

APPENDIX A. KIT-V850E/MA3-TP INTERNAL COMMANDS

This appendix describes the KIT-V850E/MA3-TP internal commands. These commands can be used as through commands in the debugger. For an explanation of using through commands, refer to the manual provided with the debugger.

With PARTNER/Win

>& << Enter through command mode.
 >#ENV << Enter an internal command.
 >& << Exit from through command mode.

With GHS-Multi

The through commands can be directly input in the target window after RTESERV has been connected.

Commands

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Note These commands can be used only if the debugger does not provide equivalent functions. If these commands are issued when the debugger provides equivalent functions, a contention may occur between KIT-V850E/MA3-TP and the debugger, causing either device to malfunction.

Command syntax

The basic syntax for the KIT-V850E/MA3-TP internal commands is described below:

command-name parameter(s)

- * In parameter syntax, a parameter enclosed in brackets ([]) is omissible. A horizontal line (|) indicates that one of the parameters delimited by it must be selected.

A command name must be an alphabetic character string, and be separated from its parameter(s) by a space or tab. A parameter must be an alphabetic character string or hexadecimal number, and be delimited by a space or tab. (A hexadecimal number cannot contain operators.)

abp, abp1, and abp2 commands

[Format]

```

abp [or|and|seq]
abp{1|2} [ADDR [AMASK]] [data DATA [DMASK]] [asid ASID|noasid] [aeq|aneq] [deq|dneq]
      [exec|read|write|accs] [byte|hword|word|nosize]
abp{1|2} /del

```

[Parameters]

abp [or and seq]:	Specifies a condition for combination of abp1 and abp2.
or:	Break occurs if either abp1 or abp2 occurs.
and:	Break occurs if both abp1 and abp2 occur at the same time. A mask condition is used.
seq:	Break occurs if abp2 occurs after abp1.
abp{1 2}:	Input before the condition of abp1 or abp2 is specified.
ADDR [AMASK]:	Specifies an address condition.
ADDR:	Specifies addresses in hexadecimal number.
AMASK:	Specifies the mask data of an address in hexadecimal. Bits that are 1 will not be compared.
data DATA [DMASK]:	Specifies a data condition.
DATA:	Specifies data in hexadecimal.
DMASK:	Specifies the mask data of data in hexadecimal. Bits that are 1 will not be compared.
asid ASID noasid:	For future expansion. Use noasid.
aeq aneq:	Specifies an address comparison condition.
aeq:	Compares address for equality.
aneq:	Compares address for non-equality.
deq dneq:	Specifies a data comparison condition.
deq:	Compares data for equality.
dneq:	Compares data for non-equality.
exec read write accs:	Specifies a cycle condition.
exec:	Specifies an executable address. A data condition is ignored.
read:	Specifies a read cycle.
write:	Specifies a write cycle.
accs:	Specifies a read or write cycle.
byte hword word nosize:	Specifies access size.
byte:	Specifies byte access (8 bits).
hword:	Specifies half-word access (16 bits).
word:	Specifies word access (32 bits).
nosize:	Specifies invalidity.
abp{1 2} /del:	Clears a condition.
/del:	Specifies deletion of a condition.

[Function]

These commands set or delete access breakpoints.
Up to two access breakpoints can be set.
They can specify execution addresses.

[Examples]

abp or

abp1 or abp2 is specified.

abp1 1000 aeq exec

A breakpoint for execution of address 1000h is set.

abp2 1000 data 5555 0 aeq deq read hword

Break occurs when 5555h is read in hword from address 1000h.

abp1 /del

The condition set by abp1 is deleted.

env and ememstat commands**[Format]**

```
env [!]auto [!]verify [jtag{25|12|5|2|1|500|250|100}
    [!]nmi [!]intwdt [!]resetz [!]hldrqz [!]waitz]
```

[Parameters]

[!]auto: If a breakpoint is set during execution, the breakpoint causes a temporary break. Choose [auto] to automatically perform the subsequent execution. Choose [!auto] to suppress it.

[!]verify: Specifies whether the verification after writing memory is set. Enter ! if it is not to be set.

Remark The CPU also accesses an area that emulates ROM (jread or equivalent). Therefore, this command is also useful for testing the area during downloading. Note, however, that the processing speed slows down.

[!]nmi: Specifies whether the NMI pin is to be masked. Enter ! if it is not to be masked.

