

1.2. Operational Description

The EUT is a Wireless Music Bridge for 2.4GHz wireless transceiver signal.. Operating Frequency Range is from 2412 MHz to 2462 MHz. The device adapts Digitally Modulation Spread Spectrum modulation. The Connector antenna was provides diversity function to improve the receiving function. Operation in 2.4GHz Direct Sequence Spread Spectrum (DSSS) radio transmission for IEEE 802.11b and Orthogonal Frequency Division Multiplexing (OFDM) for IEEE 802.11g.

The Antenna Output is 20279-001E-d . The function of CONN REVERSE SMA is disabled. The resistance and capacitance have be disconnected from the circuit.

This device provided four kinds of transmitting speed 1 Mbps, 2 Mbps, 5.5 Mbps and 11Mbps for IEEE 802.11b and eight kinds of transmitting speed 6 Mbps, 9 Mbps, 12 Mbps, 18 Mbps, 24 Mbps, 36 Mbps, 48 Mbps and 54Mbps for IEEE 802.11g. The device of RF carrier is DQPSK, DBPSK and CCK. The maximum wireless signal rate of 802.11b is 54Mbps in the 2.4GHz frequency — the same wireless frequency as 802.11b. The EUT also offers four Ethernet ports to support multiple computers.

The advanced wireless technology built into the EUT offers data transfer speeds with a maximum wireless signal rate of up to 54Mbps* through its wireless channels allowing streaming videos and other high bandwidth applications, such as online gaming events, to operate without the hassle of Ethernet cables. The ability to use high bandwidth applications also makes streaming real-time programs more enjoyable and more efficient.

The device delivers Internet sharing, local area network connectivity and security in a single device. The EUT has a 10/100 WAN port for connection to Cable or xDSL modem. The four-port 10/100 Ethernet switch along with the built-in 802.11b/g wireless access point provides network connectivity to multiple machines in the Local Area Network (LAN).

The RTL 8225 is a highly integrated system-on-a-chip, embedded with a high-performance 32-bit RISC processor, Ethernet, and WLAN controller. It is designed by Realtek especially for C-Media Wi-Sonic network audio solution with the accelerators.

The C-Media's Wi-Sonic is the industry's first multi-channel wireless network audio turnkey solution, designed to connect PC or PDA audio to existing speakers, stereos or home theatre systems through a standard wireless 802.11x Wi-Fi or wired Ethernet network. Wi-Sonic allows your customers to play their content where they want with unprecedented convenience. With the C-Media Network Audio Driver (NAD) installed on the PC/Notebook/PDA with a Wi-Fi connection, all audio on the PC or music library on the PDA can be played via PCM, AC-3, or DTS format to the Wi-Sonic audio receiver.

The RTL8201CP is a single-chip/single-port PHY receiver with an MII(Media Independent Interface)/SNI(Serial Network Interface). It implements all 10/100M Ethernet Physical-layer functions including the Physical Coding Sublayer (PCS), Physical Medium Attachment(PMA), Twisted Pair Physical Medium Dependent Sublayer (TP-PMD), With an auto crossover detection function, 10Base-Tx Encoder/Decoder, and Twisted-Pair Media Access Unit(TPMAU).

A PECL (Pseudo Emitter Coupled Logic) interface is supported to connect with an external 100Base-FX fiber optical transceiver. The chip utilizes an advanced CMOS Process to meet low voltage and low power requirements. With on-chip DSP (Digital Signal Processing) technology, the chip provides excellent performance under all operating conditions.

The RTL8201CP can be used for applications such as those for a Network Interface Adapter, MAU(Media Access Unit), CNR (Communication and Network Riser), ACR (Advanced Communication Riser), an Ethernet hub, and an Ethernet switch. In addition, it can be used in any embedded system with an Ethernet MAC that needs a UTP physical connection or Fiber PECL interface to an external 100Base-FX optical transceiver module.

The Wi-Sonic turnkey solution consists of Wi-Sonic SOC (RTL8722), PCI Sound Chip (CMI8769), RF transceiver (RTL8225), Ethernet PHY (RTL8201) or Switch (RTL8305), CMT2806-XXX MCU, firmware/SDK kit, and versatile Network Audio Driver for PC Windows 2K and XP, or Windows Pocket PC or Mobile Edition on PDA/PDA Phones. The Wi-Sonic™ network Audio driver currently supports Dolby Digital Live 5.1 Encoders, Dolby Pro-Logic IIx, Dolby Headphone, Dolby Virtual Speakers, and DTS Connect (DTS Interactive 5.1 Encoder and DTS Neo :PC) technologies for options. Wi-Sonic™ audio receiver can also provide standard 802.11x Wi-Fi Access Point or Router functionality, which depends on customer design and product positioning.