eCMD Command Line Interface

Version .5

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1 Introduction

This document has been created using OpenOffice, a copy of the OpenOffice Suite can be obtained from: http://mcweb.boeblingen.de.ibm.com/OpenOffice/

This document describes the eCMD command line set. These commands are all written in C code against the eCMD C-Api and as such can run against any implementation of the eCMD C-Api. Currently this means scripts written to use the eCMD command line will be able to run against GFW for I/P/Z Series or Cronus without any modification.

For the latest list of all available commands please see the eCMD web page at http://rhea.rchland.ibm.com/eCMD/.

2 Usage Instructions

2.1 Environment Setup

To run the eCMD command line interface requires a few environment variables be setup prior to executing any commands. The exact method to setup these variables may be different depending on which implementation(plugin) of the C-Api you plan on running but will be documented here in the future.

2.2 Error Handling

All errors encountered running an eCMD command will display a message to the screen and will return a non-zero return code to the calling shell.

2.3 Required Input Files

eCMD queries all required files (ie scandefs/help text) from the dll that it is using. In the case of IP Series when running on the FSP commands requiring external input files may not run unless a NFS mount is setup to source these files.

2.4 Optional Arguments

All eCMD optional arguments start with a '-' character, these arguments can be specified in any order on the command line.

3 eCMD Common Commands

These are the core command line functions available through the eCMD interface and the syntax of the command. The help text is commented with the text 'Core Common Function' for all commands that are part of the core eCMD subset. Other Series or Cronus specific commands will be specified uniquely as well.

3.1 Common Command Arguments

These are common arguments that are supported on most of the eCMD commands.

3.1.1 Targeting Options

Most eCMD functions use the following commands to specify which chip/node/cage you are trying to target in the system. How these options map to physical hardware will be defined by the eCMD team and documented in a separate document for each product.

The valid targeting options:

- -k# (cage)
- -n# (node)
- -s# (slot)
- -p# (position)
- -c# (core)
- -t# (thread)

These options accept the following number strings:

- -p0 Single digit
- -p1,5,10 Comma separated list
- -p2..7 Range of positions
- -p1,2..5,9 Mixture of single and ranges
- -pall Target all possible configured positions

The -t (thread) argument takes a special option -talive to specify all alive threads.

3.1.2 Data Output Formatting (-o<format>)

The -o argument is used by eCMD to decide how the data should be displayed to the user. The -o argument takes a format string , the available formats are displayed below:

Left-aligned Hex : -ox

```
FORMAT: X
gr      k0:n0:s0:p00:c0       00000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000
gr      k0:n0:s0:p02:c0       00000000000000000000000
```

Left-aligned Hex Words : -oxw

```
FORMAT: XW
gr      k0:n0:s0:p00:c0       00000000 00000000 00000000
gr      k0:n0:s0:p01:c0       00000000 00000000 00000000
gr      k0:n0:s0:p02:c0       00000000 00000000 00000000
```

Left-aligned Hex Word Columns : -oxw2

```
FORMAT: XW2
gr      k0:n0:s0:p00:c0
0: 00000000 00000000
2: 00000000
gr      k0:n0:s0:p01:c0
0: 00000000 00000000
2: 00000000
```

Right-aligned Hex : -oxr

```
FORMAT: XR
gr      k0:n0:s0:p00:c0       00000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000
gr      k0:n0:s0:p02:c0       00000000000000000000000
```

Right-aligned Hex Words : -oxrw

```
FORMAT: XRW
gr      k0:n0:s0:p00:c0       00000000 00000000 00000000
gr      k0:n0:s0:p01:c0       00000000 00000000 00000000
gr      k0:n0:s0:p02:c0       00000000 00000000 00000000
```

Right-aligned Hex Word Columns : -oxrw2

```
FORMAT: XRW2
gr      k0:n0:s0:p00:c0
0: 00000000 00000000
2: 00000000
gr      k0:n0:s0:p01:c0
0: 00000000 00000000
2: 00000000
```

Binary : -ob

```
FORMAT: B
gr      k0:n0:s0:p00:c0       00000000000000000000000000000000000000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000000000000000000000000000000000000
gr      k0:n0:s0:p02:c0       00000000000000000000000000000000000000000000000000000000
```

Binary Nibbles : -obn

```
FORMAT: BN
gr      k0:n0:s0:p00:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
gr      k0:n0:s0:p01:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
gr      k0:n0:s0:p02:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
```

Binary Nibble Columns : -obn8

```
FORMAT: BN8
gr      k0:n0:s0:p00:c0

    0           1           2           3
    0123 4567 8901 2345 6789 0123 4567 8901
00: 0000 0000 0000 0000 0000 0000 0000 0000
08: 0000 0000 0000 0000 0000 0000 0000 0000
16: 0000 0000 0000 0000 0000 0000 0000 0000
```

Binary Words : -obw

```
FORMAT: BW
gr      k0:n0:s0:p00:c0       00000000000000000000000000000000
00000000000000000000000000000000 00000000000000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000000000000
00000000000000000000000000000000 00000000000000000000000000000000
```

Binary Word Columns : -obw1

```
FORMAT: BW1
gr      k0:n0:s0:p00:c0

   0         1         2         3
   01234567890123456789012345678901
0: 00000000000000000000000000000000
1: 00000000000000000000000000000000
2: 00000000000000000000000000000000
```

Simulation Outputs : X-States are simulation states that aren't valid on real hardware, choosing one of the following X-State in a hardware environment will just be equivalent to the binary output.

