

GigaDevice Semiconductor Inc.

EtherCAT 协议栈代码移植参考手册

应用笔记

AN246

1.0 版本

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1. 前言

本文是专为使用 GD32 MCU 产品，需要使用 EtherCAT 协议栈代码移植做简要说明移植步骤和移植方法。

本应用笔记分为两个部分描述第一部分描述使用 SSC TOOL 工具生成协议栈代码过程，第二部分说明协议栈代码嵌入工程编译过程。

在使用本应用前，需要使用者已成为 ETG 组织会员，可以获取到 SSC TOOL 工具用于生成协议栈代码。

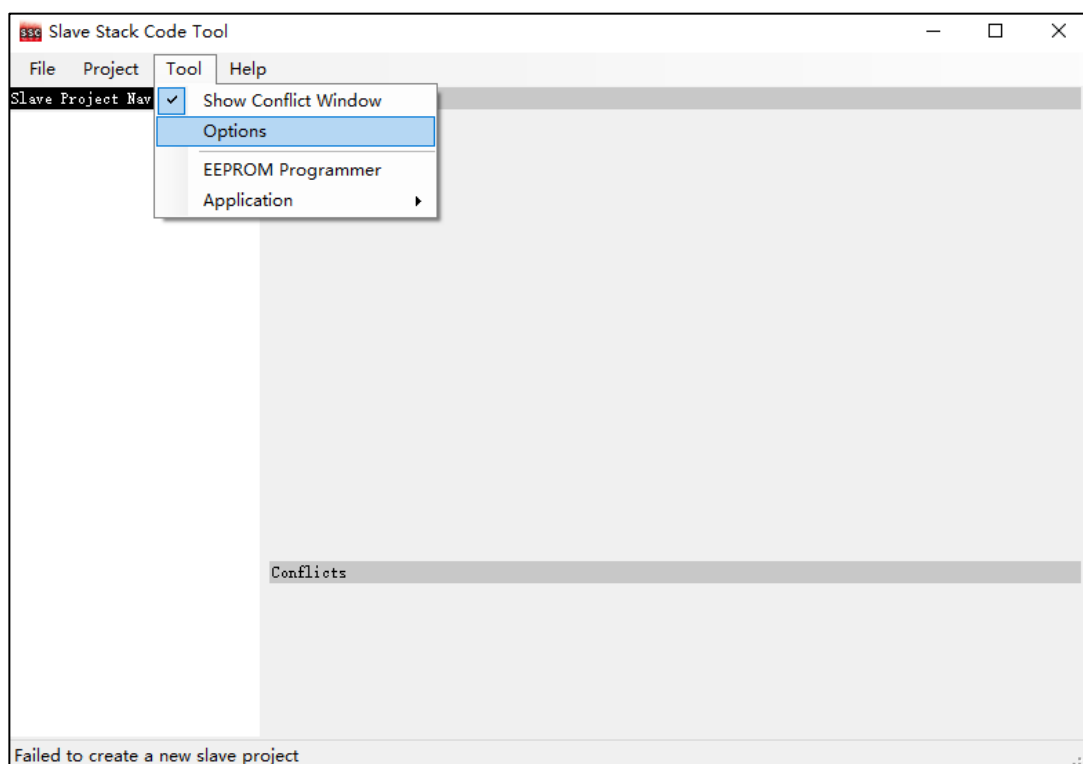
2. 使用 SSC TOOL 生成协议栈代码

使用者首先已完成 SSC TOOL 工具下载，下载方法参考 ETG 官方：
https://www.ethercat.org/en/downloads/downloads_01DCC32A10294F2EA866F7E46FB0285F.htm。

