
Execute Code on SRAM

2024.01.05

Introduction

This document introduces how to execute code on MCU embedded SRAM by an UART communication project example with KEIL MDK toolchain for megawin MG32-Series devices.

User needs to plan the C code files' location or functions' location. And user must assign these files or functions to SRAM or Flash memory space on KEIL IDE.

Apply To

MG32F02A128/U128/A064/U064/A032/V032.

Method

There are two methods. One is directly to put one .C file or some .C files to separated SRAM or Flash memory space. Two is to put separated .C Functions to separated SRAM or Flash memory space.

1. C Source Files

1. Reference Figure 1, Set Memory configuration, Figure 2.
2. Assign .c file to designated memory space, Figure 3 to 6.

Figure 1. Flash Memory Address Mapping with Normal.

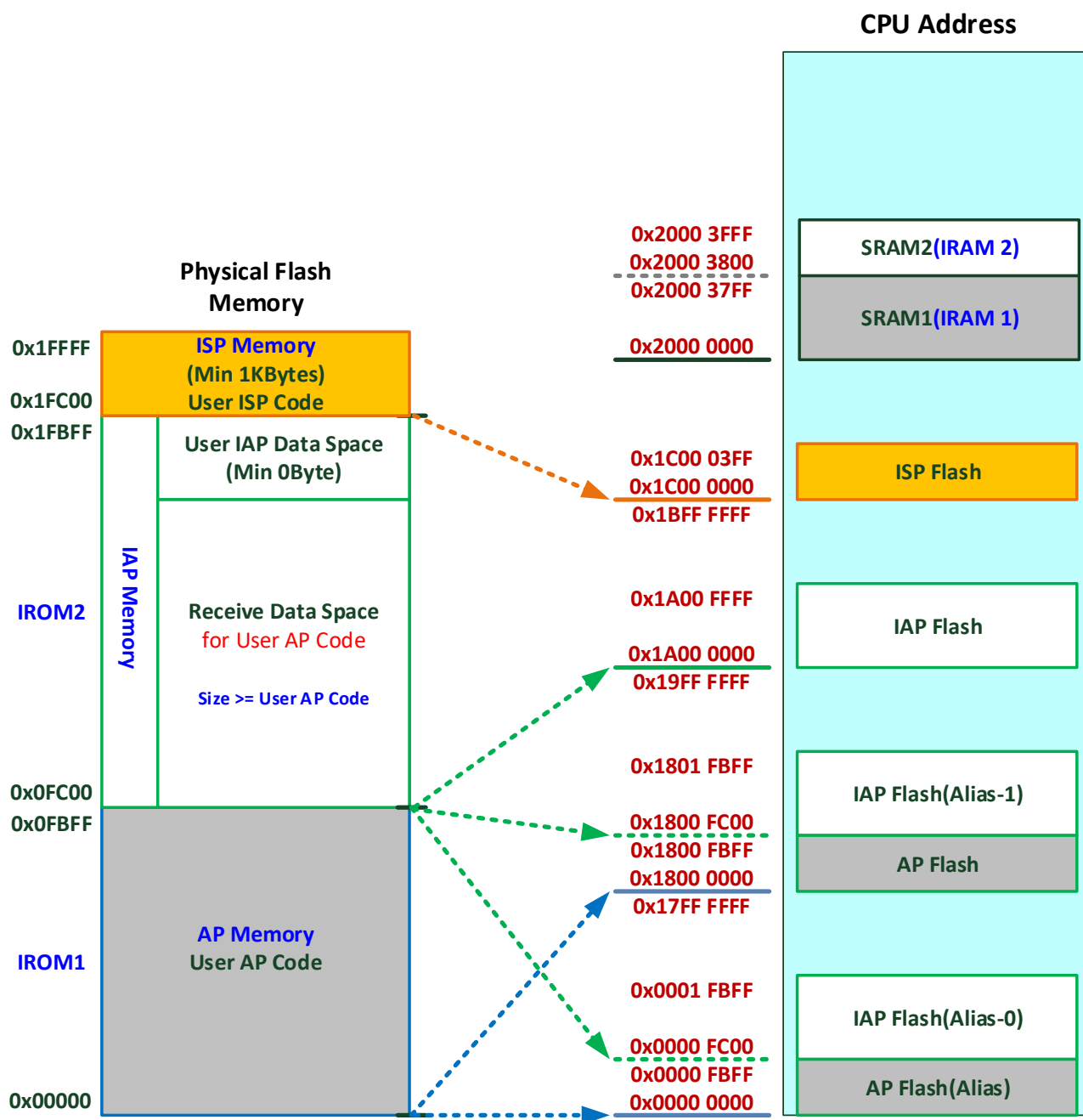


Figure 2. Keil MDK Memory Configuration-1.

