



GD32F4xx CPU Support Package Guide

Version: 4.0



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GD32F4xx Support Package

This guide describes the following features of the GD32F4xx CPU support package:

- [How to create GD32F4xx projects](#)
- [How to open GD32F4xx sample projects](#)
- [GD32F4xx specific project properties](#)
- [GD32F4xx specific project templates](#)
- [Supported GD32F4xx devices](#)

Creating GD32F4xx Projects

Creating an GD32F4xx C/C++ executable project

To create a new minimal C/C++ executable project:

- Select the **File > New > New Project** menu item.
- Select the **A C/C++ executable for GigaDevice GD32F4xx** project template.
- Set the required project name and location directory.
- Click **Next**.
- If required, change any of the default project settings.
- Click **Finish** to create the project.

Creating an GD32F4xx library project

To create a new library project:

- Select the **File > New > New Project** menu item.
- Select the **A library for GigaDevice GD32F4xx** project template.
- Set the required project name and location directory.
- Click **Next**.
- If required, change any of the default project settings.
- Click **Finish** to create the project.

Creating an GD32F4xx externally built executable project

To create a new project that will allow you to debug an existing externally built executable file:

- Select the **File > New > New Project** menu item.
- Select the **An externally built executable for GigaDevice GD32F4xx** project template.
- Set the required project name and location directory.
- Click **Next**.
- Set the **Load File** project property to point to the executable file you want to download and debug.
- If required, change any of the other default project settings.
- Click **Finish** to create the project.

Creating an GD32F4xx CrossWorks Tasking Library executable project

To create a new C/C++ executable project configured to use the CrossWorks Tasking Library:

- Select the **File > New > New Project** menu item.
- Select the **A CrossWorks Tasking Library executable for GigaDevice GD32F4xx** project template.
- Set the required project name and location directory.
- Click **Next**.

If required, change any of the other default project settings.
Click **Finish** to create the project.

Creating an GD32F4xx assembly code only executable project

Please note, this template does not add any C/C++ startup code or libraries and is therefore not suitable for creating projects that include C/C++ code.

To create a new assembly code only executable project without:

Select the **File > New > New Project** menu item.
Select the **An assembly code only executable for GigaDevice GD32F4xx** project template.
Set the required project name and location directory.
Click **Next**.
If required, change any of the other default project settings.
Click **Finish** to create the project.

Opening GD32F4xx Sample Solutions

GD32F4xx Samples Solution

This solution contains general sample projects that run on GD32F4xx devices. To open the GD32F4xx Samples Solution:

- Select the **Tools > Show Installed Packages** menu item.
- Select the **GigaDevice GD32F4xx CPU Support Package** link.
- Select the **Samples Solutions > GD32F4xx Samples Solution** link.

GD32F4xx CMSIS-DSP Samples Solution

This solution contains sample projects that use the CMSIS-DSP library running on GD32F4xx devices. To open the GD32F4xx CMSIS-DSP Samples Solution:

- Select the **Tools > Show Installed Packages** menu item.
- Select the **GigaDevice GD32F4xx CPU Support Package** link.
- Select the **Sample Solutions > GD32F4xx CMSIS-DSP Samples Solution** link.

GD32F4xx Project Properties

Projects creating using the project templates in this support package have the following device specific project properties:

Heap Size

The heap size is set to be 256 bytes when a project is created. The heap size can be modified using the **Heap Size** project property.

Section Placement

You can select the memory configuration you require using the **Section Placement** project property.

For GD32F4xx projects, the set of placements are:

Flash - The application runs in internal Flash memory (*default*).

Flash Vectors In RAM - The application runs in internal Flash memory and exception vectors are copied to RAM memory.

Flash Copy To RAM - The application starts in internal flash and copies itself to run from internal RAM memory.

RAM - The application runs from internal RAM memory only.

Stack Sizes

The main stack size is set to be 256 bytes when a project is created.

The process stack size is set to be 0 bytes when a project is created.

The main and process stack sizes can be modified using the **Main Stack Size** and **Process Stack Size** project properties.

To change the location of the stacks, edit the section placement file and place the `.stack` and `.stack_process` sections as required.