X-State Binary : -obX

```
FORMAT: BX
gr      k0:n0:s0:p00:c0       00000000000000000000000000000000000000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000000000000000000000000000000000000
gr      k0:n0:s0:p02:c0       00000000000000000000000000000000000000000000000000000000
```

X-State Binary Nibbles : -obXn

```
FORMAT: BXN
gr      k0:n0:s0:p00:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
gr      k0:n0:s0:p01:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
gr      k0:n0:s0:p02:c0       0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
```

X-State Binary Nibble Columns : -obXn8

```
FORMAT: BXN8
gr      k0:n0:s0:p00:c0

    0           1           2           3
    0123 4567 8901 2345 6789 0123 4567 8901
00: 0000 0000 0000 0000 0000 0000 0000 0000
08: 0000 0000 0000 0000 0000 0000 0000 0000
16: 0000 0000 0000 0000 0000 0000 0000 0000
```

X-State Binary Words : -obXw

```
FORMAT: BXW
gr      k0:n0:s0:p00:c0       00000000000000000000000000000000
00000000000000000000000000000000 00000000000000000000000000000000
gr      k0:n0:s0:p01:c0       00000000000000000000000000000000
00000000000000000000000000000000 00000000000000000000000000000000
```

X-State Binary Word Columns : -obXw1

```
FORMAT: BXW1
gr      k0:n0:s0:p00:c0

   0         1         2         3
   01234567890123456789012345678901
0: 00000000000000000000000000000000
1: 00000000000000000000000000000000
2: 00000000000000000000000000000000
```

Memory Output : -omem

```
FORMAT: MEM
gr      k0:n0:s0:p00
0000000000000100: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF
0000000000000110: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF
```

Memory Output – Ascii Decode : -omema

```
FORMAT: MEMA
gr      k0:n0:s0:p00
0000000000000100: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF   [THISisTHEasciiTE]
0000000000000110: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF   [XT..............]
```

Memory Output – Ebcedic Decode : -omeme

```
FORMAT: MEME
gr      k0:n0:s0:p00
0000000000000100: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF   [THISisTHEebcedic]
0000000000000110: FEEDBEEF FEEDBEEF FEEDBEEF FEEDBEEF   [TEXT............]
```

Memory Output – D-Card Format : -omemd

```
FORMAT: MEMD
gr      k0:n0:s0:p00
D 0000000000000100 FEEDBEEFFEEDBEEF 0
D 0000000000000108 FEEDBEEFFEEDBEEF 1
D 0000000000000110 FEEDBEEFFEEDBEEF 0
D 0000000000000118 FEEDBEEFFEEDBEEF 1
```

Spy Enum Output – Only valid with getspy command : -oenum

```
FORMAT: ENUM
gr      k0:n0:s0:p00:c0 OFF
gr      k0:n0:s0:p00:c1 ON
```

3.1.3 Data Input Formatting (-i<format>)

The -i argument is used by eCMD to determine how to read the data provided by the user.

Left-aligned Hex : -iX

Right-aligned Hex : -iXR

Binary : -iB

Spy Enum – Only valid with putspy command : -ienum

3.1.4 Data Input Bit Modifiers (-b<modifier>)

The -b argument allows the user to specify a bit operation to perform on the data, this forces eCMD to do a read-modify-write on the data to perform the operation.

Or : -bor

Read data from hardware, or in data specified, write data back to hardware.

And : -band

Read data from hardware, and with data specified, write data back to hardware.

3.1.5 Command Help (-h)

All commands accept the '-h' argument, when specified eCMD will echo back the help text for the command. This text is the same as shown below in this document.

3.1.6 Trace Options (-trace)

All commands accept the -trace argument which allows the user to turn on different traces. The format of the trace is common between all major eCMD plugins but the mechanism for displaying the trace may be different. For example Cronus displays traces to stdout in the shell you are running, where as IP GFW writes traces to logs on the FSP.

The trace option syntax is : **-trace=<mode1>[,<mode2>]**

Example : -trace=scan,prcd

Trace Options :

-trace=scan

Scan tracing : Displays all ring/scom/spy accesses to the hardware

-trace=prcd

Procedure tracing : Displays the procedure trace as defined by the “HW control

procedure" specification.

3.1.7 Multiple Command Mode (-stdin)

The -stdin option allows you to specify multiple commands to be run within one execution of the command line client. There are three ways to do this:

Single line command :

> echo "ecmdquery version ; getscom pu 800000" | $ECMD_EXE -stdin

Input with a text file :

> $ECMD_EXE -stdin < commands.txt

Where commands.txt is:

ecmdquery version;

getscom pu 800000

Input from stdin:

> $ECMD_EXE -stdin

<type commands>

ecmdquery version

<press Ctrl-D to stop>

3.1.8 Quiet Mode (-quiet)

Quiet mode turns off some messages that eCMD will display to the screen. Currently the things disabled are the following:

- Command echo (reprint of command run after execution)
- Target message on write operations

Here is an example of the differences:

```
> putscom pu 800000 0 -pall
p6      k0:n0:s0:p00
ecmd_x86 putscom pu 800000 0 -pall

> putscom pu 800000 0 -pall -quiet
>

> getscom pu 800000
p6      k0:n0:s0:p00       0x0000000000000000
ecmd_x86 getscom pu 800000

> getscom pu 800000 -quiet
p6      k0:n0:s0:p00       0x0000000000000000
>
```

3.2 Chip Display/Alter Commands

3.2.1 checkrings

Syntax:

```
Syntax: checkrings <ChipSelect> <RingSelect> [-v] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       checks for stuck bits and verifies scanring length by scanning
                        ones and zeros to scan chain.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        RingSelect      Specifies chip ring to operate on.  Use "all" for all rings.
                        For a list of available rings, use the query command.

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

        -v   [optional] Display detailed ring failure data

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.
        ------------------------------------------------------------------------------

        Example:        checkrings pu all -p0,1 -c0
                        checkrings memctrl int -pall
```

Examples:

```
> checkrings test all
Performing 1's test on testring ...
Performing 0's test on testring ...
Performing 1's test on sgxbs ...
Performing 0's test on sgxbs ...
ecmd.exe checkrings test all
```

