Hi3251 V600 Brief Data Sheet

Key Specifications

Key Features

- 4K x 2K@60/120 Hz motion estimation/motion compensation (MEMC)
- 4K x 2K@60/120 Hz SR
- 4K x 2K@60 Hz TCON

High-Speed Input Interfaces

- 8-lane V-by-One RX video interface, maximum 4K x 2K@60 Hz video data (RGB 10-bit)
- 4-lane V-by-One RX on-screen display (OSD) interface, maximum 4K x 2K@30 Hz OSD data (ARGB6888)
- Full high-definition (FHD) 24/30/48/50/60/96/100/120 Hz, 4K x 2K@24/30/48/50/60 Hz input

High-Speed Output Interfaces

- Mini-LVDS TX interface, supporting 4K x 2K@60 Hz or 4K x 1K@120 Hz output
- P2P TX interface, supporting 4K x 2K@60 Hz or 4K x 1K@120 Hz output
- V-by-One TX interface, supporting 4K x 2K@60/120 Hz or 4K x 1K@120 Hz output

Professional HiSilicon Graphics Engines

- Hi-Imprex video processing engine
  - Automatic detection and restoration in 3:2, 2:2, or M: N film mode
  - 3D denoising and noise level detection
  - MPEG denoising, de-blocking, and mosquito noise reduction
- Hi-Imprex image enhancement engine
  - Sharpening and shoot control over contents including the 4K x 2K data
  - Adaptive color management
  - Dynamic contrast improvement (DCI)
  - Blue level expansion
- Hi-Imprex SR enhancement engine
  - Enhanced SR engine for optimizing edges and details
- Hi-Motion professional MEMC engine
  - Enhanced halo free processing
  - Enhanced deblur & dejudder processing

- Small object protection
- OSD protection
- Letterbox processing
- Programmable 12-bit gamma look-up table
- 0D/1D/2D local dimming processing

3D

- 3D input format detection
- 2D-to-3D conversion
- FHD FS/SBS/TAB 60/120 Hz, 4K x 1K FS 60/120 Hz, and 4K x 2K FS 60 Hz 3D inputs
- 4K x 1K SG 120 Hz and 4K x 2K SG 120 Hz 3D outputs
- 3D sync interface
- 3D glass interface and programmable infrared (IR) TX interface

TCON and Related Functions

- Configurable driver timing control
- OD/MOD
- Demura
- Interconnected RGB/RGBW screen
- Scanning back light

Memory Control Interfaces

- DDR3/2 interface
- SPI flash interface

System and Peripheral Interfaces

- High-performance reduced instruction set computing (RISC) CPU
- Multiple inter-integrated circuit (I^2C) interfaces
- Two universal asynchronous receiver transmitter (UART) interfaces
- Multiple general-purpose input/output (GPIO) interfaces
- Integrated power-on reset (POR) module

Others

- Boot program download and execution over the UART interface