RENESAS

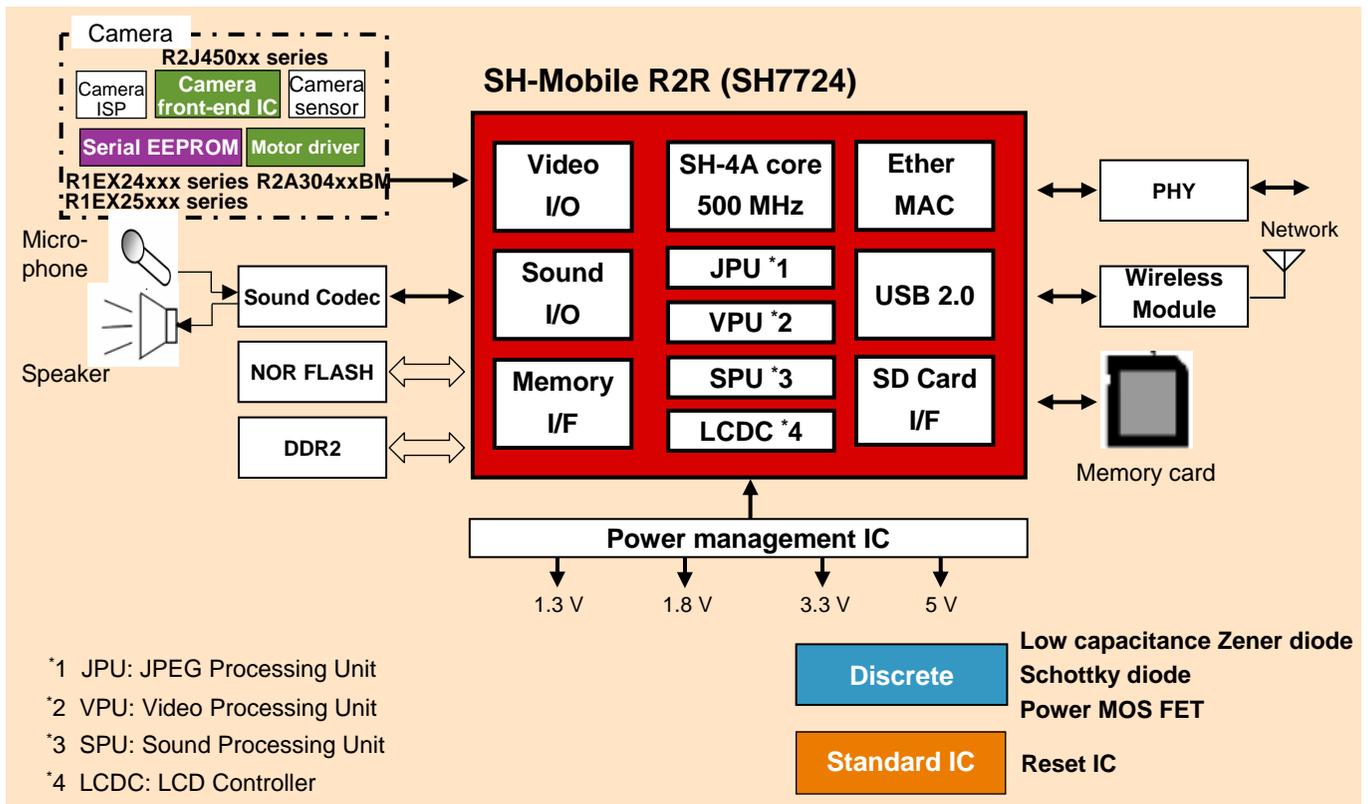| Applications	Network Camera

Overview

In the network camera field, the spread of remote control surveillance cameras and demands for higher image quality and eco-friendliness (energy-saving) are accelerating the shift away from conventional analog CCTV cameras. The market is expected to continue to expand in the future.

The Renesas SH-MobileR2R (SH7724) microcontroller equipped with the MS7724 Linux platform is optimal for network camera applications. The platform comes with the Linux Kernel BSP (Board Support Package) sample program, and software for system development such as evaluation middleware (H.264/MPEG4 codec middleware) and sample applications, making it possible to start device evaluation and system development immediately after purchase, which helps shorten system development time. The MS7724 can encode and decode HD (1280 x 720) size images at 30 fps, satisfying the demand for higher image quality for network cameras.

In addition, the SH-MobileR2R (SH7724) has two channels of camera input, making it a highly versatile device that is optimal for products using camera monitoring functions. By utilizing the H.264/MPEG4 codec and JPEG codec that are built-in as hardware IP and the 10/100 Mbps Ether MAC and LCD controller, the SH-MobileR2R (SH7724) can be used not only in network cameras but also in applications such as digital signage systems, TV conference systems, automotive backing & side monitoring, and drive recorders. The Renesas lineup of front-end ICs (R2J450xx series) and ASSPs such as motor drivers (R2A304xxBM series) is also suitable for use in the camera unit.

System Block Diagram

*1 JPU: JPEG Processing Unit
*2 VPU: Video Processing Unit
*3 SPU: Sound Processing Unit
*4 LCDC: LCD Controller

Discrete: Low capacitance Zener diode, Schottky diode, Power MOS FET

Standard IC: Reset IC

Latest application information here.   http://www.renesas.com/applications

Recommended Products

As of October 2010

Block	Semiconductor device	Recommended products	Features, etc.
Signal Processing unit/ Network Application	Microprocessor	SH-Mobile R2R SH7724 (R8A77240D500BG)	High performance, low power consumption, supports HD playback/recording support
Camera	Motor driver IC	R2A304xxBM	Compact, thin, low power consumption
	Camera front-end IC	R2J450xx series, other	High-precision/high performance, low power consumption
	EEPROM	R1EX24xxx series	I²C bus interface *1
		R1EX25xxx series	SP bus interface *2
Discrete	Low capacity Zener diode	RKZxxKP, RKZxxKL series	Low capacitance, small package
	Schottky diode	HRW0202A, other	Low capacitance, small package
	Power MOS FET	HAT1021R, other	Low on-resistance, high-speed switching, small package
Standard IC	Reset IC	RNA50C27	For 3.3V, 1.8V dual power supply MCU

*1 I²C: Inter-Integrated Circuit
*2 SPI: Serial Peripheral Interface

Related Application Notes/Sample Code

Title	Document No.
SH7724 Linux BSP（Board Support Package）	-

Related Software

Title	Document No.
Audio codec	-
FAT file system	-
Sound middleware	-
Super-resolution middleware	-
Video middleware	-

Related Boards

Name	Part No.
SuperH Linux Platform	R0P7724LC0021RL
SuperH Linux Platform (option: camera board)	R0P7724LE0021RL
SuperH Linux Platform (option: LCD board)	R0P7724LE0011RL

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SALES OFFICES

http://www.renesas.com

Refer to "http://www.renesas.com/" for the latest and detailed information.

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

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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