



Quectel Wireless Solutions

Wireless Module Expert



M80 GSM Module Presentation

2011-11-16

□ General Description

Target Applications

Highlights

Hardware Architecture

Software Advantage

Enhanced AT Commands

Mechanical Dimensions

□ Features

Enhanced Functions

New Package Technology

□ M80 Vs. Competitor's Products

M80 vs. C-Company BXS2

M80 vs. T-Company GX865 & S-Company Wx228

□ Support Package

Technical Material Package

- Vehicles and Personal Tracking
- Security
- Wireless POS
- Industrial PDA
- Smart Metering
- Health Care
- Remote Maintenance & Control

Extremely Low Standby Current Consumption

1.1mA @ DRX=5

Quad-band High Data Speed

GPRS Multi-slot Class 12

Extremely Compact Size

23mm x 25mm x 2.6 mm

Industry-standard Interface

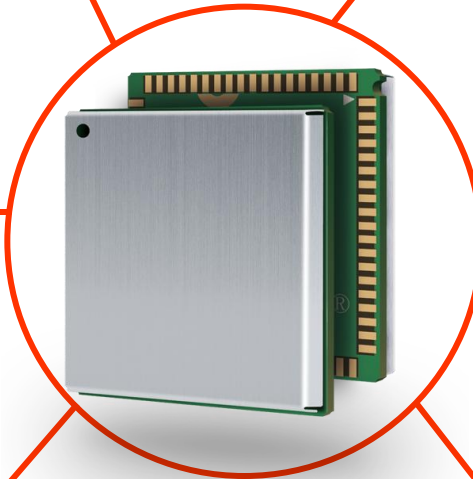
+8KV/-6KV ESD

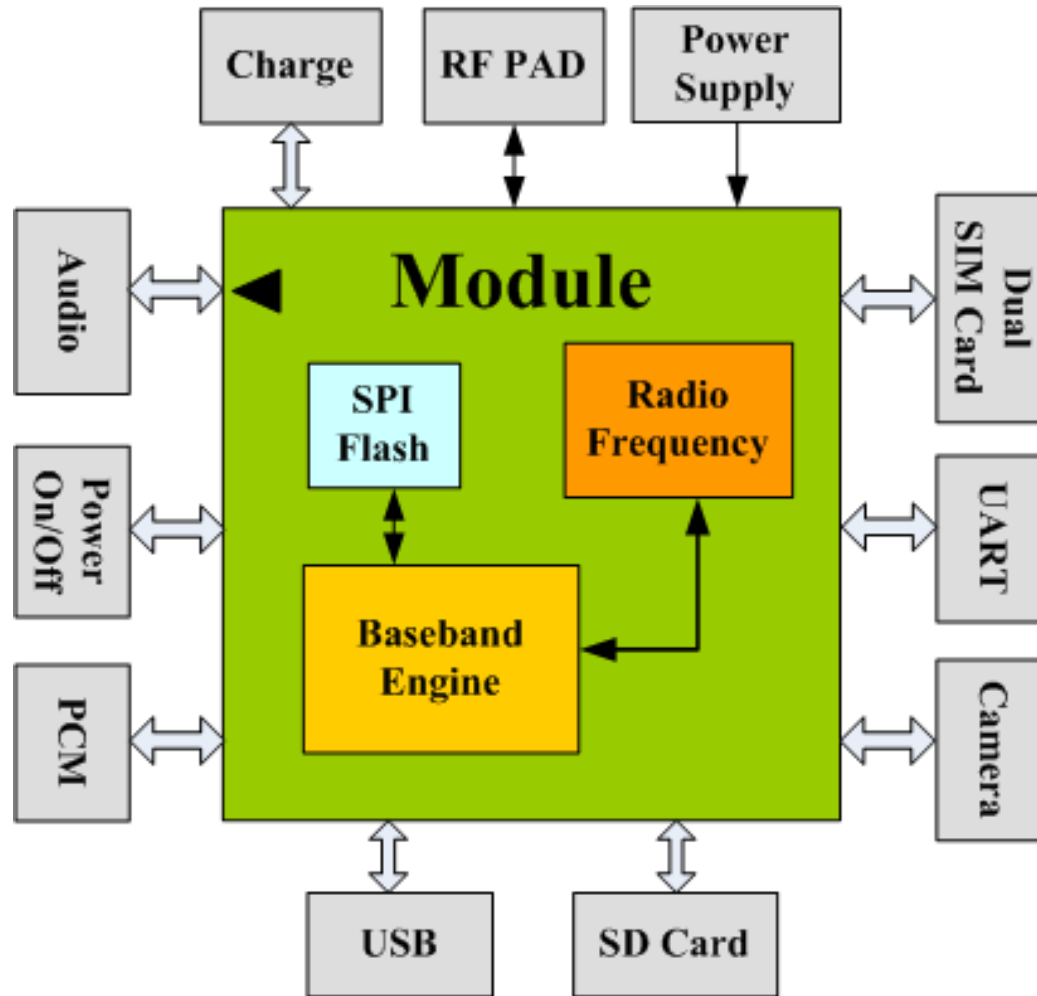
Wide Working Temperature Range

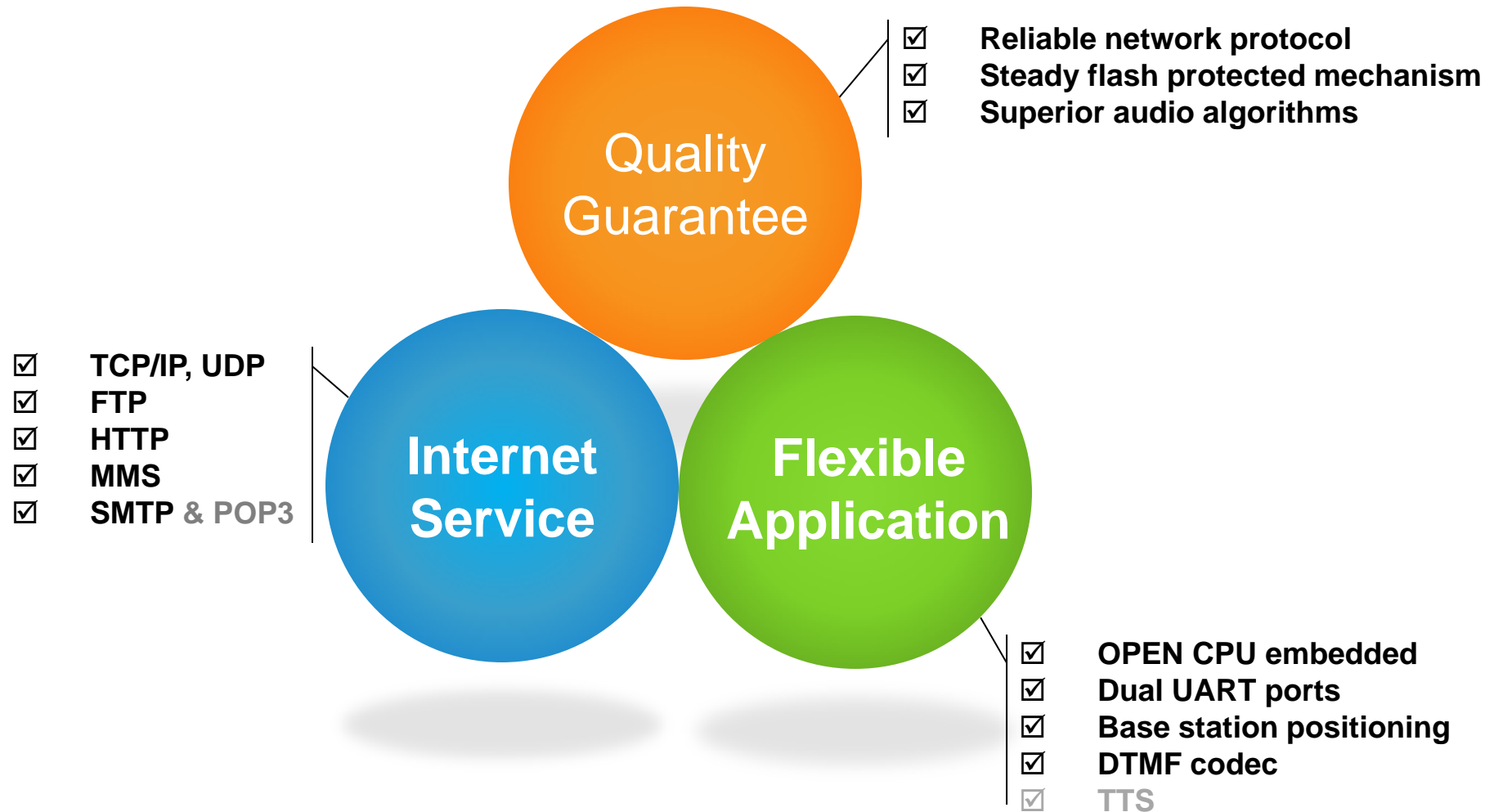
-45 °C to +85°C

Abundant Functional Interfaces

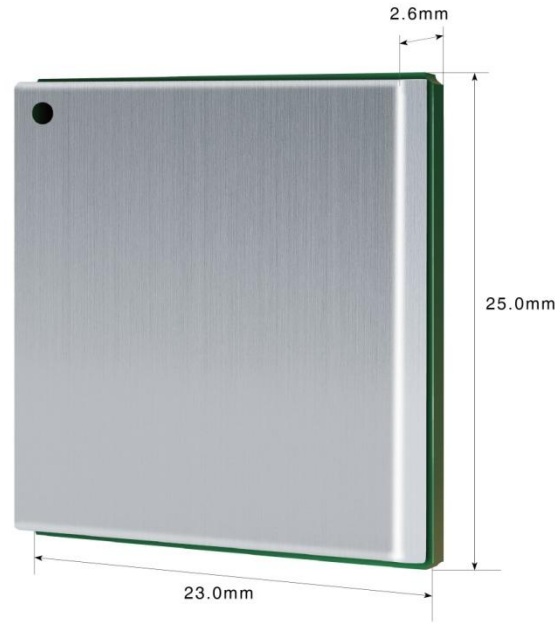
UART/SIM/Audio/USB/SD/Camera
/PCM/Charge/GPIOs







- Standard V.25ter AT commands
- GSM 07.07
- GSM 07.05 (SMS)
- GPRS AT commands in accordance to GSM 07.07
- TCP/IP stack AT commands
- STK (SIM Application Toolkit)
- Quectel defined AT commands (Enhanced Functions)



Length: 25 mm ($\pm 0.15\text{mm}$)
Width: 23 mm ($\pm 0.15\text{mm}$)
Height: 2.6 mm ($\pm 0.20\text{mm}$)
Weight: 3.3g

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Technical Material Package

M80 is Quectel's new generation Module. Based on new and more powerful baseband chipset, M80 achieves more capacity and better performance.

➤ 3 UART interfaces

More convenient and flexible for industrial application.

➤ USB

High speed for software download.

➤ Audio

Besides 3 analog audio outputs, 2 analog audio inputs, M80 also has a digital audio channel.

The 800mW class-AB amplifier is embedded to save the BOM cost without having to adopt an external amplifier.

- Camera
0.3M pixel CMOS camera can be connected to module directly.
Support taking photos and video recording.
- SD Card
32GB capacity is supported.
- Charging
With external circuits, charging function is supported by default, no additional cost.
- Dual SIM
Can be selected according to the customer's application.
More convenient and flexible for customer's application.

