![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

# Contact us

# UniStone PBA 31308

Next Generation
Bluetooth System Solution Family

## UniStone - Complete HCI System Module supporting BT 2.0 Plus Enhanced Data Rate

THE BLUETOOTH System module offers a qualified ready-to-use solution for accelerated time-to-market. It is based on Infineon's successful BlueMoon® UniCellular IC.

THE HIGH LEVEL of integration resulted into a competitive module footprint providing an optimized pad layout for easy design-in. The UniStone design focus area is cost, audio quality, range and in-design effort.

THE QUALIFIED temperature range from -40 to +85°C enables a wide spectrum of applications in a variety of different environments. Optimized memory participation of FW in ROM and patch RAM to obtain low cost and flexibility. Reference design and design kit are available for quick and easy design-in.

THE UniStone also offers an intact physical pin-out for all key interfaces for future generations.

THUS THE UniStone module is the perfect match for today's and future requirements of a standard Bluetooth HCI application.

## Applications

- Consumer, automotive & industrial applications
- Hands-free gateway
- Dial-up networking
- Data transfer & synchronization
- Advanced audio distribution

*Note: The Bluetooth word mark is owned by the Bluetooth SIG, Inc. and any use of this mark by Infineon Technologies AG is under license. The BlueMoon trade mark is owned by Infineon Technologies AG.*

## Key Features

- Bluetooth power class 2
- Bluetooth 2.0 + EDR
  - Enhanced data rate up to 3 Mbit/s
  - Adaptive frequency hopping
  - Extended SCO (eSCO) support
  - Multiple SCO/eSCO links
  - Fast connection setup
  - Channel quality driven data rate
- Firmware up to HCI in integrated ROM
- Patch area in RAM for FW upgrades
- On-module Bluetooth reference crystal
- On-module E$^2$PROM for Bluetooth device data and unique Bluetooth address
- High RF sensitivity (-88 dBm @ 0.1% BER)
- Dynamic control of output power
- WLAN coex interface
- Support for up to 24 GPIO
- Main supply voltage 2.9 V - 4.1 V
- Adjustable UART and PCM interface levels (1.35 V to 3.6 V)
- RoHS compliant

## Key Benefits

- One-Stop-Shop at Infineon
  - Module directly from IC and software manufacturer
  - Unified hardware and software support (Bluetooth system know-how)
  - Optimized value-chain (lead time, cost, responsibility)
- No external components needed except antenna
- Pre-qualified for Bluetooth and FCC
- Cost sensitive feature set and component selection
- Extended temperature range -40°C to +85°C
- Relaxed pad pitch - 1.2 mm - easy design-in
- Physical Pin-Out standardized for future generations (UART, PCM, Supply, Clock, Reset and Wakeup pins)
- Infineon provides roadmap from module to chip-on-PCB

www.infineon.com/bluetooth

# Wireless Communication

(ifineon)

Never stop thinking

**PMB 8753 BlueMoon UniCellular**
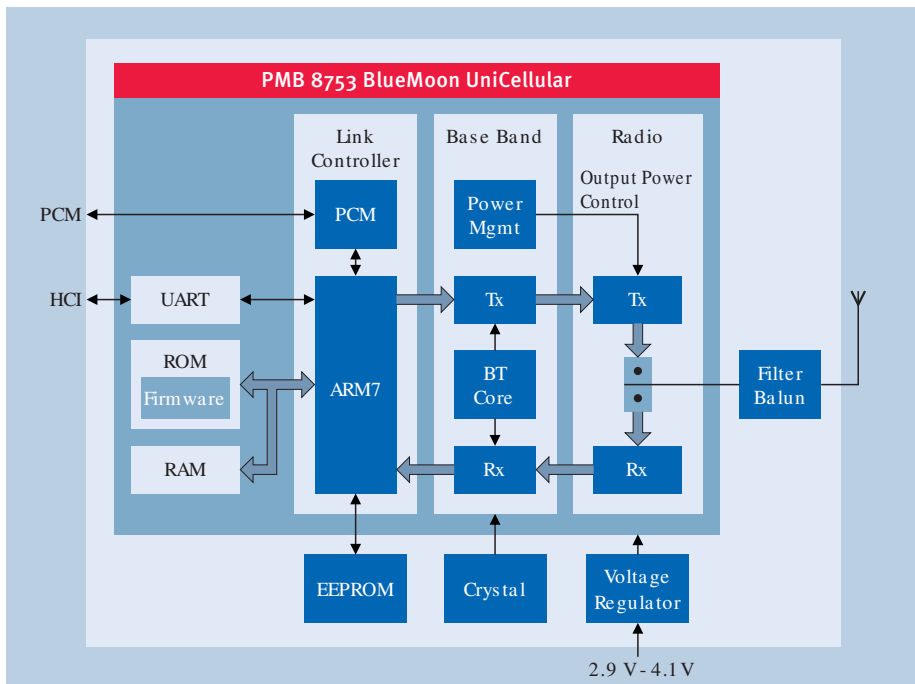
## Block Diagram

- ARM7 TDMI-S™ ARM® CPU
- HCI-FW in integrated ROM
- Patch RAM functionality
- High speed UART - 3.25 MB
- PCM
- Wake up line
- On-module E²PROM for Bluetooth device data
- On-module 26 MHz crystal
- On-module balun/filter
- On-module voltage regulator
- 3 wire WLAN coex interface
- 50 Ω antenna interface

## Product Summary

| Type | Sales Code | Package |
|------|-----------|---------|
| UniStone | PBA 31308 | Module 8.7 × 11.6 mm², 54 pads at 1.20 mm pitch |
| Development Kit | UniStone Kit | – |



## Development Kit

The Development Kit is a complete platform for development and evaluation.

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

**Legal Disclaimer**

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**Information**

For further information on technology, delivery terms and conditions and prices please contact your 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 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.