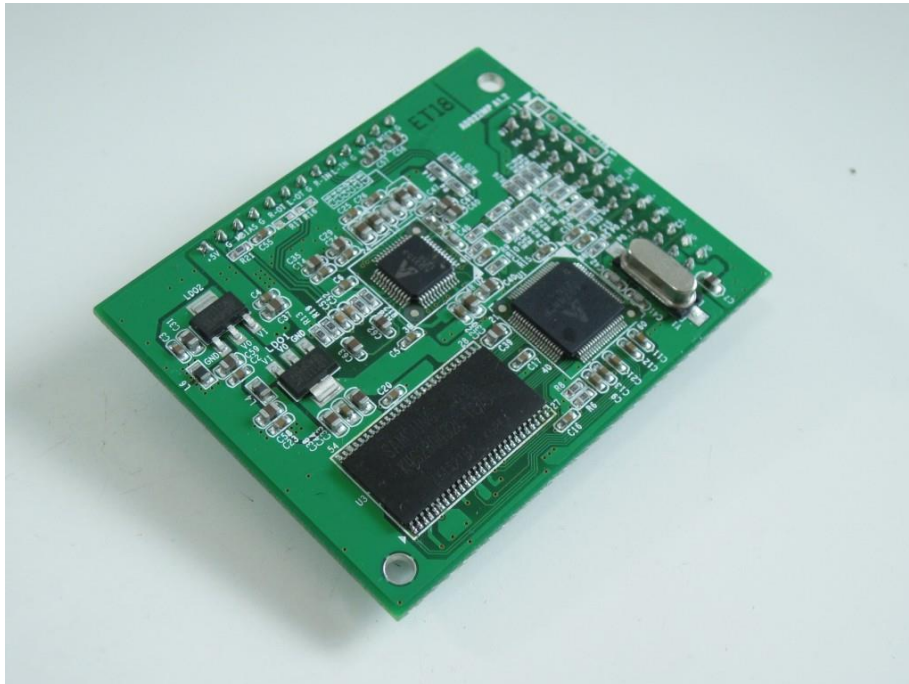# ADD22MP_DJ

With AD2882P DSP

1.   Applications

Digital signal processing for DJ Mixing and any devices which need **DJ Mixing** function.

Like DJ mixer…etc.

2.   Overview

The ADD22MP module, driven by the firmware ADD22DJ described in this datasheet, is a fully MIDI controllable, high quality audio processing device. The ADD22MP includes real time 24-bit "AD2882P" DSP engine, It provides "DJ Mixer" function,also plenty of general IO pins for user interface.

This module design for multi-purpose, the AD2882P DSP use with function which need to use SDRAM, controlled by hardware panel .

3. Specification

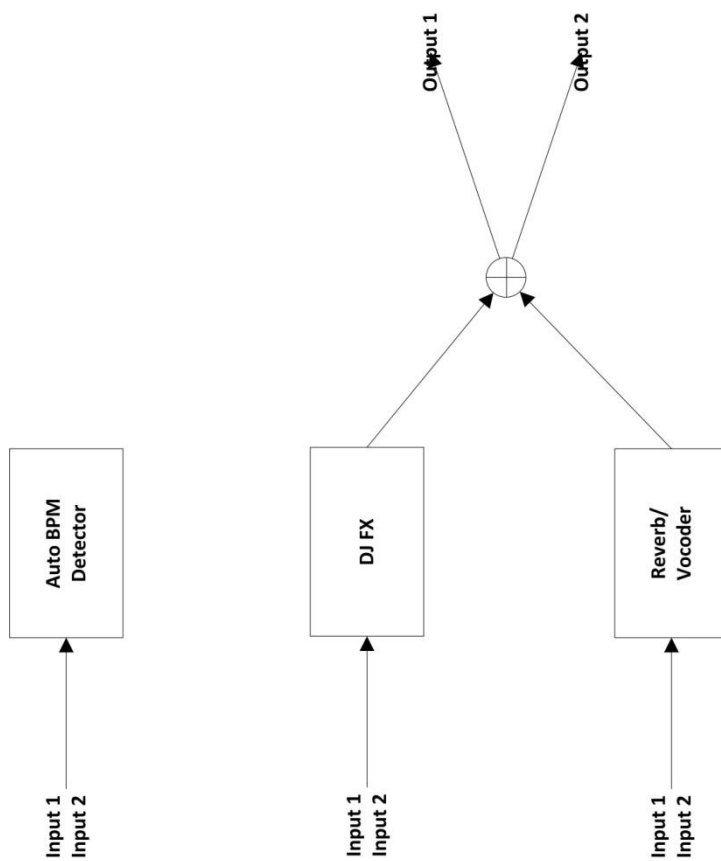|	
Analog Input	2 ch
Analog Output	2 ch
Input Impedance	110k Ω
Output Impedance	10.5k Ω
Max. Input Level	3.15Vp-p
Max. Output Level	3.5Vp-p
AD/DA conversion	48kHz/24bit
Dynamic Range	104 dB
THD+N	< -90 dB
Frequency Response	10Hz - 20kHz +/- 0.1 dB
Power supply	DC 5V, 150mA (stand-alone)
Power Consumption	750 mW

