**PROJECTNAME**

**Build and Installation Instructions**

**Revision X1**

Change Record

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| **Rev.** | **Date** | **Description of Change** |
| X1 | XX/XX/XXXX | Initial Draft |

1. Purpose

This document describes the method for building the PROJECTNAME software, Document # XXXXX, from source code, and the method for installing that compiled source code into the final media, XXXXX.

1. Scope

This document is intended as reference for any software engineer working on the PROJECTNAME project software development, or for future maintenance of the firmware.

1. Related Documentation
   1. Traceability Matrix
   2. PROJECTNAME Design Documents
2. Overview

The PROJECTNAME firmware is compiled using the DiCon standard Keil IDE, which is described in detail in this document. The method for installation onto the hardware is via the KEIL IDE and st-link debugger, also described in the document.

1. Body
   1. Source Code Compilation

The Source code is stored as document number # XXXXX, and shall be obtainable from document control. It shall also be available on the DiCon Internal server from the git repository located in the NPD folder. The source code folder shall contain a README file, which contains the directory structure and files necessary to compile the source code. The README should also include the contents of the Visual Studio about screen, using the “Copy Info” button, to ensure that future compilations are performed with the same components. The folder shall contain a .soln, to load the project into the Visual Studio. From Visual Studio, the Build>Build Solution will create the necessary compiled code. The Visual Studio settings are saved with the .soln file, so this file is very important to ensure the correct compile settings. The final compiled code shall be of the form .exe file, with the name and location indicated in the README file. The README shall contain the result of the SHA256 checksum on the compiled code, for verification of future builds from the source code. The checksum can be created using the “certutil -hashfile <filename> SHA256” from the visual studio developer command prompt. The README shall contain the Software Baseline revision number, as well as the most recent Configuration Status Report, so that the requirements informing the source code design can be determined.

* 1. Compiled Code Loading

The compiled code .exe file shall be transferred to the destination computer, and can be executed without installation.

* 1. Installation verification

Installation verification is the same as file transfer verification. Current file transfer protocols are robust and do not need external error checking. If external error checking is desired, the checksums can be matched.