[!]intwdt: Specifies whether INTWDT (NMI interrupt from the watchdog) is to be masked. Enter ! if it is not to be masked.

[!]resetz: Specifies whether the RESET- pin is to be masked. Enter ! if it is not to be masked.

[!]hldrqz: Specifies whether the HLDQR pin is to be masked. Enter ! if it is not to be masked.

[!]waitz: Specifies whether the WAIT- pin is to be masked. Enter ! if it is not to be masked.

jtag{25|12|5|2|1|500|250|100}:

Specifies the JTAG clock for N-Wire. Each number corresponds to the following JTAG clock.

[25 MHz|12.5 MHz|5 MHz|2 MHz|1 MHz|500 kHz|250 kHz|100 kHz]

Remark Usually, use 25 MHz or 12.5 MHz. If the frequency lower than 1 MHz is specified, the debugger might be slowed down in operation speed or might malfunction. The initial value is automatically set to the highest frequency at which the machine operates.

[Function]

The env command sets the emulation environment and displays the status.

Enter only those parameters that need to be changed. Parameters may be entered in any order.

If the same parameter is entered twice, only the last entry is valid.

The ememstat command displays the mounting status of the E.MEM board when RTE-2000-TP is used.

Display examples are shown below:

With RTE-1000-TP**Probe:**

```
Unit          : RTE-1000-TP          <<Displays the main unit connected.
Rom Probe     : Extend Type         <<Displays the ROM probe type connected.
Emem Size     : 32Mbyte             <<Displays the size of emulation memory implemented.
```

CPU Settings:

```
Auto Run      = ON (auto)
JTAGCLOCK    = 25MHz (jtag25)
Verify       = verify off (!verify)
CPU Mode     = single (single)
```

Signals Mask:

NMI = NO MASK (!nmi)
 INTWDT = NO MASK (!intwdt)
 RESETZ = NO MASK (!resetz)
 HLDQRZ = NO MASK (!hldrqz)
 WAITZ = NO MASK (!waitz)

With RTE-2000-TP

Probe:

Unit : RTE-2000-TP <<Displays the main unit connected.
 Rom Probe : (use ememstat command)
 Emem Size : (use ememstat command)

CPU Settings:

Auto Run = ON (auto)
 JTAGCLOCK = 25MHz (jtag25)
 Verify = verify off (!verify)
 CPU Mode = single (single)

Signals Mask:

NMI = NO MASK (!nmi)
 INTWDT = NO MASK (!intwdt)
 RESETZ = NO MASK (!resetz)
 HLDQRZ = NO MASK (!hldrqz)
 WAITZ = NO MASK (!waitz)

ememstat

```
Board_num EMEM_Size ROM_Probe
=====
ROM1 8Mbyte Extend Type 2K
```

[Example]

env resetz !nmi verify

RESET is masked while NMI is not masked. Sets the Verify function to ON.

help command

[Format]

help [command]

[Parameter]

command: Specifies the name of the command for which you require help.
If this parameter is omitted, a list of commands is displayed.

[Function]

The help command displays a help message for a specified command.

[Example]

help map

A help message for the map command is displayed.

ifromxxx commands**[Format]**

ifromfreq [FREQ_KHZ]
 ifromwrite S_RECODE_FILENAME
 ifromverify S_RECODE_FILENAME

[Parameter]

FREQ_KHZ: Specifie the frequency of the clock inputted into CPU by KHz.
 S_RECODE_FILENAME : Specifies the file name of S-Record format.

[Function and Examples]

ifromfreq [FREQ_KHZ]

It is the command which specifies the frequency of the clock inputted into CPU per KHz.
 Please be sure to specify in advance of a writing command.

```
>ifromfreq 8000
CPU Input Frequency Setting:
CPU Input Frequency : 8.000MHz (8000)
```

ifromwrite S_RECODE_FILENAME

It is the command which specifies the object file of S record and is written in the internal flash ROM.

- * The format of those other than S record is not supported.
- * All the space of internal flash ROM are erased before writing in.
- * It ignores, when the object of addresses other than the apace in the internal flash ROM is contained.
- * This command requires 10 seconds or more by completion.
- * A display is collectively performed, when all processings are completed.

