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Renesas Electronics Corporation

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Microcontroller

Tool Letter

K_Line - Play it-2

8-/32-bit Demonstration Kit

Description

K_Line – Play it-2 is a demonstration kit for NEC's K_Line products of the 78K0 and V850ES microcontroller family. It supports onboard flash programming and real time execution of application programs up to 4 Kbytes of program code for the 78K0 CPU module and up to 16 Kbytes of program code for the V850 CPU module. The board is prepared to be connected to user hardware parts such as digital I/O or analogue signals.

Devices

The provided devices are
78K0/KF1+ (UPD78F0148HDGC-8BT) and
V850ES/KG1+ (UPD70F3311GC-8EA-A)

Minimum system requirements

Host PC

A PC supporting Windows 98SE, Windows ME, Windows 2000 or Windows XP is required for the IAR Systems Embedded Workbench demo-version and the FPL flash programming software.

Pentium 166 MHz, 128 Mbytes RAM, 256-color display (1024 * 768), mouse, CD-ROM drive and 200 Mbytes free hard disk space are required to install the tool packages.

Above listed requirements are valid for the IAR Systems Embedded Workbench and the FPL flash programming software.

Host interface

USB interface that enables communication based on USB (Ver1.1 or later).

Demonstration Kit



Main Features

- Easy to use device demonstration capabilities
K_Line - Play it!-2 contains elements to easily demonstrate simple I/O-functions, i.e. push buttons, 12x2 character LC display, LED output, AD reference voltage, I/O lines, UART serial interface.
- Power supply via USB interface
K_Line - Play it!-2 is powered via USB interface, no separate power supply is needed.
- Character LCD module
K_Line - Play it!-2 provides a 12x2 character LC display, allowing the implementation of human / machine interface, comfortable I/O functions, output of measurement values, output of status information etc.
- FPL, FLASH programming software
A windows based FLASH programming software allows to select and download application programs to the K_Line - Play it!-2 board for evaluation purposes.
- Analogue to digital signal conversion is supported
- Various I/O signals available, such as
 - All I/O ports prepared to be connected to user hardware
 - Timer I/O signals
 - Two or three wire serial I/O
 - UART interface
 - LIN bus support, via TJA 1020 transceiver
 - 8 analogue input lines
 - Temperature sensor KTY13-5
 - 4 I/O ports connected to LED
 - 2 push buttons prepared for external interrupt generation
- The IAR Embedded Workbench for 78K0/78K0S and the IAR C-SPY debugger/simulator are included. These packages are restricted in such that maximum program code size is limited to 4 Kbytes of program code.
- The IAR Embedded Workbench for V850 and the IAR C-SPY debugger/simulator are included. These packages are restricted in such that maximum program code size is limited to 16 Kbytes of program code.
- Full documentation is included for the 78K0/KF1+, V850ES/KG1+, IAR Systems Embedded Workbenches, IAR Systems C-SPY debugger/simulator and the FPL flash programming software.

Order Code

K_LINE-PLAYIT-2

For further information on NEC's microcontrollers visit our European website at www.ee.nec.de/micro

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