



FSHDMI08 Low-Voltage, Wide-Bandwidth, HDMI Switch with DDC and CEC Multiplexer

Features

- -25db Non-Adjacent Channel Crosstalk at 1.65Gbps
- Low Signal Loss: -1.5dBg attenuation at 1.65Gbps
- Isolation Ground Between Channels
- Fast Turn-on/off Time (< 6ns)
- 1.65Gbps Throughput
- 8kV ESD Protection
- Low Skew: Intra-pair <90ps, Inter-pair < 150ps
- Low Power Consumption (1µA Maximum)

Applications

- XGA and 720p DVI and HDMI Video Source Selection

Description

The FSHDMI08 is a wide-bandwidth switch designed for routing HDMI link data, clock, and the relevant DDC and CEC control signals that support the data rate up to 1.65Gbps per channel for UXGA resolution. Applications include LCD TVs, DVD, set-top boxes, and notebook designs with multiple digital video interfaces.

This switch allows the passage of HDMI link signals with ultra-low non-adjacent channel crosstalk and ultra-low off isolation. This is critical to minimize ghost image between active video sources in video applications. The wide bandwidth of this switch allows the high-speed differential signal to pass through with minimal additive skew and phase jitter. The pinout supports an HDMI Standard-A connector PCB layout.

IMPORTANT NOTE:

For additional performance information, please contact analogswitch@fairchildsemi.com.

Ordering Information

Order Number	Pb-Free	Package Description
FSHDMI08MTDX	Yes	56-Lead, Thin Shrink Small Outline Package (TSSOP), JEDEC MO-153, 6.1mm Wide
FSHDMI08BQX (Preliminary)	Yes	56-Lead, Molded Leadless Package (MLP), 5x7mm Wide

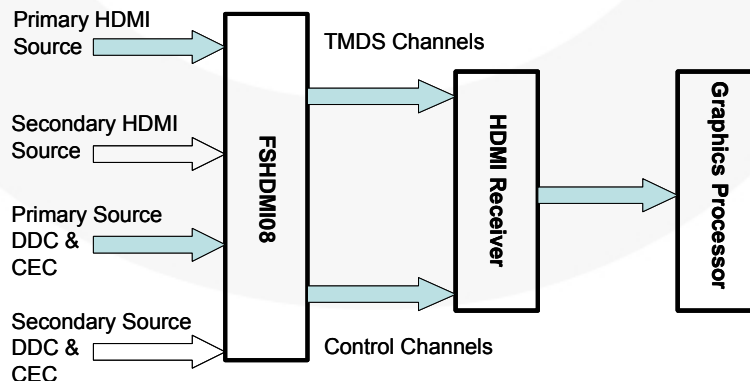



Figure 1. Single-Link HDMI Application



TRADEMARKS

The following are registered and unregistered trademarks and service marks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

- | | | | |
|--------------------------------------|--|--|----------------------------------|
| ACEx [®] | Green FPS [™] | Power247 [®] | SuperSOT [™] -8 |
| Build it Now [™] | Green FPS [™] e-Series [™] | POWEREDGE [®] | SyncFET [™] |
| CorePLUS [™] | GTO [™] | Power-SPM [™] | The Power Franchise [®] |
| CROSSVOLT [™] | i-Lo [™] | PowerTrench [®] | the power franchise |
| CTL [™] | IntelliMAX [™] | Programmable Active Droop [™] | TinyBoost [™] |
| Current Transfer Logic [™] | ISOPLANAR [™] | QFET [®] | TinyBuck [™] |
| EcoSPARK [®] | MegaBuck [™] | QS [™] | TinyLogic [®] |
| F [®] | MICROCOUPLER [™] | QT Optoelectronics [™] | TINYOPTO [™] |
| Fairchild [®] | MicroFET [™] | Quiet Series [™] | TinyPower [™] |
| Fairchild Semiconductor [®] | MicroPak [™] | RapidConfigure [™] | TinyPVM [™] |
| FACT Quiet Series [™] | MillerDrive [™] | SMART START [™] | TinyWire [™] |
| FACT [®] | Motion-SPM [™] | SPM [®] | μSerDes [™] |
| FAST [®] | OPTOLOGIC [®] | STEALTH [™] | UHC [®] |
| FastvCore [™] | OPTOPLANAR [®] | SuperFET [™] | UniFET [™] |
| FPS [™] |  [®] | SuperSOT [™] -3 | VCX [™] |
| FRFET [®] | PDP-SPM [™] | SuperSOT [™] -6 | |
| Global Power Resource SM | Power220 [®] | | |

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION, OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

- Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
- A critical component in any component of a life support device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild Semiconductor. The datasheet is printed for reference information only.

Rev. 131