3.2.2 getarray

Syntax:

```
Syntax: getarray <ChipSelect> <ArrayName> <ArrayIndex> [NumEntries] [-o<format>]
                    [-exp <data> [-i<format>] [-mask <data>]] [-k#] [-n#] [-s#] [-p#]
[-c#]

        ECMD:           Core Common Function

        Function:       Read the specified chip array.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to read array data from.

        ArrayName       Name of array to read from.

        ArrayIndex      Array Index in right aligned hex.

        NumEntries[opt] Number of consecutive entries to display
                        Address is incremented by 1

        -o<format>[opt] Output Format : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of expect and mask data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -exp [optional] Provide expected data.  Returns error if expected != actual.  No
                        error/no data returned if expected == actual.

        -mask     [opt] Array data is AND'ed with the mask bits. Only for use with -exp.


        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > getarray pu xgpr0 deadbeef80000000 -p0,1 -c1
```

Examples:

3.2.3 getbits

Syntax:

```
Syntax: getbits <ChipSelect> <RingName> <StartPos> <NumBits>  [-exp <data>]
                        [-k#] [-n#] [-s#] [-p#] [-c#] [-o<format>] [-i<format>]
```

```
getbits <ChipSelect> <RingName> -f<filename>       [-k#] [-n#] [-s#] [-p#] [-c#]

ECMD:           Core Common Function

Function:       Long scans bits out of a chip's selected ring. (non-destructive)
                Ring is either displayed to screen or written to file specified
                with the -f option.

Parameters:
------------------------------------------------------------------------------
ChipSelect      Specifies the chip to operate on.

RingName        Specifies chip ring to operate on.  For a list of available
                rings, use the ecmdquery command.

                Ex:  ecmdquery rings memctrl
                     ecmdquery rings pu

StartPos        Specifies starting bit position in Decimal.

NumBits         Specifies number of bits to get from starting position (Decimal)
                Specify the keyword 'end' to fetch from startPos to end of ring.

-exp [optional] Provide expected data.  Returns error if expected != actual.  No
                error/no data returned if expected == actual.
                Format specified by -i<format>

-o<format>[opt] Specifies the format type of the output : default 'b'
                Run 'ecmdquery formats' to view available formats

-i<format>[opt] Specifies the format type of expect data : default 'b'
                Run 'ecmdquery formats' to view available formats

-f<filename>[o] Specifies the filename that the ring data should be written to
                Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_ASCII format

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

-n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

-s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

-c#  [optional] Specify which processor core to act on (0 is default). Specify
                -call to act on all cores.

------------------------------------------------------------------------------

Examples:       > getbits pu stat 0 15
                > getbits pu cp_fxu 0 32 -oxw -exp feedbeef
                > getbits memctrl idreg 16 end
                > getbits memctrl cp_fxu -ffxuRingDump.dump
```

Examples:

```
> getbits test idreg 0 32
test   k0:n0:s0:p00         idreg(0:31)
0b11111110111011011011111011101111
ecmd.exe getbits test idreg 0 32

> getbits test idreg 0 16 -ox
test   k0:n0:s0:p00         idreg(0:15)
0xFEED
ecmd.exe getbits test idreg 0 16 -ox
```

3.2.4 getcfam

Syntax:

```
Syntax: getcfam <ChipSelect> <CFAMAddr> [-k#] [-n#] [-s#] [-p#]
                                [-o<format>] [-i<format>] [-exp <data> [-mask <data>]]

        ECMD:           Core Common Function

        Function:       Gets CFAM Registers through FSI

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get CFAM data from.

        CFAMAddr        Address in hex.

        -exp [optional] Provide expected data.  Returns error if expected != actual.  No
                        error/no data returned if expected == actual.

        -mask     [opt] Register data is AND'ed with the mask bits.
                        Only for use with -exp.

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of expect and mask data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getcfam pu 6 -p0,1
                        > getcfam memctrl 800009 -exp feed0000 -mask ffff0000
```

Examples:

3.2.5 getlatch

Syntax:

```
Sytnax: getlatch <ChipSelect> [<RingName>] <LatchName> [<Start> <Numbits>] [-exact |
-partial]
                              [-exp <value>] [-o<format>]
                              [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Gets values for specified latch names in a ring.  The
                        latch names in the scandef file are searched for the
                        substring LatchName for a match.  Each register containing the
                        pattern-matched substring will be printed to the screen.

                        With the -exact option, eCMD searches for an exact match, and
                        will return only the first latch that exactly matches (excluding
                        any parentheses). This option also enables searching the scandef
                        with a hash file which greatly increases performance.

                        The -nocompress flag turns off concatenation of all latches of
                        a register in the scandef and displays on seperate lines as
                        they appear in the scandef.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get data from.

        RingName  [opt] Specifies chip ring to operate on.  For a list of available
                        rings, use the ecmdquery command.
                        NOTE : If not specified all rings in scandef are searched

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

        LatchName       Desired latch to find in the ring. (case insensitive)

        Start     [opt] Starting bit position within the latch. Specify with Numbits.

        Numbits   [opt] Number of bits to get. Specify along with Start. If out of range,
                        and -exact not selected, prints a warning message instead of the
                        data. If -exact is selected, immediately returns an error.

        -exact    [opt] No pattern matching. Instead, search for exact latch name.
(default)

        -partial  [opt] Use pattern matching to find latch name, can be considerably
slower.

        -exp [optional] Provide an expected-value as the last argument. Returns error if
                        data miscompare, else nothing.
                        Format specified by -i<format>

        -o<format>[opt] Specifies the format type of both the output and
                        the expect-value
                        Defaults to 'b' for < 8 bits and 'xl' for >= 8 bits.
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of expect data
```

```
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       getlatch pu cp_abist LATCH0
                        getlatch pu cp_fpu GCP.PFPU.FP_UNIT0.FP_REG -ox -exact -expect
feed -ix
                        getlatch pu MYLATCH
```

Examples:

```
> getlatch test sgxbs ACCESS
test    k0:n0:s0:p00
ACCESS.SNPBUF 0b0
ecmd.exe getlatch test sgxbs ACCESS
```