Startup From Reset

By default, the application will only startup from power-on/reset in *Release* configuration. This acts as a safety net in case you accidentally download a program in FLASH during development that crashes and prevents the debugger from taking control of the target over the debug interface thus rendering the device unusable.

For GD32F4xx projects, the **Startup From Reset** project property can be set to one of the following:

No - The application will not startup from reset.

Release Only - The application will only startup from reset when built in *Release* configuration (*default*).

Yes - The application will always startup from reset.

Target Processor

Once a project has been created you can target different devices by modifying the **Target Processor** project property. See the [GD32F4xx Devices](#) section for details on the files, preprocessor definitions and macro definitions used when a device is selected.

GD32F4xx Project Templates

The project template system simplifies the creation of new projects with the IDE, it also system makes it easy to create new projects with a text editor or script. All that needs to be specified is the project name, the support packages that the project is dependent on, the target processor and the source files you want to add to the project. For example, create a file called *example.hzp* with the following contents:

```
<!DOCTYPE CrossStudio_Project_File>
<solution Name="Example Solution">
  <project Name="Example Project" template_name="GD32F4xx_EXE">
    <configuration Name="Common" package_dependencies="GD32F4xx" Target="GD32F450VK" />
    <folder Name="Source Files">
      <file file_name="file1.c" />
      <file file_name="file2.c" />
    </folder>
  </project>
</solution>
```

You can also add any other property settings that the project requires such as preprocessor definitions or include paths using the property save name, for example:

```
<!DOCTYPE CrossStudio_Project_File>
<solution Name="Example Solution">
  <project Name="Example Project" template_name="GD32F4xx_EXE">
    <configuration Name="Common" package_dependencies="GD32F4xx" Target="GD32F450VK"
      c_preprocessor_definitions="MYDEF1=1;MYDEF2=TWO" c_user_include_directories="$(ProjectDir)/
include1;$(ProjectDir)/include2" />
    <folder Name="Source Files">
      <file file_name="file1.c" />
      <file file_name="file2.c" />
    </folder>
  </project>
</solution>
```

Available GD32F4xx project templates

Template Name	Template Description
GD32F4xx_ASM_EXE	GD32F4xx Assembly Code Only Executable
GD32F4xx_CTL_EXE	GD32F4xx CTL Executable
GD32F4xx_EXE	GD32F4xx C/C++ Executable
GD32F4xx_EXT_EXE	GD32F4xx Externally Built Executable
GD32F4xx_LIB	GD32F4xx Library

GD32F4xx Devices

This package supports the following GD32F4xx devices:

[GD32F403 Family](#)

[GD32F405 Family](#)

[GD32F407 Family](#)

[GD32F450 Family](#)

GD32F403 Family

[GD32F403RC](#)

[GD32F403RE](#)

[GD32F403RG](#)

[GD32F403RI](#)

[GD32F403RK](#)

[GD32F403VC](#)

[GD32F403VE](#)

[GD32F403VG](#)

[GD32F403VI](#)

[GD32F403VK](#)

[GD32F403ZC](#)

[GD32F403ZE](#)

[GD32F403ZG](#)

[GD32F403ZI](#)

[GD32F403ZK](#)

GD32F403RC

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403RC_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x0803FFFF
RAM	0x20000000 - 0x2000BFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403RE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403RE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x20017FFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F403RG

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403RG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403RI

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403RI_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F403RK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403RK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403VC

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403VC_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0803FFFF
RAM	0x20000000 - 0x2000BFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F403VE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403VE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x20017FFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F403VG

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403VG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403VI

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403VI_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F403VK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403VK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403ZC

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403ZC_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x0803FFFF
RAM	0x20000000 - 0x2000BFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403ZE

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403ZE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x20017FFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403ZG

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403ZG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403ZI

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403ZI_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F403	
__GD32F403_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F403

GD32F403ZK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c
Family	GD32F4xx
Sub Family	GD32F403
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F403ZK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F403

__GD32F403_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Include/gd32f403.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F403_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F403_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F403/Source/system_gd32f403.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F403_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F403

GD32F405 Family

[GD32F405RE](#)

[GD32F405RG](#)

[GD32F405RK](#)

[GD32F405VG](#)

[GD32F405VK](#)

[GD32F405ZG](#)

[GD32F405ZK](#)

