



WALKI-TALKI SOC

1. GENERAL DESCRIPTION

The Conwise Walki-Talki is a highly integrated system on chip incorporating all base-band signal processing and system control functions that are required for a family radio or walkie-talkie system. The chip provides many functions such as 38 standard and 10 non-standard code for CTCSS tone generator and CTCSS detector, weather detector, scramble/descramble for security, vibration detection and remote and baby monitor detection, VOX (Voice Activity Detection), ALC (Auto-level Control), music call tone generator, Battery and RSSI detector, 4 Ω speaker/32 Ω ear driver, 8-bit micro-processor and LCD driver with 4X16. In the meantime, it includes a 32 bytes control registers via internal micro-processor or host interface with external micro-processor for many functions control. It provides circuit for external microphone control. In addition, it is easy to connect RF module by setup PLL synthesizer I/O control, power switch and RSSI detection circuit. This chip allows half-duplex operation over a 3 volt voltage and 5 volt for speaker driver. Moreover, its low power consumption makes it ideal for battery applications. In the meantime, this chip also consists of some OP amplifiers integrated with diffenet filter to allow for easy control of the analog interface.

In particular, this chip is very suitable for Walki-Talki with CTCSS systems.

2. FEATURES

- 3.0 volt power supply for sysetm except for speaker driver and 5V for speaker driver
- Master clock rate: 12.288 MHz crystal typically.
- Support Family Radio Service applications with 38 standard and 10 non-standard code for CTCSS Tone Generator/Detector (from 62.5 Hz to 250.3 Hz)
- Integrated audio suppression filter for sub-band tone injection on Transmission path
- Integrated tone elimination for quality audio on RX path
- Built-in high-speed CTCSS tone detection less than 150 ms
- Built-in weather channel detection less than 110 ms
- Built-in vibration and remote monitor detection less than 110 ms
- Built-in VOX (Voice Activity Detection) for hand-free microphone input
- Built-in ALC (Auto-Level Control) for Baby Monitor and Remote Monitor
- Provide Battery detector, RSSI detection and Squlech with 4 level for MMI program
- Provide 8 Key Input Controls
- Provide gain/volume control with 16 level for speaker driver and 32 level for host interface control
- Built-in High-power speaker driver with min 4 Ω load
- Built-in Monitor, Auto-Power OFF (APO), Roger Tone, Key Beeper
- Built-in Call Tone Music with 10 group
- Built-in LCD driver for 4X 16 LCD pannel
- Support internal and external microphone input without glue logic
- Built-in scramble/descramble function for security
- Built-in an RISC for user MMI



Preliminary Data Sheet CW6670

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- 32 Control registers with 8 bits wide Via host control interface
- Very low external components for full function
- Easy to connect RF module with internal 6 power switches and 3-pin control to PLL synthesizer
- Complete MMI(Man-Machine Interface) with external serial EEPROM for configuration
- Support High/Low power control for FRS and GMRS system On MMI
- Support Fixed volume option for switch on MMI
- Support different volume setup for FRS, FM and weather channel
- Programmable Menu sequence except first 4 selection(Volume, channel, CTCSS code and Scan) on MMI
- Packaged in 80-pin LQFP