

## M21315 HD/SD Auto-Rate Reclocker

### > Product Overview

#### HD/SD MLF Compatible Auto-rate Reclocker w/ 4:1 Selector

The M21315 is a high-speed, low-power reclocker designed to remove both random and inter-symbol interference (ISI) jitter from the input data for SMPTE and DVB-ASI serial digital video applications. Mindspeed's high performance reclocker offers significant power reduction compared to legacy reclocking solutions.

The M21315 is based on a custom and proprietary reclocker core. The high-performance reclocker design results in high-jitter tolerance, especially in the presence of duty-cycle-distortion (DCD) that typically arises with AC coupling and video pathological test patterns. The M21315 also offers improved auto rate detect acquisition times over legacy reclocker solutions.

The M21315 supports SMPTE HD/SD-SDI data rates from 143 Mbps to 1485 Mbps. The M21315 is functionally and pin compatible with the GS1575. The M21315 occupies the same footprint as the GS9075 and also consumes less power than the GS1575 or GS9075.

Features	Benefits
> SMPTE 259M, 292M, 344M compliant, DVB-ASI (270 Mbps)	Robust standard compliant reclocker
> Auto and manual modes for rate indication and selection (ARD)	Ease of use and flexibility
> 4:1 Input MUX	Switch expansion and dense router on a chip
> 0.4UI input jitter tolerance against pathological pattern	Provides additional jitter margin
> Loss of Lock (LOL) indicator	Diagnostics for status
> Input buffers are compatible with PCML voltage levels	Enables ability for direct coupling
> Differential I/O with on chip termination resistors	Low cost integrated solutions
> Selectable auto MUTE or BYPASS with manual BYPASS option	Support of non video data rates
> Pin to pin compatible with GS1575 (without serial clock out and loss of signal indicator)	Low cost alternative
> Low typical power dissipation (430 mW @ 3.3V)	Lower power and thermal management costs
> 3.3V power supply operation	Industry standard supply
> Extended temperature operation: -10°C to +85°C	Provides higher tolerance and additional design margin



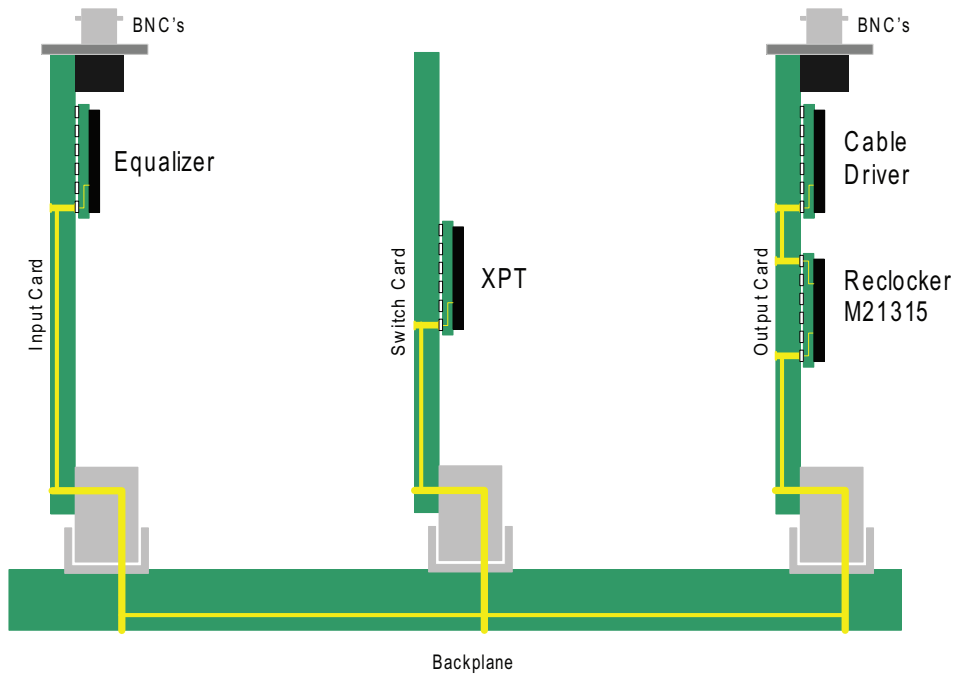


Fig. 1 - Routing Switcher Application Diagram

## Product Highlights

### Applications

- Serial Routing Switchers
- Production/Master Control Switchers
- Distribution Amplifiers
- Broadcast video applications
- SMPTE Coaxial Cable Interface

### Standards Compliance

- SMPTE 424M, 259M, 292M, 344M
- Supports DVB-ASI (270 Mbps)

### Package (RoHS Compliant)

- 9x9 mm, 16-pin MLF

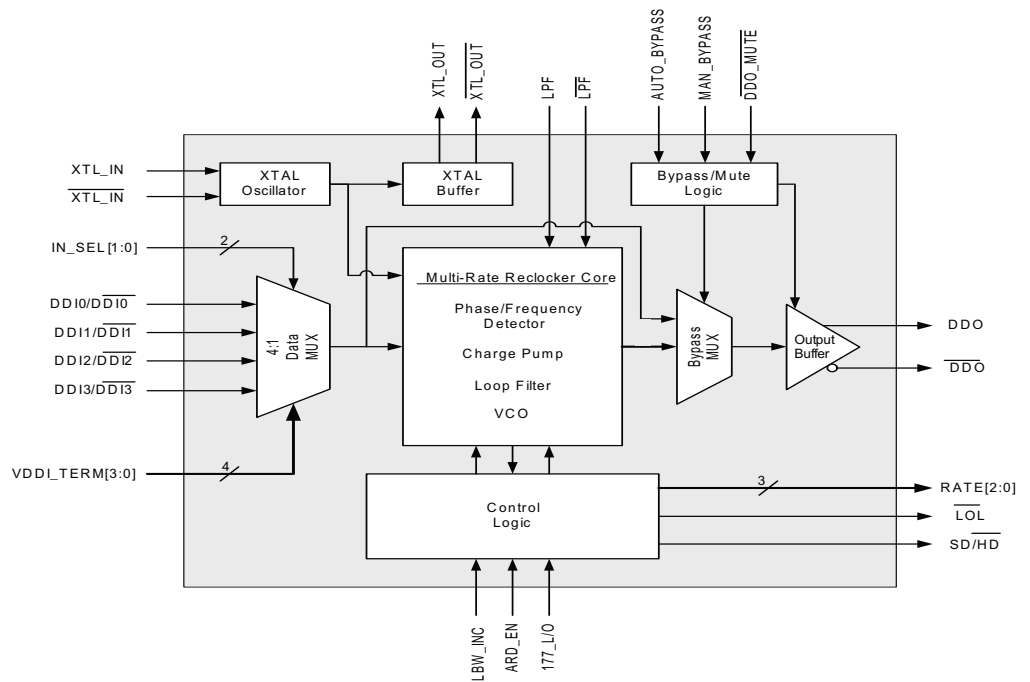


Fig. 2 - Block Diagram (M21315 Cable Driver)

For more product information, please visit [www.mindspeed.com](http://www.mindspeed.com)

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 M21315G-11