

# Flash Bootloader

## Project Specific Information

CBD1701035

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Status	Released

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## 1 Introduction

This document contains project specific information, which cannot be found in any other documentation, like special information to setup the project (if necessary), hints for Demos, restrictions and limitations, common pitfalls and justifications for observed compiler warning and changed project details (i.e. compiler options).

This document can restrict descriptions in other documents and contain latest warnings and hints.

This delivery contains a FBL\_Vector\_SLP3 specific bootloader that complies with the OEM flashing specification and flashing sequence.



### Caution

We have configured the software and programs in accordance with your specifications in the questionnaire. Whereas the programs support other configurations than the one specified in your questionnaire, Vector's release of the programs delivered to your company is expressly restricted to the configuration you have specified in the questionnaire.

## 2 Software Tools

The following Vector tools are included in your Flash Bootloader package.

Program	Description
GENy	Code generation tool which auto generates parameter files for the Flash Bootloader based on customer input.
vFlash	Flash tool which is capable of downloading application as well as calibration data to an ECU running the Flash Bootloader. The tool itself is not a standard part of the delivery and must be purchased separately. The delivery comes with an OEM specific template to be used with the vFlash tool.
Hexview	Viewer and editor of container files. May be used to edit & create required containers manually. A script solution that generates the required header formats automatically will be provided.

Table 2-1 Software tools needed to configure and run the bootloader.

### 3 Documentation

The following documentation is included in this delivery:

**Note**

Documentation concerning the Flash Bootloader can be found in the **Doc** folder of your delivery.

File	Description
DeliveryDescription_CBD1701035.html	Delivery specific information
IssueReport_CBD1701035.pdf	Known issues at the time of delivery.
Readme_CBD1701035.pdf	This document.
TestReport_FBL_Vector_SLP3.pdf	The completed test report.
UserManual_FlashBootloader.pdf	Getting started with the Flash Bootloader.
TechnicalReference_FBL_RH850.pdf	Hardware specific Flash Bootloader reference guide.
TechnicalReference_FBL_Vector_SLP3.pdf	OEM specific Flash Bootloader reference guide.
TechnicalReference_NvWrapper.pdf	Reference guide for the Nonvolatile memory handler

Table 3-1 Documentation List

## 4 Delivery Log

Delivery Number	Date	Details / Updates
D00	2018/3/27	Initial delivery

## 5 Build

### 5.1 Compiler and Linker Options

The Compiler and Linker Options used in this Bootloader can be found in [DeliveryDescription\\_CBD1701035.html](#).

## 6 Bootloader Setup

### 6.1 GENy Configuration

When creating your own GENy configuration please use the following settings.

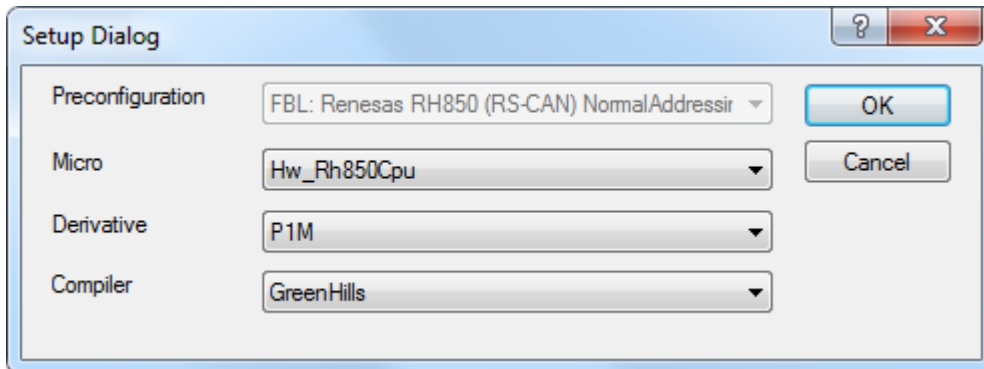


Figure 6-1 GENy Configuration

#### 6.1.1 GENy User Configuration File

A user configuration file is required to properly setup certain parts of the bootloader.

The following configurations are required for configuring the bootloader.

Required Macro	Definition
FBL_ENABLE_VECTOR_HW	Enable development board support

Table 6-1 User Config File Macros



#### Note

An example user configuration file is included with the bootloader demo (.\\Demo\\DemoFbl\\Config\\user.cfg)



## 7 Demonstration Project



### Caution

The demo projects were setup on a local ECU. The configurations as well as the code in the user callback functions are adapted to handle the local setups. Please check configuration and user callbacks carefully before working with the demo projects.

The files from \_Template folder do not contain the hardware initialization routines. Please refer to the Demo project to get the bootloader running.

### 7.1 Build Demonstration Bootloader/ Application

This delivery comes with a demo for the bootloader and a flashable application. The demo application is built upon an adapted demo bootloader. Only the files which contain necessary changes to support the interaction with the bootloader are included (jump from application into bootloader and reset positive response from application after downloading process).

The demo comes along with a make support. This system can be used to compile the demo with just a few modifications on your computer.

Please follow these steps to recompile the demonstration projects:

- ▶ Adapt the compiler path. This is done in the file "Demo/DemoFbl/Appl/Makefile":  
`COMPILER_BASE = <base folder of your compiler-installation>`



### Note

The compiler path should not have any spaces. If your compiler path is installed in a directory that includes spaces, the entire path must be enclosed in quotes.

- ▶ Run "m.bat". First, a dependency list is generated. If this was successful, the compile and link process is started.
- ▶ Try "m help" to see a list of all available options of the delivered Make Support.

### 7.2 Memory Map

Please reference the linker file provided in the Demo/DemoFbl/Appl directory for an example.



### Note

Demo/DemoFbl/Appl/DemoFbl.ld

## 8 Known Issues

See IssueReport\_CBD1701035.pdf.

## 9 Contact

Any questions concerning the Flash Bootloader package should be sent to the following email address:

[support@vector.com](mailto:support@vector.com)

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