GD32F405RE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405RE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F405RG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405RG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F405RK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405RK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F405VG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405VG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F405VK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405VK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F405	
__GD32F405_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F405

GD32F405ZG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405ZG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F405ZK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F405
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F405ZK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F405

__GD32F405_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F405

GD32F407 Family

[GD32F407RE](#)

[GD32F407RG](#)

[GD32F407RK](#)

[GD32F407VE](#)

[GD32F407VG](#)

[GD32F407VK](#)

[GD32F407ZE](#)

[GD32F407ZG](#)

[GD32F407ZK](#)

[GD32F407IE](#)

[GD32F407IG](#)

[GD32F407IK](#)

GD32F407RE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407RE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407RG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407RG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407RK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407RK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F407	
__GD32F407_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F407

GD32F407VE

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407VE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions
ARM_MATH_CM4
GD32F407
__GD32F407_SUBFAMILY
__GD32F4xx_FAMILY

Memory Segments	
FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros
DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily=GD32F4xx
DeviceSubFamily=GD32F407

GD32F407VG

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407VG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F407	
__GD32F407_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F407

GD32F407VK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407VK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F407	
__GD32F407_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F407

GD32F407ZE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407ZE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407ZG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407ZG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407ZK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407ZK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407IE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407IE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407IG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407IG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F407IK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F407
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F407IK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F407

__GD32F407_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2001FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F407

GD32F450 Family

[GD32F450VE](#)

[GD32F450VG](#)

[GD32F450VI](#)

[GD32F450VK](#)

[GD32F450ZE](#)

[GD32F450ZG](#)

[GD32F450ZI](#)

[GD32F450ZK](#)

[GD32F450IG](#)

[GD32F450II](#)

[GD32F450IK](#)

GD32F450VE

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450VE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F450	
__GD32F450_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F450

GD32F450VG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450VG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450VI

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450VI_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F450	
__GD32F450_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2006FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F450

GD32F450VK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450VK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450ZE

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450ZE_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x0807FFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_512KB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450ZG

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450ZG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450ZI

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450ZI_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2006FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450ZK

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450ZK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450IG

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450IG_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions	
ARM_MATH_CM4	
GD32F450	
__GD32F450_SUBFAMILY	
__GD32F4xx_FAMILY	

Memory Segments	
FLASH	0x08000000 - 0x080FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros	
DeviceIncludePath	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
DeviceHeaderFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
DeviceLoaderFile	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_1MB_Loader.elf
DeviceRegisterDefinitionFile	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
DeviceSystemFile	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
DeviceVectorsFile	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s
DeviceFamily	GD32F4xx
DeviceSubFamily	GD32F450

GD32F450II

Device Details

CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450II_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x081FFFFFF
RAM	0x20000000 - 0x2006FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_2MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450

GD32F450IK

Device Details	
CMSIS Header File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h
CMSIS Include Path	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include
CMSIS System File	\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c
Family	GD32F4xx
Sub Family	GD32F450
Loader File	\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf
Memory Map File	\$(TargetsDir)/GD32F4xx/XML/GD32F450IK_MemoryMap.xml
Register Definition File	\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml
Vectors File	\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

Preprocessor Definitions

ARM_MATH_CM4

GD32F450

__GD32F450_SUBFAMILY

__GD32F4xx_FAMILY

Memory Segments

FLASH	0x08000000 - 0x082FFFFFF
RAM	0x20000000 - 0x2002FFFF
RAM2	0x10000000 - 0x1000FFFF

Project Macros

DeviceIncludePath=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include

DeviceHeaderFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Include/gd32f4xx.h

DeviceLoaderFile=\$(TargetsDir)/GD32F4xx/Loader/GD32F4xx_3MB_Loader.elf

DeviceRegisterDefinitionFile=\$(TargetsDir)/GD32F4xx/XML/GD32F4xx_Registers.xml

DeviceSystemFile=\$(TargetsDir)/GD32F4xx/CMSIS/Device/F4XX/Source/system_gd32f4xx.c

DeviceVectorsFile=\$(TargetsDir)/GD32F4xx/Source/GD32F4xx_Vectors.s

DeviceFamily=GD32F4xx

DeviceSubFamily=GD32F450