

Software Evaluation Kit (SEK) Version 1.5
Release Notes
September 22, 2003

SEK Contents:

For a complete list of the SEK contents, please refer to the SEK User's Guide supplied in the kit and CD.

1. National Semiconductor CD with documentation and software for CP3000.
2. National Semiconductor CompactRISC tool chain.
3. iSYSTEM™ debugger and winIDEA™ integrated development environment.
4. ISP programming tool.
5. Demonstration version of IAR™ C tool chain.
6. CP3-DB-xx1x development board with CP3UB17 connectivity processor and jumpers set for USB.

Installation Instructions:

For a complete list of the SEK installation instructions, please refer to the SEK User's Guide supplied in the kit and CD.

1. Refer to SEK User's Guide.
2. Install iSYSTEM™ tool chain
3. Install National Semiconductor CompactRISC tool chain.
4. Install ISP programming tool.
5. Install National Semiconductor driver and demonstration software.
6. Set-up CP3-DB-xx1x development board.
7. Refer to SEK User's Guide to exercise the demonstration projects.

****Note: Before running any demonstrations on a Windows™ PC, please insure that you install the latest service packs from Microsoft™.*

Tool Requirements:

iSYSTEM™ tool chain must be winIDEA™ version 9.4 build 49 or higher.

National Semiconductor CompactRISC tool chain must be version 3.1 revision 7 or higher.

ISP programming tool must be CRISP version 1.4.3 or higher

IAR™ tool chain must be EWCR16C version 1.13A or higher. (Optional. Evaluation CD included)

New Hardware Features:

For this Initial customer release, the features described in supplied documentation.

New Software Features:

For this Initial customer release, the features described in supplied documentation.

Known Problems:

1. The CPU socket on the CP3-DB-xx1x has by-pass capacitors located close to the sides of the socket. They can be damaged if care is not taken when removing the socket.
2. "PC104A" is on the CP3-DB-xx1x silkscreen near the peripheral header. This is not a PC104 connection.
3. When using National's CompactRISC tools and iSYSTEM's winIDEA, debug information may not be displayed correctly in the debugger windows if files are not explicitly included in the winIDEA's project file list.
4. National's CompactRISC tools debug file format, coff, is not displayed in the dropdown menu for file extensions. The files are selected by explicitly searching for the coff extension.
5. Compiling utils/sbrk.c with National's CompactRISC tools generates a compiler warning. This currently cannot be fixed due to the demands of the National Tools Library. This file is only used by an application directly when heap management in the National Tools is needed in a multi-task/multi-stack environment.
6. USART driver buffer size is limited to individual maximum transfer of 256 bytes in either direction. In usart.c:

```
#define TX_BUF_SIZE 256  
#define RX_BUF_SIZE 256
```
7. ACCESS bus driver buffer size is limited to individual maximum transfers to 64 bytes in either direction. In acbs.c:

```
#define TX_BUF_SIZE 64  
#define RX_BUF_SIZE 64
```
8. CAN driver for the CP3CN17 on-chip peripheral is included. No demonstration program is provided.
9. The CAN bus driver fixes bit sampling point half way along bit period. Changing the sample point is dependant on the system frequency and various clock dividers. Please refer to the CP3CN17 datasheet for more details.
10. USB driver - ISOChronous mode not fully supported, transfers do work, but the driver does not handle synchronization, the hooks are available for applications to achieve required timing. National is working to support these features in an example for future releases.
11. CP3-DB-xx1x uses a Motorola™ MC145483 codec for the audio demonstration. When using the internal CVSD audio codec module, the CP3000 generates an interface clock that is outside Motorola's MC145483 specification. The demonstration does not use CVSD conversion and therefore not affected. National does not recommend this codec for CVSD applications.



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Support:

National Semiconductor has support contacts worldwide and a support site on the web,
http://www.national.com/support/. Please follow the instructions on this web site and SEK to
register and receive technical support.

Revision History:

Rev1.5

-Initial customer release

Rev1.4 and lower

-Internal releases for testing