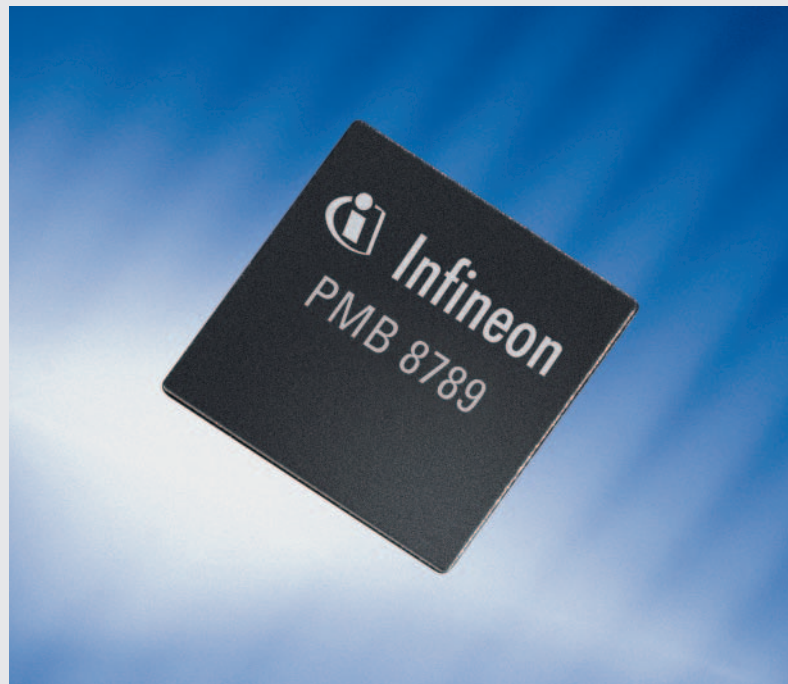


Dual-Band Media Access Controller (MAC) for WLAN System Solutions

The PMB 8789 WLAN media access controller is one chip of the wireless system solution from Infineon Technologies that addresses the need of the emerging market for wireless LAN and wireless home-networking products. Using a plurality of host interfaces, the PMB 8789 supports the MAC and data buffer management functions and is fully compliant with the IEEE802.11a/b and 11g WLAN standards.

The PMB 8789 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 8787 dual-band Modem IC (PHY).



WirelessLAN

Features

- Full implementation of the 802.11 WMAC protocol including the following:
 - IEEE 802.11a and 11g standards, including all optional data rates
 - IEEE 802.11b standard data rates
 - Supports up to 54 Mbit/s data rate
- Multiple queue management facilities to support QoS provisions, including IEEE 802.11e QoS
- Supports 802.11i security encryption algorithms without impacting device throughput performance and latency:
 - Advanced Encryption Standard (AES)
 - Up to 128-bit wired equivalent privacy (WEP)
 - Temporal Key Integrity Protocol (TKIP) per Wi-Fi® Protected Access (WPA) and draft 802.11i standard

- Host interface support of the following:

- PCI V2.3 bus mastering device featuring 32-bit transfers at 33 MHz
- MiniPCI Specification 1.0
- CardBus 32-bit, 33 MHz transfers
- USB V1.1
- PC card interface supports full 16-bit implementation per PCMCIA release 7

