

Next Generation High Performance Analog Broadcast Video Solutions

M21214 HD/SD Broadcast Video Adaptive Co-Axial Cable Equalizer

The M21214 is a next generation high performance analog SD/HD video cable adaptive equalizer that provides > 175m Belden 1694A cable length performance in a drop in solution that is pin-to-pin, electrically, and functionally compatible with existing legacy single channel cable equalizers.

Superior next generation equalization performance of the M21214 is complemented with a complete serial routing chipset that includes reclocking (M21215) and cable drivers (M21212/M21218) devices. These new devices further complement Mindspeed's unique HD/SD quad channel reclocking and asynchronous switching devices:

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

A unique, patent pending equalization approach improves SD-SDI and HD-SDI performance such that typical HD applications can be connected with a single link facilitating a lower overall facility system cost.

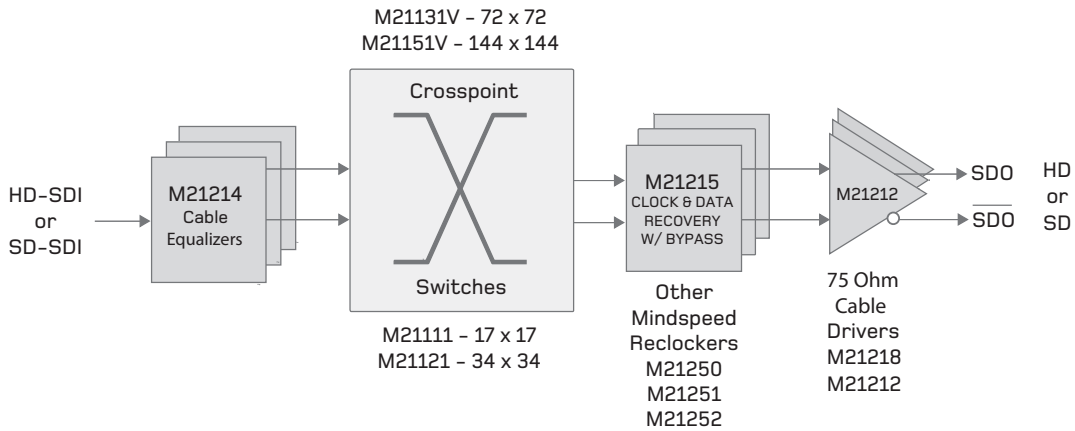
KEY FEATURES

- SMPTE 292M, SMPTE 259M, SMPTE 344M compliant
- Adaptive, multi-rate, and auto-matic co-axial cable equalization
- Supports operation from 143 Mbps to 1600 Mbps and DVB-ASI at 270 Mbps
- Selectable manual BYPASS mode
- Optimized cable equalization for SD and HD data rates
 - 175m typical @ HD-SDI with Belden 1694A
 - 350m typical @ SD-SDI with Belden 1694A
- Output mute at maximum equalized cable length with manual override
- Integrated differential 50 Ω output terminations
- 2.5V or 3.3V operation
- Reduced power dissipation
 - 175mW typical @ 2.5V
 - 230mW typical @ 3.3V
- Increased operating temperature range: -10°C to +85°C
- Pin-to-pin, electrically, and functionally compatible with GS1524

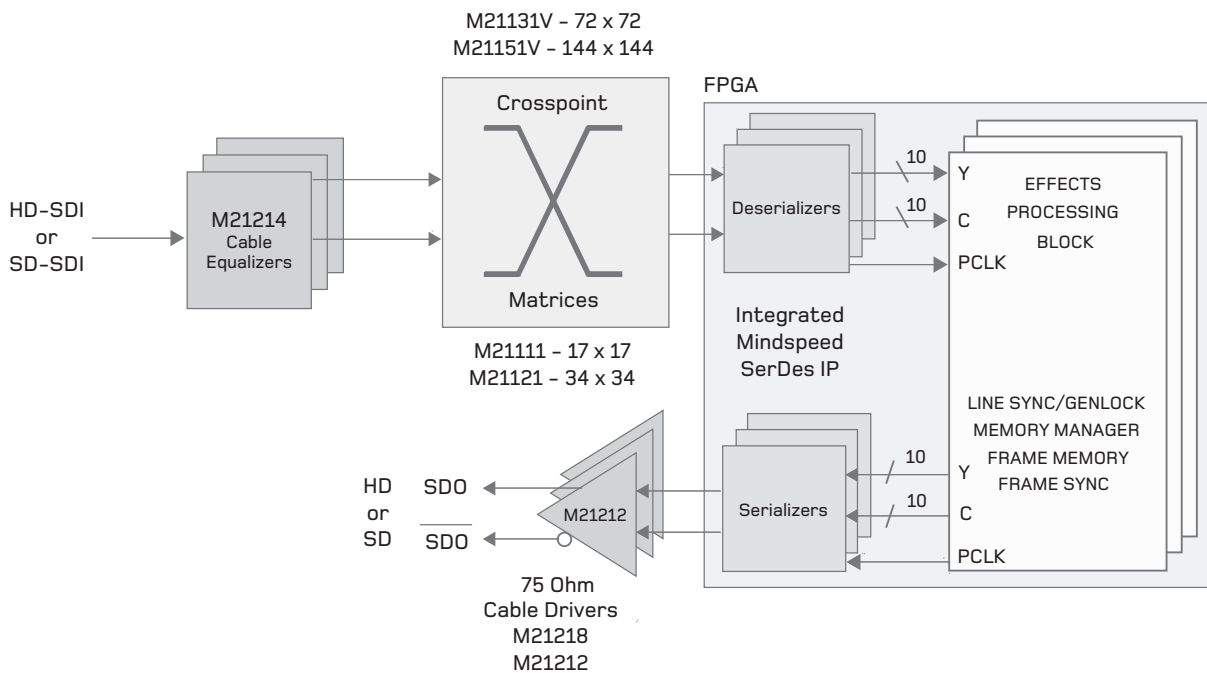
DC restoration to compensate for pathological signal DC content, cable length indication for data rates to 360 Mbps, and a voltage programmable mute threshold are included for full compatibility with the GS1524 multi-rate SDI adaptive cable equalizer.

Mindspeed's innovative circuit architecture enables next generation systems with flexible power supply operation of 2.5V to 3.3V with a 35% power reduction at 2.5V supply rails and a wider operating temperature range (-10°C to +85°C) for outdoor applications such as camcorders and edit decks.





HD/SD Serial Routing Switcher Application Diagram



HD/SD Production & Master Control Switcher Application

Product Features

Applications

- Small to large serial routing switchers
- Production and master control switchers
- Non linear editors
- Processing and terminating equipment
- Broadcast video to SONET/SDH, Fibre Channel, or Gigabit Ethernet transport line card/modules for DWDM or CWDM applications
- Distribution amplifiers,
- Backplane reach extension

Additional Features

- Fully SMPTE 259, SMPTE 292, and SMPTE 344 compliant
- Equalizer BYPASS operation

Ordering Information

- M21214-15P: HD/SD video cable equalizer
[143 Mbps – 1600 Mbps]
- M21214G-15P: HD/SD video cable equalizer
[143 Mbps – 1600 Mbps]
[RoHS compliant package]
- Package: 16 pin narrow SOIC
16 pin narrow SOIC
[RoHS compliant package]

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