C511/C513 Starter Kit Information

The C511/C513 Starter Kit contains an evaluation board, the KitCON-513 and a complete set of development tools, stored on the Starter Kit CD-ROM. The KitCON-513 is featured with 32 kByte RAM memory and 32 kByte EPROM memory.

You can develop applications with the evaluation versions of the development tools. Afterwards you can download your application into the evaluation board and debug it with powerful debugger programs.

Program Development
The Starter Kit contains evaluation packages of Tasking C500 tool chain, Keil C500 Professional Developers Kit. For details on the restrictions refer to the dedicated documentation, included in the directories.

Debugging
You can download the monitor program of your favorite debugger into the RAM memory of KitCON-513. Monitor programs for Keil and Tasking debugger are already programmed in the on-board flash memory.
For details about monitor configurations refer to the dedicated information for each debugger.

2-Controller Board
The KitCON-513 evaluation board is equipped with two C513 microcontrollers.
The controller in socket U1 is the standard romless version of C513, the controller in socket U5 is the version with 12 kByte EEPROM memory on-chip.
In normal operation mode, only the controller, located in socket U1, is actrive. The controller has access to the resources on the KitCON-513 board (RAM and EPROM memory; serial interface P1).

There are two special modes which enable C513 microcontroller in socket U5:
the EEPROM programming mode and the dual controller mode.

EEPROM Programming
The KitCON-513 board can be used to program the on-chip EEPROM memory of the C513A-H microcontroller. A MS-DOS based user interface program for EEPROM programming is included on the CD-ROM.

Dual Controller Mode
The KitCON-513 evaluation board can configured to run in a special dual controller mode. Additionally to the microcontroller, located in socket U1, the second microcontroller in socket U5 is running and executing the code out of internal EEPROM memory. The controller in socket U5 has no access to the on-board resources (RAM, EPROM, serial interface). The only connection between both microcontrollers is the SSC synchronous serial interface which can be used for data exchange between both controllers.

SSC Synchronous Serial Interface / LED Display
In dual controller mode, data exchange between both C513 microcontrollers can be established via SSC channel. The LED display is also connected via a decoder to the SSC channel. All data, sent between the microcontrollers, are displayed in hex-format on the display.

Memory Models
The KitCON-513 evaluation board is equipped with 32 kByte RAM memory which can be organized as XDATA memory or von-Neumann memory (see KitCON-513 hardware manual). Memory model selection is done by software modifications.. Debugging of your application, using a debugger program, requires von-Neumann RAM memory. The according memory model, shown in figure 9 of KitCON-504 hardware manual, is selected automatically, if you start Keil or Tasking debugger programs.

KitCON-Connector
The KitCON-513 evaluation board is equipped with 152-pin connector, which you can use for adaptation of your own application hardware to the board. Siemens will also offer additional adapter boards which can be plugged into this adapter.

Enhanced Hooks Emulation Concept
All standard derivatives of the Siemens C500 family of 8-bit microcontrollers are featured with the new Enhanced Hooks emulation technology to facilitate full featured emulators, based on standard microcontroller devices.

Socket

New series of KitCON-504 are equipped with a Yamaichi production socket of the IC198 series. The board is equipped with C504 microcontroller. It is also compatible with C501, C505C and C513 derivatives. Opening the socket and changing of the controller can be done with a special Extraction Tool , also available from Yamaichi.

Emulation Adapter

The KitCON-504 board is already prepared for connecting emulators easily. We included Hitex's ICE/connect-51 connector.

The Hitex emulator adapter can be used for adapting standard chip based emulators. The connector is not soldered on the board, but already taken into consideration in the board layout. You can solder the connector on the board, if there is a need for emulation or adaptation of measuring equipment. You should take this emulator adapter into account if you have to design new hardware.

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