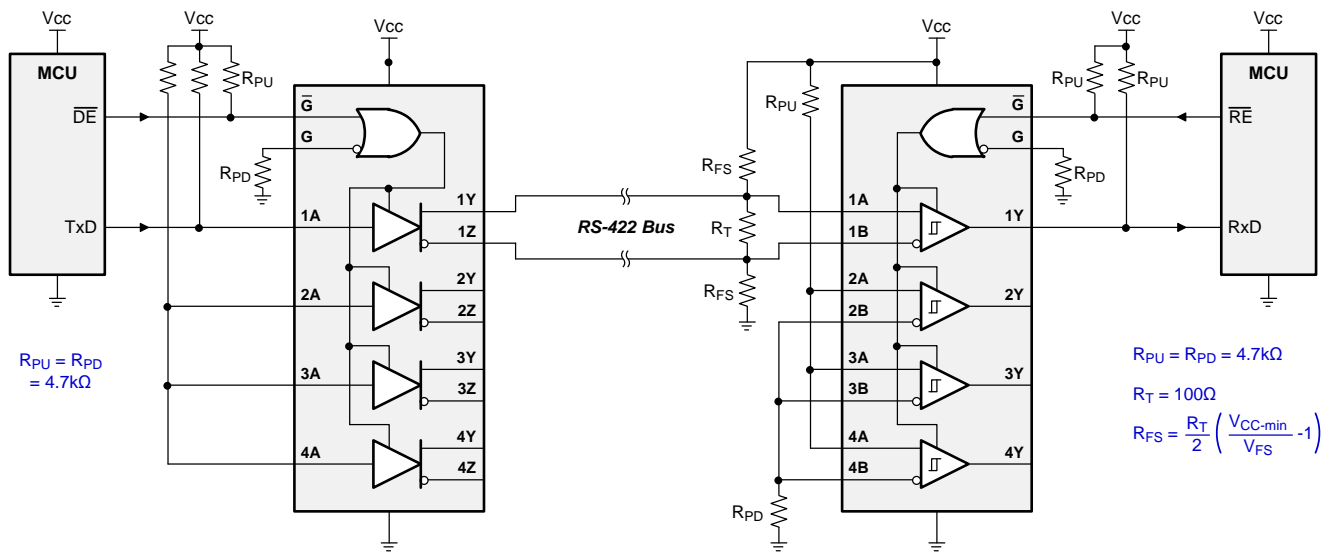


AM26LS31/32: Connecting unused Inputs in noisy Environment



Driver AM26LS31

For drivers such as AM26LS31 connect unused signal inputs to Vcc via 4.7k resistors. These resistors provide input current limiting of when operating in noisy environment. Often unexpected noise transients can rise to high voltage levels that can be fatal to unprotected inputs.

Depending on the polarity of the active MCU outputs (active-low or active-high) connect the driver enable inputs accordingly. Here it is assumed that the MCU outputs are active-low.

In order to keep the driver high-impedance during power-up (when the MCU I/Os are commonly high-impedance too), connect the G-input to Ground via a 4.7k pull-down resistor and the /G-input to Vcc via a 4.7k pull-up resistor.

Unused driver outputs can be left open.

Receiver AM26LS32

For receivers such as AM26LS32 connect unused non-inverting signal inputs to Vcc via 4.7k pull-up resistors, and connect unused inverting signal inputs to Ground via 4.7k pull-down resistors. Connecting the unused bus inputs to different supply rails is necessary to provide the receiver inputs with a defined differential input voltage.

DO NOT connect an input pair to the same rail as this reduces the differential input to zero, thus providing an input below the receiver's input sensitivity of $\pm 200mV$, which can cause toggling of the receiver outputs followed by an increase in supply current.

Depending on the polarity of the active MCU outputs (active-low or active-high) connect the driver enable inputs accordingly. Here it is assumed that the MCU outputs are active-low.

In order to keep a used receiver output at a defined voltage level (preferably high) during power-up, connect the G-input to Ground via a 4.7k pull-down resistor and the /G-input to Vcc via a 4.7k pull-up resistor. This disables the receiver during power-up. Also connect the output of the used receiver via a 4.7k pull-up resistor to Vcc.

Unused receiver outputs can be left open.

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