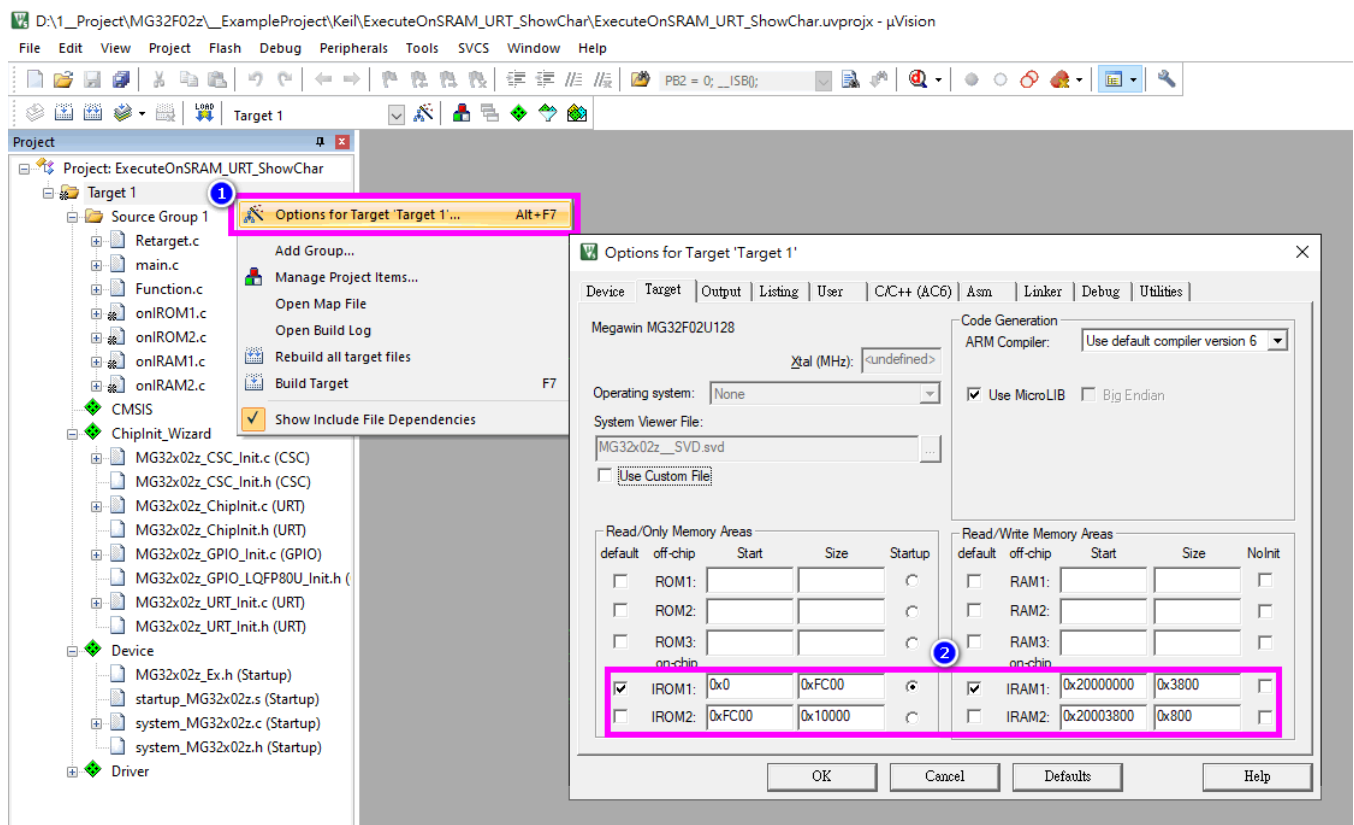


Figure 3. Keil MDK Configuration for onIROM1.c File to IROM1.

