

Parallel Firmwaring Tool

User Manual

Contents

1. Introduction.....	3
1.1. Definitions and Acronyms	3
1.2. Overview.....	3
1.3. Scope.....	3
2. Palettes	3
3. Example	4
4. System Requirements.....	5
5. Support Information.....	5

1. Introduction

1.1. Definitions and Acronyms

SOM – System on Module (NI sbRIO-9651)

1.2. Overview

The Parallel Firmwaring Tool solves the problem of parallel imaging of National Instruments Real-Time controllers both on VxWorks and NI Linux-RT Operating systems.

Parallel firmwaring means that the duration of process of applying firmware to multiple devices will mainly depend on the network speed and firmware size and minimally depend on the number of controllers.

1.3. Scope

This toolkit is meant to be used in LabVIEW development system for parallel imaging National Instruments' Real-Time Controllers.

The toolkit is compatible with both for VxWorks and NI Linux-RT controllers.

The toolkit has been tested on the following hardware:

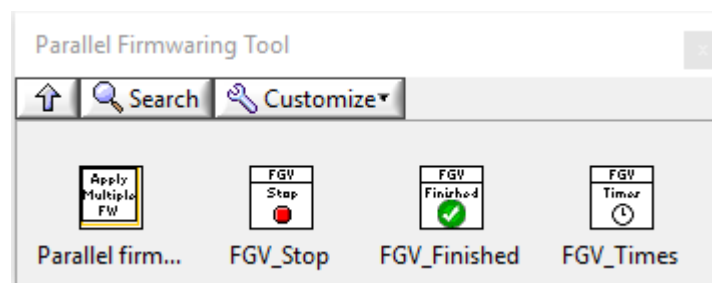
- NI sbRIO-9642
- NI sbRIO-9651-SOM

The toolkit uses IP network for communicating with the hardware, so it is required to have all controllers in the same IP subnetwork.

When specifying the controllers for firmwaring make sure that all of them are the same model and the firmware file is compatible for them because the same firmware will be applied for all selected controllers.

2. Palettes

The palettes of the toolkit contain the main processing VI and the FGVs for its monitoring.



1. Toolkit palette

3. Example

The Example VI shows use case of the toolkit functionalities. It starts with instructions for the user on the front panel.

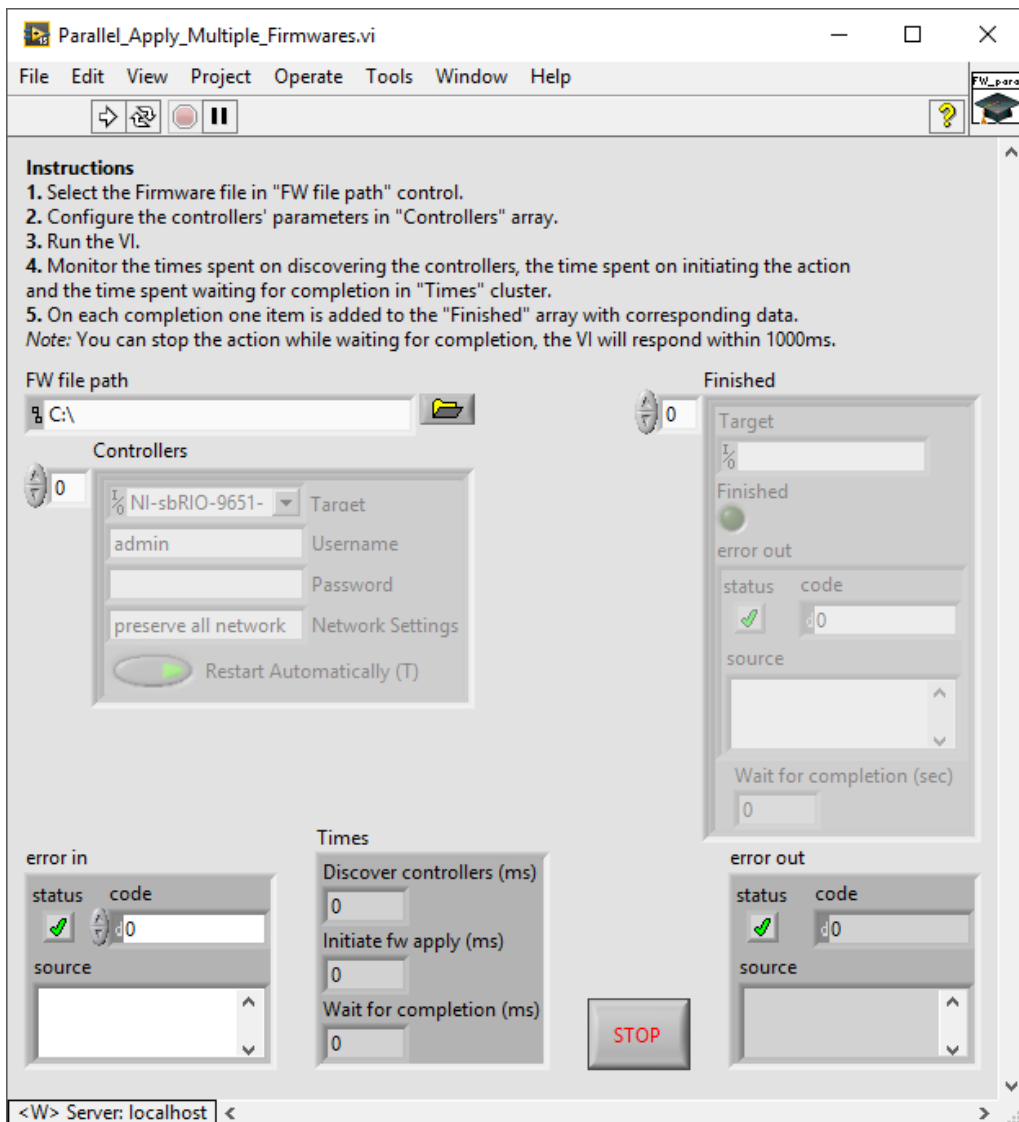
To run the example VI user should have target(s) to apply test firmware.