3.2.6 getringdump

Syntax:

```
Syntax: getringdump <ChipSelect> <RingName1> [<RingName2> ...] [-unsorted]
                                             [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Gets values for all latchs in the entire scan ring.

                        NOTE: The entire ring entry from the scandef is read in and then
                        sorted in alphabetical order.  Then all registers are pushed
                        together and displayed in 0..n order.  To disable this use
                        -unsorted

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get data from.

        RingName        Specifies one or multiple chip rings to operate on.  For a list
                        of available rings, use the ecmdquery command.

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

       -unsorted [opt] Don't sort ring dump, display in scandef order
```

```
        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Notes:          Output is binary for latches <= 8 bits in length and xl for > 8.

        Examples:       getringdump memctrl int
                        getringdump pu gps_fuse
                        getringdump pu gps_fuse gps_abist cp_ras
```

Examples:

```
> getringdump test sgxbs
test    k0:n0:s0:p00
***********************************************
* ECMD Dump scan ring contents, Tue Nov 25 12:58:44 2003
* Position 0:0, test sgxbs Ring
* Chip EC 9999
* Ring length: 573 bits
USE_GBX.CHANNELINL2(0:150) 0xAAAA00000000000000000000000000000000000
USE_ENT_IOS.ERR_SET_GX_BOUNDARY.RECEIVER_LATCH.L2 0b0
USE_ENT_IOS.ERR_SET_GX_BOUNDARY.DRIVER_LATCH.L2 0b0
USE_ENT_IOS.ERR_SET_GX_BOUNDARY.ENABLE_LATCH.L2 0b0
USE_ENT_IOS.SYSTEM_ERR_BOUNDARY.RECEIVER_LATCH.L2 0b0
USE_ENT_IOS.SYSTEM_ERR_BOUNDARY.DRIVER_LATCH.L2 0b0
USE_ENT_IOS.SYSTEM_ERR_BOUNDARY.ENABLE_LATCH.L2 0b0
....
USE_ENT_IOS.DBUGX_OUT_123_BOUNDARY.MXM.BDYRML.L2Q 0b0
USE_ENT_IOS.DBUGX_OUT_123_BOUNDARY.MXM.BDYDML.L2Q 0b0
USE_ENT_IOS.DBUGX_OUT_123_BOUNDARY.MXM.BDYEML.L2Q 0b0
USE_GBX.CHANNELINL2(151:247) 0x000000000000000000000000
ACCESS.SNPBUF 0b0
ecmd.exe getringdump test sgxbs
```

3.2.7 getscom

Syntax:

```
Syntax: getscom <ChipSelect> <ScanCommAddr> [-v] [-k#] [-n#] [-s#] [-p#] [-c#]
                                [-o<format>] [-exp <data> [-i<format>] [-mask <data>]]

        ECMD:           Core Common Function

        Function:       Gets Scan Communications registers.

        Parameters:
```

```
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get scancomm data from.

        ScanCommAddr    Address in hex.

       Start     [opt] Starting bit position within the scom.  Specify with numbits.

        Numbits   [opt] Number of bits to display. Specify with Start. If Start and
Numbits
                        are not specified, start = 0 and numbits is the bitlength of
                        scancomm data.

        -i<format>[opt] Specifies the format type of expect and mask data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -exp [optional] Provide expected data.  Returns error if expected != actual.  No
                        error/no data returned if expected == actual.

        -mask     [opt] Scom data is AND'ed with the mask bits. Only for use with -exp.

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -v   [optional] Print out Scan Comm bit meaning if available

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > getscom pu 6 -p0,1
                        > getscom memctrl 800009 -exp feed000000000001 -mask
ffff00000000ffff
```

Examples:

```
> getscom test 800000
test   k0:n0:s0:p00       FEEDBEEFAAAAAAAA
ecmd.exe getscom test 800000

> getscom test 800000 -obn8
test   k0:n0:s0:p00
    0           1           2           3
    0123 4567 8901 2345 6789 0123 4567 8901
00: 1111 1110 1110 1101 1011 1110 1110 1111
08: 1010 1010 1010 1010 1010 1010 1010 1010
16: 0000 0000 0000 0000 0000 0000 0000 0000
ecmd.exe getscom test 800000 -obn8
```

3.2.8 getspy

Syntax:

```
Syntax: getspy <ChipSelect> <SpyName> [<Start> <Numbits>] [-exp <value>]
                          [-o<format>] [-i<format>] [-v] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Display specified spy, works for edials, idials and aliases.
                        If a spy ecc error is detected all the ecc groupings will be
                        displayed along with a mask showing which bits are in error.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get data from.

        SpyName         Desired spy name. (case insensitive)

        Start     [opt] Starting bit position within the spy. Specify with Numbits.
                        Only valid with non-enumerated spy's

        Numbits   [opt] Number of bits to get. Specify along with Start.
                        Only valid with non-enumerated spy's

        -exp [optional] Provides an expected value as the last argument. Returns error
                        only if miscompare.
                        Format specified by -i<format>

        -o<format>[opt] Specifies the format type of the output
                        Default format for non-enumerated spys : 'xl'
                        Default format for enumerated spys : 'enum'
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of expect data
                        Default format for non-enumerated spys : 'xl'
                        Default format for enumerated spys : 'enum'
                        Run 'ecmdquery formats' to view available formats

        -v   [optional] Enable verbose printing of spy information.
                        Displays all groups of a spy
                        Displays all ECC Checkers

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------


        Examples:       getspy pu MYALIAS
                        getspy pu REVERSE 16 64 -ox -exp aaaa5555
```

Examples:

3.2.9 gettracearray

Syntax:

```
Syntax: gettracearray <ChipSelect> <ArrayName> [<ArrayName2> ...] [-o<format>]
                                [-nostopstart] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Read the specified chip trace array.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to read array data from.

        ArrayName       Name of array to read from.

        -o<format>[opt] Output Format : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -nostopstart[o] Don't stop and start the trace arrays while dumping.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > gettracearray pu fbc -p0,1
```