Applications

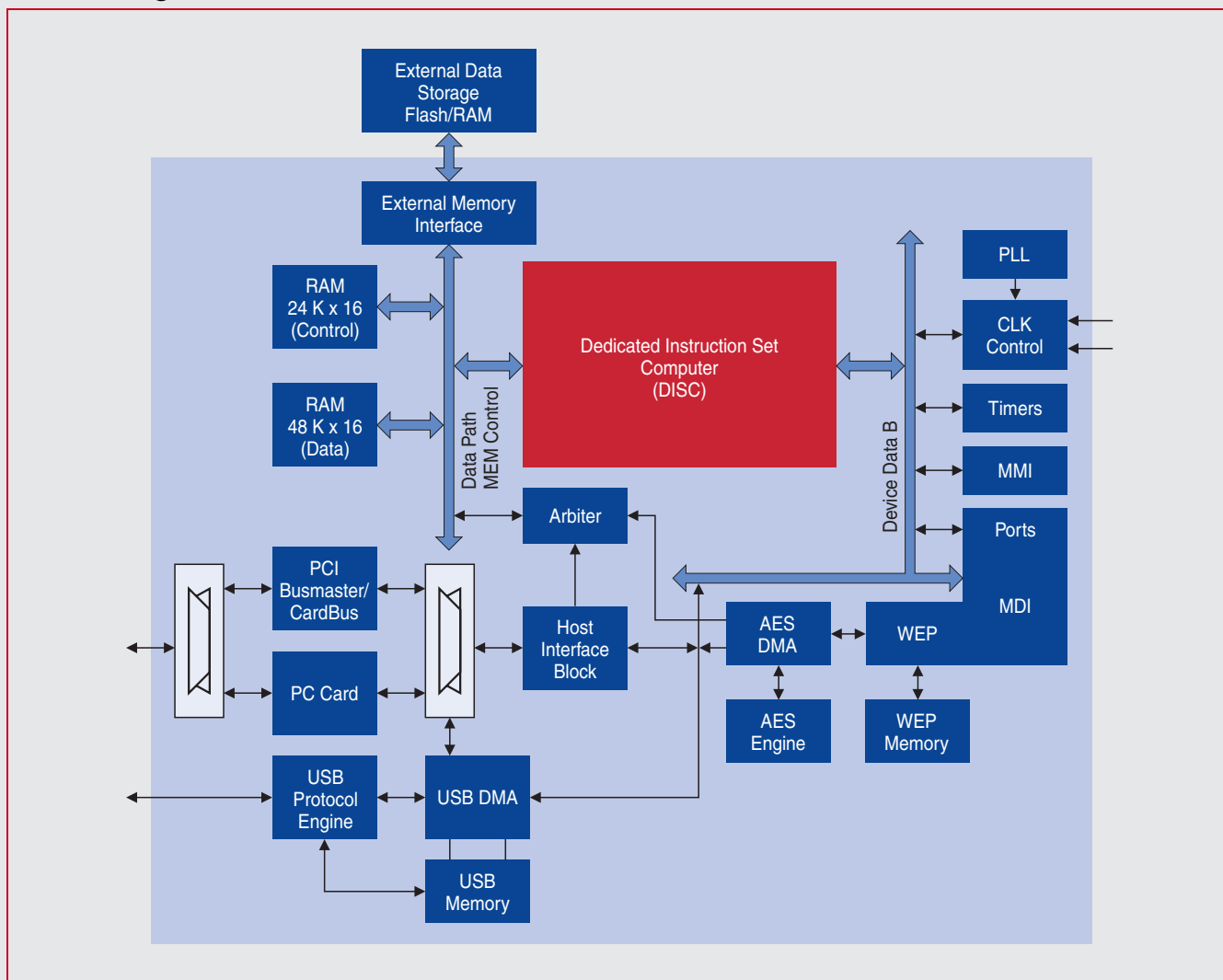
- High data-rate wireless LAN
- PC card wireless LAN adapters
- (Mini) PCI wireless LAN cards
- CardBus wireless LAN adapters
- Compact flash wireless LAN cards
- USB wireless LAN adapters
- Wireless LAN modules, access points, bridge products, and point-to-multipoint systems

P M B 8 7 8 9

Dual-Band Media Access Controller



Block Diagram



Features

- On-chip 64k x 16 static RAM supports full 802.11 station and client functionality without external memory
- Flexible modem data interface
- Flexible modem management interface
- Flexible external memory expansion:
 - Programmable wait states for slow external memo
 - Multiple memory organization up to 4 Mbytes
- Supports Bluetooth™ coexistence through a two-wire interface
- Device is capable of low-power operation
- An optional 32.768 kHz crystal can be connected for ultralow power-down mode
- Operation at 3.0 V to 3.6 V single supply
- Supports IEEE1149.1 boundary scan standard

Ordering Information

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

Type	Sales Code	Package
WLAN 802.11 MAC	PMB 8789	FSBGA-196

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

Published by
 Infineon Technologies AG,
 St.-Martin-Strasse 53,
 81669 München

© Infineon Technologies AG 2003. All Rights Reserved.

Attention please!

The information herein is given to describe certain components and shall not be considered as warranted characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Infineon Technologies is an approved CECC manufacturer.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office in Germany or our Infineon Technologies Representatives worldwide.

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life-support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.