

2. Product Specification

2-1 Product Features

| Block | Specification | Major IC | Remark |
|---------|---|---------------------------|--------|
| DMD | - Panel Resolution : 1920x1080 | xHD5 DMD Panel | |
| RF | - Intergrated HDTV Tuner (NTSC/ATSC TUNER Embedded) | QamLink | |
| Power | - Input Voltage : AC110V~120V - Stand-By : under 1W | Stand-by (KA1M0565) | |
| Video | - MPEG2 Decoder/Analog Decoder. - (IPC, Scaler, Video enhancer) | S5H2201, CXD3815 SDP62 | |
| Sound | - speaker : 10W + 10W - Trusurround XT, Dolby Digital | STV8258 | |
| Cabinet | - K7 Design | | |

■ Chip Description

- S5H2201 : SAMSUNG S5H2201 HD-TV Audio/Video Decoder Processor is designed to provide a cost-effective, low power size and high performance micro-controller solution for HD-TV,SD-TV, STB applications. To reduce total system cost, S5H2201 also provides the following features: separate 4KB Instruction and 4KB Data Cache, an improved audio DSP, a programmable video encoder with a dual output capability of interlaced and progressive scan, Memory controller, 4-channel Timers with PWM, I/O Ports, 2-channel 8-bit ADCs, 5-channel 10-bit DACs, 2-channel UARTs with handshake, IIC-BUS interface, IIS-BUS interface, SIO, Memory-Stick(NOTE) Card Interface and PLL for clock generation.
- SDP62 (B1) : * 4CH Input
 CH1, CH2 : 30Bit (RGB, YCbCr444, 601,10Bit or 8Bit)
 CH3 : 24Bit (RGB,YCbCr444 each 8bit, 601 10bit)
 CH4 : 20Bit (Only 601 8Bit or 10Bit)
 * OSD Input
 * Output
 Digital RGB(10Bit 444) Digital YCbCr(10Bit 444)
 RGB/YCbCr 10bit OUTPUT @CLK_OUT
 RGB/YCbCr 20bitEven/Odd) OUTPUT
- CXD3815 : The CX3815Q is a multi chroma that supports TV systems worldwide. It has a motion adaptive 3-D Y/C separation function for NTSC and PAL signals. In addition, this chip also has analog and digital composite signal and component signal input functions, and functions as a video signal processor IC that outputs the component signals selected from each video signal format input.(Applications: color TV's)
- STV 8258 : The STV82x8 family, based on audio digital signal processors (DSP), performs high quality and advanced dedicated digital audio processing. These devices provide all of the necessary resources for automatic detection and demodulation of analog audio transmissions for NTSC TV broadcasts. Virtual or true, multi-channel capabilities and easy digital links make them ideal for digital audio low cost consumer applications. Starting from enhanced stereo up to independent control of 5 loudspeakers and a subwoofer (5.1 channels), the STV82x8 family offers standard and advanced features plus sound enhancements, spatial and virtual effects to enhance television viewer comfort and entertainment.

■ Important efficiency comparison

| Item | S5H2201+SDP51/52(Before) | S5H2201+SDP62(After) |
|----------------------------|---|---|
| 480i Input (Bit Resol.) | - 480i(10)→480p(10)→1080p(10) - De-interlacing No. 1 | - 480i(10) →1080p(16) - De-interlacing No.1 |
| 1080i Input (Component) | - Input 10bit, Output 10bit - ME/MC IPC :480i, 1080bit | - Input 10bit, Output 10bit - ME/MC IPC :480i, 1080i |
| Graphic Display | - S5H2201→DNle(Separate Port→ No P.E) - 1080p graphic muxing to the final output | - S5H2201→SDP62(Separate Port→No P.E) - 1080p Graphic muxing to the final output |
| NTSC Input | - 3D-comb→Main(TC90103FG) - Super NR→Main/Sub(2xSDP51) | - 3D-Comb → Main(CXD3815) - Super NR → Main/Sub(SDP62) |

