Silicon Image™

SiI1292 MHL™/HDMI®-to-HDMI Bridge

Single-port, auto-sensing, MHL/HDMI-to-HDMI bridge device for HD audio and video connectivity to HDTVs, PC monitors, projectors, and multi-function monitors (MFMs)

The SiI1292 enables an existing HDMI input to upgrade to a low-power, auto-sensing MHL/HDMI input solution, which facilitates HD audio and video connectivity between MHL-enabled mobile devices and HDTVs, PC monitors, projectors and MFMs.

Applications

- MHL-enabled HDTVs
- MHL-enabled PC Monitors
- MHL-enabled Projectors
- MHL-enabled MFMs

Key Features

- Dual-mode MHL or HDMI input
- Adaptive equalizer for HDMI long-cable support
- Low BOM cost

Benefits Summary

- Low-power consumption
- Small package
- Adds MHL to one HDMI port

Industry-Standard Compliance

- HDMI 1.4
- MHL

Digital Video Output

- Integrated HDMI transmitter core
- HDMI output resolution support
    - up to 1080p@ 60 Hz with 12-bit color depth (HDMI input mode)
    - up to 1080p@ 24/30 Hz with 12-bit color depth (MHL input mode)

Digital Video Input

- HDMI input resolution support – up to 1080p@ 60 Hz 12-bit color depth
- MHL input resolution support – up to 1080p@ 24/30 Hz

Single-Wire Control Bus

Consumer Electronics Control (CEC) & DDC

- Support for DDC and CEC signals

System Operation

- Optional software control for MHL sink applications via 400 KHz local I²C bus
- Flexible interrupt registers and an interrupt pin
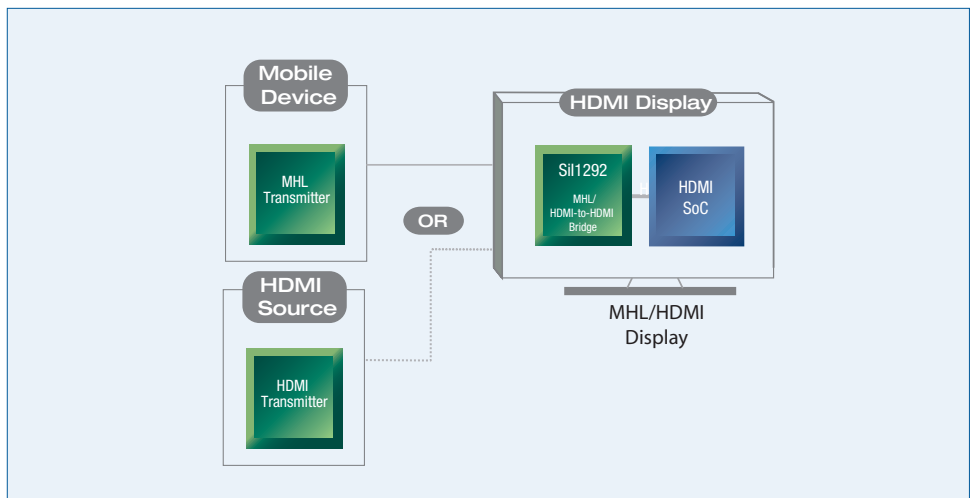- Hardware support for automatic MHL/HDMI input detection

Power Management

- Low power 1.2 V core
- On chip 3.3V and 1.8V regulators to reduce parts count

Available Packages

- 40-pin QFN, 6 mm x 6 mm footprint

Operating Range

- -20°C to +85°C extended temperature range support

Enhancing the connected HD experience