

UC20 UMTS/HSPA+ Module Presentation

2013.04.15

- **General Description**
- **Advanced Features**
- **UC20 Vs. Competitor's Products**
- **Support Package**

Highlights



Multi-Band Combination

UMTS/HSPA+: UC20-E (900/2100MHz), UC20-A (850/1900MHz)
GSM/EDGE: 850/900/1800/1900MHz

HSPA+ High Speed Packet Access

Max.14.4 Mbps (DL), Max.5.76 Mbps (UL)

Robust Package

LCC type with heat sink design

Abundant Functions and Interfaces

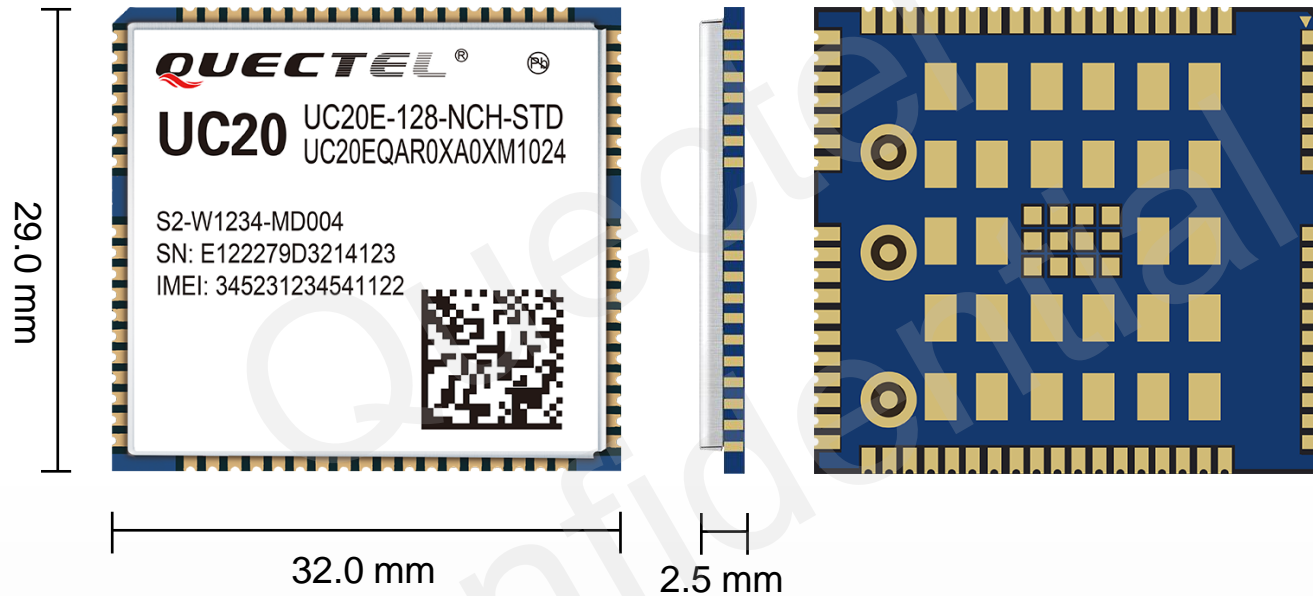
USB/UART/USIM/Audio (PCM)/ADC/RESET/NETLIGHT/GPS*/
GLONASS*/eCall*