■ The advantage of SDP62

- Video processor integrating NR, IPC, Scaler and PE
- NR(Noise Reduction)
 - * ME/MC NR
 - * Adaptive NR using Noise Estimation
- IPC(Interlace to Progressive Conversion)
 - * ME/MC IPC
 - * Ticker detection
 - * Film mode
- Scaler
 - * Premium scaler(H=12Tap, V=8Tap 128 polyphase)
 - * Dejagging
- PE(Picture Enhancement)
 - * Motion Adaptive Detail Enhancement
 - * Chrominance Transition Improvement
 - * Contrast Adjustment
 - * My Color Control & Management

2-2 Key Features

| Model | HL-T5076S | HL-T5676S | HL-T6176S |
|---------------------------|--|--|--|
| Voltage | AC 110 - 120V~ | AC 110 - 120V~ | AC 110 - 120V~ |
| Frequency of Operation | 60Hz | 60Hz | 60Hz |
| Power Consumption | 230 watts | 230 watts | 230 watts |
| Dimensions (W x D x H) | 1156 x 270 x 773 inches 1156 x 270 x 773 mm | 1290 x 270 x 847 inches 1290 x 270 x 847 mm | 1400 x 292 x 910 inches 1400 x 292 x 910 mm |
| Weight | 28.3Kg / 79.37 lbs | 28.6 Kg / 79.37 lbs | 33.6 Kg / 79.37 lbs |

■ H/W Configuration

- DMD Panel : 0.65" (1920 x1080p, TI)
- One Panel Optical Chassis (K780)
- LAMP: 132W (50",56",61")
- NTSC/ATSC Tuners : NTSC/DTV Reception
- Support HDMI Interface : Adopts DVI/HDMI systems for digital HDs including STB.
- DNIe4 : High quality image implementation
- USB Interface : Use the USB interface for service purposes (S/W Upgrade),Wise Link
- 3D Ready feature

■ S/W Configuration

- MCU : Albatross CPU
- 4-Layered Architecture : Device Driver/OS/Hardware Abstraction/Application
- OSD : 32Bit True Color Graphics OSD
- Enhanced system stability by separating the DTV control and the application control systems into multi-processes.

■ Picture

- DMD Panel
 - * Panel Size : 0.65"
 - * Panel Resolution : 1920 x 1080
- Tuner : Integrated HDTV Tuner (NTSC/ATSC Embedded)
- Display Format : 1920 x 1080

■ Sound

- Sound System : TruSurround XT,Dolby Digital
- Amp/Channel : 2 Channel Digital Amp
- Speaker System & Output(RMS)
 - * Sound (RMS) : 10W + 10W

■ In/Out Terminals

- Rear : 2 RF In, 2 CVBS In, 2 S-VHS In, 2 Component In, 3 HDMI In(DVI compatible With Adaptive Jack Only),
1 Optical audio out, 1 Monitor out, 1 PC in, 3D Ready, 1 RS-232C port

Product Specification

■ Feature

- Component Interface (480i/480p/720p/1080i/1080p, Y/Pb/Pr)
- Digital Interface : 3HDMI
- Graphic Interface : PC
- Language : English/French/Spanish
- Picture Size : 4:3/16:9/Zoom1/Zoom2/Wide Fit/Just Scan
- V-CHIP
- Closed Caption
- Sleep Timer : 180 Min.
- Optical sound output
- RS-232C
- Wise Link
- Game Mode
- 3D Game