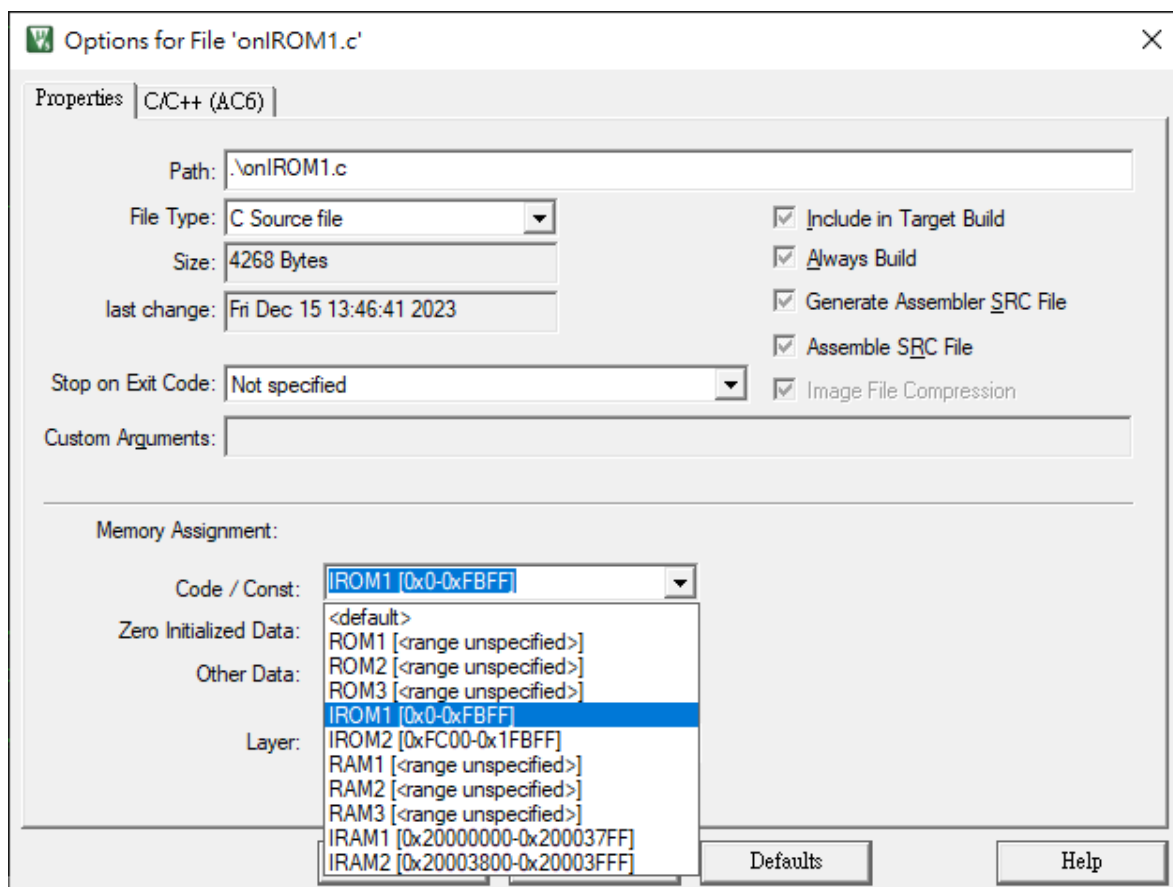


Figure 4. Keil MDK Configuration for onIROM2.c File to IROM2.

