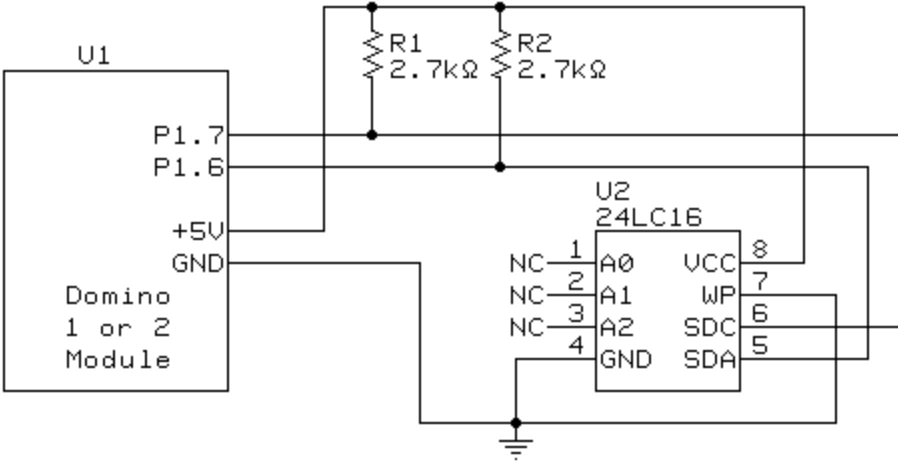
	<p>Application Note</p>
	<p>Products: Domino 1 and 2</p>
<p>Using a 24LC16 I²C EEPROM with the Domino</p>	<p>Date: 4/12/99</p>
<p>Introduction: This application note demonstrates how to interface an I²C EEPROM to the Domino 1 or 2.</p>	
<p>Background: While the on-board EEPROM memory of the Domino can be used to store data, it has a limited erase/write-cycle lifetime. To eliminate the worry over whether you're wearing out the internal device or not, simply add one or more external devices. Currently, the largest device that will work with the built-in utilities is the 16k (256 x 8 x 8 blocks) Microchip 24LC16. One can add several more of these devices but additional hardware and I/O lines are needed as well as a small bit of software to address the chips.</p> 	
<p>How it works: I²C addressing can be a little confusing so we've included this table to make things a little easier. The 24LC16 has three address lines (A0-A2) which are not used. Normally these 3 pins allow the user to set the address of the device. A specific address is set by pulling the lines high or low as shown in the table. I²C EEPROMS start with a base address of A0h. To this you add a device address. However, the 24LC16 uses the device address (controlled via software) to access the 8 blocks of 256 bytes.</p>	

	A2	A1	A0
A0H	GND	GND	GND
A2H	GND	GND	+5V
A4H	GND	+5V	GND
A6H	GND	+5V	+5V
A8H	+5V	GND	GND
AAH	+5V	GND	+5V
ACH	+5V	+5V	GND
AEH	+5V	+5V	+5V

The Read/Write modes of the 24LC16 (Byte Write, Byte Read) are supported by the Domino utilities. The skeleton code below shows how these are accomplished.

Base = the base address of the EEPROM (A0h)

Block = one of the 8 (0-7), 256 byte blocks in the device

Addr = the address within the block (0-255)

Data = the data you are writing to the device

Byte Write:

PUSH (Base + Block) * 100h + Addr, Data

CALL 0F128h

POP C

Byte Read:

PUSH (Base + Block) * 100h + Addr

CALL 0F12Ch

POP C : REM C contains the data read from the EEPROM