5.9.1. Information Commands

5.9.1.1. bdinfo - print Board Info structure

```
=> help bdinfo

bdinfo - print Board Info structure


Usage:

bdinfo

=>
```

The `bdinfo` command (short: `bdi`) prints the information that U-Boot passes about the board such as memory addresses and sizes, clock frequencies, MAC address, etc. This information is mainly needed to be passed to the Linux kernel.

```
=> bdi

memstart    = 0x00000000

memsize       = 0x20000000

flashstart  = 0xFC000000

flashsize   = 0x04000000

flashoffset = 0x00000000

sramstart   = 0x00000000

sramsize    = 0x00000000

bootflags   = 0xFFFE6530

intfreq       = 1066.667 MHz

busfreq       = 266.667 MHz

ethaddr       = 00:10:ec:01:08:84

eth1addr    = 00:10:ec:81:08:84

IP addr       = 192.168.100.6

baudrate    = 115200 bps

=>
```

5.9.1.2. coninfo - print console devices and informations

```
=> help conin

coninfo - print console devices and information


Usage:

coninfo
```

```
=>
```

The `coninfo` command (short: `conin`) displays information about the available console I/O devices.

```
=> conin
List of available devices:
serial    80000003 SIO stdin stdout stderr
serial1    00000003 .IO
serial0    00000003 .IO
nc    80000003 SIO
=>
```

The output contains the device name, flags, and the current usage. For example, the output

```
serial   80000003 SIO stdin stdout stderr
```

means that the `serial` device is a system device (flag `'S'`) which provides input (flag `'I'`) and output (flag `'O'`) functionality and is currently assigned to the 3 standard I/O streams `stdin`, `stdout` and `stderr`.

5.9.1.3. flinfo - print FLASH memory information

```
=> help flinfo
flinfo - print FLASH memory information


Usage:
flinfo
    - print information for all FLASH memory banks
flinfo N
    - print information for FLASH memory bank # N
=>
```

The command `flinfo` (short: `fli`) can be used to get information about the available flash memory (see Flash Memory Commands below).

```
=> fli


Bank # 1: CFI conformant FLASH (16 x 16)  Size: 64 MB in 512 Sectors
  AMD Standard command set, Manufacturer ID: 0x01, Device ID: 0x227E
  Erase timeout: 16384 ms, write timeout: 2 ms
  Buffer write timeout: 5 ms, buffer size: 32 bytes
```

Sector Start Addresses:

