

The μ Vision/51 for Windows version 1.13 was used to compile the VT-CM6700 motherboard firmware. The compiler used by μ Vision/51 is the Keil 8051 C compiler V5.0 (DLL 1.13). The VTEngG file with no extension in this directory is the omf51 file used by the NOHAU emulator for debugging and is an output of the linker. Under the listing tab of the C51 compiler options generate .lst file, include symbols, include assembly code, and include conditional code are selected. Under the object tab, include debug information, include extended debug information (necessary for use with the NOHAU emulator), and enable ANSI integer promotion rules. Under the optimization tab, level 5 simple loop optimization level, favor small code emphasis, and 3 bits to round for float compare. Under the memory model tab, large 64 K functions code size limits, large variables in XDATA memory model, and standard 8051 number of data pointers. Nothing is selected under the miscellaneous tab. Several options are selected under the BL51 code banking linker options. Under the listing tab, include memory map, include local symbols, include public symbols, include line numbers are selected. Page width 78, and page length 68 are used also under the listing tab. Under the linking tab, include local symbols, include public symbols, include line numbers, and enable variable overlaying are selected. Under the size/location tab, ram size 256 is used (this is necessary for use of the 8052's extra 128 bytes of internal ram), and XDATA address hex: 8001 is used. The CM6700 RAM begins at 8000 and runs to 8FFF hex, but 8001 is used because 8000 is reserved for reading and writing the real time clock.

We recently discovered that in order to compile the code and make the same hex file from different compiles, it is necessary to add the .c files in the same order. This code was compiled with the .c files in this order:

- Access.c
- Alarms.c
- Chars.c
- Clock.c
- Coaxio.c
- Kbduart.c
- Keyboard.c
- Macros.c
- Main.c
- Matrix.c
- Message.c
- Monitors.c
- Newmenu.c
- Ports.c
- Ptzuart.c
- Relay.c
- Sequence.c

Included in the documents is the project file VER305.prj. This file contains all the compiler and linker options for the project as described above. You may have to change the environment path specs to use it on your machine. In the VER305.prj you will notice that MM.h is included. It is there only for the convenience of having it open with the other files when using the open all button in the edit project window.