



# UIS8910DM Brief Device Specification

**Issue**            V1.1  
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# 1 System Overview

## 1.1 General Description

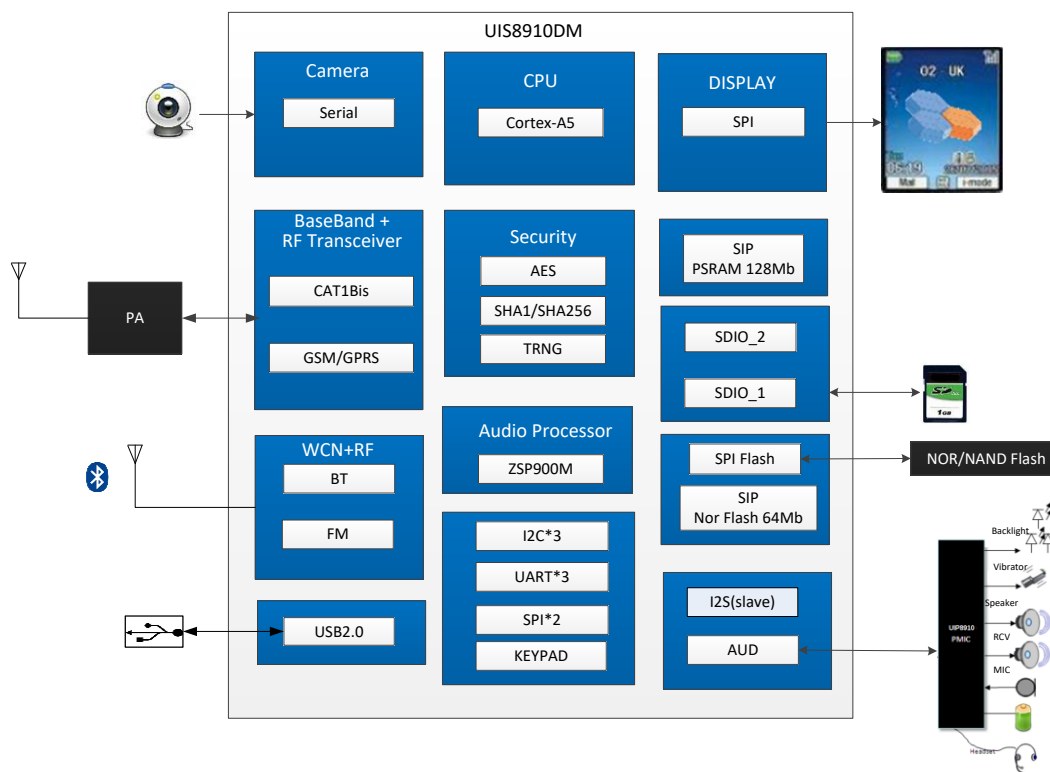
UIS8910DM is an advanced system-on-chip solution integrated CAT1bis/GSM/GPRS modems. Building on the success of UNISOC's current solutions, the UIS8910DM integrates RF transceiver and Bluetooth RF for low cost.

UIS8910DM supports plenty of peripherals such as SDIO, UART, I2C, SPI, I2S and GPIOs. Dedicated PMIC provides power to SOC and all peripherals.

8.9 mm×8.9mm TFBGA package and 301 balls.

## 1.2 Functional Block Diagram

Figure 1-1 Functional Block Diagram



## 1.3 Features

### 1.3.1 Platform Features

#### Microcontroller Subsystem

- 500MHz Cortex A5 Application processor with 32KB I-Cache and 32KB D-Cache, NEON/FPU
- Support Security Boot
- Three Boot modes
  - Normal : Boot from Nor-flash
  - Boot from SD card
  - Force download(UART2 or USB)
- Twelve general DMA channels for peripherals and one dedicated channel for debug host
- Multiple SoC low power modes with rich wakeup sources

#### Memory

- Integrated SPI Nor Flash(64Mb) and PSRAM(128Mb)
- 4K-bit E-fuse

#### WCN Subsystem

- Support Bluetooth 4.2 (BR/EDR)
- Support FM
- Integrated balun for RF

#### User Interface

- 1 Pulse Width Modulator
- Up to 32 GPIOs with interrupt function
- 3 UART interface (If software use UART2 for internal BT, UART2 can't be used for other application.)
- 2 SDIO interface
- 3 I2C interface
- 1 I2S(slave) interface
- 2 SPI(master) interface
- Up to 6 column × 6 row keypad
- USB2.0

#### Power Management

- External DC-DC and LDOs solution(PMIC UIP8910) deriving from VBAT
- Flexible I/O voltage
- External pin reset

#### Clock Source

- 26MHz TSX or crystal
- 32.768kHz crystal oscillator or 32K-less

## 1.3.2 Modem Features

### CAT1bis Communication

- 3GPP Release 13
- Supports FDD, TDD
- Supports 1.4/3/5/10/15/20MHz bandwidth in downlink and uplink
- Up to UL/DL 5Mbps/10Mbps respectively
- Support VoLTE

### GSM/GPRS

- Dual differential LNAs support quad band receiver
- Fully integrated channel filter
- High dynamic range ADC
- Transmitter support quad band
- Programmable fractional-N synthesizer
- On die wide range VCO and integrated loop filter
- Fast settling time suitable for multi-slot GPRS applications
- Low power mode support 32kHz crystal removal
- GPRS Class 12
- Support HR/FR/EFR voice codec

## 1.3.3 Multi-media Features

### Audio Processor

- ZSP900m processor
- L1 cache(32KB I-Cache and 32KB D-Cache)

### Audio Interface

- Support AUD interface
- Support I2S(slave) interface

### Camera

- Support serial port up to 2 data-line VGA@15fps
- 0.3M ISP integrated

### Display

- Support 4 wire 8 bitI type LCD
- Support 3 wire 9 bitI type LCD
- Support 3 wire 9 bit 2 data-line LCD
- Support SPI 3 or 4 wires mode up to QVGA@30fps