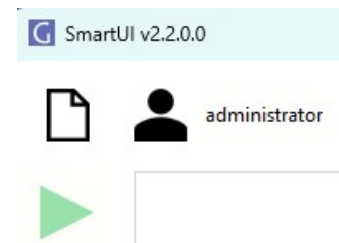



3. Activate Your License

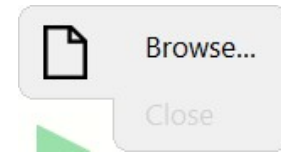
- On first launch, you’ll be prompted to activate your license.
- Enter the license key provided in your confirmation email.
- Click “Activate” to complete the process.

4. Starting the application

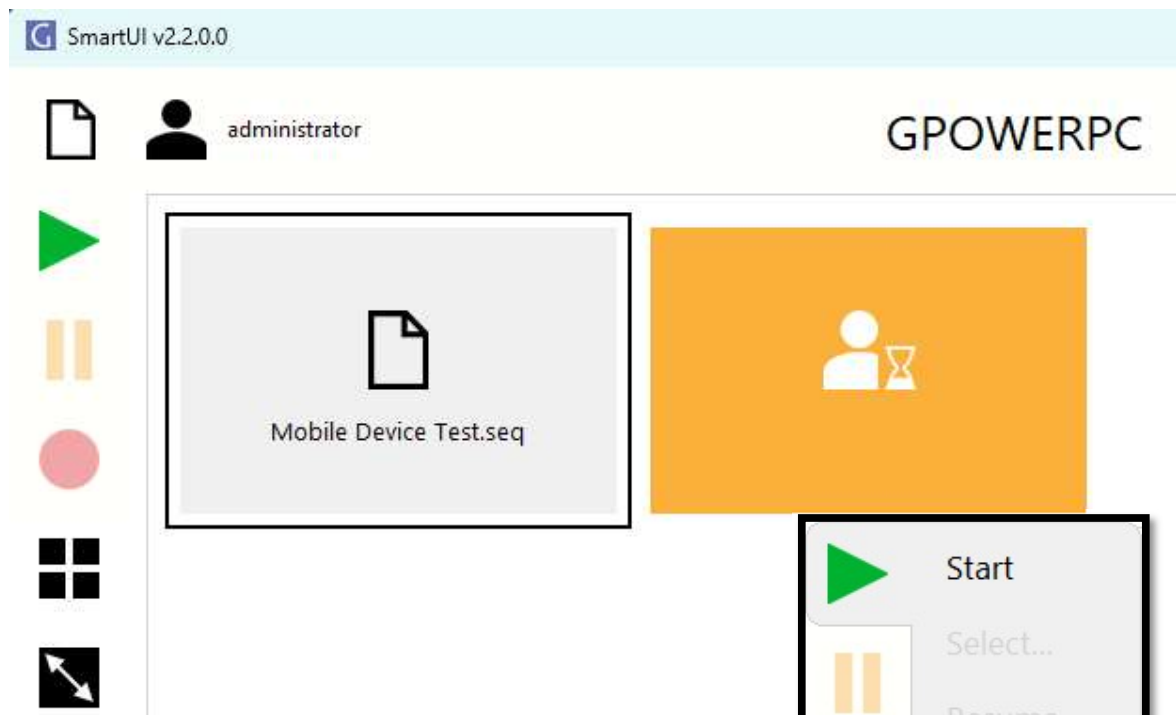
- Run “SmartUI v2” to launch the application
- Use the  button to switch operator.





- After clicking  → “Browse...”: Select the TestStand sequence file you wish to open.
- It is possible to have multiple sequence files open at the same time if required. The test sequences do not start executing automatically.



5. Running test sequences



- Select the sequence you want to run (highlighted in black) and press the start button,  → “Start”.
- This will spawn an execution of the selected test sequence
- During execution, the state of the execution will be relayed to the operator with visual cues on each of the started executions.
- Switching between execution processes will automatically update the relevant information related to the currently selected execution.
- If an execution needs to be stopped, use the button in the side panel: The  button can be used to “Abort” or “Terminate” current execution.

- When the sequence is finished executing, a test report will be shown in the test report field of the UI.
- The layout of the interface can be changed using the buttons on the side panel:
 - Toggle between large and small selection cards.
 - Toggle between different UI layouts.