➤ Host-based GPS

M80 offers fully integrated access to Quectel GPS receivers. A Quectel host-based GPS module can be controlled through a single serial port. The related software has been embedded in M80. The customers can use it directly.

The total solution for GSM&GPS offers a cost effective solution for customer application and enables short time-to-market.

M80 adopts a new package technology: LGA which makes M80 more compact.

M80 is a surface mounted device for fully automated assembly and offers highest reliability and robustness.

M80's pins are arranged uniquely. Pins of specific functional interface are laid in the center of bottom side. If the customer does not need these functions, these pins can be ignored in the manufacturing process, which makes M80 design easier and production more convenient.

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M80 vs. C-Company BxS2

Product Features		M80	BxS2
Power Consumption	Idle registered, power saving	1.1mA @ DRX=5 0.95mA @ DRX=9	1.5mA @ DRX=5 1.2 mA @ DRX=9
GPRS		Class 12: max. 85.6 kbps(uplink & downlink)	Class 10: max. 42.8 kbps(uplink), 85.6kbps(downlink)
Sensitivity		-108.5dBm typ.	-107dBm typ.
ESD	SIM/Antenna	Antenna: Air discharge $\pm 10KV$, Contact discharge $\pm 5KV$ SIM1: Air discharge $\pm 8KV$, Contact discharge $\pm 4KV$	Air discharge $\pm 8KV$ Contact discharge $\pm 4KV$
	Other Pins	UART1/PWR_KEY/EMERG_OFF: Air discharge $\pm 8KV$, Contact discharge $\pm 4KV$ Others: $\pm 1KV$ contact discharge	$\pm 1KV$ contact discharge

M80 vs. C-Company BxS2

Product Feature	M80	BxS2
UART Interface	3	2
Audio Interface	2 Inputs, 3 Outputs	1 Input, 1 Output
SIM Interface	2	1
ADC Interface	2	1
USB Interface	Support	Not Support
SD Card Interface	Support	Not Support
PCM Interface	Support	Not Support
Camera Interface	Support	Not Support
Charge Interface	Support	Not Support
Switch-off normal method	By PWRKEY or AT command	Only AT command
MMS	Support	Not Support

M80 vs. T-Company Gx865 & S-Company Wx228

Product Feature	M80	Gx865	Wx228
Size(mm)	23×25×2.6	24.4×24.4×2.7	25×25×2.8
UART Interface	3	2	1
Audio Interface	2 Inputs, 3 Outputs	1 Input, 1 Output	1 Input, 1 Output
SIM Interface	2	1	1
ADC Interface	2	2	1
USB Interface	Support	Not Support	Not Support
SD Card Interface	Support	Not Support	Not Support
PCM Interface	Support	Not Support	Not Support
Camera Interface	Support	Not Support	Not Support
Charge Interface	Support	Not Support	Not Support
Temperature Range	-45° C ~ +85° C	-40° C ~ +85° C	-40° C ~ +85° C
Switch-off Normal Method	By PWRKEY or AT command	Only AT command	Unknown
GPRS	Class 12, max. 85.6 kbps (uplink & downlink).	Class 10, max. 42.8kbps	Class 10, max. 42.8kbps
MMS	Support	Not Support	Unknown

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Technical Material Package

➤ **Technical Materials Package**

- Hardware, software, specification
- Application notes package
- Debug tool, download tool, test tool, EVB package
- Approvals & test report package



M80 EVB KIT

➤ **Development Tool**

• **Interfaces**

- ✓ 3 RS-232 interfaces
- ✓ USB interface
- ✓ Power supply
- ✓ Antenna interface
- ✓ Debug UART interface
- ✓ Handset interface
- ✓ PCM interface
- ✓ Earphone interface
- ✓ Camera interface

• **Features**

- ✓ OV7725 camera module
- ✓ Network status LED
- ✓ Power key
- ✓ Emergency off key
- ✓ Charging



Thank You!

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