3.2.10 pollscom

Syntax:

```
Syntax: pollscom <ChipSelect> <ScanCommAddr> [-exp <data> [-mask <data>]] [-o<format>]
                              [-i<format>] [-limit #[s|c]] [-interval #[s|c]] [-verbose]
                              [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Repeatedly gets Scan Communications registers until expected data
                        matches actual data or until polling limit is reached.

        Parameters:
```

```
        ------------------------------------------------------------------------------
        ChipSelect      Chip to get scancom data from.

        ScanCommAddr    Address in hex.

        -exp      [opt] Provide expected data.  Returns error if expected != actual.  No
                        error/no data returned if expected == actual.

        -mask     [opt] Scom data is AND'ed with the mask bits before checking against
                        expected value.

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of expect and mask data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -limit #  [opt] Max polling number in iterations, seconds, or cycles. To specify
                        in seconds, append an 's' to #.  To specify number of cycles for
                        simulation, append a 'c' to #.  If limit is not specified,
                        defaults to 1000 iterations.  If limit = 0, polls indefinitely.

        -interval # [opt] Time between getscoms. To specify in seconds, append an 's'
                        to #.  To specify number of cycles for simulation, append a
                        'c' to #.  If interval is not specified it defaults to 5secs.

        -verbose  [opt] Prints warning message after each getscom if actual != expected.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.
        ------------------------------------------------------------------------------

        Examples:       pollscom pu 800009 -exp feed000000000001 -limit 30s -interval 10s
-verbose -p1
                        pollscom pu 800009 -exp feed000000000001 -mask ffff00000000ffff
-limit 10
                        pollscom memctrl 400020 -limit 100000c -interval 5000c
```

Examples:

```
> pollscom test 800000 -exp FEED0000 -limit 5
test   k0:n0:s0:p00:c0:t0 Polling address 800000...
ERROR: (ECMD): Data miscompare occured at address: 00800000
test   k0:n0:s0:p00:c0:t0 Polling address 800000...
Actual            : FEEDBEEF AAAAAAAA 00000000
Expected          : FEED0000
ecmd.exe pollscom test 800000 -exp FEED0000 -limit 5
```

3.2.11 putarray

Syntax:

```
Syntax: putarray <ChipSelect> <ArrayName> <ArrayIndex> <ArrayData> [-i<format>]
                                [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Write the specified data to the specified chip array.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to put array data to.

        ArrayName       Name of array to write to.

        ArrayIndex      Array Index in right aligned hex.

        ArrayData       Data to write to array: default "x"
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > putarray pu xgpr 0 deadbeef80000000 -p0,1 -c1
```

Examples:

3.2.12 putbits

Syntax:

```
Syntax: putbits <ChipSelect> <RingName> <StartPos> <Data> [-i<format>] [-b<modifier>]
                                [-k#] [-n#] [-s#] [-p#] [-c#]

        putbits <ChipSelect> <RingName>  -f<filename>       [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function
```

```
        Function:       Put bits to the specified chip ring. The data either comes from
                        the command line or from the file specified with the -f option.

        Paramaters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        RingName        Specifies chip ring to operate on.  For a list of available
                        rings, use the ecmdquery command.

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

        StartPos        Specifies starting bit position in Decimal.

        Data            Bits to insert into chip ring.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'b'
                        Run 'ecmdquery formats' to view available formats

        -b<mod>[opt]    Bit modifier to apply to current ring data.
                        Run 'ecmdquery formats' to view available modifiers

        -f<filename>[o] Specifies the filename that the ring data should be read from
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_ASCII format

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Example:        > putbits pu int 567 ABAB -ix -p0,1 -c1
                        > putbits pu int 23 011X001X -p0 -iX
                        > putbits pu int -fintRing.dump
```

Examples:

3.2.13 putcfam

Syntax:

```
Syntax: putcfam <ChipSelect> <CFAMAddr> [<Start> <Numbits>] <Data> [-i<format>]
                             [-b<modifier>] [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function
```

```
        Function:       Write the specified data to the specified chip CFAM register

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to put CFAM data to.

        CFAMAddr        Address in right aligned hex.

        Start     [opt] Starting bit position within the register.  Specify with numbits.

        Numbits   [opt] Number of bits to insert. Specify with Start. If Start and Numbits
                        are not specified, start = 0 and numbits is calculated from
                        length of data string, rest of cfam register is padded with zeros.

        Data            Data to insert into Register.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -b<mod>[opt]    Bit modifier to apply to current ring data.
                        Run 'ecmdquery formats' to view available modifiers

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > putcfam pu 600000 deadbeef  -p0,1
                        > putcfam memctrl 2010 001001010110 -ib
                        > putcfam l3 40320 00008000 -bor -p12
```

3.2.14 putlatch

Syntax:

```
Syntax: putlatch <ChipSelect> [<RingName>] <LatchName> [<Start> <Numbits>] <Data>
              [-exact | -partial]  [-i<format>] [-b<modifier>] [-k#] [-n#] [-s#] [-p#]
[-c#]

        ECMD:           Core Common Function

        Function:       Puts a value for a specified register into a ring.  The first
                        register in the scandef file that exactly matches the RegName
                        (not including parenthesis) will be used. If the register is
                        broken into multiple lines, the register lengths are
                        concatenated to form one complete register.

                        With the -exact option, eCMD searches for an exact match, and
                        will alter only the first latch that exactly matches (excluding
                        any parentheses). This option also enables searching the scandef
                        with a hash file which greatly increases performance.
```

```
        Parmeters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to put data to.

        RingName        Specifies chip ring to operate on.  For a list of available
                        rings, use the ecmdquery command.

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

        LatchName       Desired latchs to put in the ring.

        Start     [opt] Offset at which to begin writing data.  Also specify Numbits.

        Numbits   [opt] Number of bits to insert.  If not specified, start = 0 and
                        numbits is calculated from the length of the Data string.

        Data            Data to be written to the register specified.
                        Format specified by -i<format>

        -exact    [opt] No pattern matching. Instead, search for exact latch name.
(default)

        -partial  [opt] Use pattern matching to find latch name, can be considerably
slower.

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -b<mod>[opt]    Bit modifier to apply to current ring data.
                        Run 'ecmdquery formats' to view available modifiers

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Example:        putlatch pu cp_fpu GCP.PFPU.FP_UNIT0.FPA_LATCH -ix feed
```

