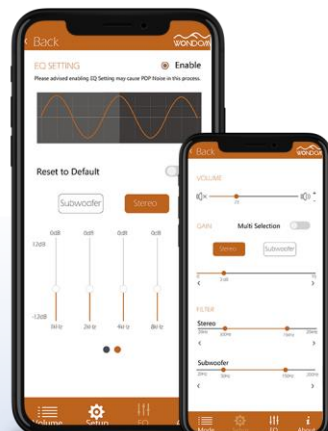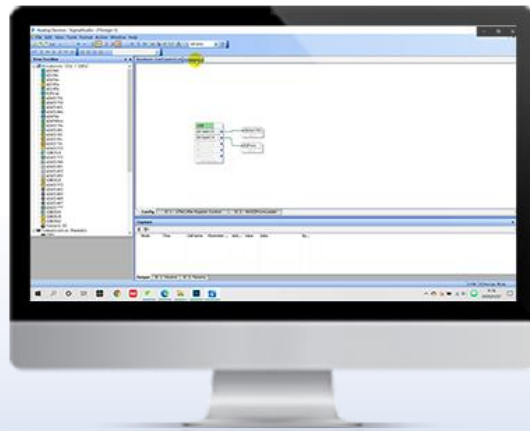**What's Required for Various Control Methods of WONDOM ADAU1701 DSP Products?**

● Overview

WONDOM has released several models on the basis of ADAU1701 DSP. To help customers control the audio systems more conveniently, WONDOM has developed In-circuit programmer for use with these products. After connection with programmers, these products can support different control methods as programming through SigmaStudio (Hereinafter referred to as SS), APP control and PC UI control. (Which function is supported depends on specific products.)

This document aims to tell you what is required for different control methods.

Products List – with ADAU1701 DSP

The following are the products list of WONDOM products that are integrated with ADAU1701 DSP.
The functions vary to different products. Please select to your requirements.

Model	Description	SS Program	APP Control	PC UI Control
APM2	2-in, 4-out ADAU1701 DSP Kernel Board	Y	Y	Y
JAB3	Mono / Stereo Class D Audio Amplifier Board Integrated with ADAU1701 DSP	Y	Y	Y
JAB3+	Mono / Stereo Audio Amplifier Board Integrated with ADAU1701 DSP & BT V5.0	Y	N	Y
JAB4	4CH 30W Audio Amplifier Board Integrated with ADAU1701 DSP & BT V5.0, Supporting Configuration as 4.0 / 2.1 / 2.0 / 0.2 Output Mode	Y	N	Y
JAB5	4CH 100W Audio Amplifier Board Integrated with ADAU1701 DSP & BT V5.0, Supporting Configuration as 4.0 / 2.1 / 2.0 / 0.2 Output Mode	Y	N	Y

Products List – ICP Series

Different ICP products support different functions. Please select to your requirements.

Model	Description	SS Program	APP Control	PC UI Control
ICP1	In-Circuit Programmer	Y	N	N
ICP3	In-Circuit Programmer Integrated with Bluetooth BLE	Y	Y	N
ICP5	In-Circuit Programmer Integrated with Bluetooth BLE & USB to UART	Y	Y*	Y

* The function only works when both products with ADAU1701 DSP and the ICP board support it, i.e. JAB3+ doesn't support APP control, so even if you buy ICP3 or ICP5 that supports APP control, JAB3+ still cannot support APP control after connection.
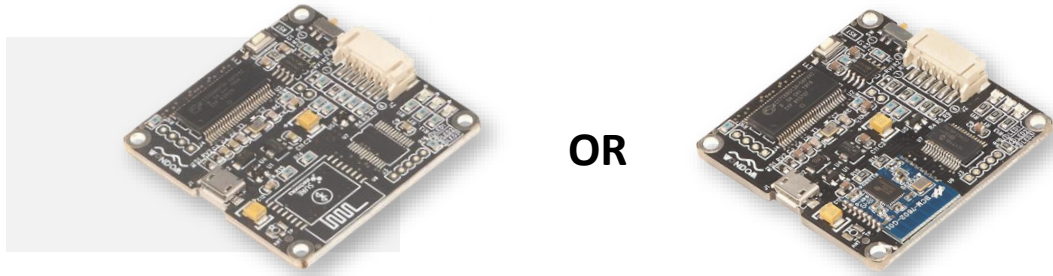
Various Applications Required ICP and Instructions

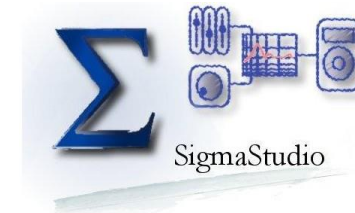| Function	Software	ICP	INSTRUCTION	VIDEO
Programming with SS	SS	ICP1	WONDOM ICP1 User Guide	How to use WONDOM ICP3 to program ADAU1701 with SigmaStudio and realize APP control
		ICP3	WONDOM ICP3 User Guide	
		ICP5	WONDOM ICP5 User Guide	Video
APP Control	Miumax (APP)	ICP3	WONDOM ICP3 User Guide	Use Miumax APP to control audio 2.1 system built by WONDOM JAB3&JAB2
		ICP5	WONDOM ICP5 User Guide	Video
PC UI Control	Miumax (PC UI)	ICP5	WONDOM ICP5 User Guide	Video

Note: The products and documentation in red are processing and will be released soon.

SS Programming

1 Original USBi or WONDOM ICP3/ICP1

OR

2 PC & SS Software

Analog Devices, Inc. SigmaStudio™

3 Supporting Documents

We have made reference documents for programming DSP with SS.
You can click HERE to view.

