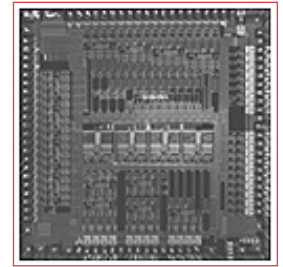




BCM92200 PRODUCT Brief



BROADBAND WIRELESS MODEM REFERENCE DESIGN

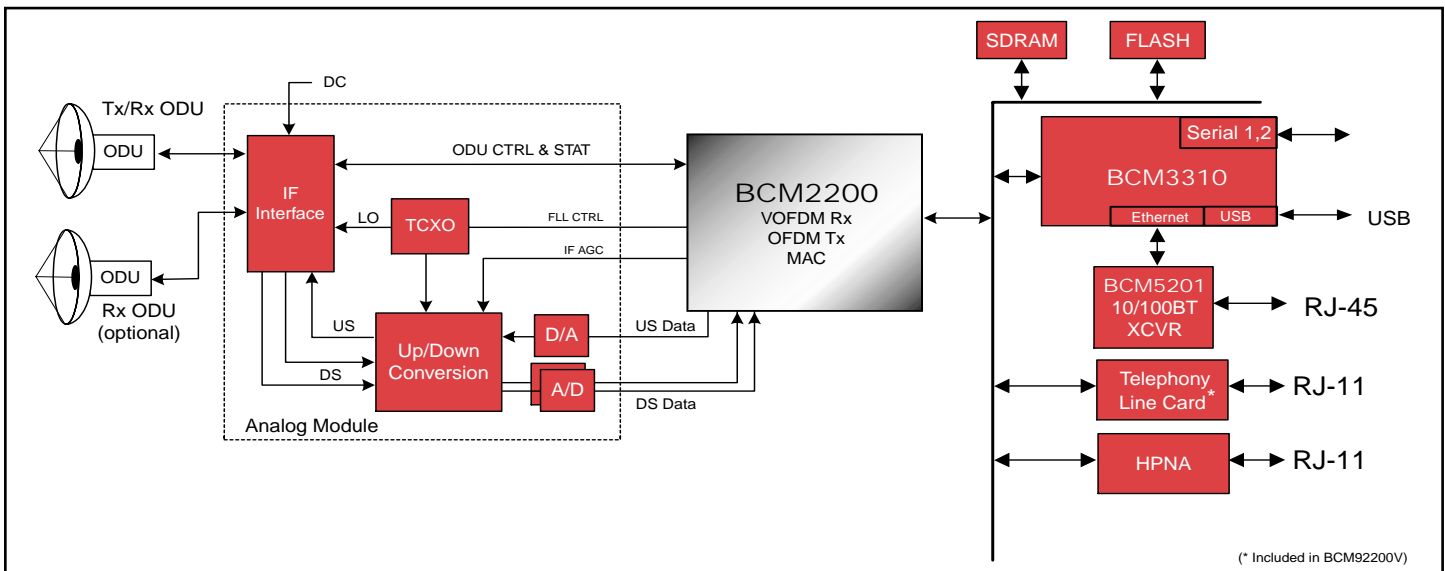
BCM92200 FEATURES

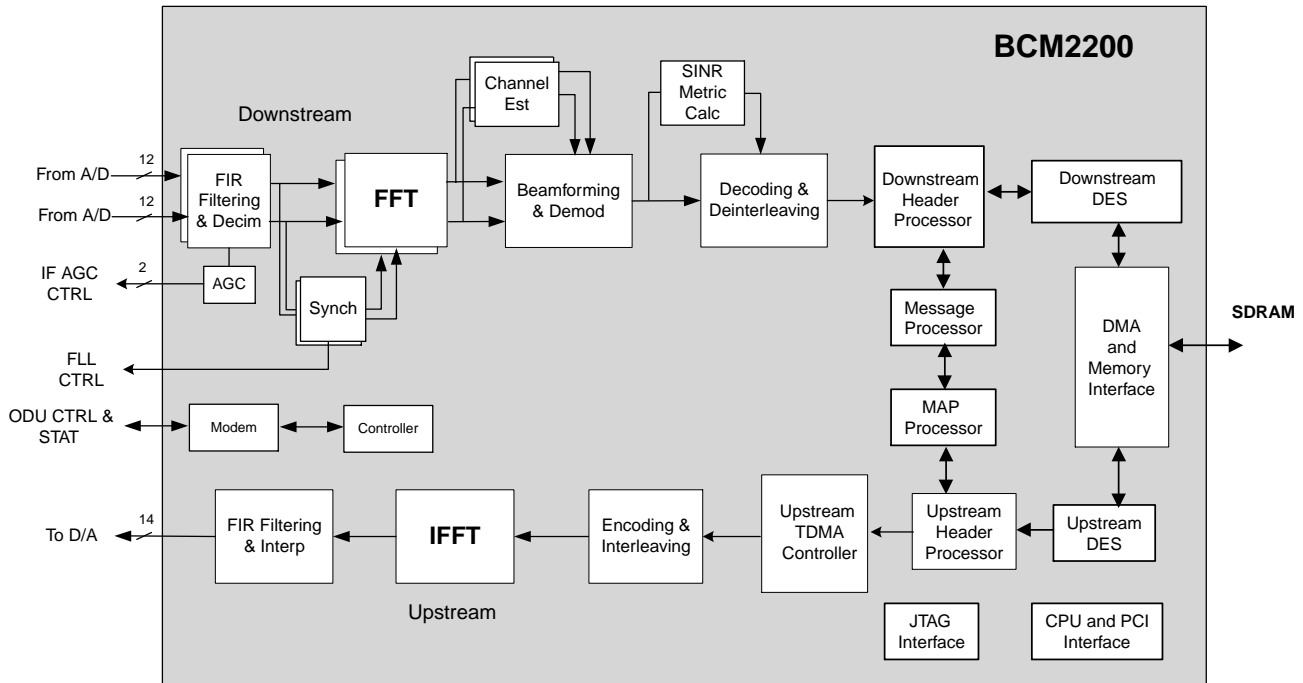
- **A fully functional VOFDM receiver and burst transmitter for broadband wireless applications**
- **Dual VOFDM Receivers**
 - Up to 71 Mbps data rate
 - Variable channel width up to 15 MHz
 - Up to 1024 tones
 - 4-, 16-, 64-, 256-QAM
- **Integrated OFDM Burst Transmitter**
 - Up to 48 Mbps data rate
 - Variable channel width up to 15 MHz
 - Up to 512 tones
- **Integrated Media Access Controller (MAC) for Wireless Applications**
 - Enhanced Quality of Service (QoS) for Voice over IP (VoIP) support
 - Dedicated SID for closed loop power control
- **Analog Module Interface to Outdoor Unit**
- **RF Outdoor Units for Over-The-Air Testing**
- **Subscriber Interfaces**
 - 10/100Base-T Ethernet
 - Universal Serial Bus (USB)
 - Home Phoneline Networking Alliance (HPNA)
 - Optional VoIP Module

SUMMARY OF BENEFITS

- **Provides compatibility with BCM92210 Basestation Reference Design for a complete end-to-end system solution**
- **Facilitates accelerated time-to-market development**
- **Specifically designed MAC improves performance in the wireless environment**
 - Rapid RF power control
 - Supports connection based isochronous telephony
- **Single-chip PHY/MAC reduces overall system cost and provides lower overall power consumption**
- **Inclusion of documented source code enables rapid software development**
- **Advanced VOFDM architecture specifically designed for broadband wireless results in robust performance under harsh and non-LOS conditions**
- **Broadcom's comprehensive support includes:**
 - Schematics and Gerber files
 - Bill of materials
 - Documented C source code
 - System schematics
 - Comprehensive engineering support

BCM92200 Wireless Modem Reference Design