Extended Temperature Range

-40° C ~ +85° C

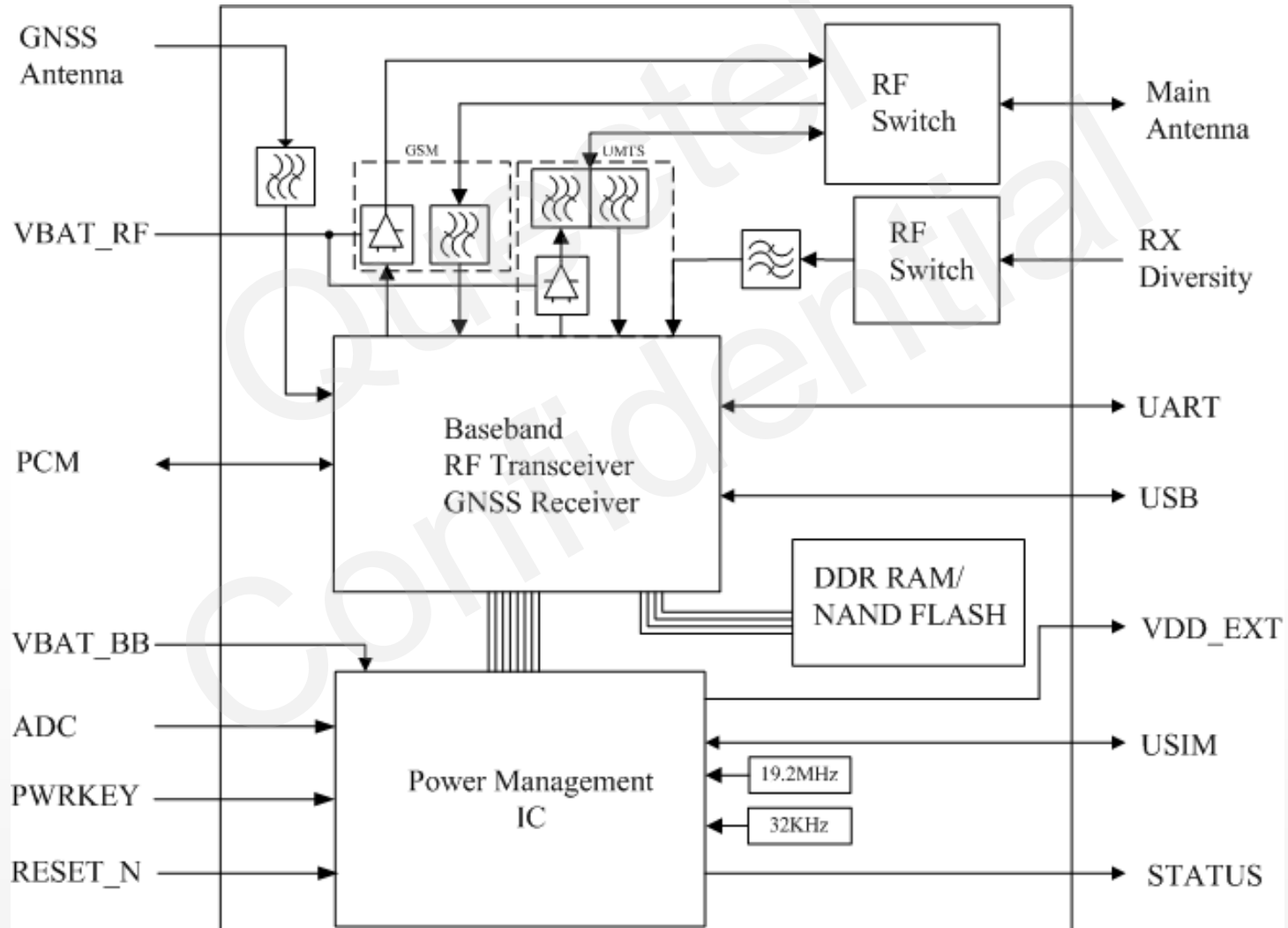
* Under development

Mechanical Dimensions



Length:	32.0 mm (± 0.15 mm)
Width:	29.0 mm (± 0.15 mm)
Height:	2.5 mm (± 0.2 mm)
Weight:	Approx. 4.9g

Hardware Architecture



Software Advantages

USB Drivers

- Window XP, Windows Vista, Windows 7, Windows8
- Windows CE 5.0*/6.0*/7.0*
- Linux 2.6*
- Android 2.3*/4.0*

Abundant Protocols

- TCP/IP, UDP, PPP
- FTP*, HTTP*
- SMS
- MUX*

* Under development

Quality Guarantee

- Reliable network protocol
- Steady flash protected mechanism
- Superior audio algorithms
- High sensitivity

Flexible Applications

- GPS*
- GLONASS*
- eCall*

Special Features

- Rx-Diversity
- QuecFOTA *
- Over Voltage & Temp Protection

Enhanced AT Commands

Standard V.25ter AT commands

3GPP TS 27.007 (GSM 07.07)

3GPP TS 27.005 (GSM 07.05 SMS)

TCP/IP stack AT commands

STK (SIM Application Toolkit)