Examples:

3.2.15 putpattern

Syntax:

```
Syntax: putpattern <ChipSelect> <RingType> <Data> [-i<format>]
```

```
                                        [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Puts a repeated pattern to the entire specified chip ring.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        RingName        Specifies chip ring to operate on.  For a list of available
                        rings, use the ecmdquery command.

                        Ex:  ecmdquery rings memctrl
                             ecmdquery rings pu

        Data            32bit pattern to write.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Example:        putpattern pu int FEEDBEEF -p0,1
```

Examples:

3.2.16 putscom

Syntax:

```
Syntax: putscom <ChipSelect> <ScanCommAddr> [<Start> <Numbits>] <Data> [-i<format>]
                             [-b<modifier>] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Write the specified data to the specified chip using scancom.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to put scancom data to.

        ScanCommAddr    Address in right aligned hex.
```

```
        Start     [opt] Starting bit position within the scom.  Specify with numbits.

        Numbits   [opt] Number of bits to insert. Specify with Start. If Start and Numbits
                        are not specified, start = 0 and numbits is calculated from
                        length of data string, rest of Scom register is padded with zeros.

        Data            Data to insert into Scom Register.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -b<mod>[opt]    Bit modifier to apply to current ring data.
                        Run 'ecmdquery formats' to view available modifiers

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > putscom pu 600000 deadbeef80000000  -p0,1 -c1
                        > putscom memctrl 2010 001001010110 -ib
                        > putscom l3 40320 0000800000 -bor -p12
```

Examples:

3.2.17 putspy

Syntax:

```
Syntax: putspy <ChipSelect> <SpyName> [<Start> <Numbits>] <Data>  [-i<format>]
                                [-b<modifier>] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Write data to a spy.  Works with idial, edial and alias spy's.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to write data to.

        SpyName         Desired spy name, (case insensitive)

        Start     [opt] Starting bit position within the spy.  Specify with numbits.
                        Only valid with non-enumerated spy's
```

```
        Numbits   [opt] Number of bits to insert. Specify with Start. If Start and Numbits
                        are not specified, start = 0 and numbits is calculated from
                        length of data string.
                        Only valid with non-enumerated spy's

        Data            Data to put into spy, either raw data or enum name.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data
                        Default format for non-enumerated spys : 'xl'
                        Default format for enumerated spys : 'enum'
                        Run 'ecmdquery formats' to view available formats

        -b<mod>[opt]    Bit modifier to apply to current ring data.
                        Run 'ecmdquery formats' to view available modifiers

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       putspy pu MYALIAS -ixr feedbeeffeeedbeef
                        putspy pu EVERYOTHER 16 4 -ib 1010
                        putspy pu MYEDIAL ENUMVALUE -ienum
```

3.2.18 ringcache

Syntax:

```
Syntax: ringcache enable|disable|flush|query

        ECMD:           Core Common Function

        Function:       Modifies state of internal caching of reads/writes of scan rings


        Parameters:
        ------------------------------------------------------------------------------

        enable          Enables ring caching

        disable         Disables ring caching

        flush           Flushes ring cache and leaves enabled

        query           Displays state of ring cache

        ------------------------------------------------------------------------------
```

```
        Example:        ringcache enable
                        ringcache disable
```

3.2.19 sendcmd

Syntax:

```
Syntax: sendcmd <ChipSelect> <ScanInstrCode> <ScanInstrMod> [-v] [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Send a JTAG Instruction to the chip and display
                        instruction status from previous command

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to send ScanInstrCode to.

        ScanInstrCode   Scan instruction code to be sent (in hex).

        ScanInstrMod    Scan instruction modifier (for ACCESS/CFAM).

        -v   [optional] Verbose mode.  Displays the instruction
                        status in an easy-to-read format.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

      ------------------------------------------------------------------------------

        Notes:          Only valid with JTAG attached chips

        Example:        sendcmd pu 12 C00008 -p0,1
```

Examples:

3.3 Processor Functions

3.3.1 getfpr

Syntax:

```
Syntax: getfpr <FprStartNum> [<numEntries>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]
                                            [-o<format>]

        ECMD:           Core Common Function

        Function:       Gets Processor Architected FPR (Floating Point Register).

        Parameters:
        ------------------------------------------------------------------------------

        FprNum          Fpr Entry to read (Decimal)

        numEntries      Specifies number of entries to get from starting entry (Decimal)

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > getfpr 6 -p0,1
                        > getfpr 0 32 -p10, -t1 -c1
```

3.3.2 getgpr

Syntax:

```
Syntax: getgpr <GprStartNum> [<numEntries>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]
                                            [-o<format>]

        ECMD:           Core Common Function

        Function:       Gets Processor GPR (General Purpose Register).
```

```
        Parameters:
        ------------------------------------------------------------------------------

        GprNum          Gpr Entry to read (Decimal)

        numEntries      Specifies number of entries to get from starting entry (Decimal)

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > getgpr 6 -p0,1
                        > getgpr 0 32 -p10, -t1 -c1
```

3.3.3 getspr

Syntax:

```
Syntax: getspr <SprName> [<SprName> ...] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]
                                 [-o<format>]

        ECMD:           Core Common Function

        Function:       Gets Processor SPR (Special Purpose Register).

        Parameters:
        ------------------------------------------------------------------------------

        SprName         Name of SPR to fetch, multiple SPR's can be listed

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.
```

```
        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > getspr pu nia msr -p0,1
```

3.3.4 putfpr

Syntax:

```
Syntax: putfpr <FprNum> <Data> [-i<format>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]

        ECMD:           Core Common Function

        Function:       Write the specified data to a Processor FPR
                        (Floating Point Register)

        Parameters:
        ------------------------------------------------------------------------------

        FprNum          Fpr Entry to write (Decimal)

        Data            Data to insert into FPR.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > putfpr 10 deadbeef80000000  -p0,1 -c1
```