The example of an input in the case of writing \ma3\ram_test.s to the internal flash ROM.

```
>ifromwrite w:\ma3\ram_test.s
CPU Input Frequency : 8.000MHz (8000)
The following file is written to Internal FlashROM.
"w\ma3\ram_test.s"
Write Data Range : 00000100 - 00003fbc
Erase all data in Internal FlashROM (00000000 - 0007ffff).
Write Complete.
Internal Verify Complete.
Verify Complete.
```

ifromverify S_RECODE_FILENAME

It is the command which specifies the object file of S record and is compared with the internal flash ROM.

- * The format of those other than S record is not supported.
- * It ignores, when the object of addresses other than the apace in the internal flash ROM is contained.
- * This command requires 10 seconds or more by completion.
- * A display is collectively performed, when all processings are completed.

The example of an input in the case of comparing the file of \ma3\ram_test.s with the internal flash ROM.

```
>ifromverify w:\ma3\ram_test.s
```

The following file is compared with Internal FlashROM.

```
"w:\ma3\ram_test.s"
```

```
Verify Data Range : 00000100 - 00003fbc
```

```
Verify Complete.
```

[Cautions]

Notes in the case of using ID850NW

In ID850NW, backslash("\" sign) cannot use it for a command input as it is.

Please perform the input of the path of a file by the following methods.

Method 1. A path is bundled with a curly brace.

```
-> (NECTools32) 2 % ie ifromwrite {w:\ma3\ram_test.s}
```

Method 2. A backslash is piled up.

```
-> (NECTools32) 2 % ie ifromwrite w:\\ma3\\ram_test.s
```

inb, inh, and inw commands**[Format]**

inb [ADDR]

inh [ADDR]

inw [ADDR]

[Parameter]

ADDR: Specifies the address of an input port in hexadecimal.

[Function]

The inb, inh, and inw commands read the I/O space in different sizes.

The inb command accesses I/O space in bytes, inh in half words, and inw in words.

[Examples]

inb 1000

The I/O space is read in bytes (8-bit units), starting at 1000H.

inh 1000

The I/O space is read in half words (16-bit units), starting at 1000H.

inw 1000

The I/O space is read in words (32-bit units), starting at 1000H.

init command

[Format]

init

[Parameter]

None

[Function]

The init command initializes KIT-V850E/MA3-TP. All environment values are initialized.
A memory cache rejection area is not initialized.

jread command

[Format]

jread [ADDR [LENGTH]]

[Parameters]

ADDR: Specifies an address in hexadecimal.

LENGTH: Specifies the number of bytes to be read, in hexadecimal. (Max.: 100h)

[Function]

The jread command reads the ROM emulation area allocated by the ROM command, via JTAG (the CPU). (Access to the ROM emulation area by ordinary commands is performed directly on internal memory.)

[Example]

jread 100000 100

100h bytes, starting at 100000h, are read via JTAG.

nc command**[Format]**

```
nc [[ADDR [LENGTH]]
```

[Parameters]

ADDR: Specifies the start address of a memory cache rejection area.

LENGTH: Specifies the length of the memory cache rejection area in bytes.

The default value is 32 bytes. The allowable minimum value is also 32 bytes.

[Function]

To ensure quick memory access, KIT-V850E/MA3-TP provides a memory read cache of 8 blocks*32 bytes. When the same memory address is accessed more than once, the read operation is not actually performed. This cache operation conflicts with the actual operation when an I/O unit is mapped onto memory. In such a case, specify a memory cache rejection area by using the nc command. Up to eight blocks can be specified as a memory cache rejection area. The allowable minimum block size is 32 bytes. Addresses ffff000h through ffffffh and 3fff000h through 3fffffh constitute sfr areas of the internal ROM. As the default value, these areas are excluded.

[Example]

```
nc 10000 100
```

A 100-byte area, starting at 10000h, is specified as a memory cache rejection area.

```
>nc 100000 100
```

```
No Memory Cache Area
```

No.	Address	Length
1	00100000	00000100
2	0ffff000	00001000
3	03fff000	00001000

ncd command**[Format]**

ncd block-number

[Parameter]

block-number: Specifies the block number for a memory cache rejection area to be deleted.

[Function]

The ncd command deletes a memory cache rejection area. Specify the block number corresponding to the memory cache rejection area to be deleted.