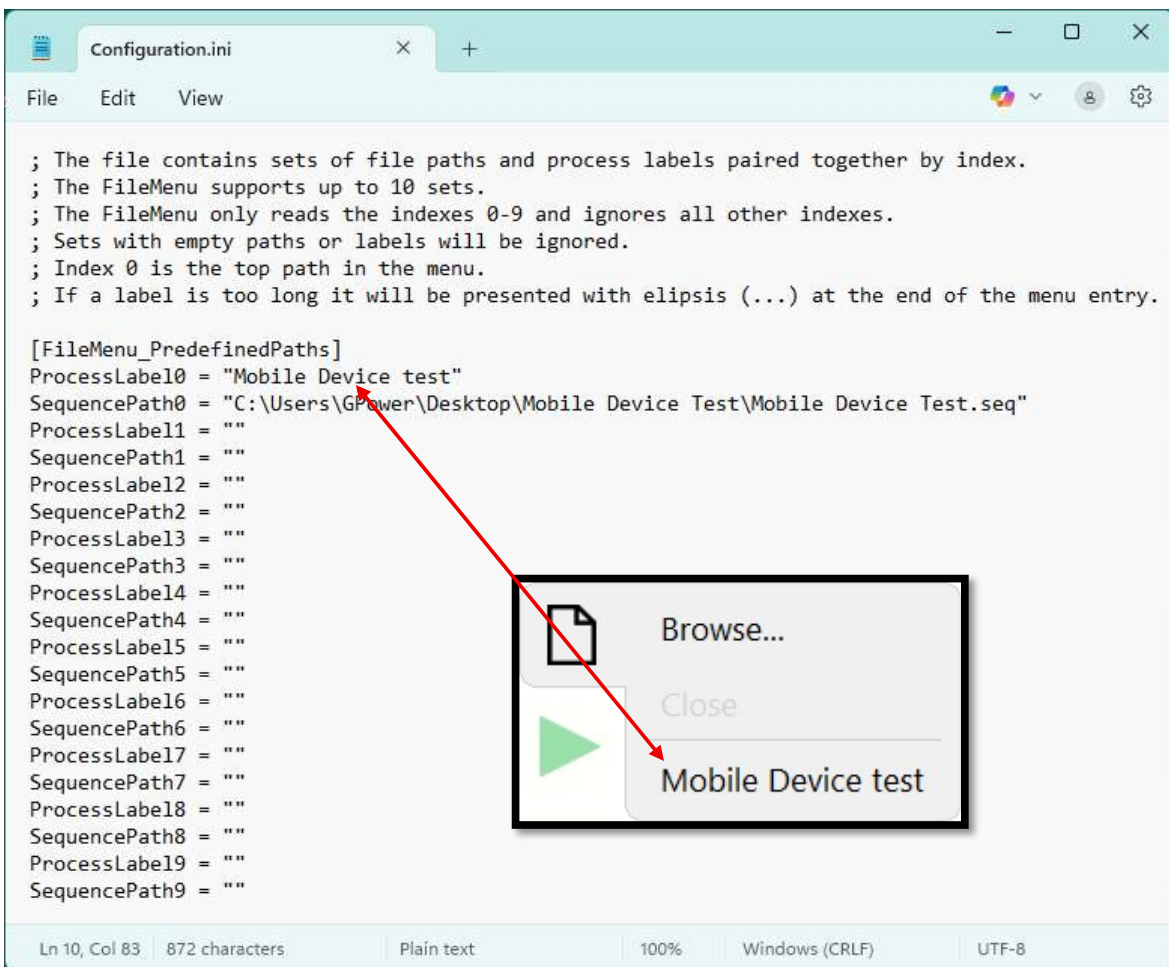
7 Configuration and customization

7.1 Predefined sequence list

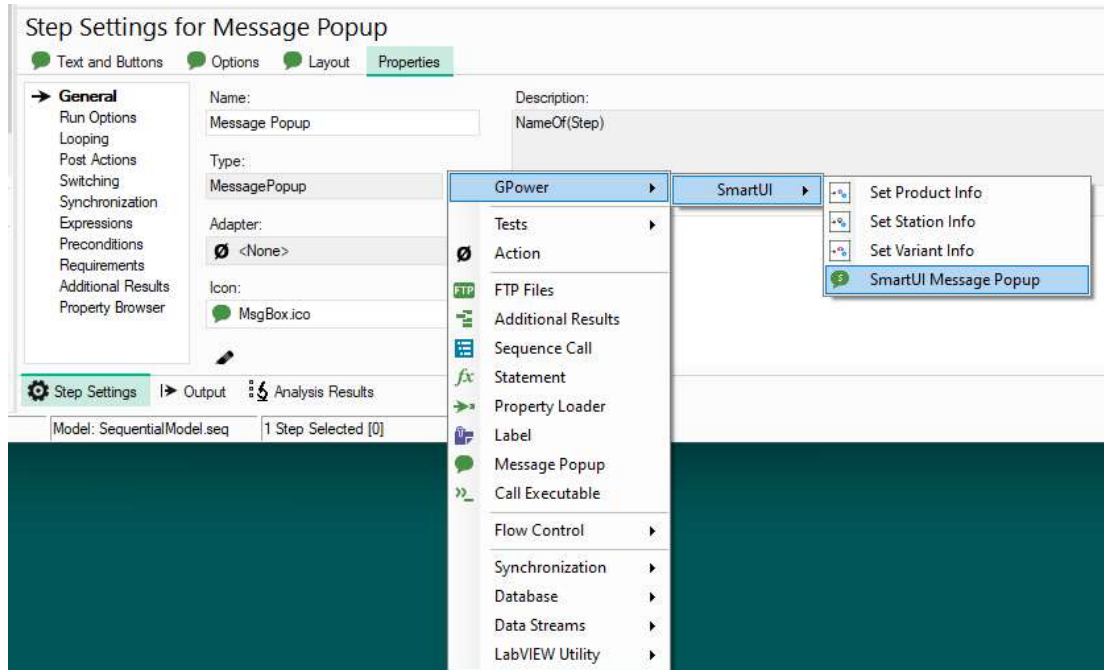
It is possible to predefine test sequences in the SmartUI configuration.ini file for faster access and reduced operator errors.

This can be done by:

- 1) Locate the SmartUI Configuration.ini in “C:\Users\Public\Documents”



Settings for Message Popup” -> “Properties” pane. Under the “General” option, change the “Type” from “MessagePopup” to “GPower -> SmartUI -> SmartUI Message Popup”.



To ensure visual continuity and proper embedded functionality in the interface, only certain settings in the Message Popup are active in SmartUI Message Popup. A list of the active parameters can be seen in Table 1. All the data is retained, and the user can therefore easily revert to a standard TestStand Message Popup, if required, without loss of information by following the same steps and changing the type back to “Message Popup”. If SmartUI is not installed, the SmartUI Message Popup will open in a free window like a regular TestStand Message Popup.