4. Features

- BPM Detector.
- Vocoder effect.
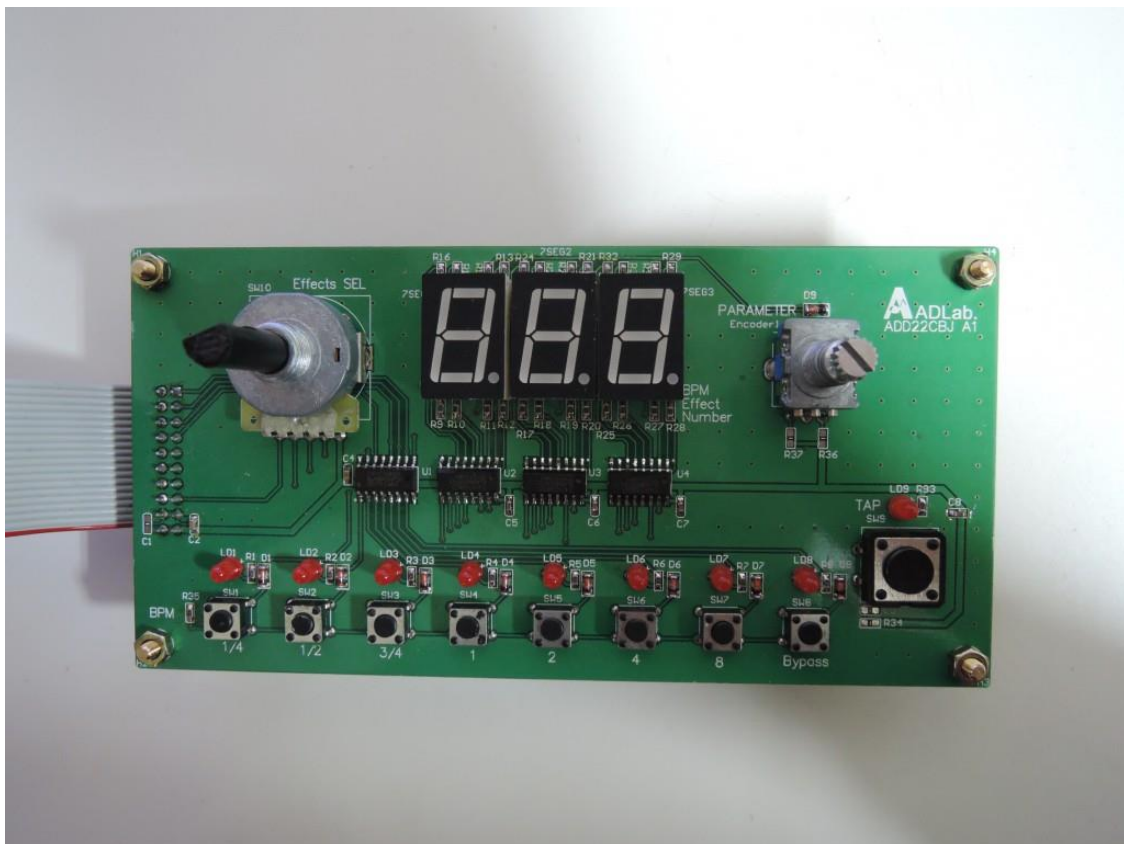- Space effect.
- Modulation effect.

5. Effect List

	Effect name	Parameter 1	Parameter 2	Beat Divide function
1	Delay	Delay Time	Dry/Wet Level	Yes
2	Echo	Delay Time	Dry/Wet Level	Yes
3	Reverb	Reverb Time	Dry/Wet Level	
4	Auto Filter (BP)	Rate	Depth	Yes
5	Manual Filter (BP)	Cutoff Freq.	Resonance	
6	Auto Filter (HP)	Rate	Depth	Yes
7	Manual Filter(HP)	Cutoff Freq.	Resonance	
8	Auto Filter(LP)	Rate	Depth	Yes
9	Manual Filter(LP)	Cutoff Freq.	Resonance	
10	Phaser	Rate	Depth	Yes
11	Flanger	Rate	Depth	Yes
12	Auto Pan	Rate	Depth	Yes
13	Vocal Cancel	Central Cut Freq	Width	
14	Vocoder	Carrier Freq	Dry/Wet Level	
15	Ring Modulator	OSC Freq	Dry/Wet Level	
16	Pitch shifter	Pitch Tone	Dry/Wet Level	

6.   Signal Block Diagram

Output 1

Output 2

⊕

| Auto BPM Detector |
| DJ FX |
| Reverb/ Vocoder |

Input 1
Input 2

Input 1
Input 2

Input 1
Input 2

7.   Hardware Control

- 16 essential DJ beat effect for DJ mixer on binary encoder.

- Each effect with two parameter editing from one rotary encoder.
  Auto BPM function also can be controlled by TAP switch manually,there is a tempoLED indicate the present beat

- 3-digit 7 segment LED for BPM/parameter display.

- 7 beat divider switch (1/4'1/2'3/4'1/1'2/1'4/1'8/1 beats) that can sync with effect which is useful for more accurate effect parameter control.

8.   Module Dimension