FC000000 FC020000 FC040000 FC060000 FC080000

FC0A0000 FC0C0000 FC0E0000 FC100000 FC120000

FC140000 FC160000 FC180000 FC1A0000 FC1C0000 E

FC1E0000 FC200000 FC220000 FC240000 FC260000

FC280000 FC2A0000 FC2C0000 FC2E0000 FC300000

FC320000 FC340000 FC360000 FC380000 FC3A0000

FC3C0000 E FC3E0000 E FC400000 E FC420000 E FC440000 E

FC460000 E FC480000 E FC4A0000 E FC4C0000 E FC4E0000 E

FC500000 E FC520000 E FC540000 E FC560000 E FC580000 E

FC5A0000 E FC5C0000 E FC5E0000 E FC600000 E FC620000 E

FC640000 E FC660000 E FC680000 E FC6A0000 E FC6C0000 E

FC6E0000 E FC700000 E FC720000 E FC740000 E FC760000 E

FC780000 E FC7A0000 E FC7C0000 E FC7E0000 E FC800000 E

FC820000 E FC840000 E FC860000 E FC880000 E FC8A0000 E

FC8C0000 E FC8E0000 E FC900000 E FC920000 E FC940000 E

FC960000 E FC980000 E FC9A0000 E FC9C0000 E FC9E0000 E

FCA00000 E FCA20000 E FCA40000 E FCA60000 E FCA80000 E

FCAA0000 E FCAC0000 E FCAE0000 E FCB00000 E FCB20000 E

FCB40000 E FCB60000 E FCB80000 E FCBA0000 E FCBC0000 E

FCBE0000 E FCC00000 E FCC20000 E FCC40000 E FCC60000 E

FCC80000 E FCCA0000 E FCCC0000 E FCCE0000 E FCD00000 E

FCD20000 E FCD40000 E FCD60000 E FCD80000 E FCDA0000 E

FCDC0000 E FCDE0000 E FCE00000 E FCE20000 E FCE40000 E

FCE60000 E FCE80000 E FCEA0000 E FCEC0000 E FCEE0000 E

FCF00000 E FCF20000 E FCF40000 E FCF60000 E FCF80000 E

FCFA0000 E FCFC0000 E FCFE0000 E FD000000 E FD020000 E

FD040000 E FD060000 E FD080000 E FD0A0000 E FD0C0000 E

FD0E0000 E FD100000 E FD120000 E FD140000 E FD160000 E

FD180000 E FD1A0000 E FD1C0000 E FD1E0000 E FD200000 E

FD220000 E FD240000 E FD260000 E FD280000 E FD2A0000 E

FD2C0000 E FD2E0000 E FD300000 E FD320000 E FD340000 E

FD360000 E FD380000 E FD3A0000 E FD3C0000 E FD3E0000 E

FD400000 E FD420000 E FD440000 E FD460000 E FD480000 E

FD4A0000 E FD4C0000 E FD4E0000 E FD500000 E FD520000 E

```
FD540000 E     FD560000 E     FD580000 E     FD5A0000 E     FD5C0000 E
FD5E0000 E     FD600000     FD620000 E     FD640000 E     FD660000 E
FD680000 E     FD6A0000 E     FD6C0000 E     FD6E0000 E     FD700000 E
FD720000 E     FD740000 E     FD760000 E     FD780000 E     FD7A0000 E
FD7C0000 E     FD7E0000 E     FD800000 E     FD820000 E     FD840000 E
FD860000 E     FD880000 E     FD8A0000 E     FD8C0000 E     FD8E0000 E
FD900000 E     FD920000 E     FD940000 E     FD960000 E     FD980000 E
FD9A0000 E     FD9C0000 E     FD9E0000 E     FDA00000 E     FDA20000 E
FDA40000 E     FDA60000 E     FDA80000 E     FDAA0000 E     FDAC0000 E
FDAE0000 E     FDB00000 E     FDB20000 E     FDB40000 E     FDB60000 E
FDB80000 E     FDBA0000 E     FDBC0000 E     FDBE0000 E     FDC00000 E
FDC20000 E     FDC40000 E     FDC60000 E     FDC80000 E     FDCA0000 E
FDCC0000 E     FDCE0000 E     FDD00000 E     FDD20000 E     FDD40000 E
FDD60000 E     FDD80000 E     FDDA0000 E     FDDC0000 E     FDDE0000 E
FDE00000 E     FDE20000 E     FDE40000 E     FDE60000 E     FDE80000 E
FDEA0000 E     FDEC0000 E     FDEE0000 E     FDF00000 E     FDF20000 E
FDF40000 E     FDF60000 E     FDF80000 E     FDFA0000 E     FDFC0000 E
FDFE0000 E     FE000000 E     FE020000 E     FE040000 E     FE060000 E
FE080000 E     FE0A0000 E     FE0C0000 E     FE0E0000 E     FE100000 E
FE120000 E     FE140000 E     FE160000 E     FE180000 E     FE1A0000 E
FE1C0000 E     FE1E0000 E     FE200000 E     FE220000 E     FE240000 E
FE260000 E     FE280000 E     FE2A0000 E     FE2C0000 E     FE2E0000 E
FE300000 E     FE320000 E     FE340000 E     FE360000 E     FE380000 E
FE3A0000 E     FE3C0000 E     FE3E0000 E     FE400000 E     FE420000 E
FE440000 E     FE460000 E     FE480000 E     FE4A0000 E     FE4C0000 E
FE4E0000 E     FE500000 E     FE520000 E     FE540000 E     FE560000 E
FE580000 E     FE5A0000 E     FE5C0000 E     FE5E0000 E     FE600000 E
FE620000 E     FE640000 E     FE660000 E     FE680000 E     FE6A0000 E
FE6C0000 E     FE6E0000 E     FE700000 E     FE720000 E     FE740000 E
FE760000 E     FE780000 E     FE7A0000 E     FE7C0000 E     FE7E0000 E
FE800000 E     FE820000 E     FE840000 E     FE860000 E     FE880000 E
FE8A0000 E     FE8C0000 E     FE8E0000 E     FE900000 E     FE920000 E
FE940000 E     FE960000 E     FE980000 E     FE9A0000 E     FE9C0000 E
FE9E0000 E     FEA00000 E     FEA20000 E     FEA40000 E     FEA60000 E
FEA80000 E     FEAA0000 E     FEAC0000 E     FEAE0000 E     FEB00000 E
FEB20000 E     FEB40000 E     FEB60000 E     FEB80000 E     FEBA0000 E
```

```
  FEBC0000 E     FEBE0000 E     FEC00000 E     FEC20000 E     FEC40000 E
  FEC60000 E     FEC80000 E     FECA0000 E     FECC0000 E     FECE0000 E
  FED00000 E     FED20000 E     FED40000 E     FED60000 E     FED80000 E
  FEDA0000 E     FEDC0000 E     FEDE0000 E     FEE00000 E     FEE20000 E
  FEE40000 E     FEE60000 E     FEE80000 E     FEEA0000 E     FEEC0000 E
  FEEE0000 E     FEF00000 E     FEF20000 E     FEF40000 E     FEF60000 E
  FEF80000 E     FEFA0000 E     FEFC0000 E     FEFE0000 E     FF000000 E
  FF020000 E     FF040000 E     FF060000 E     FF080000 E     FF0A0000 E
  FF0C0000 E     FF0E0000 E     FF100000 E     FF120000 E     FF140000 E
  FF160000 E     FF180000 E     FF1A0000 E     FF1C0000 E     FF1E0000 E
  FF200000 E     FF220000 E     FF240000 E     FF260000 E     FF280000 E
  FF2A0000 E     FF2C0000 E     FF2E0000 E     FF300000 E     FF320000 E
  FF340000 E     FF360000 E     FF380000 E     FF3A0000 E     FF3C0000 E
  FF3E0000 E     FF400000 E     FF420000 E     FF440000 E     FF460000 E
  FF480000 E     FF4A0000 E     FF4C0000 E     FF4E0000 E     FF500000 E
  FF520000 E     FF540000 E     FF560000 E     FF580000 E     FF5A0000 E
  FF5C0000 E     FF5E0000 E     FF600000 E     FF620000 E     FF640000 E
  FF660000 E     FF680000 E     FF6A0000 E     FF6C0000 E     FF6E0000 E
  FF700000 E     FF720000 E     FF740000 E     FF760000 E     FF780000 E
  FF7A0000 E     FF7C0000 E     FF7E0000 E     FF800000 E     FF820000 E
  FF840000 E     FF860000 E     FF880000 E     FF8A0000 E     FF8C0000 E
  FF8E0000 E     FF900000 E     FF920000 E     FF940000 E     FF960000 E
  FF980000 E     FF9A0000 E     FF9C0000 E     FF9E0000 E     FFA00000 E
  FFA20000 E     FFA40000 E     FFA60000 E     FFA80000 E     FFAA0000 E
  FFAC0000 E     FFAE0000 E     FFB00000 E     FFB20000 E     FFB40000 E
  FFB60000 E     FFB80000 E     FFBA0000 E     FFBC0000 E     FFBE0000 E
  FFC00000 E     FFC20000 E     FFC40000 E     FFC60000 E     FFC80000 E
  FFCA0000 E     FFCC0000 E     FFCE0000 E     FFD00000 E     FFD20000 E
  FFD40000 E     FFD60000 E     FFD80000 E     FFDA0000 E     FFDC0000 E
  FFDE0000 E     FFE00000 E     FFE20000 E     FFE40000 E     FFE60000 E
  FFE80000 E     FFEA0000 E     FFEC0000 E     FFEE0000 E     FFF00000 E
  FFF20000 E     FFF40000 E     FFF60000   RO     FFF80000   RO     FFFA0000   RO
  FFFC0000   RO     FFFE0000   RO

=>
```