参考以下步骤生成协议栈代码

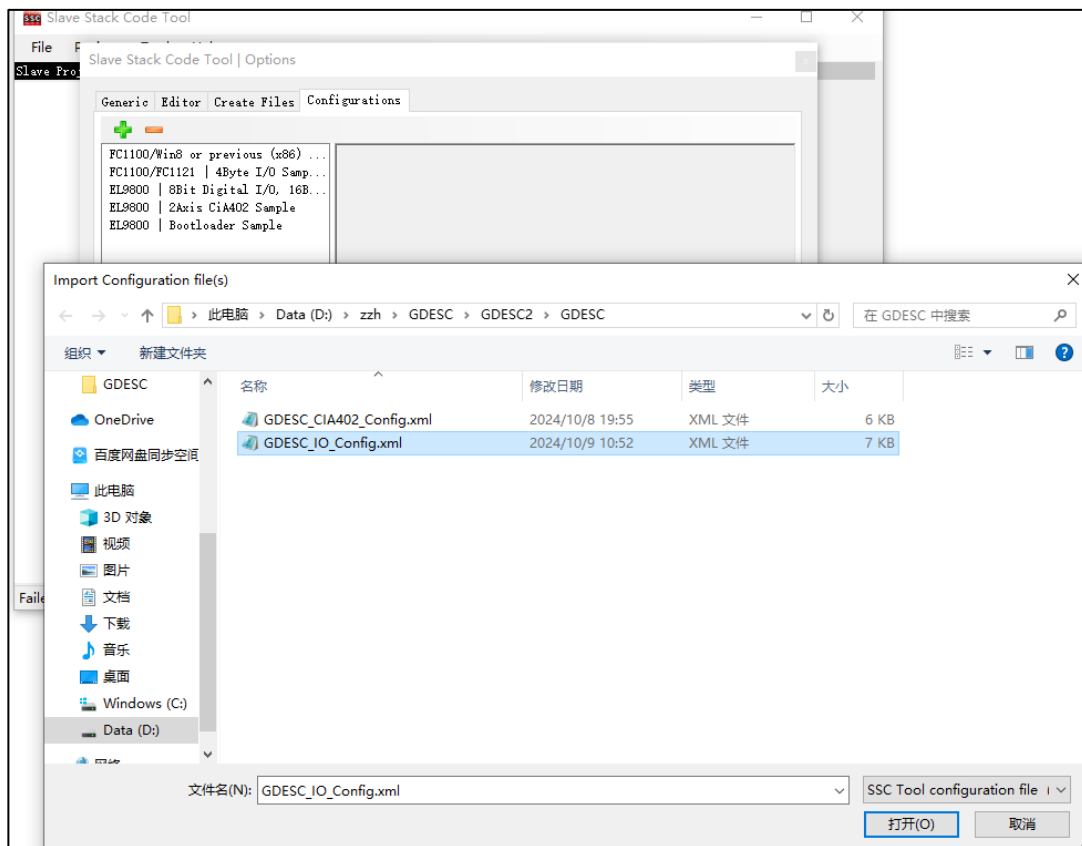
1. 打开 SSC Tool, 选择**Tool->Options**

