

Keywords: LED display driver, alphanumeric display, LEDs, display drivers, scrolling message

## APPLICATION NOTE 2791

# Using the MAX6955 LED Display Driver with a PIC Microcontroller to Scroll Messages

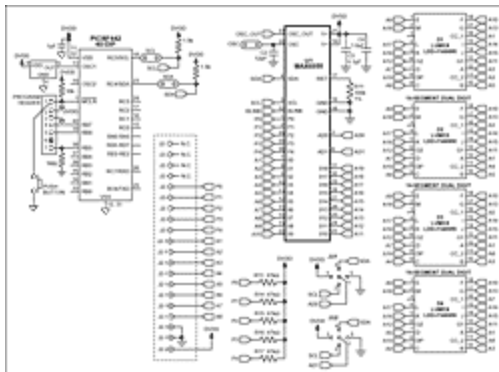
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*Abstract: A circuit and program listing for using the MAX6955 LED display driver with a PIC microcontroller and 14-segment displays.*

The MAX6955 is an LED display driver with an I<sup>2</sup>C™-compatible, serial interface capable of supporting Fast Mode speeds up to 400kHz. It is capable of driving sixteen 7-segment, eight 14-segment, eight 16-segment or 128 separate LEDs. This application note describes a 14-segment application circuit and an example program that continuously scrolls the message:

"THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG".

The program, shown in Listing 1, can be modified to scroll alphanumeric messages with a length of 8 to 126 characters. The application circuit shown in **Figure 1** consists of the MAX6955, the PIC18F442 and four super bright red 14-segment dual character displays from Lumex (Part number LDD-F5406R1).



[For Larger Image](#)

Figure 1. MAX6955 application schematic.

The example assembly program continuously scrolls the alphanumeric characters located in the lookup table of the program. The alphanumeric message length is adjustable from 8 to 126 characters long including all blank spaces (0x20). It is recommended to add 7 blank spaces at the beginning and end of the message to obtain the best scrolling effect. In order to customize the message, first modify the hexadecimal representation of the character to scroll in the lookup table of the program. Then modify the CharCount variable value to the number of alphanumeric characters in the selected message including



HWI2C\_stop

Performs an I<sup>2</sup>C compatible stop condition.

#### Related Parts

[MAX6955](#)

2-Wire Interfaced, 2.7V to 5.5V LED Display Driver with I/O Expander and Key Scan

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