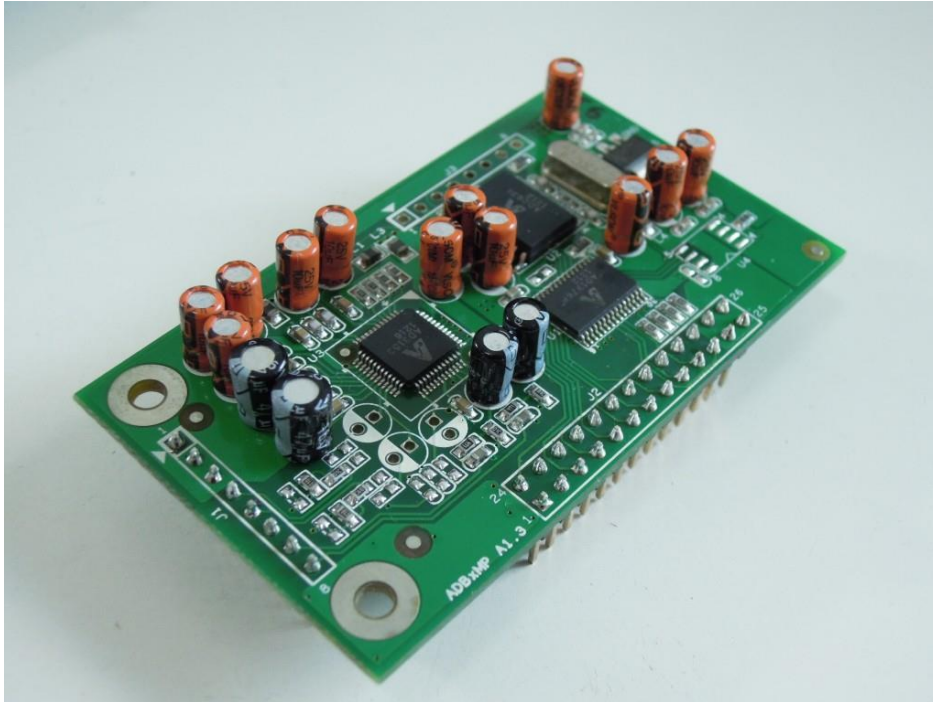


# **ADBxMP**

**With AD2631 DSP**



## **1. Applications**

Digital signal processing for sound effect and any devices which need **mixing sound effect**.

Like mixer' USB soundcard...etc.

## **2. Overview**

The Module assembled that can be installed on main boards in products. Connection to the ADBxMP is simple. It has two audio input and output for stereo connection. Four digital input pins are used to select each of DSP programs by encoder. The additional analog inputs (digital inputs) are used for program parameter adjustment. You can also add an external dual 7 segment LED for the program display.

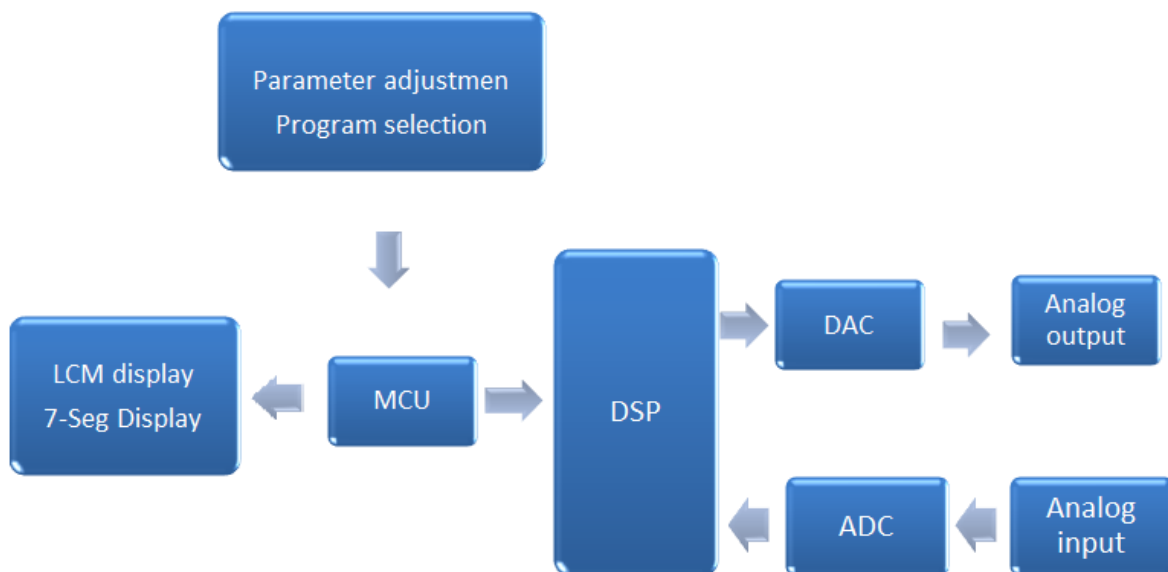
### 3. Features

- Space effect( can support Tap Delay).
- Modulation effect.

