

CXN1600

High-Functionality/High-Performance Compact Bluetooth® Module for Wireless Stereo Audio Playback



With the increasing popularity of wireless functionality in portable audio players and cellular phones, products such as wireless stereo headphones, wireless speaker, and hands-free automotive system are becoming increasingly common. Bluetooth® technology enables connection among those products without wires and cords and has been adopted by consumer and automotive manufacturers. Looking forward, Bluetooth® applications continue to grow and it is expected that file transfers of data such as address books and phone books between portable equipment and automotive system will become widely available.

The CXN1600 is a self contained, full-featured, easy to use Bluetooth® module. It supports the BT2.0 + EDR (Enhanced Data Rate) standard that is becoming the mainstream technology for providing wireless stereo playback environments.

Bluetooth®

- Diverse interfaces
- Miniature SMD package
14 × 16.5 × 2.1 mm
Shielded 72-pin LGA package
- CSR's BC5-MM
- Built-in 16M-bit flash ROM
- Battery charger circuit included
- 1.8 V DC-DC converter
- Minimal number of external components

Full Firmware Support Provided Since It is a Full Module

The CXN1600 is a transmission power class 2 full functionality surface mounting module that supports both headsets and a wide range of application profiles. The CXN1600 is optimal for headset and headphone applications and allows the inclusion of echo canceling and noise canceling functions in automotive and other hands-free applications. It can also support AAC/AAC + Codec, WMA, and other standards, and supports application software development to match user needs and even embedded applications. It includes flash ROM to make software updates and upgrades possible.

The CXN1600's superlative characteristics and

an easy-to-use parameter set mean that it can be used with confidence in audio applications.

External Interfaces

The CXN1600 supports the following extensive set of interfaces.

- Audio input/output
- UART
- PCM/I²S
- AIO (2 systems)
- USB
- PIO (16 systems)
- LED (2 systems)

Profile Options

Users can select from the following wide variety of profiles according to the application's needs.

- A2DP
- PBAP
- SPP
- HS
- AVRCP1.3
- OPP
- HF1.5

Simplified End Product Power Supply

The CXN1600 includes both 1.5 V and 1.8 V regulator circuits (external resonators are required), and can operate on a single battery system.

It also includes a power supply charge control circuit and supports miniature form factors and reduced costs in products that use rechargeable batteries.

Power consumption has been reduced by 20% from the current CXN1450.

RF Design

Bluetooth® uses the 2.4 GHz band. The CXN1600 uses a 50 Ω matching circuit in its RF input block and can operate an external antenna with a simple matching circuit. Sony can also offer consultation on antenna selection, directional antenna development, and RF circuit board design.

Custom Modules

Sony also provides the CXN1601, which is a slim version (20.9 × 11.4 × 2.2 mm, 72-pin LGA without a shield) that features the same functionality as the CXN1600. Please contact your Sony representative to discuss modifications to module-internal circuits, modifications to package specifications or other design changes, as well as certification procedures.

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V O I C E

This miniature high-performance module, in true Sony tradition, incorporates both hardware and software know-how fostered through extensive experience. We also took the user's standpoint into account and focused on ease of use in this product. I strongly recommend that you look into this device and expand the world of Bluetooth® applications together with Sony.