3.3.5 putgpr

Syntax:

```
Syntax: putgpr <GprNum> <Data> [-i<format>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]

        ECMD:           Core Common Function

        Function:       Write the specified data to a Processor GPR
                        (General Purpose Register)

        Parameters:
        ------------------------------------------------------------------------------

        GprNum          Gpr Entry to write (Decimal)

        Data            Data to insert into GPR.
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > putgpr 10 deadbeef80000000  -p0,1 -c1
```

3.3.6 putspr

Syntax:

```
Syntax: putspr <SprName> [<Start> <Numbits>] <Data> [-i<format>]
                             [-b<modifier>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]

        ECMD:           Core Common Function

        Function:       Write the specified data to a Processor SPR
                        (Special Purpose Register).

        Parameters:
```

```
--------------------------------------------------------------------------------
SprName         Name of SPR to write

Start     [opt] Starting bit position.  Specify with numbits.

Numbits   [opt] Number of bits to insert. Specify with Start. If Start and Numbits
                are not specified, start = 0 and numbits is calculated from
                length of data string, rest of register is padded with zeros.

Data            Data to insert into Register.
                Format specified by -i<format>

-i<format>[opt] Specifies the format type of input data : default 'xl'
                Run 'ecmdquery formats' to view available formats

-b<mod>[opt]    Bit modifier to apply to current ring data.
                Run 'ecmdquery formats' to view available modifiers

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

-n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

-s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

-c#  [optional] Specify which processor core to act on (0 is default). Specify
                -call to act on all cores.

-t#  [optional] Specify which processor thread to act on (0 is default). Specify
                -tall to act on all threads, -talive to act on all alive threads.

--------------------------------------------------------------------------------

Examples:       > putspr nia deadbeef80000000  -p0,1 -c1 -t1
```

3.4 Memory Display/Alter Functions

3.4.1 cacheflush

Syntax:

```
Syntax: cacheflush <ChipSelect> <CacheType> [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Flush a particular cache based on the cache type specified

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to flush the cache on.

        CacheType       One of L1I / L1D / L2 / L3 / L4

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

       -c#  [optional] Specify which core to act on (0 is default). Specify
                        -call to act on all cores.

      ------------------------------------------------------------------------------

      Example:        cacheflush pu L1I -p0,1 -call
```

3.4.2 getmemdma

Syntax:

```
Syntax: getmemdma <MemAddress> <NumBytes> [-k#] [-n#]
                                          [-o<format> | -f[d|b]<filename>]

        ECMD:           Core Common Function

        Function:       Display the contents of mainstore using either DMA's or PSI

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to read from (Hex-Right)

        NumBytes        Number of bytes to fetch (Decimal).

        -o<format>[opt] Specifies the format type of the output : default 'mem'
                        Not valid with -f option.
                        Run 'ecmdquery formats' to view available formats

        -fd <filename>  Specify full path and filename to file in D-Card format to write
```

```
                data from system
                Not valid with -o option.

        -fb <filename>  Specify full path and filename to binary file to write data from
                system
                Not valid with -o option.
                Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

        ------------------------------------------------------------------------------

        Examples:       > getmemdma 1000 128 -p0
                        > getmemdma 1000 128 -fb datafile
```

3.4.3 getmemmemctrl

Syntax:

```
Syntax: getmemmemctrl <MemAddress> <NumBytes> [-k#] [-n#] [-s#] [-p#]
                                              [-o<format> | -f[d|b]<filename>]

        ECMD:           Core Common Function

        Function:       Display the contents of mainstore using the Memory Controller.
                        NOTE : This operation typically is not cache coherent.

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to read from (Hex-Right)

        NumBytes        Number of bytes to fetch (Decimal).

        -o<format>[opt] Specifies the format type of the output : default 'mem'
                        Not valid with -f option.
                        Run 'ecmdquery formats' to view available formats

        -fd <filename>  Specify full path and filename to file in D-Card format to write
                        data from system
                        Not valid with -o option.

        -fb <filename>  Specify full path and filename to binary file to write data from
                        system
                        Not valid with -o option.
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.
```

```
        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getmemmemctrl 1000 128 -p0
                        > getmemmemctrl 1000 128 -fb datafile
```

3.4.4 getmemproc

Syntax:

```
Syntax: getmemproc <MemAddress> <NumBytes> [-k#] [-n#] [-s#] [-p#]
                                           [-o<format> | -f[d|b]<filename>]

        ECMD:           Core Common Function

        Function:       Display the contents of mainstore using the processor

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to read from (Hex-Right)

        NumBytes        Number of bytes to fetch (Decimal).

        -o<format>[opt] Specifies the format type of the output : default 'mem'
                        Not valid with -f option.
                        Run 'ecmdquery formats' to view available formats

        -fd <filename>  Specify full path and filename to file in D-Card format to write
                        data from system
                        Not valid with -o option.

        -fb <filename>  Specify full path and filename to binary file to write data from
                        system
                        Not valid with -o option.
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format


        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getmemproc 1000 128 -p0
                        > getmemproc 1000 128 -fb datafile
```

3.4.5 putmemdma

Syntax:

```
Syntax: putmemdma <MemAddress> <Data> [-i<format>]         [-k#] [-n#] [-s#] [-p#]
        putmemdma <MemAddress> -fb<filename>               [-k#] [-n#] [-s#] [-p#]
        putmemdma -fd<filename>                            [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Write the specified data to mainstore using either DMA's or PSI

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to write to (Hex-Right). Not valid with -fd option

        -fd <filename>  Specify full path and filename to file in D-Card format to load
                        to system

        -fb <filename>  Specify full path and filename to binary file to load to system
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        Data            Data to write into mainstore. Not valid with -f option
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Not valid with -f option
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        ------------------------------------------------------------------------------

        Examples:       > putmemdma 10000 deadbeef80000000  -p0,1
                        > putmemdma 10000 -fb datafile
                        > putmemdma -fd dcardfile
```