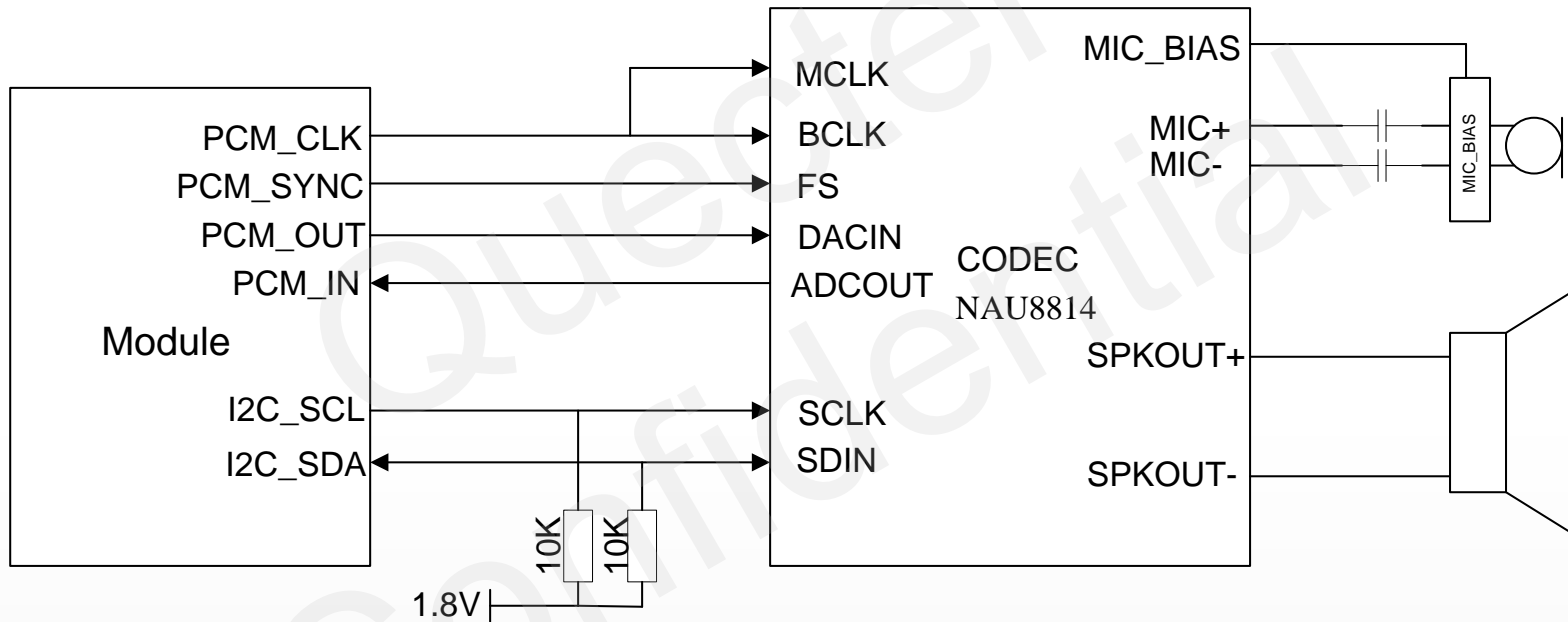
Quectel enhanced AT commands

Target Applications

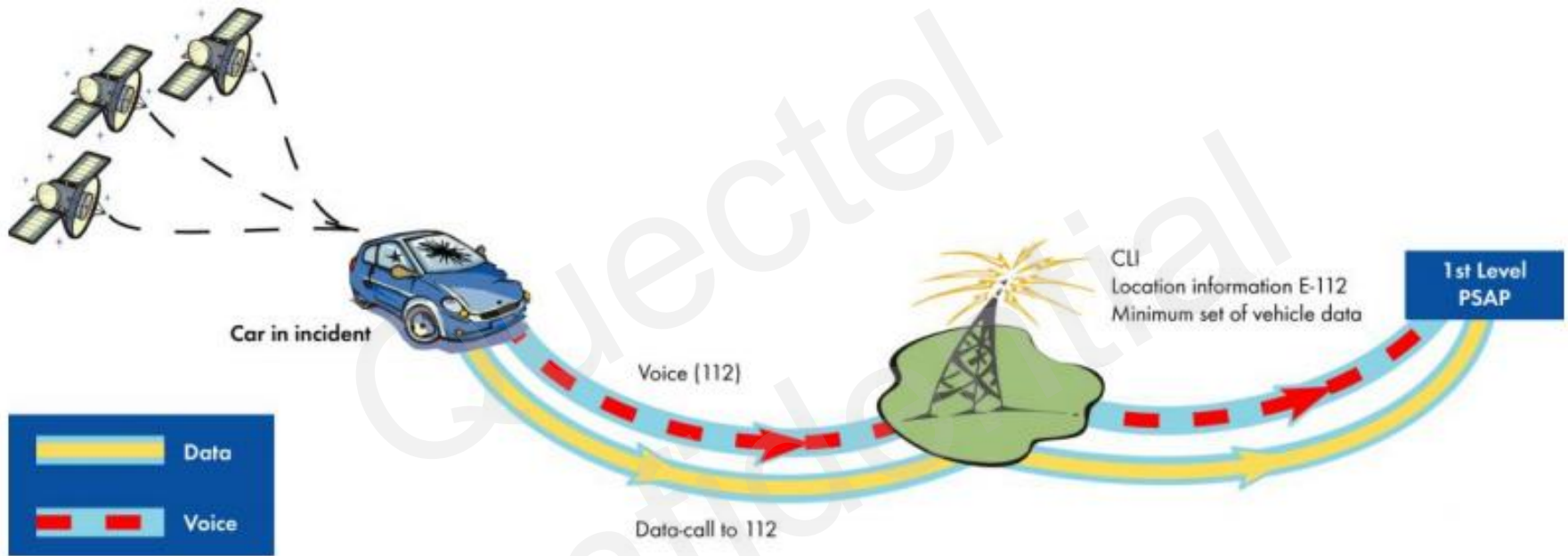


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Analog Audio Solution

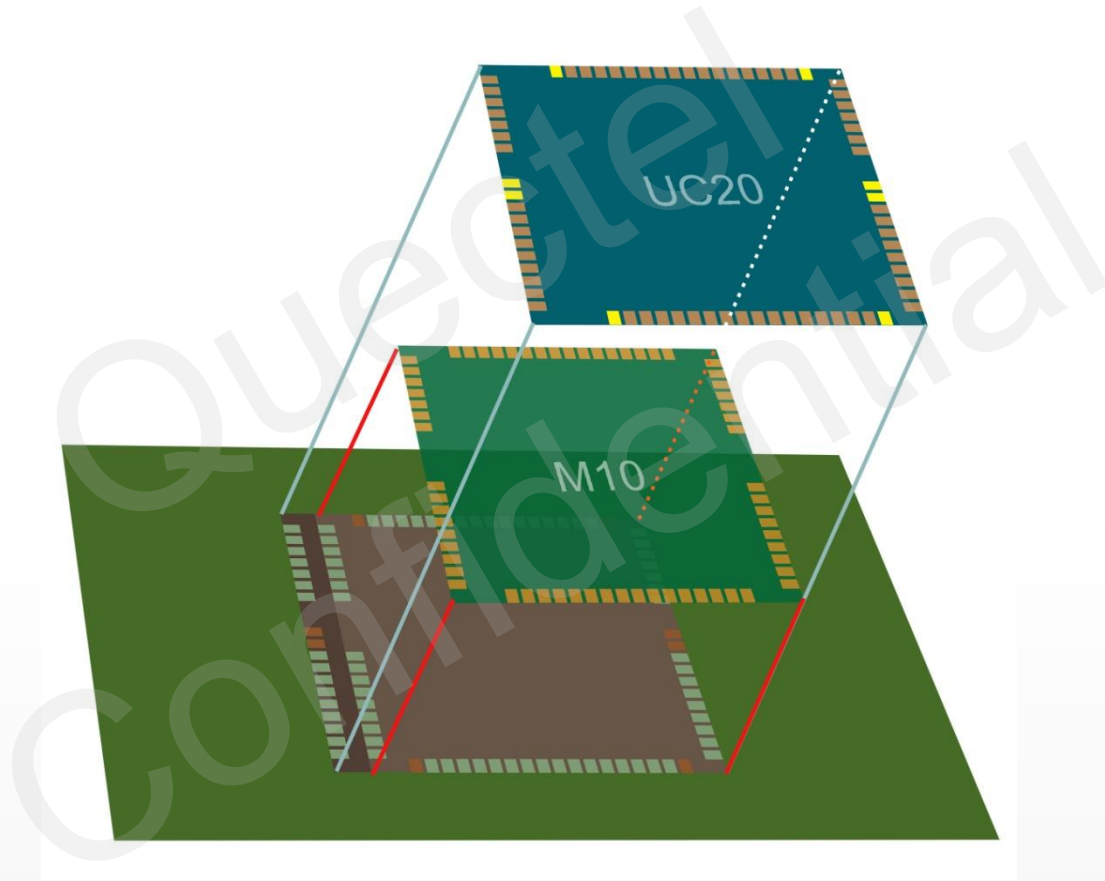


UC20 can implement the analog audio function through a total recommended solution as the above figure shown. This external circuit can get exceptional performance in audio quality , which is fully verified by Quectel.



eCall is defined as an emergency call from a vehicle, supplemented with a minimum set of emergency related data (MSD), as defined under the EU Commission's eSafety initiative. The eCall system is installed in the vehicle. In the event of a vehicle collision, the in-band modem transmits vehicle location, airbag deployment, and other relevant information timely and reliably from the in-vehicle system (IVS) over the cellular network voice channel to the public safety answering point (PSAP). As soon as the PSAP received the emergency call, it will dispatch the rescue assistance to the accident site, which can shorten response time and save lives.