5.9.1.4. iminfo - print header information for application image

```
=> help iminfo
iminfo - print header information for application image


Usage:
iminfo addr [addr ...]
    - print header information for application image starting at
      address 'addr' in memory; this includes verification of the
      image contents (magic number, header and payload checksums)
=>
```

`iminfo` (short: `imi`) is used to print the header information for images like Linux kernels or ramdisks. It prints (among other information) the image name, type and size and verifies that the CRC32 checksums stored within the image are OK.

```
=> tftp ${ram_ws} ${bootfile}
Waiting for PHY auto negotiation to complete.... done
ENET Speed is 1000 Mbps - FULL duplex connection (EMAC0)
Using ppc_4xx_eth0 device
TFTP from server 192.168.1.1; our IP address is 192.168.100.6
Filename '/tftpboot/duts/canyonlands/uImage'.
Load address: 0x100000
Loading: T #################################################################
    #################################################################
    ####
done
Bytes transferred = 1958609 (1de2d1 hex)
=> imi ${ram_ws}


## Checking Image at 00100000 ...
   Legacy image found
   Image Name:    Linux-2.6.32.7-00007-g08eba26
   Created:    2010-02-04  17:54:22 UTC
   Image Type:    PowerPC Linux Kernel Image (gzip compressed)
   Data Size:    1958545 Bytes =  1.9 MB
   Load Address: 00000000
   Entry Point:    00000000
   Verifying Checksum ... OK
```

```
=>
```

Like with many other commands, the exact operation of this command can be controlled by the settings of some U-Boot environment variables (here: the `verify`variable). See below for details.

5.9.1.5. help - print online help

```
=> help help
help - print online help


Usage:
help [command ...]
    - show help information (for 'command')
'help' prints online help for the monitor commands.


Without arguments, it prints a short usage message for all commands.


To get detailed help information for specific commands you can type
'help' with one or more command names as arguments.
=>
```

The `help` command (short: `h` or `?`) prints online help. Without any arguments, it prints a list of all U-Boot commands that are available in your configuration of U-Boot. You can get detailed information for a specific command by typing its name as argument to the `help` command:

```
=> help protect
protect - enable or disable FLASH write protection


Usage:
protect on  start end
    - protect FLASH from addr 'start' to addr 'end'
protect on start +len
    - protect FLASH from addr 'start' to end of sect w/addr 'start'+'len'-1
protect on  N:SF[-SL]
    - protect sectors SF-SL in FLASH bank # N
protect on  bank N
    - protect FLASH bank # N
protect on  all
```

```
    - protect all FLASH banks

protect off start end

    - make FLASH from addr 'start' to addr 'end' writable

protect off start +len

    - make FLASH from addr 'start' to end of sect w/addr 'start'+'len'-1 wrtable

protect off N:SF[-SL]

    - make sectors SF-SL writable in FLASH bank # N

protect off bank N

    - make FLASH bank # N writable

protect off all

    - make all FLASH banks writable

=>
```