# Easy-II型TMS320F280X开发板

# 用户手册

Version 1.0.0

技术支持: 15041130502 QQ: 113969201

### 使用对象

本开发板简单经济,易学易用,扩展性好,面向想掌握32位DSP技术的初级者,或对 DSP感兴趣的爱好者。系统支持JTAG与UART两种程序下载模式,可以在没有仿真器的 情况下,利用串口对片内FLASH进行程序烧写。



## 系统资源

图一

## 核心芯片

TMS 32 0F 28 0X

## 插排引脚定义

电路板上插排两旁的数字对应TMS320F280x的引脚号码。如92/91,对应DSP芯片的92, 91管脚。

## 供电方式 (任选其一)

供电方式一: USB

供电方式二:插排供电。GD代表GND接地,V5代表5V供电引脚,其输入电压在3.6-5V 之间。

说明:电源上电后,会看到LED灯一闪一闪,此时运行的是内部已烧写测试程序。如灯没有闪烁,确保模式选择位插排上无短路冒。LED灯接在DSP第91引脚。

### 模式选择位

1. UART 程序加载, 短路冒位置如下图。



2. 程序从DSP内部flash加载时,确保模式选择位无短路冒。注意:短路冒是为从串口烧写FLASH程序做准备的,其他时候都没用,都可以拔掉。

## 编译到内部 RAM 仿真。(以 TMS320F2806 进行说明)

用户可以通过仿真器对程序进行调试,下载到内部RAM运行。

第一步: CCS Setup, 作者使用的是SEEDDSP仿真器

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第二步: connect

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第三步: 打开目录下D:\v160\DSP280x\_examples\gpio\_toggle 测试程序.cmd文件选择2806\_RAM\_link.cmd.CMD,DSP280x\_Headers\_nonBios.cmd。 Gel Files选择工程目录下的Example\_280xGpioToggle.gel。



第四步:编译完成后,选择File->Load Program

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第五步: RUN

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#### 编译到内部 FLASH

在上面第三步中, cmd文件选择

D: \tidcs\c28\DSP280x\v160\DSP280x\_common\cmd下的F2806.cmd,编译生成.out文件,此时目标代码映射到FLASH空间。可通过CCS或串口将此程序烧写到DSP内部。

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#### 以上步骤演示是以TMS320F2806目标板,如果目标板是其他芯片。参照以下两部修改

1.	按下图所示选择目标芯片,	例:	目标芯片是2808	则define	DSP28_	2808	1
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 如图选择对应的CMD文件。例:目标芯片是2808,编译到RAM选择2808\_RAM\_link.cmd 编 译到FLASH选择F2808.cmd

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**注意一**: TI TMS320F280X系列器件的IO引脚不能接4.6V以上电压输入,否则会损坏DSP芯片。本开发板为DSP最小系统,仅适合学习之用,不建议直接去控制其它电路(如产生PWM去控制电机),除非用户确保弱电与强电之间的隔离和驱动电路的稳定,任何高压干扰信号足以烧毁DSP,该性质为TI的DSP本身特性所致。基于以上几点,为确保安全,仅建议以本开发板作为学习之用。

**注意二:**任何时候,仿真调试或烧写DSP之前,去掉Option->Memory Map对话框 下的Enable Memory Mapping的勾选.

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