图 2-1. SSC Tool Options 页面



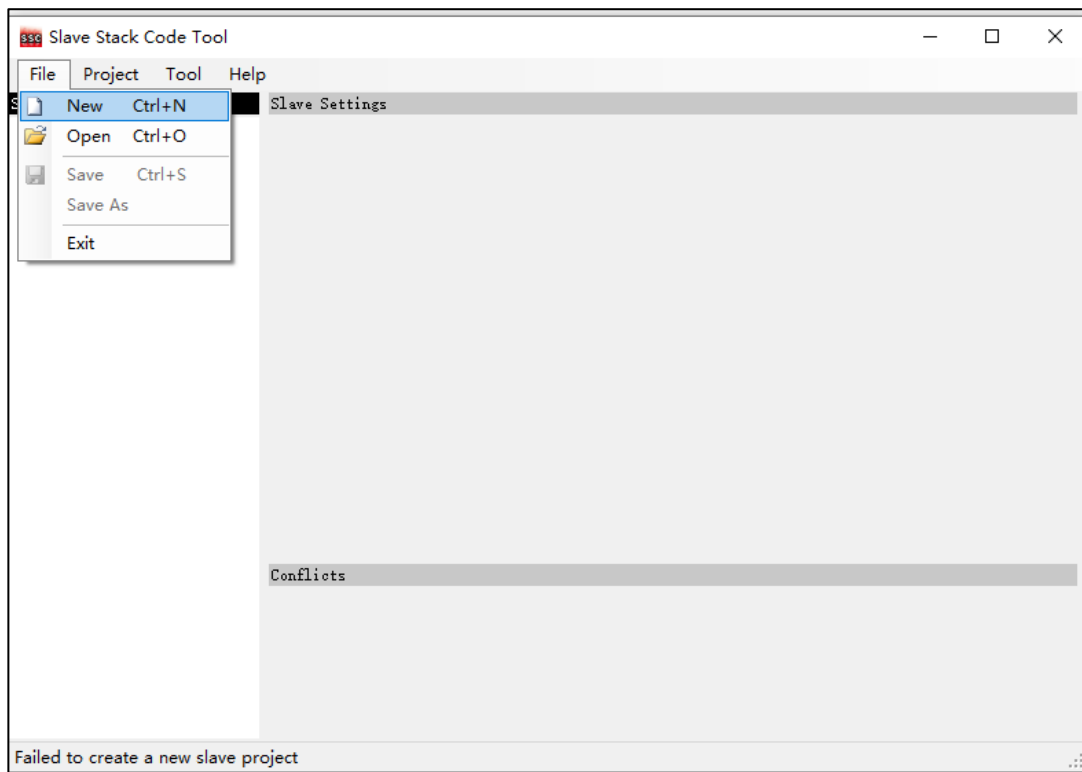
2. 点击 Configurations, 选择添加配置文件 GDESC_IO_Config.xml

