

Guiliani on the M13-RZA2M-EK: Quickstart Guide – “GuilianiDemo” application

Product:	Guiliani-SDK for M13-RZA2M-EK
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1 Introduction

The “GuilianiDemo” presents some of the capabilities of the Guiliani HMI framework running on the M13-RZA2M-EK. It uses the TES eGML software rendering engine.

Additionally the efficient way of working for HMI application development by using the Guiliani Streaming Editor (GSE) is introduced. The user may make some first changes to the “GuilianiDemo”, simulate the changes on PC and download the changes to the RZ/A2M board – all without the need of compiling and linking a new executable.

This quick guide runs you through this process within minutes!

- Preparing your PC, i.e. installing and configuring the required tool chain
- Installing the “GuilianiDemo” demo on the M13-RZA2M-EK
- Using the Guiliani Editor (GSE) to simulate the “GuilianiDemo” on PC and to make your own first changes to the “GuilianiDemo”.
- Exporting your changes and loading them to the M13-RZA2M-EK
- Compiling your own GSE and StreamRuntime

2 System Preparation

- The eval kit for which the software and this manual are developed is M13-RZA2M-EK:
<https://m13design.fr/products/M13-RZA2M-EK.html>
- JLink drivers need to be installed (at least version 7.20 is needed!):
<http://www.segger.com/jlink-software.html>

3 Load pre-built example project



Fig. 1 M13-RZA2M-EK board

- Connect the board to the computer via CN6 USB-Connector. This will also power the board.
- Execute the file “FlashGuilianiDemo.bat”, located in the folder “FlashTools”. This batch file will install the demo: The Guiliani Runtime Engine, application and the resources (e.g. the application behavior, pictures, textures, fonts...). Select the three options one by one (Fig. 2). The choice order is irrelevant, but we recommend the given sequence from 1 to 3.

```

C:\WINDOWS\system32\cmd.exe
Your JLINK Version is 68004
Minimum JLINK Version is 60000

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*****
Please select one of the following options:

1 - Flash Bootloader
2 - Flash Guiliani Application
3 - Flash Guiliani Resources

x - Exit

Your choice:
    
```

Fig. 2 Batch Script for Flashing Guiliani Demo

- Wait until the flash process has finished. This will take several minutes.
- Now you can start playing with the demo on the board

4 Edit example project on the computer

Please read the “GuilianiDemo Manual” (found in the documentation folder) for a short description on the contents of the demo and how to modify and export the project.

5 Load edited example project onto the board

When you have successfully exported the changed GuilianiDemo you can copy the file Resources.dat to the board and start the program as described previously.

(*) If you want to export the project to a different folder, you will have to modify the *FlashGuilianiDemo.bat* file (Fig. 7). Please substitute the text “*..\Export\RZA2M\Resources.dat*” with the required path, where the resources will be exported.

Note: The file which will be flashed is “Resources.bin” which is a copy from your “Resources.dat”. The script will automatically copy your file and rename the new one.

```
137 :RZA2M
138 if not exist "..\Export\RZA2M\Resources.dat" goto :errorNoResourceFile_RZA2M
139 copy ..\Export\RZA2M\Resources.dat ..\Export\RZA2M\Resources.bin >nul
140 echo.
141 pause
142 cd JLink
143 cls
144 "%BASE%\JLink.exe" -if JTAG -speed 12000 -device R7S721031 -jtagconf -1,-1 -CommanderScript FlashResources_RZA2M.Command
145 pause
146 cd ..
147 goto :loop
```

Fig. 3 FlashGuilianiDemo.bat

You will also need to change J-Link command files present under “*FlashTools\JLink*”. To modify the path for the resources of RZA2M platform, open *FlashResources_RZA2M.command* file (Fig. 8) and change the path of loadbin and verifybin command.

```
4 exec .device .R7S921053
5 loadbin ..\..\Export\RZA2M\Resources.bin,0x19000000
6 verifybin ..\..\Export\RZA2M\Resources.bin,0x19000000
7
```

Fig. 4 Command File for Flashing Resources for RZA2M platform

6 Compiling your own GSE and StreamRuntime

If you like to extend your GSE project with your own functionality, you have to re-compile GSE and StreamRuntime. For this you have to take CMake as the build environment. Please refer to chapter “3.Preparation and compilation” inside the manual “Custom Extensions.pdf” which you will find in the documentation folder.