### 4. Specification

Analog Input	2ch
Analog Output	2ch
Input Impedance	110 k $\Omega$
Output Impedance	10.5 k $\Omega$
Max. Input Level	3.15 Vp-p
Max. Output Level	3.5 Vp-p
AD/DA conversion	48 kHz/24 bit
Dynamic Range	104 dB
THD+N	< -90 dB
Frequency Response	10 Hz – 20 kHz +/- 0.1 dB
Power supply	DC 5 V, 90 mA (stand-alone)
Power Consumption	450 mW

### 5. Block Diagram



## 6. Effect List

**Binary Code Chart**

No.	Description	Binary Code
1	Small Hall	1111
2	Large Hall	1110
3	Small Room	1101
4	Bright Room	1100
5	Thin Plate	1011
6	Large Plate	1010
7	Spring Reverb	1001
8	Multi-tap Delay	1000
9	Analog Delay	0111
10	Chorus Verb	0110
11	Stereo Chorus	0101
12	Flanger	0100
13	Phaser	0011
14	Gated Reverb	0010
15	FlangeVerb	0001
16	Vocal Echo	0000

**Mixing Console YMH 16**

No.	Description	Parameter
1	Hall 1	Decay
2	Hall 2	Decay
3	Room 1	Decay
4	Room 2	Decay
5	Stage 1	Decay
6	Stage 2	Decay
7	Plate	Decay
8	Drum	Decay
9	KTV Echo	Delay Time
10	Vocal Echo	Delay Time
11	Chorus 1	Rate
12	Chorus 2	Rate
13	Flanger	Rate
14	Phaser	Rate
15	Auto Wah	Rate
16	Tremolo	Rate

### Mixing Console 16

No.	Description	Parameter 1	Parameter 2
1	Small Hall	Decay	High-boost
2	Large Hall	Decay	High-Boost
3	Small Room	Decay	High-Boost
4	Bright Room	Decay	High-Boost
5	Thin Plate	Decay	High-Boost
6	Large Plate	Decay	High-Boost
7	Spring Reverb	Decay	High-Boost
8	Multi-Tap Delay	Delay Time	Repeat
9	Analog Delay	Delay Time	Repeat
10	Chorus Verb	Decay	Chorus Rate
11	Stereo Chorus	Rate	High-Boost
12	Flanger	Rate	Feedback
13	Phaser	Rate	Feedback
14	Gated Reverb	Gate Time	High-Boost
15	Flange Verb	Decay	Rate
16	Vocal Echo	Delay Time	Repeat

### Mixing Console 32

No.	Description	Parameter	No.	Description	Parameter
1	Reverb Hall	6.0 sec	2	Reverb Hall	4.5sec
3	Reverb Hall	3.0sec	4	Reverb Hall	1.6sec
5	Reverb Room	1.6sec	6	Reverb Room	1.0sec
7	Reverb Plate	3.0sec	8	Reverb Plate	1.6sec
9	Ambient	1.6sec	10	Echo+Reverb	1.6 sec
11	Echo 50% F.B.	100 ms	12	Echo 50% F.B.	200 ms
13	Echo 50% F.B.	300 ms	14	Echo 50% F.B.	400 ms
15	Echo 50% F.B.	500 ms	16	Echo 50% F.B.	800 ms
17	Voice doubler I	60 ms	18	Voice doubler II	120ms
19	Chorus	slow	20	Chorus	medium
21	Chorus	fast	22	Chorus+Reverb I	2.0sec
23	Chorus+Reverb II	4.0sec	24	Chorus+Echo I	150 ms
25	Chorus+Echo II	300 ms	26	Flanger	slow
27	Flanger	medium	28	Flanger	fast
29	Gated Reverb I	125ms	30	Gated Reverb II	200 ms
31	Reverse Reverb I	150 ms	32	Reverse Reverb II	250 ms

