

Dual-Band Modem IC (PHY) for WLAN System Solutions

The PMB 8787 provides the complete modem functionality for a dual-band wireless LAN chipset.

It contains the signal processing functionality for both the DSSS/CCK and the OFDM modulation/demodulation needed for an 802.11a/b/g compliant system.

The PMB 8787 is designed to form an Infineon WLAN chipset in combination with the PMB 8680 dual-band RF Transceiver, the PMB 8825 dual-band Power Amplifier and the PMB 8789 MAC IC.

The device is fabricated in an advanced 0.13 μm CMOS-technology and will be available in a LFBGA-81 package.



WirelessLAN

Features

- Advanced low power CMOS technology
- Supply voltage 3.3 V for MAC/RF interface and 1.5 V for core and analog supply
- Full support of 802.11a (54 Mbit @ 5 GHz) OFDM
- Full support of 802.11g (54 Mbit @ 2.4 GHz) OFDM
- Market proven 802.11b CCK/DSSS signal processing
- Data flow/low power architecture
- Radar/CW Detection (802.11h)
- Adaptive data rate selection due to SNR measurement
- Channel selection due to silence measurement
- Proven high performance mixed signal blocks (ADC/DAC, PLL)
- Low power A/D Converter

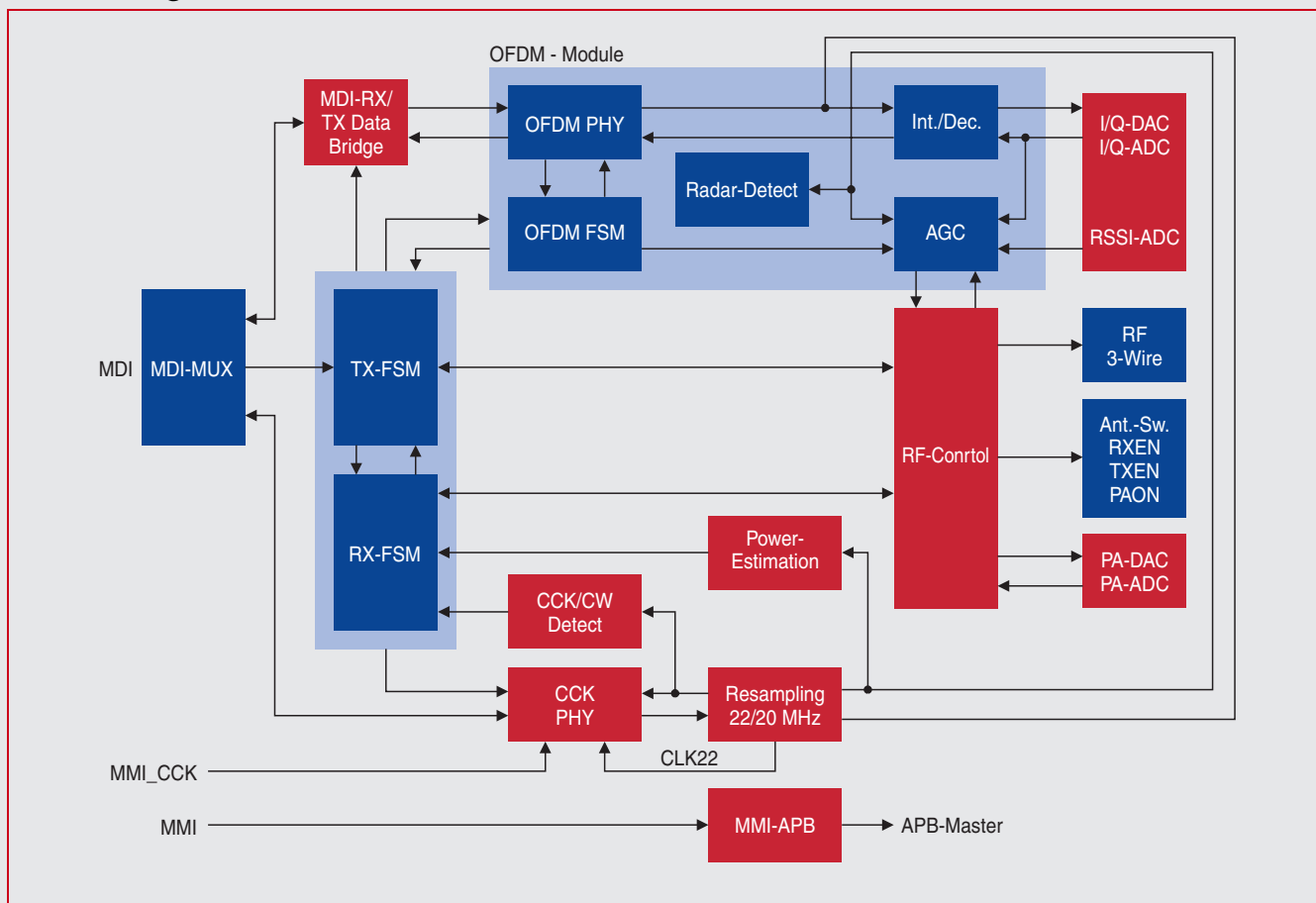
Applications

- High data-rate wireless LAN
- PC card wireless LAN adapters
- (Mini) PCI wireless LAN cards
- CardBus wireless LAN adapters
- Compact flash wireless LAN cards
- USB wireless LAN adapters
- Wireless LAN modules, access points, bridge products, and point-to-multipoint systems

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Dual-Band Modem IC (PHY)



Block Diagram



Features

- Modem data interface (MDI) to WLAN MAC controller, PMB 8789
- Modem management interface (MMI) to WLAN MAC controller, PMB 8789
- Serial 3 wire control interface to dual-band RF transceiver PMB 8680
- Analog RX/TX IQ-interface
- JTAG Test Access Port (TAP)
- Engineering test interface for real time debugging
- Parallel control RF-port
- Integrated PLL
- Support of OFDM modulation/demodulation 6/9/12/18/24/36/54 Mbit/s rate according to 802.11a/g standard
- Interpolation/Decimation
- Automatic gain control
- Channel tracking
- Supports DSSS/CCK for 1/2/5.5 and 11 Mbit/s rate according 802.11b standard
- Simultaneous DSSS-/CCK- and OFDM-preamble detection for 802.11g operation

Ordering Information

Please contact the local Infineon sales office for dedicated information on our Wireless LAN products

Type	Sales Code	Package
WLAN 802.11a/g PHY	PMB 8787	P-LFBGA-81

How to reach us:
<http://www.infineon.com>

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