FEATURES

- **SMPTE 292M and SMPTE 259M compliant**
- **Automatic Cable Equalization**
- **Multi-Standard Operation from 143Mb/s to 1.485Gb/s**
- **Supports DVB-ASI at 270Mb/s**
- **Manual bypass (useful for low data rates with slow rise/fall times)**
- **Performance optimized for 270Mb/s and 1.485Gb/s**
- **Typical maximum equalized length of Belden 1694A cable: 140m at 1.485Gb/s, 300m at 270Mb/s**
- **50 ohm differential output (with internal 50 ohm pull-ups)**
- **Cable Length Indicator**
- **Output Mute based on max cable length adjust or manual override**
- **Seamless interface to other HD-LINX II family products**
- **Single 3.3V power supply operation**
- **Space-saving 20-lead BCC++ and 16 lead SOIC packages**
- **Operating temperature range: 0°C to +70°C**

APPLICATIONS

SMPTE 292M and SMPTE 259M Coaxial Cable Serial Digital Interfaces

CIRCUIT DESCRIPTION

The GS1524 is a second-generation high-speed bipolar integrated circuit designed to equalize and restore signals received over 75-ohm co-axial cable at up to 1.5Gb/s. The GS1524 is designed to support both SMPTE 292M and SMPTE 259M, and is optimized for performance at 270Mb/s and 1.5Gb/s.
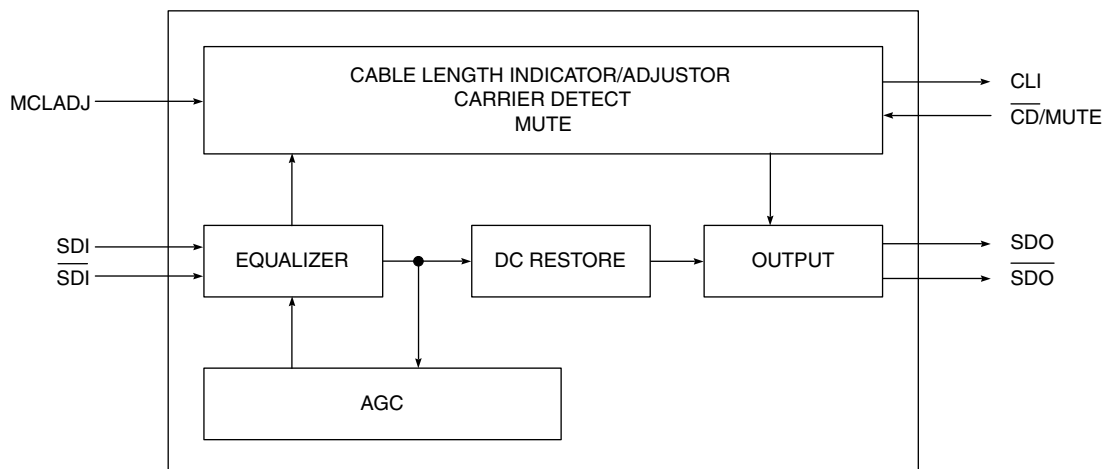
The GS1524 features DC restoration to compensate for the DC content of SMPTE pathological test patterns, and incorporates a Cable Length Indicator that provides a linear indication of the amount of cable being equalized.

A voltage programmable mute threshold (MCLADJ) is included to allow muting of the GS1524 output when a selected cable length is reached. This feature allows the GS1524 to distinguish between low amplitude HD SDI signals and noise at the input of the device. The MUTE/$\overline{CD}$ pin provides an indication of the GS1524 mute status in addition to functioning as a mute control input. The output of the GS1524 may be forced to an active or a mute condition by applying a voltage to the MUTE/$\overline{CD}$ pin.

The GS1524 has one differential LVPECL serial output which may be seamlessly interfaced to the serial inputs of other HD-LINX II family devices.

ORDERING INFORMATION

PART NUMBER	PACKAGE	TEMPERATURE
GS1524-CKD	16 pin SOIC	0°C to 70°C
GS1524-CCF	20 pin BCC++	0°C to 70°C

FUNCTIONAL BLOCK DIAGRAM