4 Demo Program

You may want demo programs for reference when you write your own program. We have uploaded the demo program for your download.
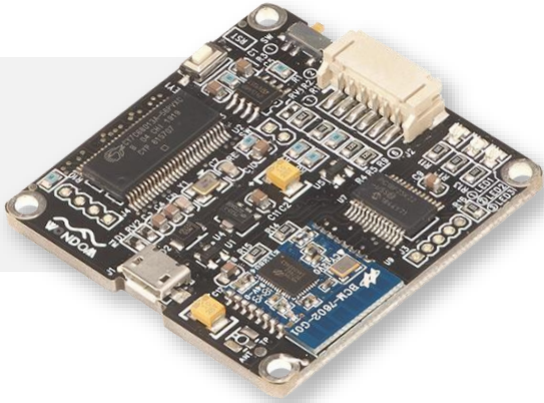
Demo Programs for Programming

Here are the demo programs for the products. You can download them for reference. The demo program is only for demonstration of signal flow chart.

Products	Demo Program	Document you may need
APM2	APM2_SigmaStudio.dspproj	Download
JAB3 - Mono	JAB3_SigmaStudio_MONO.dspproj	
		Download
JAB3 - Stereo	JAB3_SigmaStudio_STEREO.dspproj	
JAB3+	JAB3+_Stereo_ADAU1701_DEMOProgram.dspproj	Download
JAB4	JAB4_ADAU1701_DEMOProgram.dspproj	-
JAB5	JAB5_ADAU1701_DEMOProgram.dspproj	Download

APP Control

1 WONDOM ICP3

2 Miumax V2.0

Android

iOS

3 Factory Settings Program

Specialized program is required for the DSP products to support APP control. If you have re-write the program, you need to reset factory settings for APP control functions.
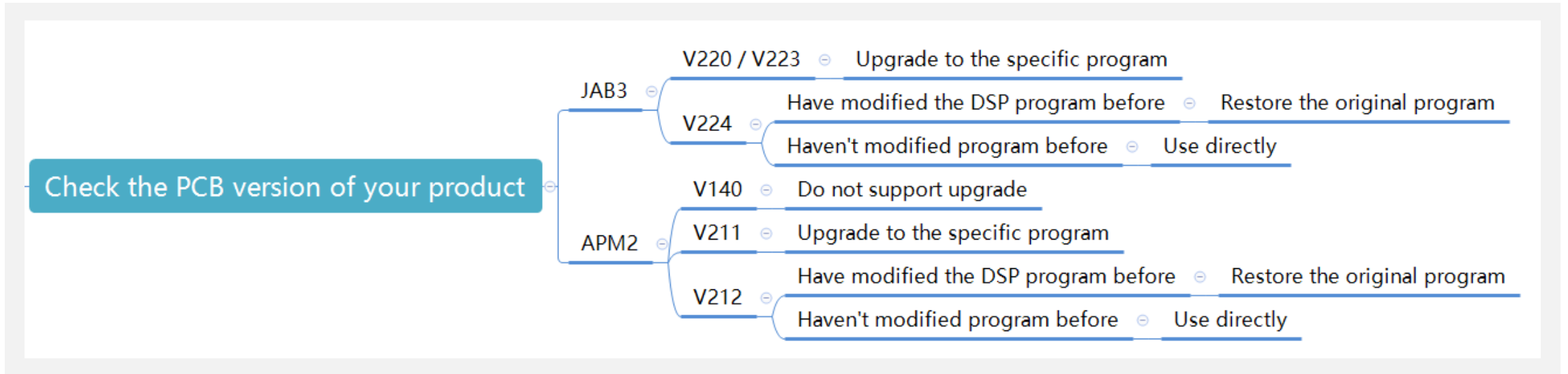
Self-Check

We have upgraded the APP before, so there are two apps, Miumax V1.0 and Miumax V2.0.
The right chart is the default APP version that products of different PCB version support.

If you want to use the latest APP – Miumax V2.0, please do as the following picture shows.

Product	PCB Version	Supportive APP
JAB3	V220	-
	V223	Miumax V1.0
	V224	Miumax V2.0
APM2	V140	-
	V211	Miumax V1.0
	V212 / V220	Miumax V2.0

Check the PCB version of your product

JAB3
- V220 / V223 ⊖ Upgrade to the specific program
- V224 ⊖
  - Have modified the DSP program before ⊖ Restore the original program
  - Haven't modified program before ⊖ Use directly

APM2
- V140 ⊖ Do not support upgrade
- V211 ⊖ Upgrade to the specific program
- V212 ⊖
  - Have modified the DSP program before ⊖ Restore the original program
  - Haven't modified program before ⊖ Use directly

Programs for APP Control

Please download the corresponding HEX file for APP control function after self-check. As for how to restore factory settings with ICP3, please view this [video](#).

JAB3+, JAB4 and JAB5 do not support Miumax V2.0 by now. We may upgrade the APP in the future.

Products	Factory Settings Program	Version
APM2	APM2_APPCtrl_V1.0.Hex	V1.0 (For Miumax V1.0)
	APM2_APPCtrl_V2.0.Hex	V2.0 (For Miumax V2.0)
JAB3 - Mono	JAB3_APPCtrl_MONO_E2Prom_V1.0.Hex	V1.0 (For Miumax V1.0)
	JAB3_APPCtrl_MONO_E2Prom_V2.0.Hex	V2.0 (For Miumax V2.0)
JAB3 - Stereo	JAB3_APPCtrl_STEREO_E2Prom_V1.0.Hex	V1.0 (For Miumax V1.0)
	JAB3_APPCtrl_STEREO_E2Prom_V2.0.Hex	V2.0 (For Miumax V2.0)