■ Remocon

- TM87C












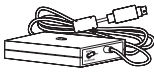

■ Power Supply


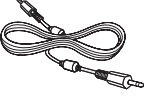

- AC 110V~120V

2-3 Specifications Analysis

| Model | | HL-R5078W | HL-R5668W | HL-T5076S |
|-------------|---|---|--|---|
| Design | |  |  |  |
| Picture | Display Device | DLP | DLP | DLP |
| | Built-in Tuner | ATSC, NTSC | ATSC, NTSC | ATSC, NTSC |
| | Display Format | 1080p, 1080i, 720p, 480p, 480i | 1080p, 1080i, 720p, 480p, 480i | 1080p, 1080i, 720p, 480p, 480i |
| | Screen Size | 50 inch | 56 inch | 50 inch |
| | Aspect ratio | 16:9 | 16:9 | 16:9 |
| | Progressive scan | Yes | Yes | Yes |
| | Digital Comb Filter | 3D Comb | 3D Comb | 3D Comb |
| | First Surface Mirror | Yes | Yes | Yes |
| | Brightness | 800cd/ m ² | 600cd/ m ² | 600cd/ m ² |
| | Contrast | 10000:1 | 10000:1 | 10000:1 |
| | Color Wheel Size/Bearing | 7segment/65 φ , Air Bearing | 7segment/65 φ , Air Bearing | 7segment/65 φ , Air Bearing |
| | Anti-glare Sun Screen | No | No | No |
| | Screen Pitch | 0.098mm | 0.098mm | 0.098mm |
| | Image enhancer | DNle4 | DNle4 | DNle4 |
| DMD | xHD3 | xHD3 | xHD5 | |
| Audio | Base/Tremble/Balance | No | No | No |
| | Equalizer | 5 Band | 5 Band | 5 Band |
| | Auto Volume Leveler | Yes | Yes | Yes |
| | Surround Sound | TruSurround XT Dolby Digital | TruSurround XT Dolby Digital | TruSurround XT Dolby Digital |
| | Speaker system | 2 Way 4 Speaker | 2 Way 4 Speaker | 2 Way 4 Speaker |
| | Output Power | 15Wx2 | 15Wx2 | 10Wx2 |
| Features | 2-Tuner Split-Screen PIP | Yes(HD/SD/QAM) | Yes(HD/SD/QAM) | No |
| | Split-screen Side-by-Side | Yes | Yes | Yes |
| | MTS with dbx Noise Reduction/SAP | Yes | Yes | Yes |
| | Still Picture | Yes | Yes | Yes |
| | Wise Link | No | No | Yes |
| Connections | Plug & Play | Yes | Yes | Yes |
| | S-Video In | Rear 2, Side1 | Rear 2, Side1 | Rear 2 |
| | HDTV Component Video Input (Y, Pb, Pr) 1080p/1080i/480P/480i | Rear 2 | Rear 2 | Rear 2 |
| | PC | Yes | Yes | Yes |
| | HDMI | Yes | Yes | Yes |
| | Digital Sound | Optical 1 | Optical 1 | Optical 1 |

2-4 Accessories

| Accessories | | Item | Item code | Remark |
|--|---|------------------------|----------------------------|--|
| Supplied Accessories |  | Remocon Batteries | BP59-00125A 4301-000103 | Samsung Service center |
| |  | Manual | BP68-00630A | |
| |  | Cloth-Clean | BN63-01798A | |
| |  | Power Cord | 3903-000144 | |
| Accessories that can be purchased additionally |  | HDMI/DVI cable | - | Electronics Store/ Internal shopping mall |
| |  | HDMI Cable | - | |
| |  | S-VIDEO Cable | - | |
| |  | Optical Cable | - | |
| |  | Antenna Cable | - | |
| |  | Component Cables (RCA) | - | |
| |  | 1Stereo/2RCA Cable | - | |
| |  | 3D IR Emitter | - | |
| |  | 3D Glasses | - | |

| | Accessories | Item | Item code | Remark |
|--|---|--------------------|-----------|--|
| Accessories that can be purchased additionally |  | Replacement Lamp | - | Electronics Store/ Internal shopping mall |
| |  | PC Audio Cable | - | |
| |  | Audio/Video Cables | - | |

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