图 2-2. Configurations 页面



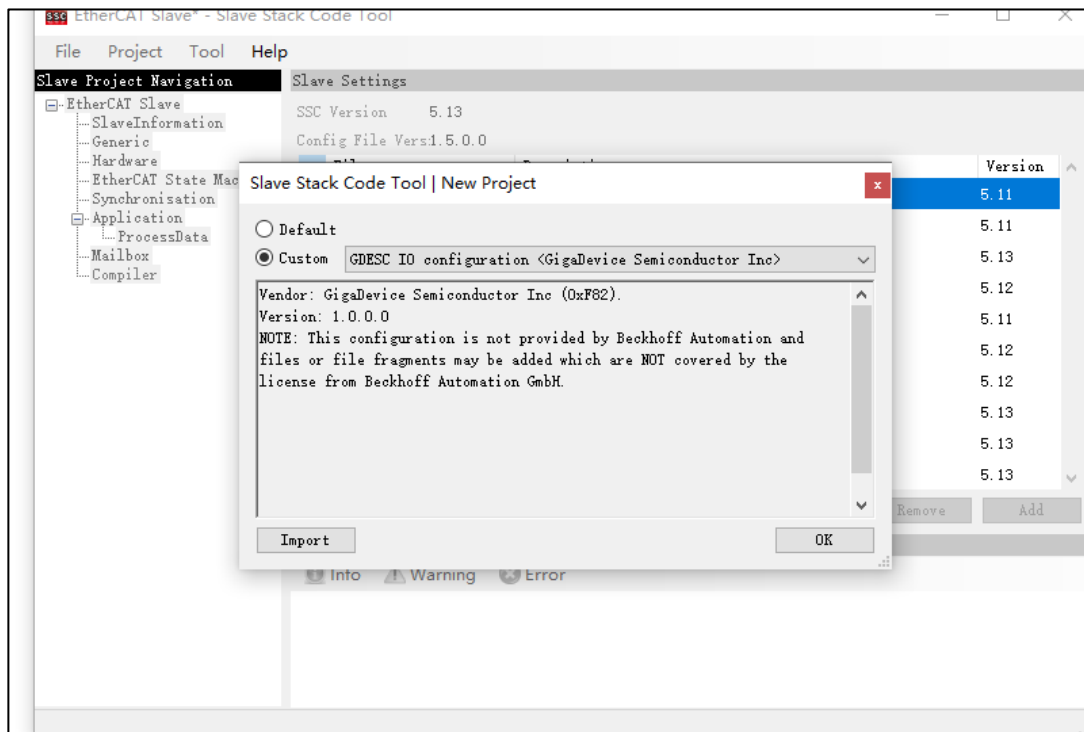
3. SSC Tool 中创建新的工程, 点击**File->New**

图 2-3. 创建工程页面



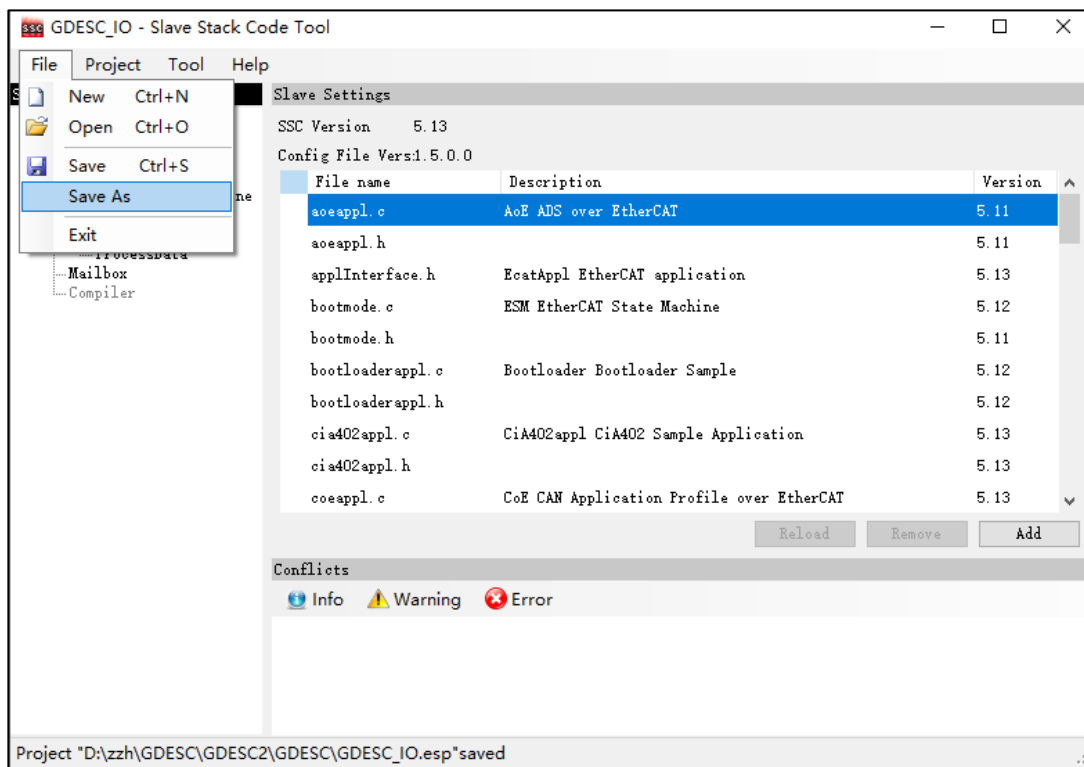
4. 点击****Custom****选项，并在下拉列表中选择****GDESC IO configuration <GigaDevice Semiconductor Inc >****

