Next Generation High Performance Analog Broadcast Video Solutions

M21235

HD/SD Broadcast Video Multi-rate Automatic Reclocker

The M21235 is an evolution of Mindspeed’s single channel HD/SD multi-rate reclocking technology that provides significant power savings, superior performance, and flexible power supply options when compared to other competing single channel reclockers.

In addition to a smaller 7x7mm MLF package to enable denser designs with simplified PCB layouts, the M21235 also provides a new I²C serial interface for simplified control of all functions and PCB layout.

The M21235 is complemented with the M21232 HD/SD video cable driver in a 3x3mm MLF package, and the M21234 HD/SD video cable equalizer in a 5x5mm MLF package to optimize performance and density in new multi-rate designs.

Additional unique Mindspeed devices include the HD/SD quad channel reclocking and asynchronous switching families:

- M21250, DS-M21251, DS-M21252 quad channel multi-rate video reclockers
- M21260 4x4 1.6 Gbps video crosspoint switch with quad multi-rate reclockers
- DS-M21261 1x4 1.6 Gbps video fanout with HD/SD multi-rate reclocking
- DS-M21262 4x1 1.6 Gbps video selector with HD/SD multi-rate reclocker

Mindspeed’s innovative circuit architecture enables next generation systems with flexible power supply operation of 2.5V to 3.3V with a > 50% typical power reduction at 2.5V (40% at 3.3V) supply rails and a wider operating temperature range [-10°C to +85°C] and now with simplified control.

The additional functionality previously available on the M21215 RSVD pins is now available thru the I²C interface while basic functions such as input selection, rate selection or indication, and output mode control are still available through hard-wired control pins.
HD/SD Serial Routing Switcher Application Diagram

HD/SD Production & Master Control Switcher Application

Product Features

Applications
- Small to large serial routing switches
- Distribution amplifiers

Additional Features
- Crystal reference frequency selection: 12MHz or 14.140MHz
- Auto rate detect sequence optimization
- Loop bandwidth control
- Output swing amplitude control
- PCML, LVDS, and LVPECL output modes
- Common mode shift for DC coupling to LVPECL

Ordering Information
- M21235-33P: HD/SD Video Reclocker (143 Mbp - 1485 Mbp)
- M21235G-33P: HD/SD Video Reclocker (143 Mbp - 1485 Mbp) [RoHS compliant package]

Package: 7x7mm, 48 pin MLF

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