Bluemoon® Universal

Bluetooth® Family Compliant to BT 2.1 Core Release

BlueMoon® UniCellular - HCI Single Chip supporting BT 2.1 Plus Enhanced Data Rate

PMB 8763 SUPPORTS all new features of the BT 2.1 standard with enhancements that improve usability, security and power consumption. The efficient power management of PMB 8763 maximizes the utilization of low power modes to further bring down power consumption.

SECURE SIMPLE PAIRING and extended inquiry response are 2.1 features that makes it easier to connect two devices while still maintaining a high security. For HID devices the Sniff Subrating Feature allows major power savings and extended battery life for accessories like keyboards, mice and remote controls.

THE HIGH PERFORMING PMB 8763 offers outstanding range and audio quality. The excellent sensitivity and the proprietary audio error correction algorithm give the user high noise immunity and the longest class 2 range available.

Key Features

- *Bluetooth*® power class 2 (+6dBm typical at chip)
- *Bluetooth*® 2.1+ EDR including:
  - Enhanced data rate
  - Superior adaptive frequency hopping
  - Secure simple pairing
  - Sniff subrating
  - Extended inquiry response
  - Encryption pause/resume
- Firmware up to HCI in integrated ROM
- Patch area in RAM for FW upgrades
- High RF sensitivity (90 dBm @ 0.1% BER)
- Dynamic control of output power
- Class 1 prepared with control lines for external PA
- Highly configurable UART and PCM interfaces
- WLAN coexistence interface
- Temperature range -40°C to +85°C
- WFSGA-65 package 5 x 5 mm (RoHS compliant)

Applications

- Cellular phones
- Car handsfree
- Cellular accessories
- Access points
- Cordless telephony

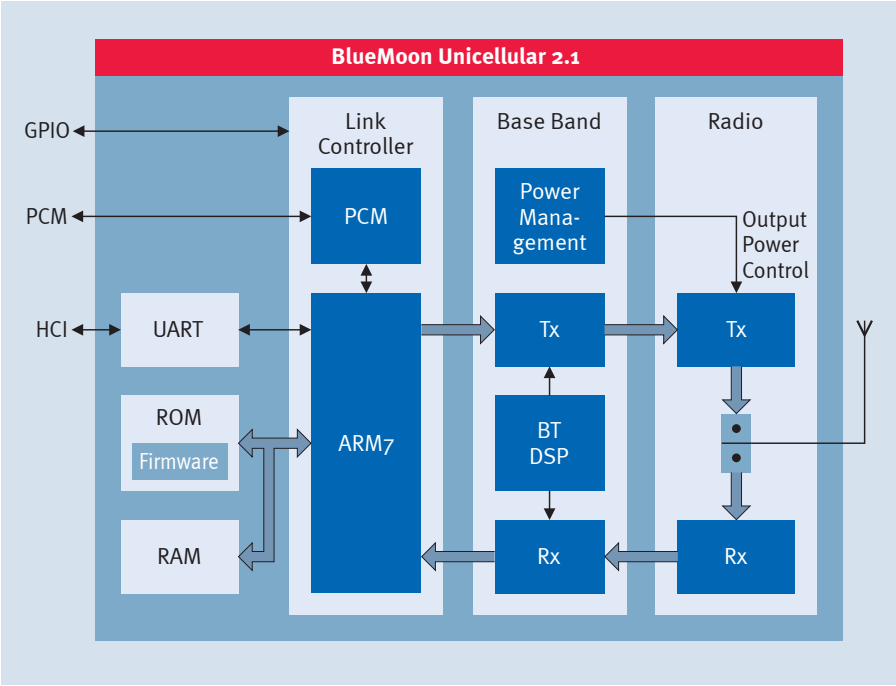
Key Benefits

- Data througput up to 2,1Mbit/s
- Extended range, up to 8 times longer range than standard *Bluetooth*® class 2
- Long battery life: 11µA typical in ultra low power mode
- Small solution footprint 44mm², using only 7 external components.
- Superior audio quality with proprietary audio processing algorithm
- WLAN co-existence support
- Support for crystal or external clock
- Pin compatible to PMB 8753, easy upgradable from BT 2.0 to BT 2.1

www.infineon.com/bluetooth

Communication Solutions

Never stop thinking



Block Diagram

- ARM7TDMI-STM ARM® CPU
- 0.13µm CMOS technology
- HCI-FW in integrated ROM
- Patch RAM functionality
- *Bluetooth*® 1.2, 2.0 + EDR & 2.1 +EDR
- H4 and H5 HCI protocols
- Integrated antenna switch
- Internal LDOs for all needed voltages

Interfaces

- High speed 3 and 4 wire UART - 3.25 MB
- Wake-up lines
- Dual bidirectional PCM/I2S
- I2C
- Control lines for external PA and switch (class 1 operation)
- Reference clock and low power clock
- GPIOs for key entries and LEDs
- 3-wire WLAN coex interface
- 50Ω balanced Antenna interface
- Separated IO voltage domains

Development Kit

The Development Kit is a complete platform for development and evaluation

- Host Controller Interface tool box software
- 1 pair of evaluation boards
- USB, UART and PCM interfaces
- Reference design
- Documentation

Product Summary

Type	Sales Code	Package
Bluemoon Unicellular 2.1	PMB8763 J	PG-WFSGA-65
	PMB8763 A	PG-WFSGA-65
Development Kit	BMU Kit	

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

Published by
Infineon Technologies AG
81726 Munich, Germany

Legal Disclaimer

The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

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

Infineon Technologies components may be used in life-support devices or systems only 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.

Published by Infineon Technologies AG

Ordering No. B134-H8133-G4-X-7600