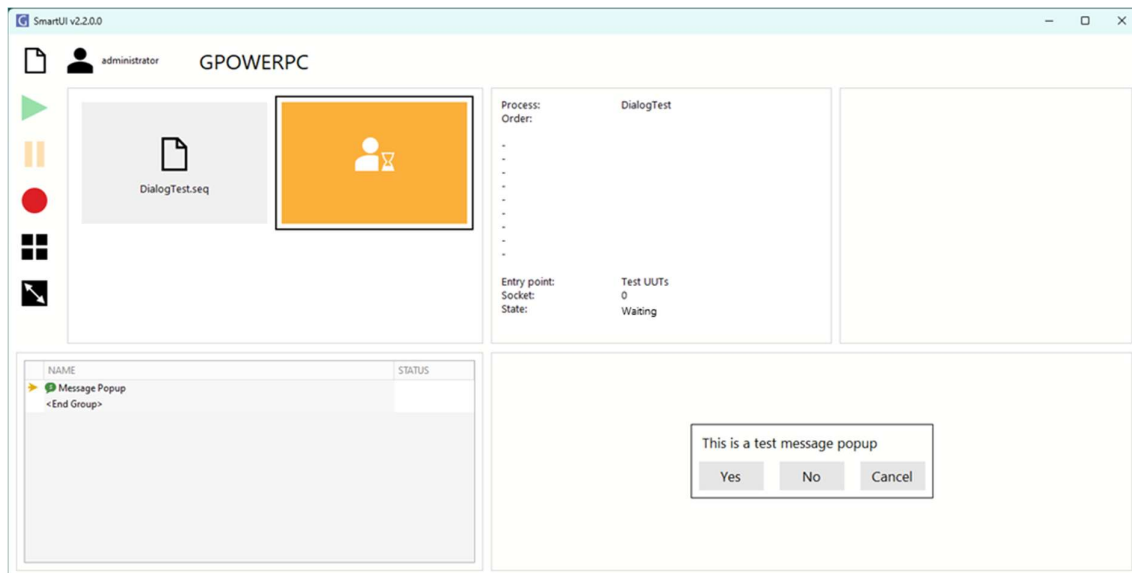
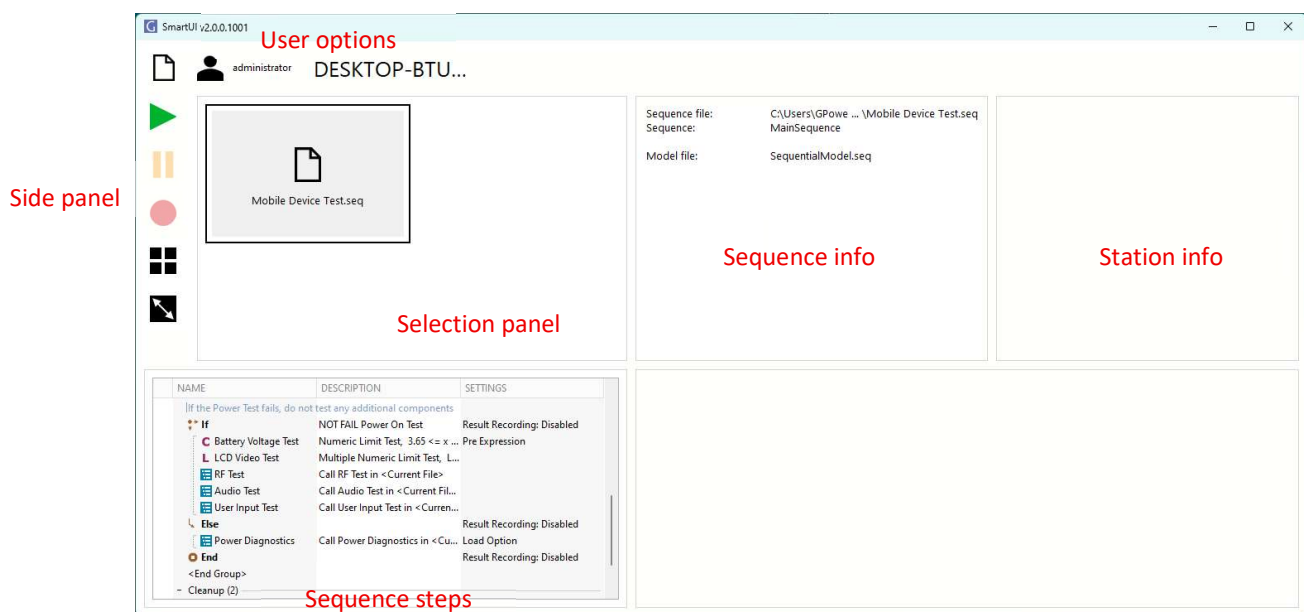


Table 1 Active dialog parameter comparison

| | TestStand Message Popup | SmartUI Message Popup |
|---|-------------------------|-----------------------|
| Update visual cues and states in SmartUI | ✗ | ✓ |
| Embedded in SmartUI | ✗ | ✓ |
| Custom button and text font | ✓ | ✗ |
| Support up to 6 dialog buttons | ✓ | ✓ |
| Custom title and message expression | ✓ | ✓ |
| Enable response text box | ✓ | ✓ |
| Display image or web page | ✓ | ✓ |
| Show Image or Web file from data embedded in step | ✓ | ✗ |
| Button location Top or Bottom | ✓ | ✓ |
| Modal or floating dialog options | ✓ | ✗ |

8 User Interface Overview



9 SmartUI Changelog

v2.0

Complete overhaul of interface including

- New graphics
- Better workflow
- Updated visual cues

v2.1

Added customization of interface with predefine test sequences defined in .ini file

v2.2

Updated SmartUI process flow to allow handling of test sequences without process model.

10 Uninstallation

To uninstall SmartUI or any of the affiliated products, open NI Package Manager and select “GPower SmartUI v2”, “TS Smart Flow v1” or any other product under the “Installed” pane. Then press “Remove”.

11 Support and Contact

For more support, feedback or comments contact Jeppe Langeland, SmartUI Product owner, jla@gpower.io