



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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RN52 Bluetooth Audio Module

Fully Certified Bluetooth® Version 3.0 Module

PRODUCT BRIEF



FEATURES

- Fully certified Bluetooth® version 3.0 audio module, fully compatible with Bluetooth version 2.1+EDR, 1.2, and 1.1
- Software configurable through commands over UART console interface
- Embedded Bluetooth stack profiles: SPP, A2DP, HFP/HSP, and AVRCP
- Supports iAP profile discovery for iPhone® and iPod® Bluetooth accessories
- Available as an A2DP audio source or sink
- Postage-stamp-sized form factor, 13.5 x 26 x 2.7mm
- Dual-channel, differential audio input and output for highest quality audio
- External audio codecs supported via I²S and S/PDIF interface
- Castellated SMT pads for easy and reliable PCB mounting
- Additional support for codecs such as aptX®, AAC, MP3, and others
- Environmentally friendly, RoHS compliant
- Certifications: FCC, IC, CE
- Bluetooth SIG certified

RN52-I/RM

Roving Networks' RN52-I/RM Bluetooth audio module provides an integrated solution for delivering high-quality stereo audio in a small form factor. It combines a Class 2 Bluetooth radio with an embedded DSP processor, controlled and configured by simple ASCII commands and GPIO.

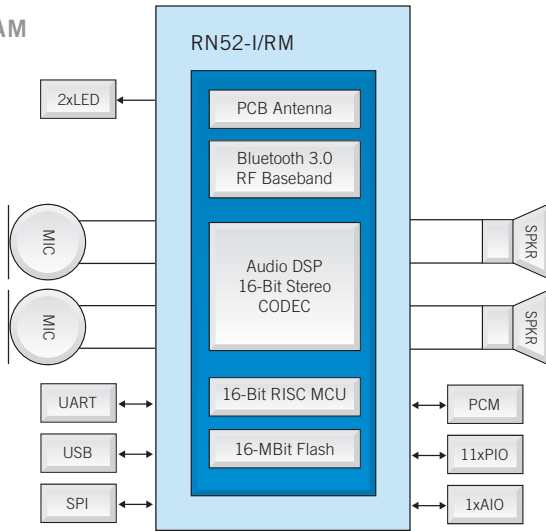
It integrates RF, a baseband controller, and DSP, making it a complete Bluetooth audio wireless link. The RN52 supports HSP/HFP, A2DP, AVRCP, SPP, and iAP profiles and includes support for codecs such as SBC, aptX®, and AAC. It provides a UART interface, GPIO, stereo speaker outputs, stereo microphone inputs, and a USB port (see block diagram).

APPLICATIONS

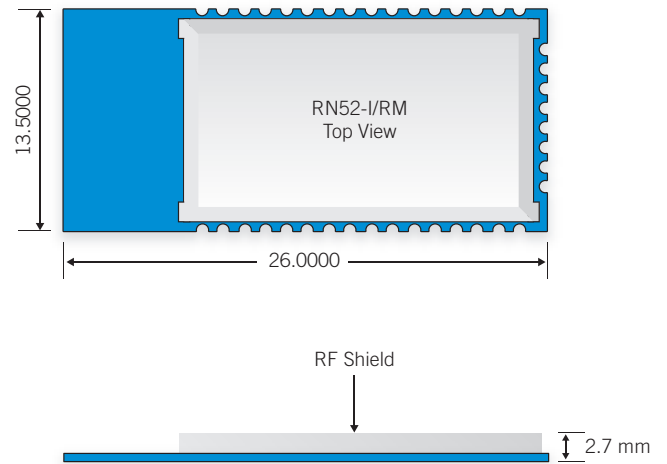
- Wireless stereo speakers and headsets
- Smartphone app streaming
- Wireless audio docking station for smartphones
- Automotive hands free audio
- High-quality, 2-channel audio streaming
- Remote control for media player
- Intercom push-to-talk audio connection



BLOCK DIAGRAM



PHYSICAL DIMENSIONS



SPECIFICATIONS

Standard	Bluetooth 3.0
Standard Profiles	A2DP, AVRCP, SPP, HFP/HSP, iAP
Frequency	2.4 ~ 2.48 GHz
Modulation Method	GFSK, PI/4-DQPSK, 8 DPSK
Maximum Data Rate	3 Mbps burst mode, 1.5 Mbps sustained
RF Input Impedance	50 ohms
Interface	UART, USB, Bluetooth, GPIO
Operation Range	Class 2: 10 meters (33 feet)
Sensitivity	-85 dBm at 0.1 % BER
RF TX Power	+4 dBm (typical)

ORDERING INFORMATION

Part Number	Description
RN52-I/RM	Bluetooth 3.0 Class 2 surface mount audio module with PCB trace antenna
RN52APL-I/RM	Bluetooth 3.0 Class 2 surface mount audio module with PCB trace antenna, supports A2DP, SPP profiles with additional support for iAP data communication
RN52APT-I/RM	Bluetooth 3.0 Class 2 surface mount audio module with aptX™ codec (decode), PCB trace antenna
RN-52-EK	Evaluation kit for the RN52 audio Bluetooth module - includes evaluation board, USB cable, and 2 USB mini-speakers

EVALUATION KIT

