

SMP8650 Series

Secure Media Processors



SET-TOP
BOXES

CONSUMER
ELECTRONICS

AV
NETWORKS

HOME
CONTROL

COMMERCIAL
SYSTEMS

TARGET MARKETS

- IPTV
- Satellite
- Cable
- Media players
- Wireless display receivers
- IPTV/cable/satellite thin clients

SUPPORTED TECHNOLOGIES

- AVCHD, DVD-Video, DVD-R/-RW/+R/+RW, CD/-R/-RW, Picture CD (JPEG) media formats
- ATSC, DVB, ARIB, and IPTV
- Audio DSP supports wide variety of audio codecs
- Security CPU supports wide variety of conditional access (CA) and digital rights management (DRM) solutions, including Nagravision NOCS v1.1, NDS ICAM v2.2a, NDS VGS

VIDEO DECODING

- MPEG-4.10 (H.264) BP@L3, MP@L4.0, HP@L4.0
- SMPTE 421M (VC-1) MP@HL, AP@L3
- WMV9 MP@HL
- MPEG-2 MP@HL
- MPEG-4.2 ASP@L5 (up to HD, 1-point GMC)
- AVS Jizhun profile@L2.0, 4.0, 6.0*
- RMVB v9, v10
- 3D video support
 - Generic side-by-side and top-bottom output
 - RealD (side-by-side output)
 - Sensio (side-by-side output)

* 20 Mbps for L4.0; 40 Mbps for L6.0

ADVANCED VIDEO PROCESSING

- 3D graphics accelerator with Open GL ES 1.1/2.0 support
- Deblocking and deringing filters
- Individual brightness, contrast, saturation, hue, and colorimetry correction controls for each video source and output port
- 12-bit xvYCC processing
- Integrated HDMI v1.3a with CEC, 12-bit deep color, xvYCC

The SMP8650 family provides highly-integrated solutions for products requiring MPEG-4.10 (H.264), SMPTE 421M (VC-1), AVS, WMV9, MPEG-4.2, MPEG-2, and RMVB decoding. The Secure Media Processor architecture offers advanced content protection, supporting a wide variety of Digital Rights Management (DRM) and Conditional Access (CA) solutions.

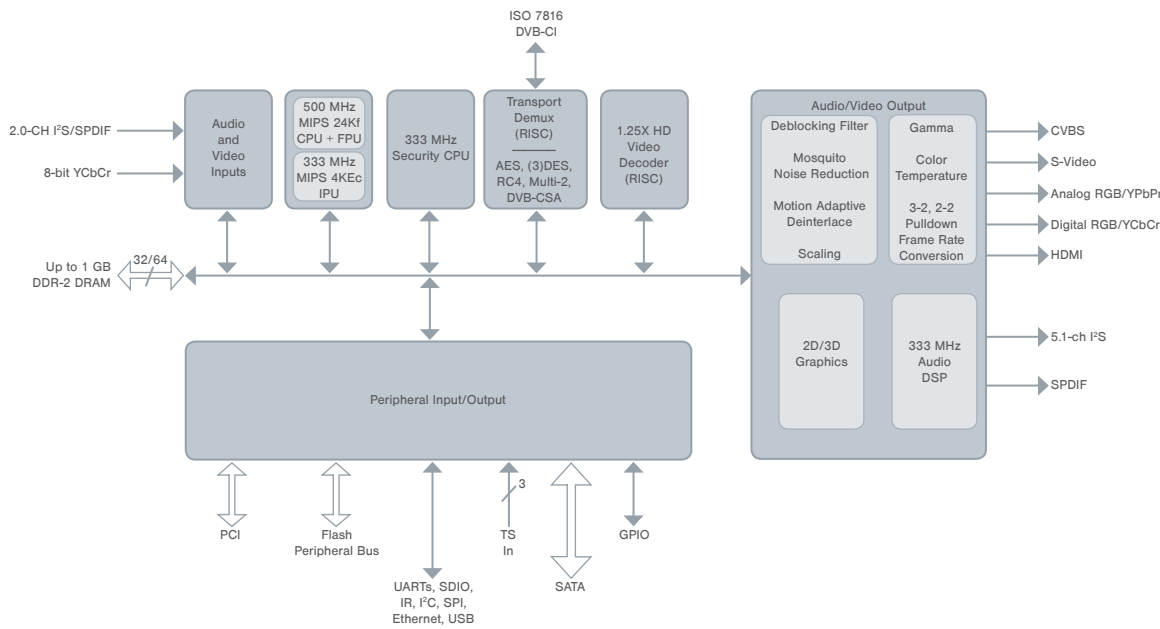
The high-performance 3D graphics available on the SMP8656 enables dynamic and customizable user interfaces by supporting the flipping, rotating, warping, and moving of images.



To meet the new low-power requirements for CE products, the SMP8650 family features several standby features, including wake-on-IR, wake-on-LAN, and sleep/standby with DRAM data preserved.

POWERING THE NEW DIGITAL HOME





| | SMP8652 | SMP8654 | SMP8656 |
|--------------------------------------|--------------------------|------------------------|------------------------|
| DMIPS | 1230* | 1230* | 1230* |
| NDS and Nagravision CA Support | | | • |
| 2D/3D Graphics | 2D | 2D | 3D |
| Ethernet | (2) 10/100 | (2) 10/100 | (2) 10/100/1000 |
| HDMI | v1.2 | v1.3a + CEC + PHY | v1.3a + CEC + PHY |
| SATA II (1.5 Gbps, eSATA compatible) | 1 | 2 | 2 |
| USB 2.0 | 1 OTG | 2 Host | 2 Host |
| SDIO | 2 | | |
| Peripheral Bus, DVB-CI Support | • | | |
| DRAM Support | 32-bit 512 MB (DDR2-667) | 64-bit 1 GB (DDR2-667) | 64-bit 1 GB (DDR2-667) |
| NAND Flash Support | 8-bit 4 GB SLC | 8-bit 4 GB SLC | 8-bit 4 GB MLC |
| NOR Flash Support | 16-bit 256 MB SPI | | SPI |
| Digital RGB/YCbCr Video Outputs | • | | |
| Video DACs | 4 | 6 | 6 |
| PCI | | • | • |
| Non-Macrovision Version | SMP8653 | SMP8655 | SMP8657 |

* Host CPU + IPU (720 + 510)

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