[Example]

ncd 1

Block 1 is deleted from the memory cache rejection area.

```
>nc 100000 100
No Memory Cache Area
No. Address Length
1 00100000 00000100
2 0fff000 00001000
3 03fff000 00001000
```

```
>ncd 1
No Memory Cache Area
No. Address Length
1 0fff000 00001000
2 03fff000 00001000
```

nsbp command**[Format]**

nsbp [[ADDR [LENGTH]]]

[Parameters]

- ADDR:** Specifies the start address of a software break prohibition area.
- LENGTH:** Specifies the length of a software break prohibition area in bytes.
The minimum unit of a specification area is the boundary of half word.
The number of the areas which can be specified is a maximum of four.

[Function]

The nsbp command specifies an area to forbid a software break.
When a breakpoint is specified in the specification prohibition area, a debugger implicitly performs a memory test (write access) to an object address.
The state of some flash ROM may change by performing write access and right data may not be read.
When this happens, please forbid a software break by this command to prohibit use of write cycles.
Usually, it is not necessary to specify.

[Example]

nsbp 10000 20000

A 20000-byte area, starting at 10000h, is specified as a software break prohibition area.

```
>nsbp 100000 20000
Num Address Length
01 00100000 00020000
```

nsbpd command**[Format]**

nsbpd [block-number/all]

[Parameters]

block-number: Specifies the block number of the software break prohibition area to be deleted.

/all: Specifies all software break prohibition area to be deleted.

[Function]

The nsbpd command deletes the software break prohibition area specified by nsbp.

[Example]

nsbpd 1

Block 1 is deleted from a software break prohibition area.

>nsbp

Num	Address	Length
01	00100000	00200000
02	00400000	00010000

>nsbpd 1

Num	Address	Length
01	00400000	00010000

nrom command**[Format]**

nrom [[ADDR [LENGTH]]]

[Parameters]

ADDR: Specifies the start address of a forced user area.

LENGTH: Specifies the length of a forced user area in bytes.

The minimum unit of the a specification area is as follows.

RTE-1000-TP: 4 bytes

RTE-2000-TP: Depends on the size of the ROM being emulated.

8/16 bits: 128K bytes

32 bits: 256K bytes

(64 bits: 512K bytes)

The number of areas which can be specified is a maximum of four.

[Function]

The nrom command specifies the area when part of ROM emulation area specified by the ROM command is mapped to other resources on a user system. Usually, it is not necessary to specify this command.

The operations for the specified area are as follows.

- An access from the debugger is forcibly made to the user system.
- The EMEMEN- signal is deasserted inactive (high level) in the cycle for accessing this area during execution (RTE-2000-TP only).

[Example]

nrom 0 20000

A 20000-byte area, starting at 0h, is specified as a forced user area.

```
>nrom 0 20000
```

No.	Address	Length
1	00000000	00020000

```
>nrom 100000 40000
```

No.	Address	Length
1	00000000	00020000
2	00100000	00040000

nromd command

[Format]

nromd [block-number/all]

[Parameters]

block-number: Specifies the block number for the forced user area to be deleted.

/all: Specifies all the forced user area to be deleted.

[Function]

The nromd command deletes the forced user area specified by nrom.

[Example]

nromd 1

Block 1 is deleted from the forced user area.

>nrom 100000 40000

No.	Address	Length
1	00000000	00020000
2	00100000	00040000

>nromd 1

No.	Address	Length
1	00100000	00040000

outb, outh, and outw commands**[Format]**

outb [[ADDR] DATA]

outh [[ADDR] DATA]

outw [[ADDR] DATA]

[Parameters]

ADDR: Specifies the address of an output port in hexadecimal.

DATA: Specifies the data to be output in hexadecimal.

[Function]

The outb, outh, and outw commands write data to the I/O space in different sizes.

The outb command accesses the I/O space in bytes, outh in half words, and outw in words.

[Examples]

outb 1000 12

Byte data 12h is written to 1000H in the I/O space.

outh 1000 1234

Half word data 1234h is written to 1000H in the I/O space.

outw 1000 12345678

Word data 12345678h is written to 1000H in the I/O space.

reset command

[Format]

reset

[Parameter]

None

[Function]

The reset command resets the emulation CPU of KIT-V850E/MA3-TP.

rom command (for RTE-1000-TP)

[Format]

rom [ADDR [LENGTH]] [512k|1m|2m|4m|8m|16m|32m|64m|128m|256m] [rom8|rom16]
[bus8|bus16|bus32]

[Parameters]