Running the example VI would take several minutes.

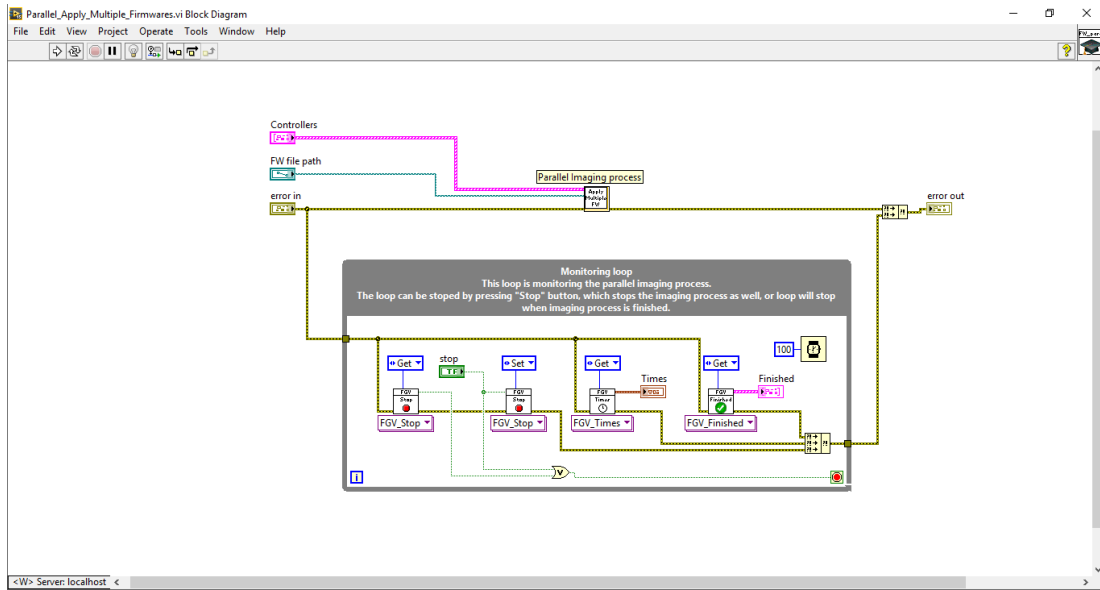
The block diagram of the example VI has two parts: the toolkit processing VI and the Monitoring loop.

The “Stop” button stops both the processing VI and the Monitoring loop if the initiating processes has been already finished.

In the same directory where example VI is, “Example_FW.rar” is located. You can specify the file path to run the example for NI sbRIO-9642 target.



2. Example Front Panel



3. Example Block Diagram

4. System Requirements

- LabVIEW Base, Full or Professional Development system ≥ 2015
- LabVIEW Real-Time Module

5. Support Information

For technical support, please, contact Ovak Technologies at:

Phone: +1.281.506.0020

Email: support@ovaktechnologies.com

Web: www.ovaktechnologies.com