

October 13, 2011

Product Specifications of the SH7766 SoC

Items	SH7766 Specifications
Part #	SH7766 (R8A77660DBG: 2D Graphics)
Voltage	3.3 V (IO) 1.5 (DDR3) 1.275 V (core)
CPU	SH-4A
Operating frequency	534 MHz
Temperature	-40-85°C
Cache memory	<ul style="list-style-type: none"> • Instruction cache: 32 KB • Operand cache: 32 KB
DDR3 SDRAM bus	<ul style="list-style-type: none"> • DDR3-SDRAM (DDR3-712) • External bus frequency: up to 356 MHz (Up to 712 M words/s) • Data: 16-bit
Local bus state controller	<ul style="list-style-type: none"> • Flash ROM and SRAM IF • Manages an external memory space divided into 3 areas of up to 64 MB each • Data bus width: 8- or 16-bit
Main on-chip peripheral functions	IMP-X2266 MHz Image recognition unit
	<ul style="list-style-type: none"> • IMR・$\bar{\Delta}$ SX Image render/Distortion correction unit on display unit • IMR-X Image render/Distortion correction unit
	DRC Dynamic range control/compression unit
	<ul style="list-style-type: none"> • Renesas Graphic processor (2D) • Option: PowerVR SGX530 (3D)
	SD host IF
	CAN (RCAN2) 2 ch

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Package	440-pin BGA (21 mm × 21 mm, 0.8 mm pitch)
Development environment	ICE for SH-4A
Evaluation board	<p>A user system development reference platform offering the following features is also available, enabling the user to carry out efficient system development.</p> <p>(1) Includes car information system oriented peripheral circuits, providing a user system actual device verification environment.</p> <p>(2) Can be used as a software development tool for application software, etc.</p> <p>(3) Allows easy addition of custom user functions.</p>
Middleware	<ul style="list-style-type: none"> • IMP-X2 library • DRC library