## Mixing Console 99

Reverberation Effect (37)			Echo / Delay Effects (32)			Modulation Effect (30)		
1	Reverb Hall	2.0 Sec.	38	Voice doubler	60 ms	70	Chorus	Fast
2	Reverb Hall	2.5 Sec.	39	Voice doubler	80 ms	71	Chorus & Echo	Fast / 0.1 Sec.
3	Reverb Hall	3.0 Sec.	40	Voice doubler	100 ms	72	Chorus & Room	Fast / 1.0 Sec.
4	Reverb Hall	4.0 Sec.	41	Voice doubler	120 ms	73	Chorus	Medium
5	Reverb Hall	5.0 Sec.	42	Voice doubler	140 ms	74	Chorus & Echo	Med. / 0.2 Sec.
6	Reverb Hall	6.0 Sec.	43	Echo & Room	0.1 / 1.0 Sec.	75	Chorus & Hall	Med. /2.0 Sec.
7	Reverb Hall	8.0 Sec.	44	Echo & Room	0.15 / 1.5 Sec.	76	Chorus	Slow
8	Reverb Hall	10.0 Sec.	45	Echo & Room	0.2 / 2.0 Sec.	77	Chorus & Echo	Slow / 0.3 Sec
9	Reverb Room	1.0 Sec.	46	Echo & Room	0.25 / 2.5 Sec.	78	Chorus & Hall	Slow / 4.0 Sec
10	Reverb Room	1.5 Sec.	47	Echo & Room	0.3 / 3.0 Sec.	79	Flanger	Fast
11	Reverb Room	2.0 Sec.	48	Echo & Room	0.35 / 3.5 Sec.	80	Flanger & Echo	Fast / 0.1 Sec.
12	Reverb Room	2.5 Sec.	49	Echo & Room	0.4 / 4.0 Sec.	81	Flanger & Room	Fast / 1.0 Sec.
13	Reverb Room	3.0 Sec.	50	Echo & Room	0.5 / 5.0 Sec.	82	Flanger	Medium
14	Reverb Room	4.0 Sec.	51	Echo 50% F.B	100 ms	83	Flanger & Echo	Med. / 0.2 Sec.
15	Reverb Plate	1.0 Sec.	52	Echo 50% F.B	125 ms	84	Flanger & Room	Med. /2.0 Sec.
16	Reverb Plate	1.5 Sec.	53	Echo 50% F.B	150 ms	85	Flanger	Slow
17	Reverb Plate	2.0 Sec.	54	Echo 50% F.B	200 ms	86	Flanger & Echo	Slow / 0.3 Sec
18	Reverb Plate	2.5 Sec.	55	Echo 50% F.B	250 ms	87	Flanger & Room	Slow / 4.0 Sec
19	Reverb Plate	3.0 Sec.	56	Echo 50% F.B	300 ms	88	Tremolo	Fast
20	Reverb Plate	4.0 Sec.	57	Echo 50% F.B	350 ms	89	Tremolo & Room	Fast / 1.0 Sec.
21	Ambient	0.5 Sec.	58	Echo 50% F.B	400 ms	90	Tremolo	Medium
22	Ambient	0.7 Sec.	59	Echo 50% F.B	500 ms	91	Tremolo & Hall	Med. /2.0 Sec.
23	Ambient	1.0 Sec.	60	Echo 50% F.B	650 ms	92	Tremolo	Slow
24	Ambient	1.3 Sec.	61	Echo 50% F.B	800 ms	93	Tremolo & Hall	Slow / 4.0 Sec
25	Ambient	1.6 Sec.	62	Single Delay	50 ms	94	Wah Wah	Fast
26	Gated Reverb	75 ms	63	Single Delay	100 ms	95	Wah Wah & Room	Fast / 1.0 Sec.
27	Gated Reverb	100 ms	64	Single Delay	150 ms	96	Wah Wah	Medium
28	Gated Reverb	125 ms	65	Single Delay	200 ms	97	Wah Wah & Hall	Med. /2.0 Sec.
29	Gated Reverb	150 ms	66	Single Delay	250 ms	98	Wah Wah	Slow
30	Gated Reverb	200 ms	67	Single Delay	300 ms	99	Wah Wah & Hall	Slow / 4.0 Sec
31	Gated Reverb	300 ms	68	Single Delay	400 ms			
32	Reverse Reverb	75 ms	69	Single Delay	500 ms			
33	Reverse Reverb	100 ms						
34	Reverse Reverb	125 ms						
35	Reverse Reverb	150 ms						
36	Reverse Reverb	200 ms						
37	Reverse Reverb	300 ms						

### DJ Mixer 16

No.	Description	Parameter 1	Parameter 2
1	Flanger	Rate	Feedback
2	Flanger Reverb	Decay	Flanger Rate
3	Phaser	Rate	Feedback
4	Robot Flanger	Rate	Feedback
5	Pitch Shift	Pitch Up	Pitch Down
6	Soft Scratch	Character1	Character2
7	Delay	Delay Time	Repeat
8	Trans	Rate	Depth
9	Phase Wah	Rate	Feedback
10	Filter	Rate	Feedback
11	Auto Wah	Rate	Feedback
12	Small Hall	Decay	Bottom Boost
13	Thin Plate	Decay	Bottom Boost
14	Plate	Decay	Bottom Boost
15	Manual LPF	Freq-FC	Decay
16	Gate	Gate Time	High-Boost

### Guitar 16

No.	Description	Parameter 1	Parameter 2
1	Chorus	Rate	Depth
2	Flanger	Rate	Feedback
3	Phaser	Rate	Feedback
4	Tremolo	Rate	Depth
5	Spring	Decay	High-Boost
6	Plate	Decay	High-Boost
7	Hall	Decay	High-Boost
8	Room	Decay	High-Boost
9	Gate	Gate Time	High-Boost
10	Modulate	Decay	High-Boost
11	Auto Wah	Rate	Feedback
12	Auto Filter	Rate	Feedback
13	Chorus Delay	Rate	Repeat
14	Delay	Delay Time	Repeat
15	Octave-Down	Octave Level	Direct Level
16	Octave-Up	Octave Level	Direct Level

## 7. Hardware Control

### 7 Segment



### LCM



## 8. Module Dimension