图 2-4. 选择 GD 工程页面



5. 保存工程文件，指定保存路径

图 2-5. 保存路径页面



6. 导入应用 EXCEL 文件

图 2-6. EXCEL 文件选择页面

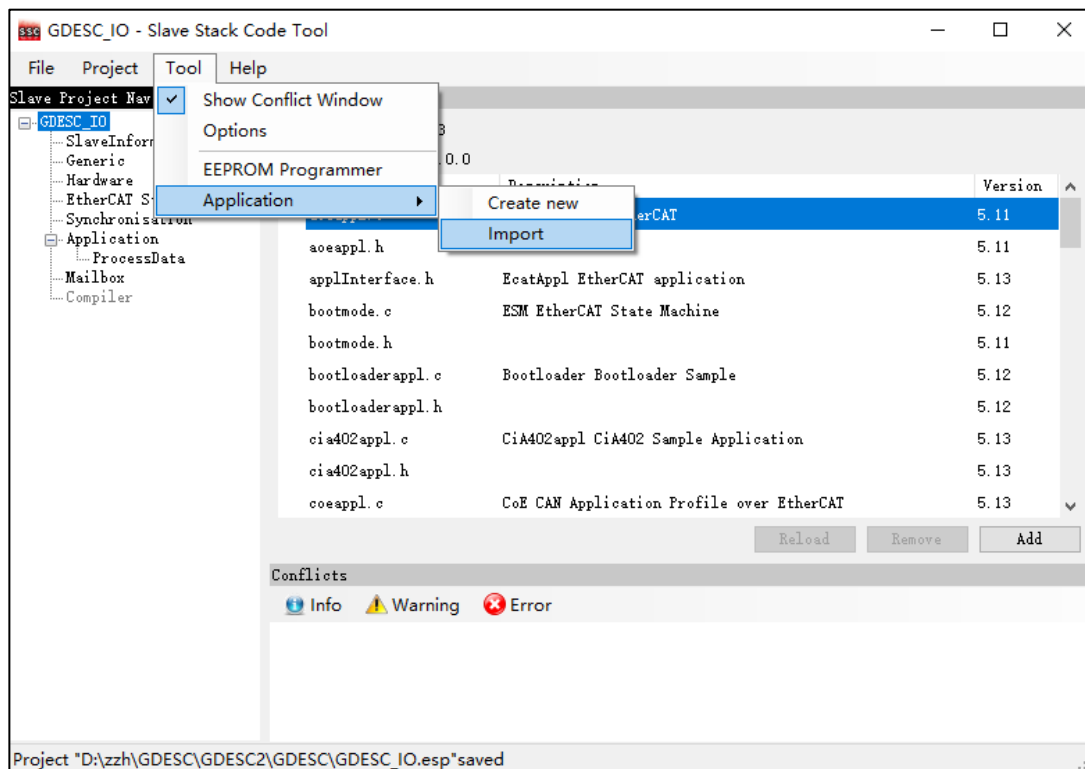
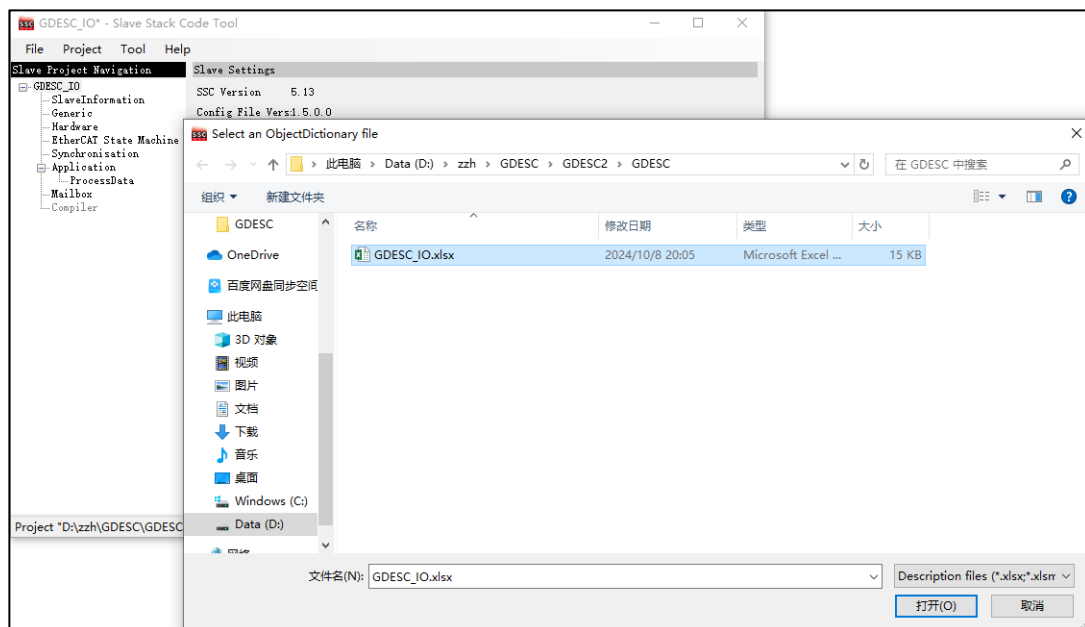
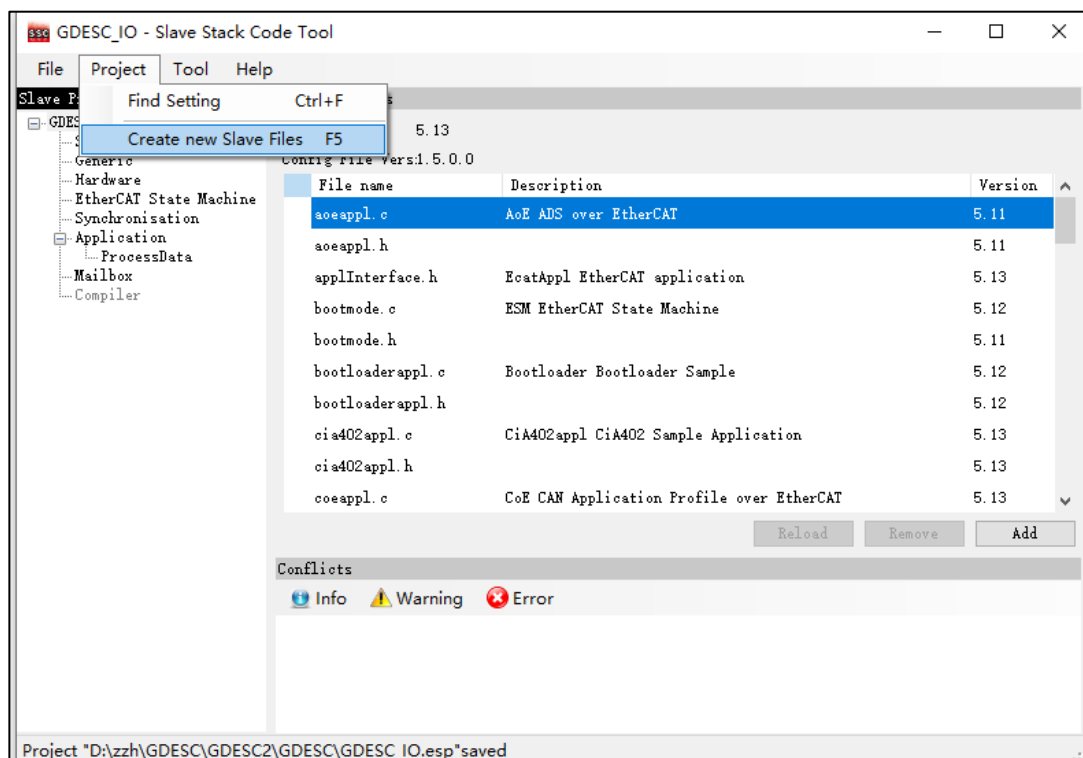