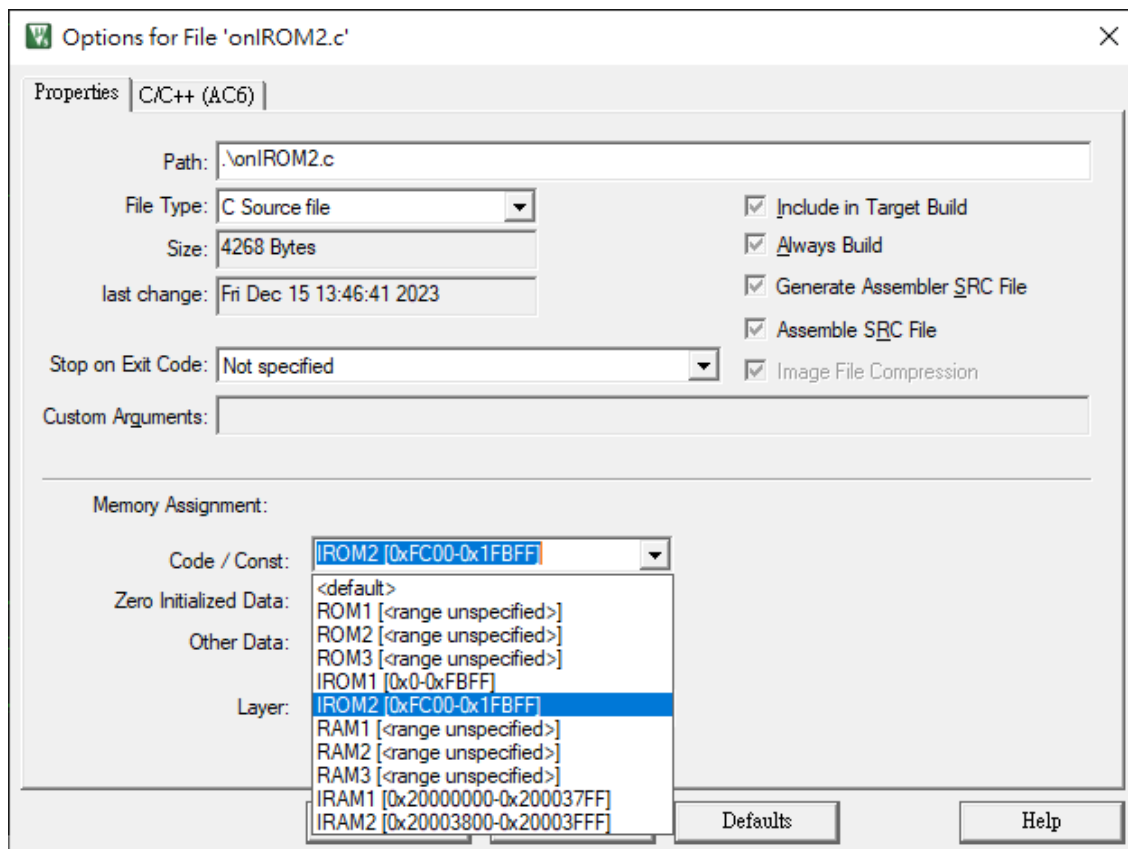


Figure 5. Keil MDK Configuration for onIRAM1.c File to IRAM1.

