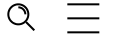




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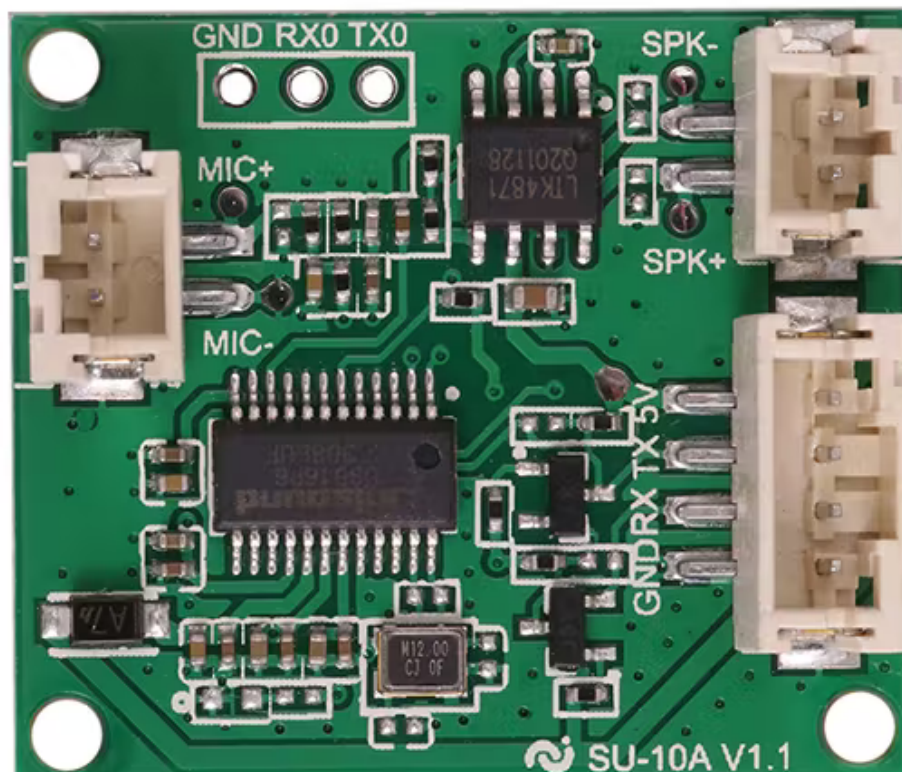


ICStation's \$5 SU-10A Packs an On-Board Unisound US516P6 for Offline Voice Recognition Work

Low-cost module offers local voice processing, but documentation is sadly thin on the ground.

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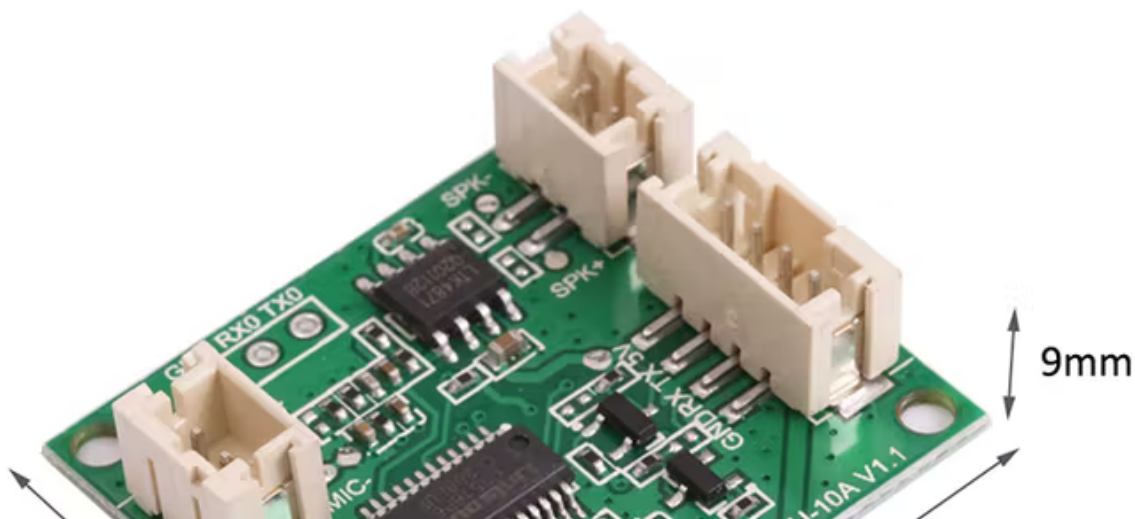
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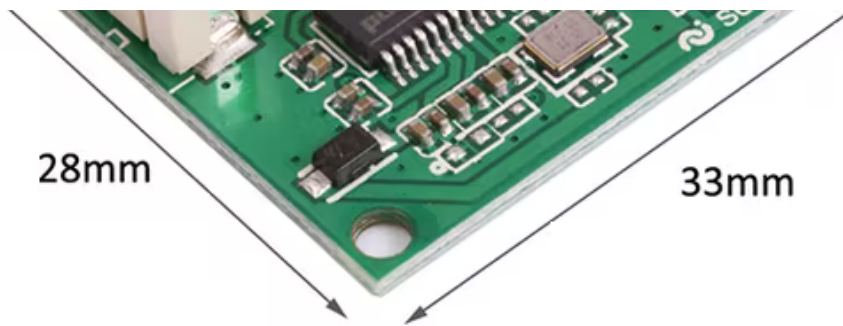
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ICStation has begun selling a \$5 module designed to add voice control to projects without the need for a network connection, building on the Unisound US516P6 microcontroller: the SU-10A.

Designed for solder-free installation to speakers, a microphone, and a host microcontroller, the SU-10A — brought to our attention by CNX Software (<https://www.cnx-software.com/2021/08/17/offline-speech-recognition-mcu-module-comes-with-speaker-microphone-and-uart-connectors/>) — looks to simplify the creation of offline voice control systems, offering on-board processing without needing a connection to a remote voice recognition server.

The heart of the module is a Unisound US516P6 microcontroller running at 240MHz and offering 242kB of static RAM (SRAM) and 2MB of flash, alongside a floating-point unit and accelerators for digital signal processing (DSP) and fast Fourier transform (FFT) operations. A 3W monaural amplifier is brought out to a solder-free speaker connector, and a second connector supports an electret microphone.





The SU-10A offers soldering-free installation for offline voice processing, but no easily accessible GPIO. (📷: ICStation)

Two UART connections are included, one for a serial console and the other for connection to an external microcontroller. What isn't included, oddly, is any way to access the Unisound's general-purpose input/output (GPIO) pins — meaning that an external microcontroller becomes a lot less optional if you're actually wanting to trigger anything other than audio playback with the gadget.

Sadly, documentation on programming the module is thin on the ground — but ICStation (<http://www.icstation.com/intelligent-offline-speech-recognition-module-voice-recognition-control-switch-lights-chip-sound-control-module-p-15800.html>) has begun selling the part for \$5.03, a discount on a claimed \$6.99 retail price, making it a low-cost target for experimentation.

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