图 2-7. 导入页面



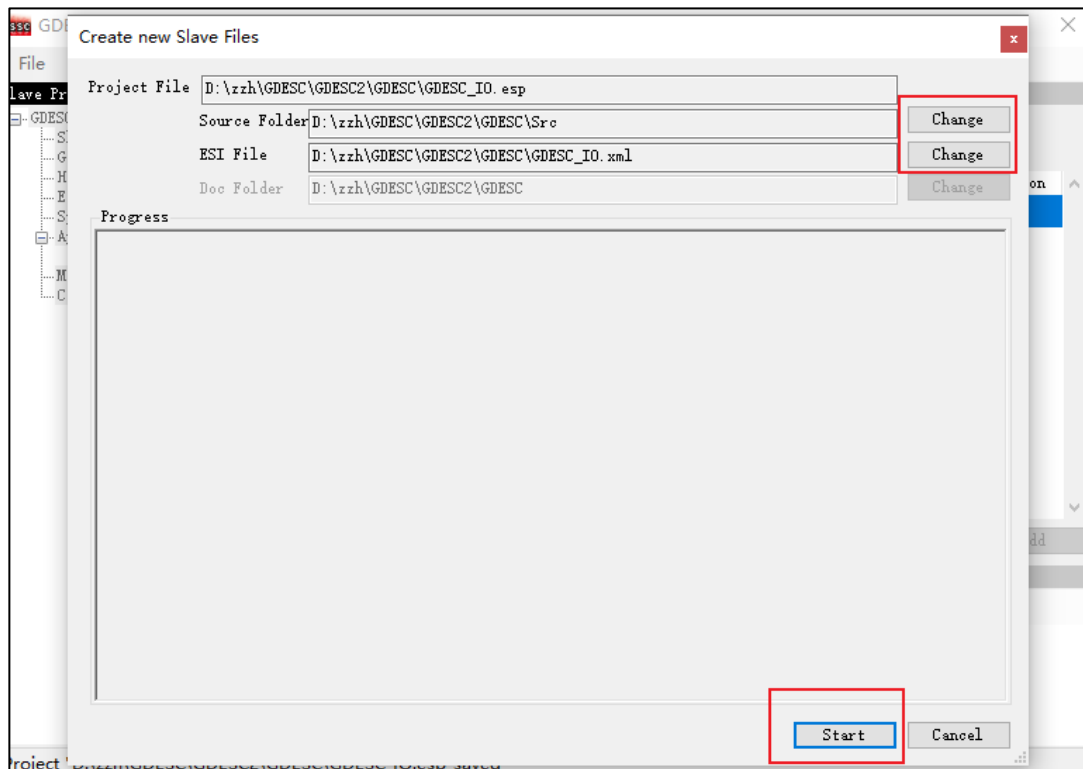
7. 生成协议栈代码

图 2-8. 生成协议栈代码页面



8. 选择路径，保存协议栈代码和配置 xml 文件

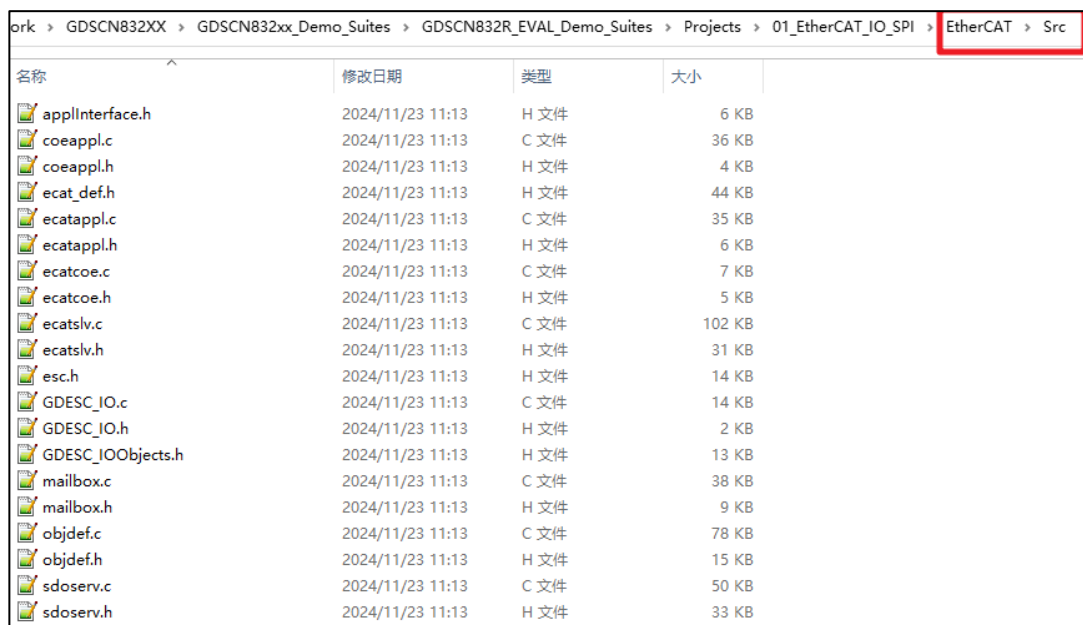
图 2-9. 保存路径页面



3. 协议栈代码编入工程

1. 拷贝生成的协议栈代码到工程目录下的 EtherCAT/Src 目录

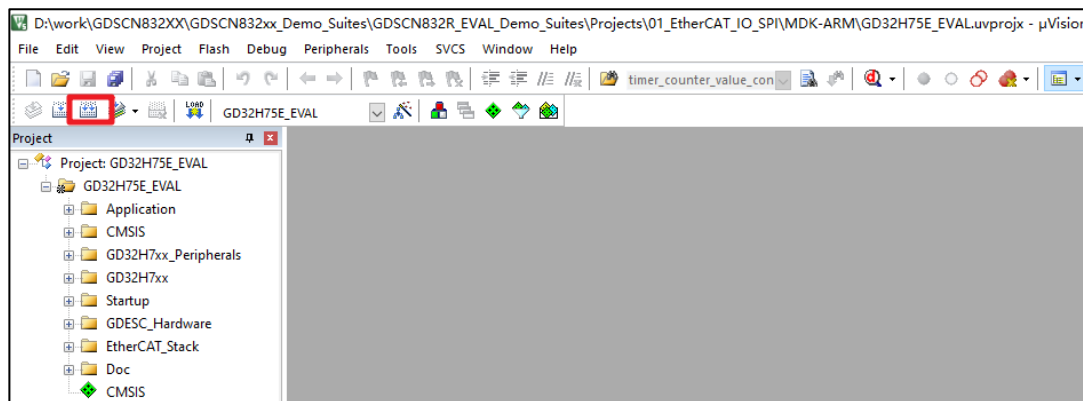
图 3-1. 源文件目录页面



名称	修改日期	类型	大小
applInterface.h	2024/11/23 11:13	H 文件	6 KB
coeappl.c	2024/11/23 11:13	C 文件	36 KB
coeappl.h	2024/11/23 11:13	H 文件	4 KB
ecat_def.h	2024/11/23 11:13	H 文件	44 KB
ecatappl.c	2024/11/23 11:13	C 文件	35 KB
ecatappl.h	2024/11/23 11:13	H 文件	6 KB
ecatcoe.c	2024/11/23 11:13	C 文件	7 KB
ecatcoe.h	2024/11/23 11:13	H 文件	5 KB
ecatdrv.c	2024/11/23 11:13	C 文件	102 KB
ecatdrv.h	2024/11/23 11:13	H 文件	31 KB
esc.h	2024/11/23 11:13	H 文件	14 KB
GDESC_IO.c	2024/11/23 11:13	C 文件	14 KB
GDESC_IO.h	2024/11/23 11:13	H 文件	2 KB
GDESC_IOObjects.h	2024/11/23 11:13	H 文件	13 KB
mailbox.c	2024/11/23 11:13	C 文件	38 KB
mailbox.h	2024/11/23 11:13	H 文件	9 KB
objdef.c	2024/11/23 11:13	C 文件	78 KB
objdef.h	2024/11/23 11:13	H 文件	15 KB
sdoserv.c	2024/11/23 11:13	C 文件	50 KB
sdoserv.h	2024/11/23 11:13	H 文件	33 KB

2. 直接编译工程文件

图 3-2. 编译工程页面



4. 版本历史

表 4-1. 版本历史

版本号.	说明	日期
1.0	首次发布	2024 年 11 月 29 日

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