

Using the SF1000 with Shared Serial Ports

Introduction

Rabbit microprocessor serial ports may be shared among several serial devices. The chip select is used to turn the serial devices on/off so that only one device is actually accessing the shared serial port at a given instant.

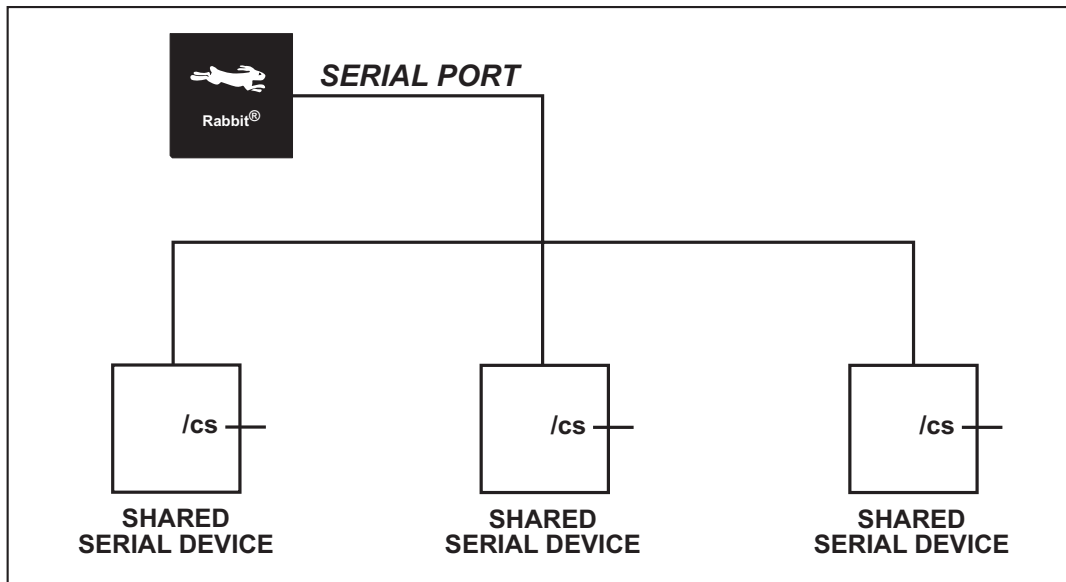


Figure 1. Sharing Rabbit Microprocessor Serial Ports

A fault has been discovered with the SF1000 series Serial Flash Expansion Boards whereby they do not respond to the on/off activation by the chip select and, if sharing a serial port, do not allow other devices sharing that serial port to access the serial port.

This fault exists for all SF1000 series boards that show a part number of 20-175-0189 or earlier on the printed circuit board; these boards were in production up to 2009. If you have these printed circuit boards, but you are not using them in a design where they share a serial port with another device, you may continue to use your SF1000 problem-free without any modifications.

If you choose to exchange your pre-2009 SF1000 series board for one that will share a serial port correctly, please contact our Customer Service Department by calling 1.530.757.8400 or by sending an email to rabbit.rma@rabbit.com to arrange to exchange it. Otherwise you may perform the modification described below.

How to Modify Pre-2009 SF1000 to Share Serial Ports

A 10 k Ω termination resistor, R8, was added between the gate and the source of the *n*-channel FET Q1 to turn Q1 off and release the shared serial port to other devices when the SF1000 is not being accessed. Figure 2 shows the addition of R8 relative to Q1.

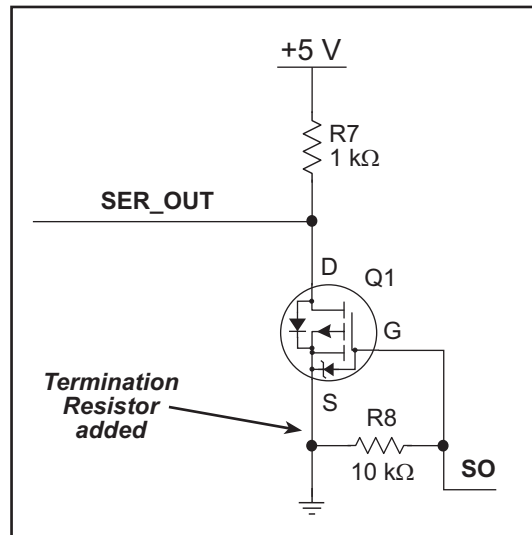


Figure 2. Addition of R8 Termination Resistor to SF1000 Circuit

You may add your own SMT 0603 10 k Ω termination resistor across the gate and source of Q1 as shown in Figure 3.

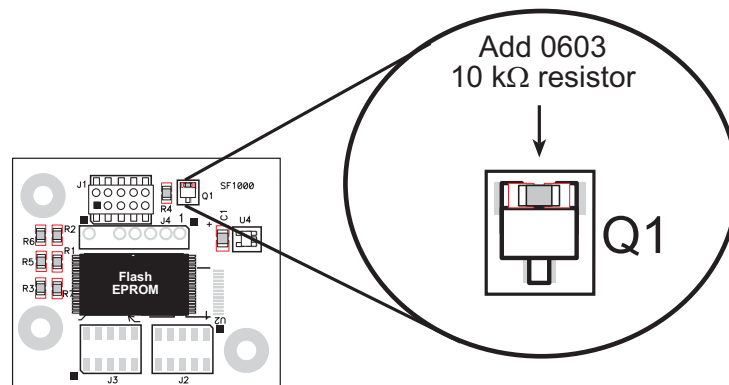


Figure 3. Add 10 k Ω Termination Resistor

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