Kaiwa vox

Have your MCU or Emy speak Japanese Romaji, the robotic way.



Kaiwa Vox is text-to-speech add-on board with a Japanese robotic voice. It just needs to receive an ASCII string of Romaji Japanese to start speaking.

The speech engine recognizes text and various speech modifiers to improve prosody.

The chip can also vary the speed, the pitch and the accent to the speech.

The hardware is compatible with the mikroBUS™ standard, allowing rapid prototyping and easy integration into existing projects.

The onboard class-d amplifier can drive a small 8 ohms speaker.

A led turns on when the chip is done talking and ready to proceed.

Specifications

- Japanese AquesTalk pico text-to-speech speech synthesizer
- Speaks any Japanese from romaji text format with a robot voice
- Speech, pitch and accent can be changed for nice voice effects
- mikroBUS™ board format
- run on 3.3V or 5V

- Onboard amplifier that can drive an 8-Ohm speaker at up to 1.4 Watts
- Trimpot to adjust volume.
- 3.5 jack or 2 pins speaker connectors output

Applications

This vox board is designed to be used in the forthcoming Polaxis new **Kaiwa** Eurorack Module. (in this case, the audio signal is forwarded via the “PWM” pin – the jack is not used here)

It can also be used in robots, toys or any other speaking devices you may think of.

Thanks to the popular mikroBUS™, this board can be instantly connected to multiple different platforms like the Arduino or the Clicker2.
The onboard amplifier is quite powerful and is just waiting for the speaker to be plugged in!

Breadboard Connection

Code example

```
#include          "AquesTalk.h"                    //
http://www.a-quest.com/download/package/Arduino_AquesTalk_Libr
ary.zip
#include

/*

        +-----------------+
        |[ ]NC      OUT[ ]| Audio
      3 |[ ]RST   !PLAY[ ]| 2
```

```
          |[ ]NC       NC[ ]|
          |[ ]NC       NC[ ]|
          |[ ]NC      SCL[ ]| A5
          |[ ]NC      SDA[ ]| A4
          |[ ]3V3      5V[ ]| 5V
          |[ ]GND     GND[ ]| GND
          +__________________/
*/

AquesTalk atp;  // I2C address : 0x2E
#define RESET 3
#define NPLAY 2 // busy playing when LOW



void setup()
{
    pinMode(RESET, OUTPUT);
    digitalWrite(RESET, HIGH);
    pinMode(NPLAY,INPUT_PULLUP);
  delay(100);
  atp.Synthe("konnnichiwa.");

}

void loop()
{
   atp.Synthe("arigato.");
   atp.SetAccent(random(200));
   atp.SetPitch(random(200));
   atp.SetSpeed(random(200));
   atp.Synthe(".");

}
```

Github

This board is developed under the creative commons license: CC-BY-SA

The schematic and the code are available here

User Manual

Kaiwa_vox_Manual_1_0

Soundcloud

mikroBUS™ standard designed by MikroElektonika