

OP7100 and OP7200 LCD Controller Chips — Library Changes to Support New Chips

Introduction

OP7100 units sold after June, 2006, and OP7200 units sold after January, 2006, have a new LCD controller chip because the previously used LCD controller chip is no longer available. The new LCD controller chip has 32K of internal SRAM.

Figure 1 shows the area of the OP7100 that changed to accommodate the new LCD controller chip.

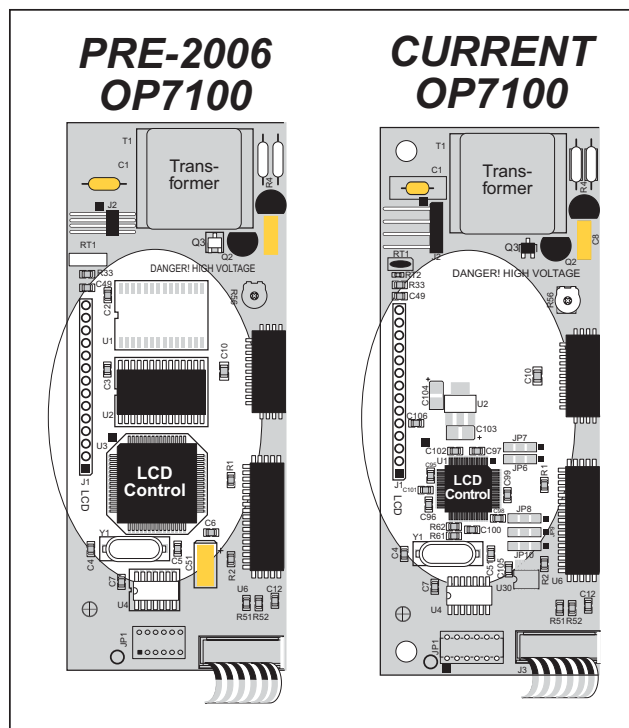


Figure 1. How to Identify Pre-2006 OP7100 Boards

Figure 2 shows the area of the OP7200 that changed to accommodate the new LCD controller chip.

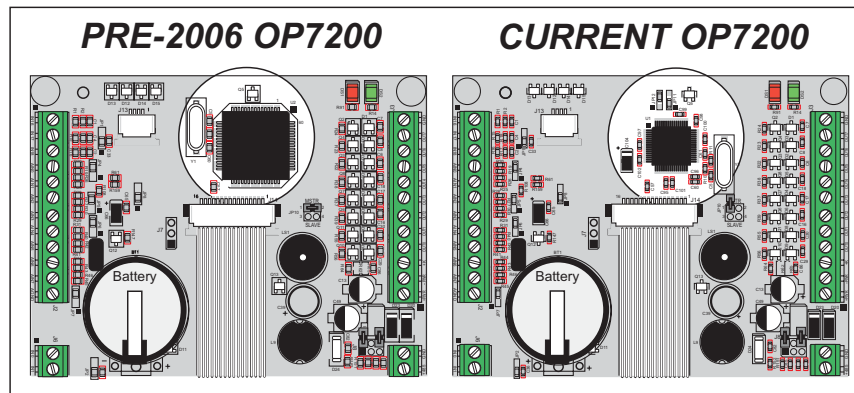


Figure 2. How to Identify Pre-2006 OP7200 Boards

Library Modifications

The new LCD controller is not 100% code-compatible with the old chip, and therefore changes were made to the LCD drivers.

OP7100

If you are using a program developed for the now-obsolete LCD controller chip, you will need to replace either the existing Dynamic C **OP71L.LIB**, **OP71P.LIB**, and **OP71HW.LIB** libraries or the **LQVGA.LIB** and **PQVGA.LIB** libraries in your Dynamic C installation — you only have to replace one of these two sets of libraries, depending on which set you used when you created your original application. You may, of course, replace all five libraries, which will allow you to access the other updated set at a later date.

The new libraries are available for download from Rabbit's Web site at www.rabbit.com/support/downloads/downloads_prod.shtml, and have been tested for compatibility with Dynamic C version 6.30.

Unzip the contents of the compressed file you downloaded into a non-Dynamic C folder to see the updated library files. If you customized any of these libraries, you should first make backup copies of the libraries you customized. Then customize the new libraries, if needed. Now copy and paste the new libraries to replace the old versions in the **LIB** folder in your Dynamic C installation. You will have to recompile your program once you have replaced the libraries.

The changes to the libraries will improve the OP7100 screen update time for OP7100 units using the new LCD controller chip. Otherwise, the form, fit, and function of the OP7100 are not affected by the changes.

For applications that are operating in the landscape mode using the new **OP71L.LIB** library, there is a macro that can be defined to enhance the LCD performance for older OP7100s using the original LCD controller chip. Add the following macro at the start of your program before the graphic libraries are **#used**. Using the macro may increase your interrupt latency.

```
#define LCD_ENHANCED_MODE
```

See the *OP7100 User's Manual* for more information.

OP7200

The updated drivers for the OP7200 are included in Dynamic C v. 9.40 and later, and are backward-compatible for use with the now-obsolete LCD controller chip.

If you are using a program developed with an earlier version of Dynamic C, you will need to replace the existing Dynamic C **SED1335F.LIB** library in your Dynamic C installation in the **LIB\DISPLAYS\GRAPHIC\320x240** folder. Once you have the new **SED1335F.LIB** library, you will have to recompile your program.

The new **SED1335F.LIB** library is available for download from our Web site at www.rabbit.com/support/downloads/downloads_prod.shtml, and has been tested for compatibility with Dynamic C versions 7.33 and later.

The changes to the **SED1335F.LIB** library will improve the OP7200 screen update time by a factor of four. Otherwise, the form, fit, and function of the OP7200 are not affected by the changes.

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