

How to use/config PDM MIC in ADAU1761

(MediaWorks Shenzhen 2019.6)

Hardware connection as below, note MIC's L/R select pin should be connected to VCC or GND.

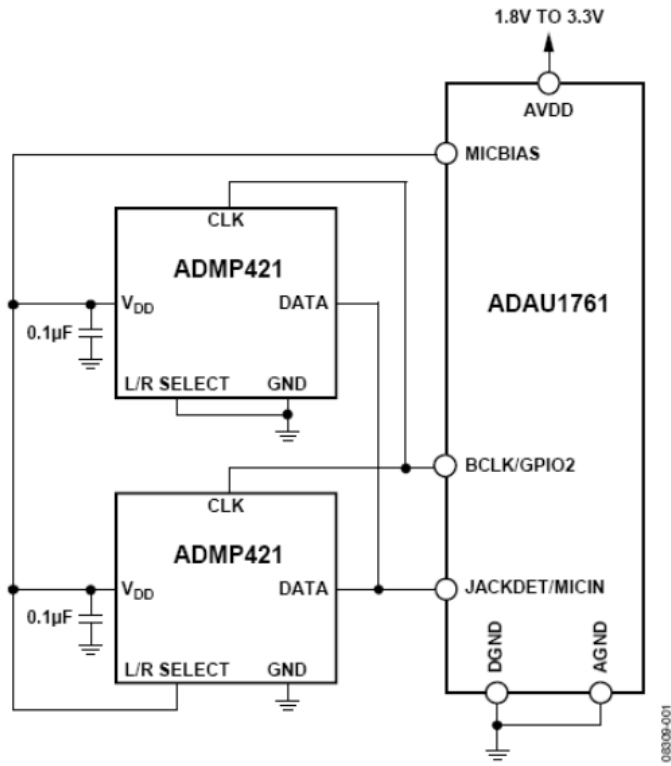


图 1. 数字麦克风与音频编解码器的连接

1st. Schematic design as example below in SigmaStudio:

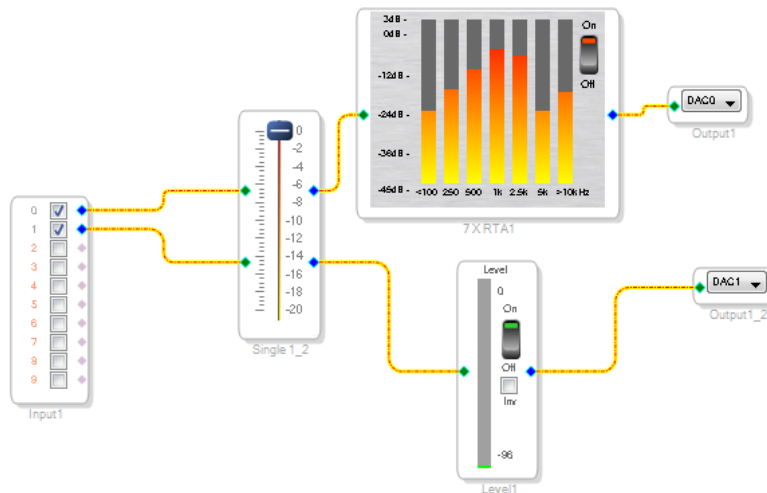


图 2: SigmaStudio 工程原理图

2nd. Hardware config → Codec Setup:

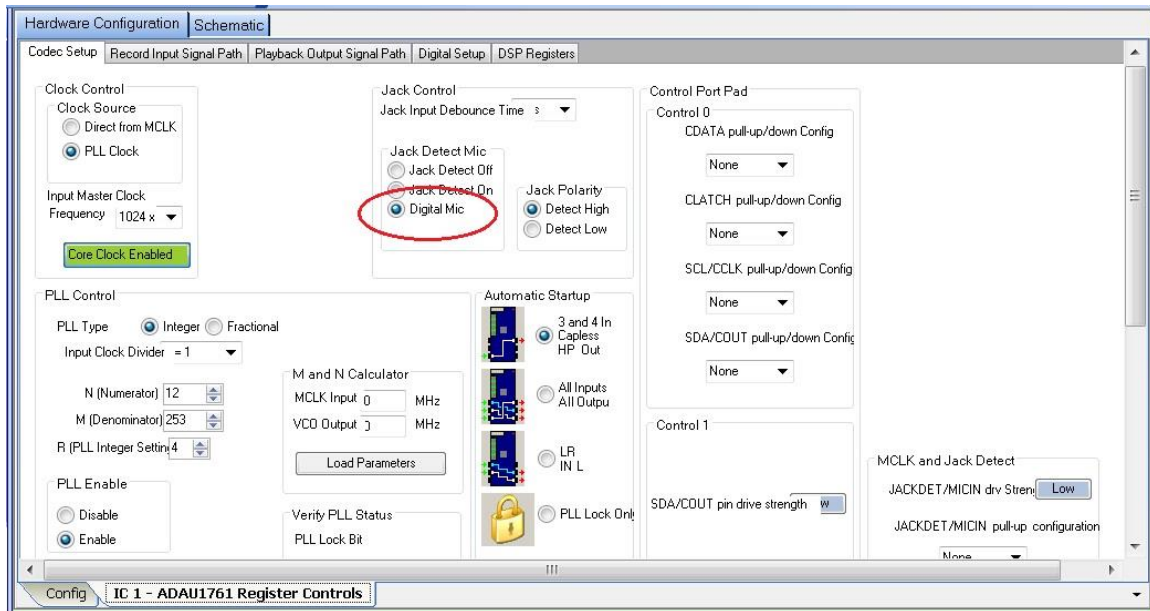


图 3: DSP 硬件寄存器设置 (JACK CONTROL)

Mic Bias should be enabled if you power your MIC with DSP's Mic Bias output. Or you can ignore this if power by external VCC.

Hardware config → Record Input Signal Path → Mic Bias Ctrl.

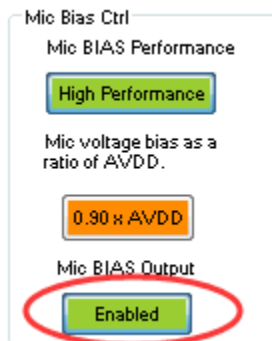


图 4: DSP 硬件寄存器设置 (MIC BIAS CONTROL)

3rd. Hardware config → Digital Setup:

IIS mode: Master mode, as we need use 1761 to output BCLK to drive PDM MIC.

Digital MIC in Select: ADCs off.