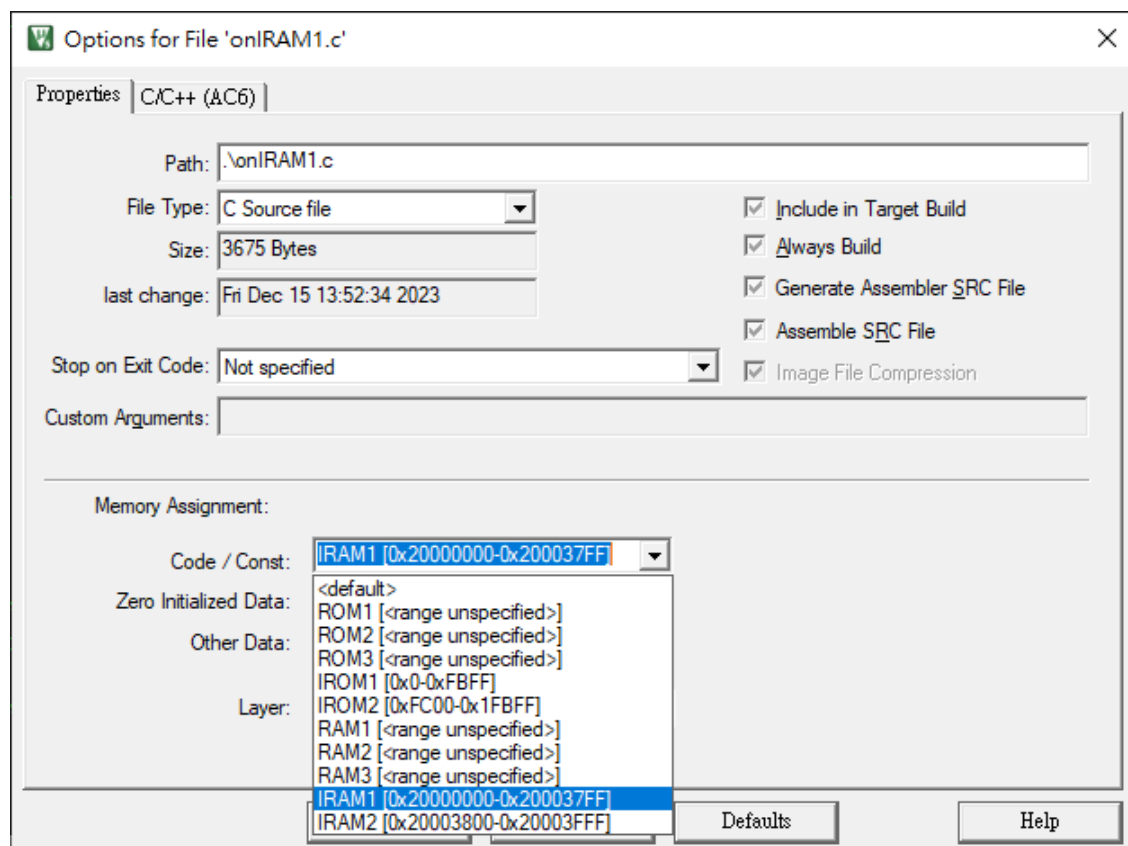
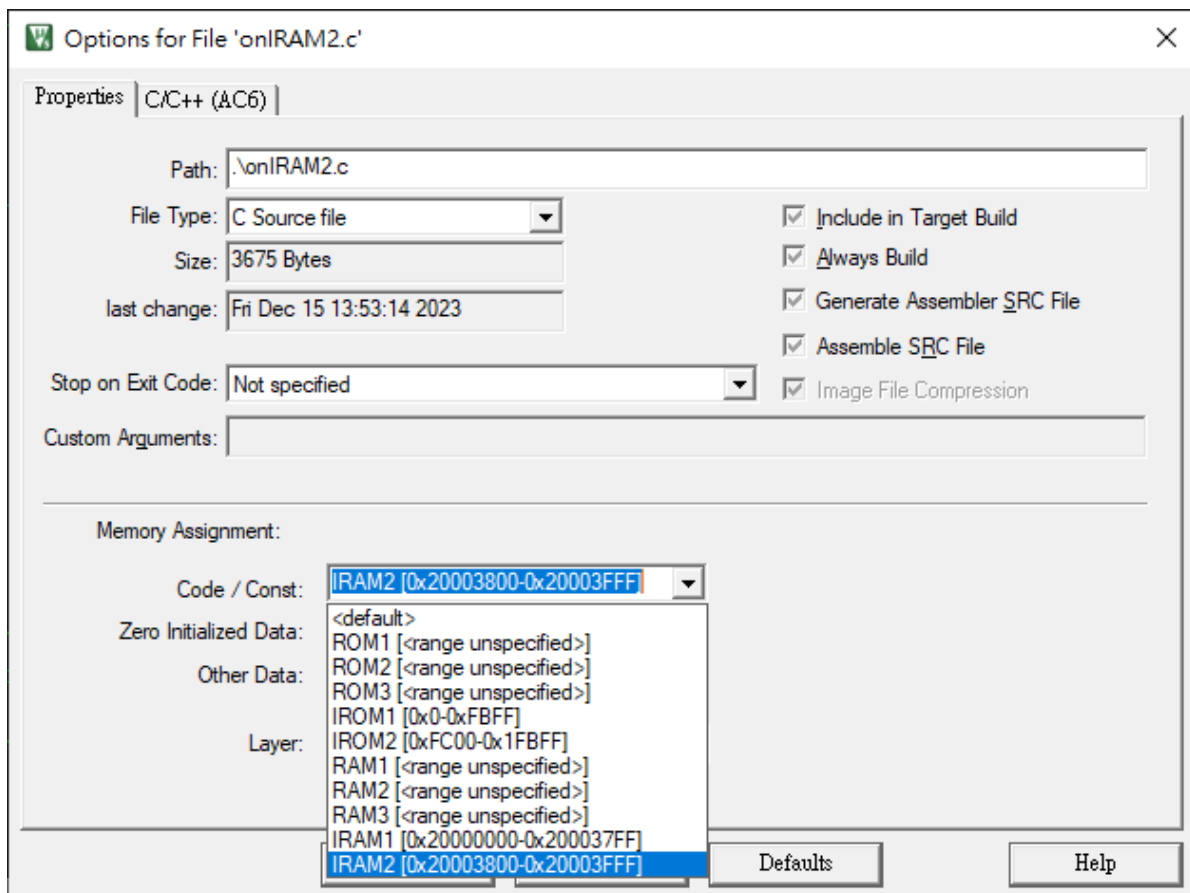