Compatibility with M10



UC20 can be compatible with M10. Customer can place one PCB footprint in one Hardware design for both M10 and UC20 modules.

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UC20 Vs. Competitors' Products

Features	UC20	Sxx5320	Mx226	Mx509	Hx910 V2	L1xA U2	ExS5
Processor	ARM1136J-STM 480MHz DSP 162MHz	ARM926EJS 400MHz DSP 115MHz	ARM1136J-STM 480MHz DSP 162MHz	ARM926EJS-400MHz DSP 115MHz	ARM1136J-STM 480MHz DSP 162MHz		
Package	LCC	LCC	LGA	LGA	LGA	LCC	LGA
Data Rate	DL 14.4 Mbps UL 5.76 Mbps	DL 3.6 Mbps UL 384 Kbps	DL 14.4 Mbps UL 5.76 Mbps	DL 3.6 Mbps UL 384 Kbps	DL 14.4 Mbps UL 5.76 Mbps	DL 7.2 Mbps or 21.1Mbps (U230 only) UL 5.76 Mbps	DL 7.2 Mbps UL 5.76 Mbps
Voice	Supported	Supported	Supported	Optional	Optional	Supported	Supported
GPS	gpsOne® Gen 8	gpsOne® Gen 7	gpsOne® Gen 8	Not supported	Optional	Not supported	Not supported
GLONASS	Supported	Not supported	Not supported	Not supported	Optional	Not supported	Not supported
eCall	Supported	Supported	Not supported	Not supported	Not supported	Optional (U270)	Not supported
Rx-Diversity	Supported	Not supported	Supported	Not supported	Not supported	Optional (U230)	Not supported
Over Temp&Voltage Potection	Supported	Supported	Not supported	Not supported	Not supported	Temperature Supervisor	Supported
Compatible with 2G Module	With M10	Not supported	Not supported	Not supported	With GE910	With SARA	With BGS2
Temperature Range	-40°C ~ +85°C	-30°C ~ +80°C	-30°C ~ +75°C	-30°C ~ +75°C	-30°C ~ +85°C	-40°C ~ +85°C	-30°C ~ +85°C

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Technical Materials Package

➤ Technical materials package

- Hardware, software, specification
- Application note package
- Debug tool, download tool, test tool, EVB package, USB drivers.
- Approvals & test report package

➤ Development Tool

- Interfaces
 - ✓ RS-232 interfaces
 - ✓ USB interface
 - ✓ Power supply
 - ✓ Antenna interface
 - ✓ Handset interface
 - ✓ Earphone interface
 - ✓ Test interface
- Features
 - ✓ Digital or analog audio interface
 - ✓ Network status LED
 - ✓ Power key
 - ✓ Reset key



Thank you