ADDR [LENGTH]: Specifies an area to be emulated.
 ADDR: Specifies a start address. An error occurs if the specified start address does not match the lowest address of the ROM to be emulated (boundary of the ROM).
 LENGTH: Specifies the number of bytes of the ROM to be emulated. (Must be specified in boundary units of 4 bytes.)
 512k|1m|2m|4m|8m|16m|32m|64m|128m|256m:
 Specifies the bit size of the ROM to be emulated.
 Sizes from 512K to 256M bits can be specified. For the 27C1024, for example, specify 1M bit.
 rom8|rom16: Specifies the number of data bits of the ROM to be emulated.
 Either 8 bits or 16 bits can be specified. If a DIP-32-ROM cable is used, choose rom8; if a DIP-40/42-ROM or STD-16BIT-ROM cable is used, choose rom16.
 bus8|bus16|bus32: Specifies the ROM bus size in the system to be emulated. 8 bits, 16 bits, or 32 bits can be specified.

[Function]

The rom command sets the ROM emulation environment of RTE-1000-TP. ADDR and LENGTH must be input in pairs. Input other parameters only when their values need to be changed. Parameters may be entered in any order. If the same parameter is entered twice, only the last entry is valid. The initial value of LENGTH is 0 (not used).

[Examples]

rom 100000 40000 1m rom16 bus16

The 256K bytes (40000h) of the 27C1024 (16-bit ROM with a size of 1M bit), starting at 100000h are emulated. Consequently, two 16-bit ROMs are emulated.

rom 0 40000 2m rom16 bus32

The 256K bytes (40000h) of the 27C2048 (16-bit ROM with a size of 2M bits), starting at 0x0, are emulated. Consequently, two 16-bit ROM is emulated.

<Remark>

Note on area specified by rom command

Access to a range specified by the rom command from the debugger is a direct access to the emulation memory in the tool. As a result, display is performed correctly even if the processor cannot correctly access ROM. It is therefore recommended to read and check data by using the jread command (that reads data via the CPU bus) or write data by setting verify to ON with the env command (download) in the initial stage of debugging.

rom1..rom4 commands (for RTE-2000-TP)**[Format]**

```
rom1 [ADDR [LENGTH]] [512k|1m|2m|4m|8m|16m|32m|64m|128m|256m] [rom8|rom16]
      [bus8|bus16|bus32|bus64] [[!]wren]
rom2 [ADDR [LENGTH]] [512k|1m|2m|4m|8m|16m|32m|64m|128m|256m] [rom8|rom16]
      [bus8|bus16] [[!]wren]
rom3 [ADDR [LENGTH]] [512k|1m|2m|4m|8m|16m|32m|64m|128m|256m] [rom8|rom16]
      [bus8|bus16|bus32] [[!]wren]
rom4 [ADDR [LENGTH]] [512k|1m|2m|4m|8m|16m|32m|64m|128m|256m] [rom8|rom16]
      [bus8|bus16] [[!]wren]
```

rom1: This command performs setting of a module including the EMEM board mounted to slot #3.

rom2: This command performs setting of a module including the EMEM board mounted to slot #4.

rom3: This command performs setting of a module including the EMEM board mounted to slot #5.

rom4: This command performs setting of a module including the EMEM board mounted to slot #6.

[Parameters]

ADDR [LENGTH]: Specifies an area to be emulated.

ADDR: Specifies a start address. An error occurs if the specified start address does not match the lowest address of the ROM to be emulated (boundary of the ROM).

LENGTH: Specifies the number of bytes of the ROM to be emulated. (Must be specified in boundary units of 4 bytes.)

512k|1m|2m|4m|8m|16m|32m|64m|128m|256m:
Specifies the bit size of the ROM to be emulated.
Sizes from 512K to 256M bits can be specified. For the 27C1024, for example, specify 1M bit.

rom8|rom16: Specifies the number of data bits of the ROM to be emulated.
Either 8 bits or 16 bits can be specified. If a DIP-32-ROM cable is used, choose rom8; if a DIP-40/42-ROM or STD-16BIT-ROM cable is used, choose rom16.

bus8|bus16|bus32|bus64:
Specifies the ROM bus size in the system to be emulated. 8 bits, 16 bits, 32 bits, or 64 bits can be specified.
>> [bus64] is a parameter for future use. (It is not used with KIT-V850E/MA3-TP.)

[[!]wren]: Write Enable: This setting is for using the emulation memory as RAM. wren enables writing, and !wren disables writing. The default value is !wren.