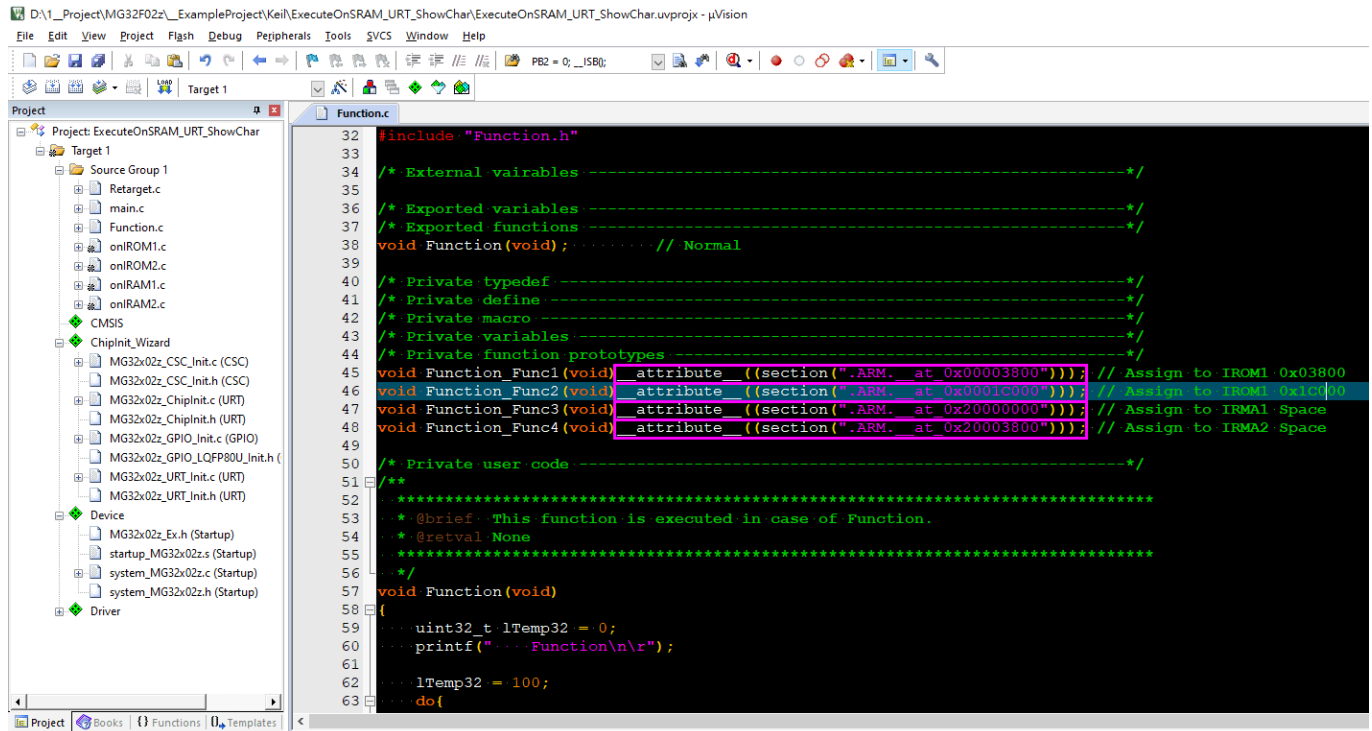
Figure 6. Keil MDK Configuration for onIRAM2.c File to IRAM2.



2. C Functions

1. Reference Figure 1, Set Memory configuration, Figure 2.
2. Assign .c file to designated memory space, Figure 7.

Figure 7. Function assign to designated address.(for Keil V6 Compiler)



Keyword : `__attribute__((section(\".ARM.__at_Address\")))`

Note : Not support .c source file configuration to memory space.

Appendix

1. Sample project : SampleProject_ExecuteOnSRAM_URT_ShowChar.zip

Revision History

| Revision V1.00 (2024_0105) | | Chapter |
|----------------------------|-----------------|---------|
| 1 | Initial version | |