Processor

For an official overview of the SuperH RISC engine family go here.

http://www.am.renesas.com/products/mpumcu/superh/

This page is in reverse order by relevance with newer parts listed first.

Renesas SuperH Family

This listing corresponds to the official SuperH Family diagram linked to above. CPUs not listed are not currently supported by the Linux kernel.

SH4

SH7750 Series

- SH7750
- SH7750R
- SH7750S
- SH7751
- SH7751R

The SH7751R is a custom subtype created for IO-DATA by Hitachi, derived from the SH4-200 Series.

The SH7751R runs at 266MHz, "200MHz to 266MHz" Clock Up Version for NAS.

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* Systems using this CPU subtype
  * LANDISK (IODATA NAS)
  * LANTANK (IODATA NAS KIT)
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LANDISK/LANTANK is based on Debian/GNU Linux. Detailed information with LANDISK LANTANK is obtained on the following:

http://iohack.sealandair.info/wiki/index.php?I-O HACK - BROKEN!

- SH7760

SH-4A

SH7780 Series

- SH7780
- SH7781
- SH7785
- SH7786 - Dual Core
- SH7763
- SH7764
- SH7722 - SH-MobileR
- SH7730
- SH7723 - SH-MobilR2
- SH7724 - SH-MobileR2R

SH5

- SH8000 (see SH64)

SH3 and SH3-DSP

Renesas SH7700 Series (http://am.renesas.com/products/mpumcu/superh/sh7700/index.jsp)

- SH7705
- SH7706
- SH7708R

The SH7708R is a RISC processor for High Performance Operation. This processor is integrated peripheral function for system construction. (PLL Clock Generator,Interrupt Controller,Timer,Real Time Clock,Serial Communication Interface,Cache Memory(8KB) & DRAM/SDRAM/SRAM/ROM/BurstROM Controller) and Low power consumption. It is needed in the microcomputer application. This processor performance is about same clock i486 processor.

- Systems using this CPU subtype
  - CAT 68701 (Silicon Linux Co., Ltd.) NOTE: Discontinued.

CAT68701's standard operating system is based on Debian/GNU Linux for SuperH. It is confirmed that even kernel 2.4.17 operates.

  - SH7709A

The SH7709A is a processor for handheld PC and PDA application.

- Systems using this CPU subtype
  - SH2000 (Daisen Electronic Industrial Co., Ltd.)

SH7709A can compactly develop H/PC by combining with companion chip HD64461. It is contain 640x240 STN Color LCD Controller,IrDA1.1,RS232C,PCMCIAx2,SoftModem and Timer Unit. For example Hitachi PERSONA[HPW-50PA](WindowsCE 2.0) is using SH7709A/HD64461 pair. But there is no operation report of Linux though PERSONA. It has the operation report of NetBSD only.

  - SH7709S

The SH7709S is a processor for handheld PC and PDA application.

- Systems using this CPU subtype
  - SH2002/SH-500/SH-1000 (Daisen Electronic Industrial Co., Ltd.)
  - CAT709 (Silicon Linux Co., Ltd.)
- SH7706A

SH-2

- SH7040 Series

The SH7040 Series (SH7040, SH7041, SH7042, SH7043, SH7044, SH7045) single-chip RISC (Reduced Instruction Set Computer) microprocessors integrate a Renesas Technology-original RISC CPU core with peripheral functions required for system configuration.

- Supported Processor Subtypes
  - SH7040
  - SH7041
  - SH7042
  - SH7043
  - SH7044
  - SH7045

Additional Information

Further information on this series can be found on the Renesas page.

SH-2A

- SH7200 Series

The SH7200 series is the first range of processor subtypes featuring an SH-2A core.

Other noteworthy differences over SH-2 include being superscalar, and an extended ISA supporting several new 32-bit instructions.

- Supported Processor Subtypes
  - SH7206

The SH7206 is the first member of the SH7200 Series and is aimed at AC servos, numerical control machines, fax machines, reading devices, and various printers.

It is using an SH-2A core, runs at 200MHz, has 128KB of on-chip RAM, and has no FPU or MMU.

- Systems using this CPU subtype
  - MS7206SE01 (SH72060 Solution Engine)

Additional Information

Further information on this series can be found on the page

http://www.renesas.com/products/mpumcu/superh/sh7200/index.jsp

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- SH7206

SuperH

SH4

- SH4-100 Series (Used in ST40 parts)
    - SH4-102
    - SH4-103
- SH4-200

  The SH4-200 series features an SH-4 core with an FPU, and 2-way set associative caches.

    - SH4-201 (Used in Renesas SH7750R parts).
    - SH4-202

Additional Information

  Further information on this series and SH4-FPU can be found on the SuperH SH4-FPU page.

SH5

- SH5-101
- SH5-103

STMicroelectronics

ST40

- ST40RA (formerly ST40STB1)
- ST40GX1

ST50 (see SH64)