[Function]

The rom1 to rom4 commands set the ROM emulation environment of RTE-2000-TP. ADDR and LENGTH must be input in pairs. Input other parameters only when their values need to be changed. Parameters may be entered in any order. If the same parameter is entered twice, only the last entry is valid. The initial value of LENGTH is 0 (not used).

[Examples]

rom1 100000 40000 2m rom16 bus16 !wren

Slot position of EMEM board	Address range	Bus width	ROM		Write enable
			Bus width	Bits	
#3	100000 - 13ffff	16 bits	16 bits	2M bits	Disabled

rom2 140000 40000 2m rom16 bus16 wren

Slot position of EMEM board	Address range	Bus width	ROM		Write enable
			Bus width	Bits	
#4	140000 - 17ffff	16 bits	16 bits	2M bits	Enabled

rom1 0 80000 2m rom16 bus32 !wren

Slot position of EMEM board	Address range	Bus width	ROM		Write enable
			Bus width	Bits	
#3 + #4	000000 - 07ffff	32 bits	16 bits	2M bits	Disabled

Do not issue the rom2 command at this time.

<Remark>

Note on area specified by rom command

Access to the range specified by the rom1..rom4 commands from the debugger is a direct access to the emulation memory in the tool. As a result, display is performed correctly even if the processor cannot correctly access ROM. It is therefore recommended to read and check data by using the jread command (that reads data via the CPU bus) or write data by setting verify to ON with the env command (download) in the initial stage of debugging.

Relationship between rom command and EMEM board

rom command	Bus width	Slot position of EMEM board	Unusable rom command
rom1	8 bits	#3	
	16 bits	#3	
	32 bits	#3 + #4	rom2
	64 bits	#3 + #4 + #5 + #6	rom2, rom3, rom4
rom2	8 bits	#4	
	16 bits	#4	
rom3	8 bits	#5	
	16 bits	#5	
	32 bits	#5 + #6	rom4
rom4	8 bits	#6	
	16 bits	#6	

sfr command

[Format]

sfr [reg [VAL]]

[Parameters]

VAL: Specifies the value for an SFR register in hexadecimal.

reg: Specifies an SFR register name.

The following names can be used as register names:

SFR (R/W):

PAL PALL PALH PAH PAHL PAHH PDL PDLL PDLH PCS PCT PCM PCD PBD PMAL
 PMALL PMALH PMAH PMAHL PMAHH PMDL PMDLL PMDLH PMCS PMCT PMCM PMCD PMBD
 PMCAL PMCALL PMCALH PMCAH PMCAHL PMCAHH PMCDL PMCDLL PMCDLH PMCCS PFCCS
 PMCCT PFCCT PMCCM PMCCD PMCBD CSC0 CSC1 BEC VSWC
 DSA0L DSA0H DDA0L DDA0H DSA1L DSA1H DDA1L DDA1H
 DSA2L DSA2H DDA2L DDA2H DSA3L DSA3H DDA3L DDA3H DBC0
 DBC1 DBC2 DBC3 DADC0 DADC1 DADC2 DADC3 DCHC0
 DCHC1 DCHC2 DCHC3 IMR0 IMR0L
 IMR0H IMR1 IMR1L IMR1H IMR2 IMR2L IMR2H IMR3 IMR3L IMR3H WDTIC P00IC0
 P00IC1 P00IC4 P00IC5 P10IC6 P10IC7 P01IC0 P01IC1 P01IC2 P01IC3 P11IC4
 P11IC5 P02IC1 P02IC2 P12IC4 P12IC5 P12IC6 P13IC0 P13IC1 P13IC2 P13IC3
 P13IC4 P13IC7 P05IC0 P05IC1 CMICD0 CMICD1 CMICD2 CMICD3 CM10IC0 CM10IC1
 OVPIC0 OVQIC OVPIC1 OVPIC2 DMAIC0 DMAIC1 DMAIC2 DMAIC3 SEIC0 SRIC0
 STIC0 SEIC1 SRIC1 STIC1 SEIC2 SRIC2 STIC2 SEIC3 SRIC3 STIC3 ADIC PSC
 ADM0 ADM1 ADM2 ADTS DA0CS0 DA0CS1
 DA0M P0 P1 P2 P3 P4 P5 PM0 PM1
 PM2 PM3 PM4 PM5 PMC0 PMC1 PMC2
 PMC3 PMC4 PMC5 PMC7 PFC0 PFC1 PFC2
 PFC3 PFC4 PFC5 BCT0 BCT1 DWC0
 DWC1 BCC ASC BCP LBS LBC0 LBC1 FWC FIC BMC PRC AHC SCR1
 RFS1 SCR3 RFS3 SCR4 RFS4 SCR6 RFS6 CMD0
 TMCD0 CMD1 TMCD1 CMD2 TMCD2 CMD3
 TMCD3 TMENC10 CM100 CM101 CC100
 CC101 CCR10 TUM10 TMC10 SESA10 PRM10 TQ0CTL0
 TQ0CTL1 TQ0IOC0 TQ0IOC1 TQ0IOC2 TQ0OPT0 TQ0CCR0 TQ0CCR1 TQ0CCR2 TQ0CCR3
 TQ0OPT1 TQ0OPT2 TQ0IOC3 TQ0DTC HZA0CTL0
 HZA0CTL1 TP0CTL0 TP0CTL1 TP0IOC0 TP0IOC1 TP0IOC2 TP0OPT0 TP0CCR0 TP0CCR1
 TP1CTL0 TP1CTL1 TP1IOC0 TP1IOC1 TP1IOC2 TP1OPT0 TP1CCR0 TP1CCR1
 TP2CTL0 TP2CTL1 TP2IOC0 TP2IOC1 TP2IOC2 TP2OPT0 TP2CCR0 TP2CCR1
 OSTWDCS WDTM PFCE0 PFCE1 PFCE2
 PFCE3 PFCE5 SYS DTFR0 DTFR1 DTFR2
 DTFR3 PSMR CKC PCC WDRES CORAD0
 CORAD0L CORAD0H CORAD1 CORAD1L CORAD1H CORAD2 CORAD2L CORAD2H CORAD3
 CORAD3L CORAD3H CORCN DTOC DIFC
 DAKW FLPMC UA0CTL0 UA0CTL1 UA0CTL2
 UA0OPT0 UA0STR UA0TX UA1CTL0 UA1CTL1 UA1CTL2 UA1OPT0 UA1STR UA1TX UA2CTL0