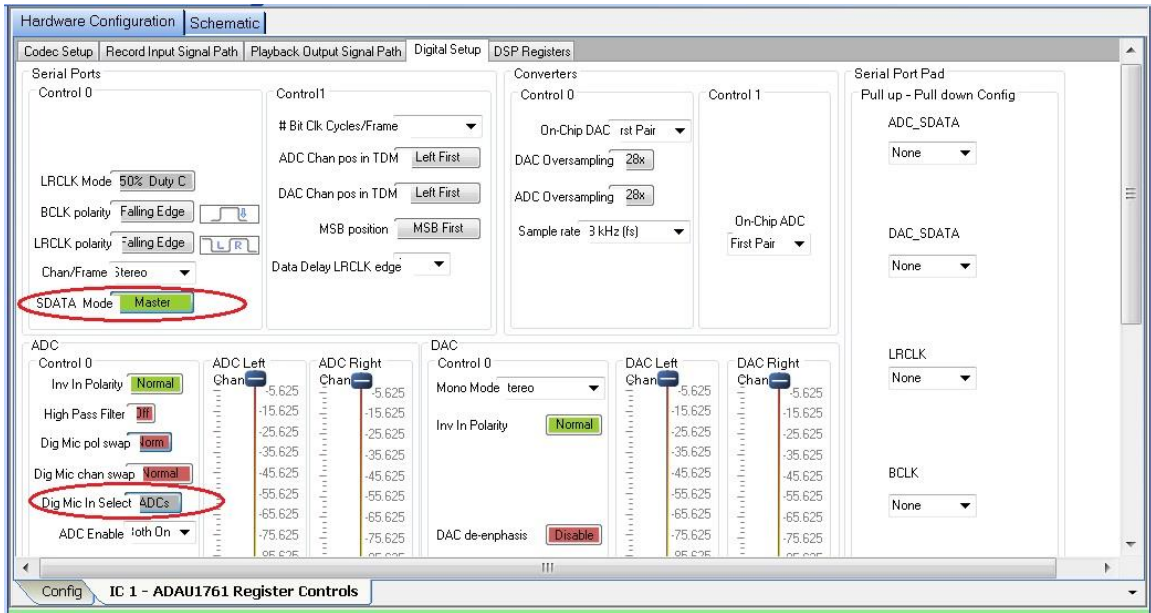


图 5: DSP 硬件寄存器设置 (IIS 工作模式和 DIG MIC 输入选择)

4th. Hardware Config → DSP Registers:

Serial Data/GPIO pin config → set **GPIO2 as BCLK**.

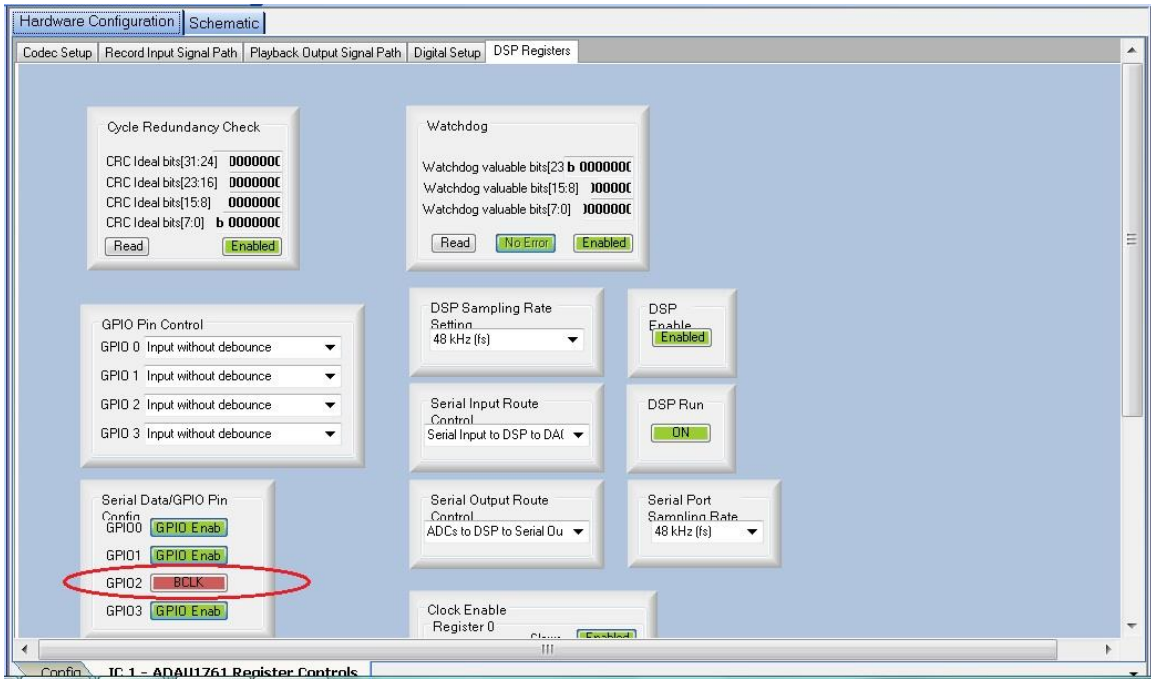


图 5: DSP 硬件寄存器设置 (GPIO2 工作模式设定)

参考文档:

ADI 官方 CN0078: 《利用 **ADAU1761 SigmaDSP** 音频编解码器和 **ADMP421** 麦克风构建立体声数字麦克风输入端》