

SiI9587-3 HDMI® 1.4a Port Processor

300MHz Port Processor Featuring HDMI[®] 1.4a, MHL[™] Technology and Silicon Image's InstaPort[™] S Technology

The SiI9587-3 is an advanced HDMI 1.4a port processor that supports 300MHz operation. It is ideally suited for DTVs, A/V receivers and switching systems designed to send or receive high frame rate (1080p 3D @ 60Hz) or 4K content. The SiI9587-3 incorporates Silicon Image's industry-leading InstaPort™ S technology, which allows manufacturers to build DTVs that switch HDMI input ports in one second, and is also compatible with the growing number of MHL™-(Mobile High-Definition Link) enabled smartphones and tablets.

Applications

- DTVs
- AVRs
- Home Theater-in-a-Box

Key Features

- Four 300MHz HDMI input ports
- Supports all mandatory 3D formats in HDMI 1.4a Specification
- InstaPort™ S technology
- MHL technology support
- Built-in HDCP engines (encrypt/decrypt)

Benefits Summary

- Reduces BOM cost and development time
- 300MHz speed meets requirements of advanced CE products (4K and 3D TVs and gaming systems)
- Connect, control and charge the latest MHL-enabled mobile devices

Industry-Standard Compliance

- HDMI 1.4a
- DVI 1.0
- EIA/CEA-861E
- HDCP 1.4
- MHL 1.1

HDMI Inputs

- Four HDMI 1.4a input ports
- Audio Return Channel on one port
- Content Type detection and InfoFrame on all ports
- InstaPort™ S fast HDMI port switching
- Resolutions up to 1080p @ 120Hz, 1080p 3D @ 60Hz, and 4K @ 30Hz
- Deep Color support up to 36 bits
- Integrated DDC and EDID NVRAM for HDMI and VGA ports
- AVI, Audio InfoFrame, and video input resolution detection for all input ports, accessible port-by-port
- Automatic output mute and unmute based on link stability, such as cable connect/detach
- Repeater function supports up to 127 devices

MHL Input

- One auto-sensing, auto-switching MHL input port
 - MHL can be assigned to any port
 - Converts MHL into HDMI-compliant TMDS
 - 24-bit color depth

 Input resolutions up to 1080p @ 30Hz or 720p/1080i @ 60Hz

System Operation

• Register-programmable via slave I²C interface

Content Protection

- InstaPort[™] S fast port switching preauthenticates and decrypts HDCP
- Integrated HDCP cipher decryption engine
- Built-in HDCP BIST (self-test)
- Pre-programmed HDCP keys
- Hardware-based HDCP error detection and recovery minimizes firmware intervention

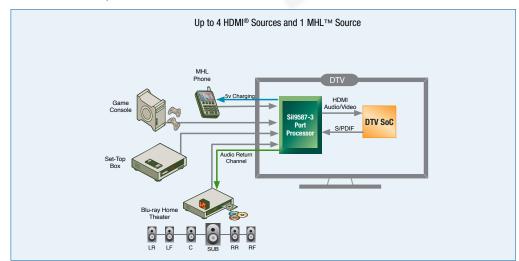
Power Management

 Low standby power mode with auxiliary power mode for EDID support

Package

◆ 88-pin, (10mm X 10mm), 0.4mm pitch QFN

Also Available as SiI9587, with 225MHz HDMI



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