NMI5625

Product Highlight

- Built in CMOS RF Tuner
- Supports VHF- Ⅰ, FM, VHF- Ⅲ, and UHF bands
- Demodulates ISDB-T 1-seg digital transmission and decodes the audio and video streams
- Worldwide FM support
- Worldwide PAL, NTSC, and SECAM support
  - Supports all NTSC standards : NTSC-M, NTSC-J, NTSC-4.43
  - Supports all PAL standards : B, B1, D, D1, G, H, I, K, K1, M, N, Nc
  - Supports SECAM B, D, G, K, K1
- Pin for pin compatible with NMI600 & NMI601
- It can drive an LCD directly
- Available in 48-pin 6X6 QFN qualified Green Package

Main Features

Integrated Paripherals	/ LNA matching networks / PLL loop filter / Crystal Oscillator	/ VCOs / Baseband filters and amplifiers / Analog-digital converters
Band	/ VHF-1 / FM / VHF-III / UHF	
External Interfaces	/SPI, TSIF, I2C for ISDB-T mode /I2C, I2S, BT.601,656 for Analog TV mode	
Size	/ 6x6 BGA	

Performance

Minimal Power consumption (When internal LDO is not used)	/ 135mW in ATV mode / 92mW in ISDB-T mode / 67mW in FM mode
Pin Compatibility	/ Compatible with NMI601 and S/W driver API
Multimedia	/ AV Decoder H.264, AAC+

"The Final Choice for Mobile TV Front End"

NMI5625 is an ultra lower power SoC IC with three modes of operation.

NMI5625 is a single-chip solution that implements the RF tuner, demodulators, protocol stack audio/video decoders, all required memory, and peripherals on a single die which achieves small package size and ultra low power consumption along with class-leading performance. It receives an input single-ended RF signal from the antenna through the VHF- Ⅰ /FM, VHF- Ⅲ, or UHF-band RF input and can operate in the three modes discussed in Section 1.
The tuner integrates the LNAs, mixer, VCO, PLL/loop filter, LO generation, crystal oscillator baseband filters and amplifiers, and analog-digital converters. The tuner also includes an innovative closed loop RF gain control.

The demodulator receives a baceband input from the tuner and provides an Automatic Gain Control (AGC) signal to control the tuner gain. The demodulator implements the full acquisition, synchronization, and demodulation for analog TV (PAL/NTSC/SECAM), 1-seg ISDB-T, and FM transmission. In ISDB-T mode, the decoder parses the MPEG-2 transport stream and decodes the H.264 video and AAC audio stream.
The NMI5625 communicates with the host via the I2C or SPI interface for control, the BT.601/656 video interface, and the I2S interface for audio. An analog audio output is also provided as an alternative to the I2S audio interface.

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United States : +1 949 340 6150 _Newport Media Inc. 1 Spectrum Pointe Dr. Suite 225 Lake Forest CA 92630 / info@newportmediainc.com **China** / **Shanghai office** : +86 21 6109 6986 _Newport Media Inc. Room 501, North ZheDaWangXin Building, No. 2966 JinKe Rd., ZhangJiang HiTech Park PuDong, Shanghai, China / **Shenzhen office** : 1017,TianAn Cyber Park, Futian District, Shenzhen
/ vwang@newportmediainc.com **Egypt** _ +20 2 2696 1700 _ 11 Markaz El-maalomat St., block 1157 Masaken Sheraton Heliopolis Cairo 11361 Egypt.
Korea _ +82 31 783 4200 _ WRG 12F, Parkview Office Tower, 6 Jeongja-Dong, Bundang-Gu, Seongnam-Si Gyeonggi-Do, Korea. / sales@wrg.co.kr
Japan _ +81 3 5775 0327 _ R&M 2F, 3-5-17 KitaAoyama, Minato-ku, Tokyo 107-0061, Japan