UA2CTL1 UA2CTL2 UA2OPT0 UA2STR UA2TX UA3CTL0 UA3CTL1 UA3CTL2 UA3OPT0
 UA3STR UA3TX INTF0 INTF1 INTF2
 INTF3 INTF5 NMIF INTR0 INTR1 INTR2
 INTR3 INTR5 NMIR CB0CTL0 CB0CTL1
 CB0CTL2 CB0STR CB0TX CB0TXL CB1CTL0 CB1CTL1 CB1CTL2 CB1STR CB1TX CB1TXL
 CB2CTL0 CB2CTL1 CB2CTL2 CB2STR CB2TX CB2TXL IIC
 IICC SVA IICCL IICX IICF PRSM PRSCM

SFR (W):

PRCMD PFCMD

SFR (R):

ISPR ADCR0 ADCR1 ADCR2 ADCR3
 ADCR4 ADCR5 ADCR6 ADCR7 ADCR0H ADCR1H ADCR2H ADCR3H ADCR4H ADCR5H ADCR6H
 ADCR7H P7 P8 TMD0 TMD1 TMD2 TMD3
 STATUS10 TQ0CNT TQ0DTT1 TQ0DTT2
 TQ0DTT3 TP0CNT TP1CNT TP2CNT
 PFS UA0RX UA1RX UA2RX UA3RX CB0RX
 CB0RXL CB1RX CB1RXL CB2RX CB2RXL
 IICS

[Function]

The sfr command sets and displays the value of the SFR register.

[Examples]

sfr PAL

The value of the PAL register is displayed.

sfr PAL 55

The value 55h is set in the PAL register.

symfile and sym commands

[Format]

symfile FILENAME

sym [NAME]

[Parameters]

FILENAME: Specifies file name.

NAME: Specifies first character string in the symbols to be displayed.

[Function]

The symfile command reads symbols from the elf file specified by the FILENAME parameter.

Only global symbols can be read.

The sym command displays up to 30 symbols that have been read.

[Examples]

symfile c:\test\dry\dry.elf

Symbols are read from the elf file dry.elf in the c:\test\dry directory.

sym m

Up to 30 symbols that begin with "m" are displayed.

ver command

[Format]

ver

[Parameter]

None

[Function]

The ver command displays the version of KIT-V850E/MA3-TP.