Key Specifications

Processor
- Multi-core 64-bit high-performance ARM Cortex A53
- Multi-core high-performance GPU

Memory Control Interfaces
- DDR3/4 interface
- eMMC/NOR/NAND flash interface

Video Decoding (HiVXE 2.0 Processing Engine)
- Maximum 4K x 2K@60 fps 10-bit decoding
- Multiple decoding formats, including H.265/HEVC, AVS, H.264/AVC MVC, MPEG-1/2/4, VC-1, and so on

Image Decoding
Full HD JPEG and PNG hardware decoding

Video and Image Encoding
1080p@30 fps video encoding

Audio Encoding and Decoding
- Audio decoding in multiple formats
- Audio encoding in multiple formats

DVB Interface
- Multi-channel TS inputs and outputs

Security Processing
- Advanced CA and downloadable CA
- DRM
- Secure boot, secure storage, and secure upgrade

Graphics and Display Processing (Imprex 2.0 Processing Engine)
- Multiple HDR formats
- 3D video processing and display
- 2D graphics acceleration engine

Audio and Video Interfaces
- HDMI 2.0b output
- Analog video interface
- Digital and analog audio interfaces

Peripheral Interfaces
- GE and FE network ports
- Multiple USB ports
- SDIO, UART, SCI, IR, KeyLED, and I2C interfaces

Others
- Ultra-low-power design with less than 30 mW standby power consumption
- BGA package

Solution
- Is targeted for the DVB/Hybrid STB market.
- Supports full 4K decoding.
- Supports Linux, Android, and TVOS intelligent operating systems
- Complies with the broadcasting television-level picture quality standards.
- Meets the increasing value-added service requirements.
Functional Block Diagram

Acronyms and Abbreviations

AVC  advanced video coding
AVS  Audio Video Standard
BGA  ball grid array
CA  conditional access
DDR  double data rate
DRM  digital rights management
DVB  Digital Video Broadcasting
eMMC  embedded multimedia card
FE  fast Ethernet
GE  gigabit Ethernet
GPU  graphics processing unit
HD  high definition
HDMI  high definition multimedia interface
HDR  high dynamic range
HEVC  high efficiency video coding
I²C  inter-integrated circuit
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>infrared</td>
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<tr>
<td>JPEG</td>
<td>Joint Photographic Experts Group</td>
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<tr>
<td>LED</td>
<td>light emitting diode</td>
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<tr>
<td>MVC</td>
<td>multiview video coding</td>
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<tr>
<td>PNG</td>
<td>portable network graphics</td>
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<tr>
<td>SCI</td>
<td>smart card interface</td>
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<tr>
<td>SDIO</td>
<td>secure digital input/output</td>
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<tr>
<td>TS</td>
<td>transport stream</td>
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<tr>
<td>TVOS</td>
<td>television operating system</td>
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<tr>
<td>UART</td>
<td>universal asynchronous receiver transmitter</td>
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