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Key Features of Renesas Electronics' EMMA3TJ and EMMA3TS SoCs

Specifications common to both the EMMA3TJ and EMMA3TS SoCs

- OFDM channel decoder
 - ISDB-T 13-segment OFDM channel decoder
 - Support for IF (57 MHz), low IF (4 MHz)
- 8PSK channel decoder
 - ISDB-S 8PSK demodulator
 - Support for IQ input
 - On-chip CPU specifications
 - Main CPU
 - MIPS32® 4KEc™ core
 - 500 DMIPS at 320 MHz
 - Sub-CPU
 - MIPS32 4KEc core
 - 500 DMIPS at 320 MHz
 - Memory interfaces
 - DDR2 memory interface
 - DDR2 800 MHz
 - Support for max. 256 MB capacity
 - Bus width: 16 bits
 - NAND Flash ROM interface
 - Support for max. 2 Gb capacity
 - Support for 8-bit bus with
- MPEG transport stream processing engine
 - Stream input I/F
 - Support for transport streams conforming to MPEG standard
- Video decoder
 - Conforms to MPEG2 MP@HL
 - MPEG4 AVC decoder HP@L4.0

- JPEG decoder
 - Baseline support for decoding at 8,000 × 8,000 pixels
- Audio controller
 - Support for MPEG1/MPEG2 layers 1/2, MP3
 - Support for MPEG2 AAC, Dolby Digital, LPCM
 - Support for SPDIF output
- Display and graphics
 - 1 video plane
 - 7 × 5 tap video scaler
 - 2 OSD planes
- Peripheral functions
 - USB 2.0 host controller × 1 line
 - Ethernet controller × 1 line
 - UART × 2 lines
 - Smartcard I/F × 1
 - I²C × 2 lines
 - Clocked serial I/F
 - IR receiver/blaster
 - Timer

Specifications specific to the EMMA3TJ SoC

- Video input
 - HDMI receiver × 1 line
 - 3-channel video ADC on-chip
 - Analog video decoder (NTSC/PAL)
- Audio input
 - 4-channel audio ADC on-chip
- Panel output
 - LVDS output I/F

Specifications specific to the EMMA3TS SoC

- Analog video outputs

- Composite analog video output/component analog video output
- 3-channel DAC on-chip for video output