

- Power Supply
- USB Interface
- Serial Interface
- Analog Audio Interfaces
- SIM Interface
- GPIO
- ADC
- LDO Power Output
- Sink Current Source
- PCM Interface
- Keypad Interface
- SPI Interface
- RTC
- I2C Interface

1.3 Hardware Diagram

The global architecture of the SIM5320A Embedded module is described in the figure below.

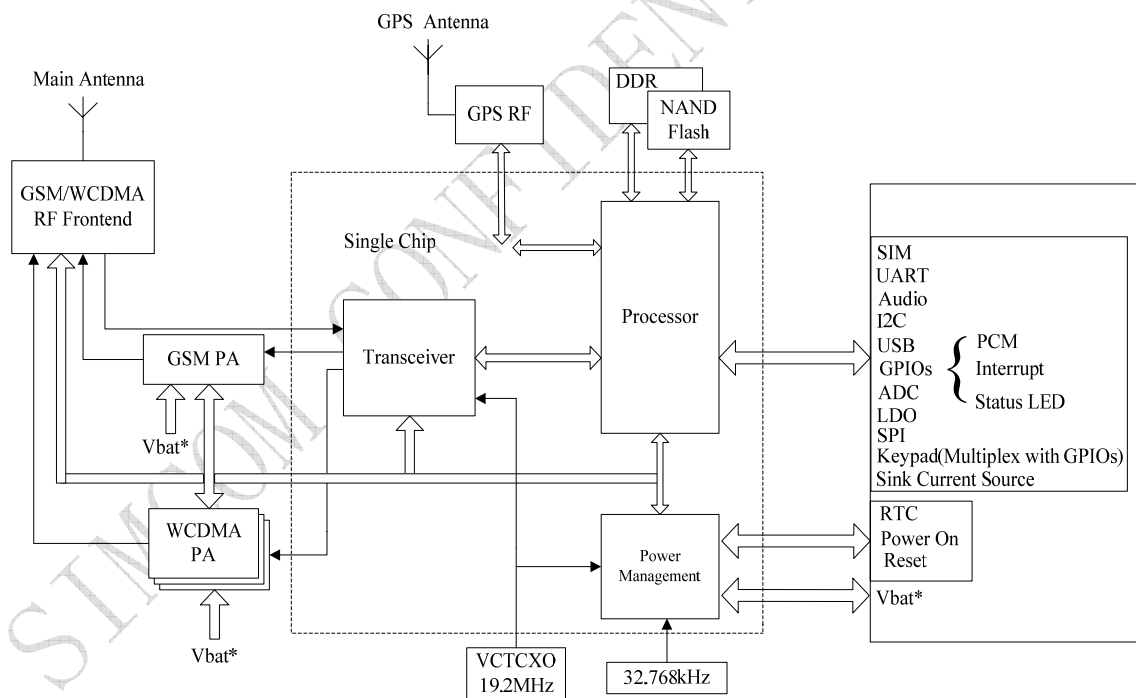


Figure 1: SIM5320A functional architecture

1.4 Functional Overview

Table 2: General Feature

Feature	Implementation
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Power supply	Single supply voltage 3.3~4.2V
Transmission data	<ul style="list-style-type: none"> ● Dual-mode UMTS/HSDPA/EDGE/GPRS operation ● GPRS Class B, multislots class 12 operation, Supports coding scheme: CS1-4 ● EDGE multislots class 12 operation, Supports coding schemes MSC1-9 ● UMTS R99 data rates-384 kbps DL/UL ● HSDPA Category 5/6 -3.6 Mbps Category12-1.8 Mbps ● CSD feature: 9.6, 14.4, 64 kbps UL/DL
GPS	<ul style="list-style-type: none"> ● Mobile-Assisted mode ● Mobile-based mode ● Standalone mode
SMS	<ul style="list-style-type: none"> ● MT, MO, CB, Text and PDU mode ● SMS storage: SIM card ● Support transmission of SMS alternatively over CSD or GPRS. User can choose preferred mode.
SIM interface	Support identity card: 1.8V, 3V.
Audio features(optional)	Speech codec modes: <ul style="list-style-type: none"> ● Half Rate (ETS 06.20) ● Full Rate (ETS 06.10) ● Enhanced Full Rate (ETS 06.50 / 06.60 / 06.80) ● AMR (WCDMA) ● AMR+QCP (GSM) ● A5/1, A5/2, and A5/3 ciphering
Serial interface	<ul style="list-style-type: none"> ● Serial Port standard or null modem mode on Serial Port Interface ● Serial Port can be used to control module by sending AT command
USB	Support USB2.0 Slave mode
Phonebook management	Support phonebook types: SM, FD, LD, RC, ON, MC.
SIM application toolkit	Support SAT class 3, GSM 11.14 Release 98 Support USAT
Real Time Clock	Support RTC
Timer function	Programmable by AT command
Physical characteristics	Size:30*30*2.9mm Weight:5.6g
Firmware upgrade	Firmware upgrade over USB interface
PCM	Multiplex on GPIOs. 3 kinds of coding formats: 8 bit (u-law or A-law) and 16 bit (linear).
Temperature range	<ul style="list-style-type: none"> ● Operation temperature: -30°C to +80°C ● Storage temperature -40°C to +85°C