# RENESAS



## **Overview**

New models of cellular phones are expected to provide ever more sophisticated functionality as communication speeds increase, camera pixel counts rise, LCD displays increase in size and resolution. There is a growing demand for features such as the ability to receive and record 1seg TV broadcasts and to handle electronic distribution of video and audio content. Consequently, low power consumption is critical in order to maintain adequate operating time when the user is communicating or the phone is in standby mode. Also, the control functions must be compact so handsets can be thinner and weigh less.

Renesas Electronics supplies a broad lineup of products for cellular phone applications. Chief among them are the application processors in the EMMA Mobile and SH-Mobile series, devices that support full HD video processing, and the solutions in the Medity and SH-Mobile G series, chips that combine a baseband processor and an SH-Mobile processor in a single package. Our High-Power Amplifier (HPA) modules support the wireless communication standards used worldwide, and we also offer RFICs. Additionally, Renesas Electronics also produces sub-MCU products that support pedometer, touch-key, and other cellular phone functions.



Latest application information here.

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# **Recommended Products**

As of July 2010

Block	Semiconductor device	Recommended products	Features, etc.
Baseband/ application	Microprocessor	EMMA Mobile Series	Multi core, Low er pow er consumption
		Medity Series	Base Band/application integrated chip
		SH-Mobile G Series	High performance, low power consumption
		SH-Mobile Series	High performance, low pow er consumption
RFIC	GSM RFIC	B6PLE	GPRS/EDGE
	WCDMA RFIC	B7WG	W-CDMA
	GSM/WCDMA RFIC	B8WGE	Low power consumption, smaller
HPA	GSM HPA module	RPF08165B	GPRS
		RPF59001B	EDGE
		RPF88143B	Built-in ANT SW
	WCDMA HPA module	RPF57711B	W-CDMA
Camera	Motor driver IC	R2A304xxBM	Smaller, thinner, and low er pow er consumption
	Camera front-end IC	R2J450xx Series, other	High-precision, high function, low er pow er consumption
	EEPROM	R1EX24xxx Series	PC-bus interface *1
		R1EX25xxx Series	SPI-bus interface *2
Touch panel sensor	Sub MCU	78K0/Kx2-L	Low er pow er consumption, bulit-in Op-amp.
		R8C Family	Low er pow er consumption, touch key
	Illuminance sensor	PH5501A*	Illuminance range: 1 to 10,000 lx, analog linear output
Security	Secure MCU for U-SIM	AE/RS Series	CPU with proprietary architecture & encryption coprocessor emphazing security
Discrete	Zener diode (Small Capacitance)	RKZxxKP, RKZxxKL Series	Low er pow er consumption, small package
	Schottky Barrier Diode	RKRxxA/B Series	High speed sw itching, noise reduction
	Pow er MOS FET	HAT1069C/HAT1090C, other	Low on-resistance, fast switching, small package
		µPA2550	Pch-Dual, Small package
		μPA650TT, μPA651TT, other	Low on-state resistance, low Qg, small package
RF sw itch IC	GaAs SWIC	µPGxxxx Series	Low loss, high isolation, ultra-small package, low pow er consumption

\*1 I<sup>2</sup>C: Inter-Integrated Circuit

\*2 SPI: Serial Peripheral Interface

\* = Under development



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# Renesas Electronics Corporation

Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

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#### Renesas Electronics America Inc.

2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A. Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited 1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada Tel: +1-905-898-5441, Fax: +1-905-898-3220

#### Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K Tel: +44-1628-585-100, Fax: +44-1628-585-900

Renesas Electronics Europe GmbH Arcadiastrasse 10, 40472 Düsseldorf, Germany Tel: +49-211-65030, Fax: +49-211-6503-1327  $^{\rm L}$ 

Renesas Electronics (China) Co., Ltd. 7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd. Unit 204, 205, AZIA Center, No.1233 Lujiazui Ring Rd., Pudong District, Shanghai 200120, China Tel: +86-21-5877-1818, Fax: +86-21-6887-7858 / -7898

## Renesas Electronics Hong Kong Limited

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong Tel: +852-2886-9318, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd. 7F, No. 363 Fu Shing North Road Taipei, Taiwan Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

#### Renesas Electronics Singapore Pte. Ltd. 1 harbourFront Avenue, #06-10, keppel Bay Tower, Singapore 098632 Tel: +65-6213-0200, Fax: +65-6278-8001

#### Renesas Electronics Malaysia Sdn.Bhd. Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd. 11F., Samik Lavied' or Bldg., 720-2 Yeoksam-Dong, Kangnam-Ku, Seoul 135-080, Korea Tel: +82-2-558-3737, Fax: +82-2-558-5141

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