The **BCM92200** is a complete wireless modem providing RF, IF and baseband hardware, along with MAC processing software. The design is based on the BCM2200 wireless modem physical layer and MAC device.

The **BCM92200** is the first integrated device specifically designed to address the broadband wireless market requirements. It is based on a standardized MAC implementation and provides the superior performance advantages of spatial diversity and OFDM in the VOFDM receiver.

The MAC used in the **BCM92200** is a mature design, taken from previous generations of Broadcom modem products. It includes all the functionality required to support voice over IP applications, such as fragmentation and quality of service. In addition, the MAC is enhanced for nearly symmetric throughput in many operating modes.

The reference design also includes the BCM3310 Broadband Communications Processor and the BCM5201 Ethernet physical layer transceiver. An analog IF module and an outdoor RF electronics package with antenna is a part of the **BCM92200**.

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For more information please contact us at:
 Phone: 949-450-8700, FAX: 949-450-8710
 Email: info@broadcom.com

Visit our web site at: www.broadcom.com

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The reference design leverages many years of Broadcom software engineering applied to Broadcom DOCSIS/EuroDOCSIS platforms to ensure high quality, fully portable software deliverables. The **BCM92200** provides multiple, easy to use interfaces: two serial interfaces, Universal Serial Bus (USB), 10BASE-T Ethernet and Home Phoneline Networking Alliance (HPNA).

A complete end-to-end reference design solution is offered by the combination of the **BCM92200** and BCM92210 Broadband Wireless Basestation Reference Design. These reference designs are a direct aid in reducing the development time to bring the highest performance and lowest cost wireless point-to-multipoint product to market.



BROADCOM CORPORATION
 16215 Alton Parkway, P.O. Box 57013
 Irvine, California 92619-7013