

## MT8870 DTMF Audio/Speech Decoding Telephone Module



### QUICK OVERVIEW

The MT8870 module is a low power device DTMF decoder chip. It is a complete DTMF receiver integrating both the band-split filter and digital decoding functions. This module is suitable for modem interfaces, mobile radios and other DTMF related applications.

- [Description](#)

This component is ideally suited to adding dual tone multi-frequency (DTMF) decoding to your project. This detection module interprets the incoming tone and produces a coded output that can be connected to all manner of microcontrollers.

DTMF is commonly found in touch tone devices such as a phone. The tone is a combination of two separate sine waves that produce a unique signal that can be transmitted or heard. When the module receives the signal it is able to decode it and produce a binary output that can be used in other devices. The module shows the state of the signal through onboard LEDs.

As an idea, you can connect up a mobile phone via 3.5mm to 3.5mm cable to the module. Dialling into the phone from a second mobile and then using the keypad will produce the tones on the original phone. The tones in the call can then be interpreted by the module, allowing you

to control all manner of projects. The pins are suited to standard sockets with a pin pitch of 2.54mm.

The MT8870 Tone Decoder is a kind of commonly used multi-frequency decode IC product developed by the MITEL company. It is a complete DTMF receiver. After it received the DTMF signal, it will divide the signal into high-frequency group and low-frequency group and send the signal to the digital decoder which can figure out the key value then send it to the outside Bus via four lines( Q1, Q2, Q3, Q4) as the binary form.

- [Specifications](#)

|                       |                                   |
|-----------------------|-----------------------------------|
| Main Chip             | MT8870DS                          |
| Working voltage       | 5V                                |
| Power Consumption     | 500mW (MAX)                       |
| Type                  | MT 8870 DTMF Tone Decoding Module |
| Operating Temperature | -40-+85 Â°C                       |
| Board Colour          | Blue                              |
| Dimension (LxWxH)mm   | 27 x 25 x 10                      |
| Weight                | 5g                                |
| Shipment Weight       | 0.095 kg                          |
| Shipment Dimensions   | 3 × 2 × 2 cm                      |

---

### Features:

1. Onboard voice input interface
2. Low power consumption
3. Internal gain setting amplifier
4. Onboard LED, it is very convenient to check the output state.
5. Adjustable guard time
6. Central office quality
7. Onboard 3.5mm input interface
8. 5 Channel interface
9. On-board MT8870 frequency decoder chip
10. Power-down mode
11. Inhibit mode

12. Onboard audio input interface
13. Onboard LED lights for output state indication Complete DTMF Receiver.
14. Does not require external circuits or wiring, it can be inserted directly into the UNO/MEGA2560/DUE board to use.
15. 12-Digital outputs decode mobile and fixed telephone keys (0-9, \* #). Also, another 4 Digital output(ABCD) can use “DTMF Dial” for Software control.

---

**Package Includes:**

1 x MT8870 DTMF Audio/Speech Decoding Telephone Module