

Appendix**Main Specifications for NEC Electronics' EMMA3SL/P SoC**

Internal CPU: Total of 990 MIPS

Main CPU

MIPS32® 4KEc ®Core

495MIPS@324MHz

Cache size: 16KB instruction cache; 16KB data cache

Sub CPU

MIPS32 4KEc Core

495MIPS@324MHz

Cache size: 16KB instruction cache; 16KB data cache

Memory Interface

DDR2 memory interface

16-, 32-bit bus

64MB to 256MB capacity

3.2GB/s bandwidth

Flash ROM interface

Up to 64MB capacity

8-, 16-bit bus

Serial Flash Memory

MPEG Transport Stream Processing Engine

Stream interface: two serial and two parallel

MPEG2 TS

108 PID filters

96 section filters

MPEG Video Decoder

Compliant with:

MPEG-2 MP@ML, MP@H-14, MP@HL

MPEG-4 ASP@L5

H.264/AVC HP@L4.0

AVS JP@L6.0

VC-1 AP@L3

DivX® Home Theater@6.x, HD1080p@6.x

WMV9

Audio Controller

Compliant with:

MPEG-1/2 L1/2, MPEG-4 AAC, MPEG4 HE-AAC, DD, DD+, MP3, WMA

SPDIF output

PDM output

I2S output

HDMI output

Transcode function: HE-AAC to DTS or DD

Graphics and Display Engine

- 2D Bit BLT
- 6 graphics planes
- Video output up to 1080P
- 256-level alpha-blending function
- Real-time video scaling (1/4to 4 H/V)x2
- Built in deinterlacer

Video Encoder

- Built-in 6-channel DAC: CVBS, YC, RGB/YCbCr
- HDMI output
- PAL, SECAM, NTSC formats

USB2.0 Host Controller

- USB2.0 interface x2
- Compliant with EHCI specification
- High (480Mbps), full (12Mbps), and low speeds (1.5Mbps)

Ethernet Interface

- Built-in Integrated Ethernet MAC conforming to IEEE802.3/3u/3x
- Compliant with RMII (10Mbps/100Mbps Ethernet) specification

HDMI Interface

- HDMI 1.3a with X.V. color™
- HDCP 1.3

Peripherals

- Two-channel FUART
- Two-channel Smart Card interface
- Two-channel I2C
- Two-channel IR receiver

Package

- 484-pin plastic BGA

(Remark)

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