3.4.6 putmemmemctrl

Syntax:

```
Syntax: putmemmemctrl <MemAddress> <Data> [-i<format>]         [-k#] [-n#] [-s#] [-p#]
        putmemmemctrl <MemAddress> -fb<filename>               [-k#] [-n#] [-s#] [-p#]
        putmemmemctrl -fd<filename>                            [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Write the specified data to mainstore using the Memory Controller
                        NOTE : This operation typically is not cache coherent.

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to write to (Hex-Right). Not valid with -fd option
```

```
        -fd <filename>  Specify full path and filename to file in D-Card format to load
                        to system

        -fb <filename>  Specify full path and filename to binary file to load to system
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        Data            Data to write into mainstore. Not valid with -f option
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Not valid with -f option
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > putmemmemctrl 10000 deadbeef80000000  -p0,1
                        > putmemmemctrl 10000 -fb datafile
                        > putmemmemctrl -fd dcardfile
```

3.4.7 putmemproc

Syntax:

```
Syntax: putmemproc <MemAddress> <Data> [-i<format>]         [-k#] [-n#] [-s#] [-p#]
        putmemproc <MemAddress> -fb<filename>               [-k#] [-n#] [-s#] [-p#]
        putmemproc -fd<filename>                            [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Write the specified data to mainstore using the Processor

        Parameters:
        ------------------------------------------------------------------------------
        MemAddress      64 Bit address to write to (Hex-Right). Not valid with -fd option

        -fd <filename>  Specify full path and filename to file in D-Card format to load
                        to system

        -fb <filename>  Specify full path and filename to binary file to load to system
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        Data            Data to write into mainstore. Not valid with -f option
                        Format specified by -i<format>

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Not valid with -f option
```

```
                Run 'ecmdquery formats' to view available formats

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

-n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

-s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

------------------------------------------------------------------------------

Examples:       > putmemproc 10000 deadbeef80000000  -p0,1
                > putmemproc 10000 -fb datafile
                > putmemproc -fd dcardfile
```

3.5 Miscellaneous Commands

3.5.1 Deconfig

Syntax:

```
Syntax: deconfig [<ChipSelect>] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function

        Function:       Deconfigure a target from the system.  Can deconfigure
                        cages, nodes, slots, chip positions and cores.

                        NOTE : It typically requires rerunning isteps to fully disable
                        the target

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip name to deconfigure

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > deconfig pu -k0 -n1 -p3
                        > deconfig -k1 -n2
```

3.5.2 ecmdquery

Syntax:

```
Syntax: ecmdquery <Mode> [Mode Options]

        ECMD:           Core Common Function

        Function:       Query information from eCMD

        Parameters:
        ------------------------------------------------------------------------------
        Mode            Query type to perform

        Mode Values
                        rings ChipSelect [ringname] [-k#] [-n#] [-s#] [-p#]
                            - Display all rings available (or the selected ring) for chip

                        scoms ChipSelect [scomaddr] [-k#] [-n#] [-s#] [-p#]
```

```
                            - Display all scoms available (or the selected scom) for chip

                        arrays ChipSelect [arrayname] [-k#] [-n#] [-s#] [-p#]
                            - Display all arrays available (or the selected array) for
chip

                        tracearrays ChipSelect [tracearrayname] [-k#] [-n#] [-s#] [-p#]
                            - Display all tr arrays available (or the selected tr array)
for chip

                        spys ChipSelect [spyname] [-k#] [-n#] [-s#] [-p#]
                            - Display all spys available (or the selected spy) for chip

                        formats
                            - Display help text for all available input/output formats

                        chips [-ep] [-dp | -dc | -dt]
                            - Display all the chips in the system
                            - Use '-ep' to display in an easier to parse format
                            - Use -dp to specify position depth display
                            - Use -dc to specify core depth display
                            - Use -dt to specify trace depth display

                        chipinfo ChipSelect [-k#] [-n#] [-s#] [-p#]
                            - Display info about a particular chip (ex. EC level)

                        version
                            - Display version info about the eCMD Instance you are running

        ------------------------------------------------------------------------------

        Example:        ecmdquery rings pu -p0,1
                        ecmdquery formats
```

Examples:

```
> ecmdquery version
================================================
Dll Type         : Cronus
Dll Product      : Unknown
Dll Environment  : Hardware
Dll Build Date   : Nov 24 2003 14:19:14
Dll Capi Version : .1
================================================
ecmd.exe ecmdquery version

> ecmdquery rings test

Available rings for test     k0:n0:s0:p00        ec 0:
Ring Names                       Address    Length   Mask Chkable BroadSide ClockState
-------------------------------  --------   ------   ---- ------- --------- -----------
idreg                            0x000100   32        N     N         N     UNKNOWN
scancom                          0x000040   64        N     N         N     UNKNOWN
scancomprint                     0x000040   64        N     N         N     UNKNOWN
scancomstat                      0x000080   32        N     N         N     UNKNOWN
bypass32                         0x000010   32        N     N         N     UNKNOWN
access_ec                        0x000200   32        N     N         N     UNKNOWN
crcreg                           0x000020   32        N     N         N     UNKNOWN
gp1                              0x001000   32        N     N         N     UNKNOWN
gp2                              0x002000   32        N     N         N     UNKNOWN
gp3                              0x004000   32        N     N         N     UNKNOWN
testring                         0x800003   128       N     Y         N     UNKNOWN
sgxbs                            0x800009   573       N     Y         N     UNKNOWN
ecmd.exe ecmdquery rings test
```

3.5.3 getconfig

Syntax:

```
Syntax: getconfig [<ChipSelect>] <ConfigName> [-o<format>] [-k#] [-n#] [-s#] [-p#] [-c#]
                                [-dk | -dn | -ds | -dp | -dc]

        ECMD:           Core Common Function

        Function:       Read the specified configuration variable and display to screen

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip to read data from.

        ConfigName      Name of configuration variable to fetch

        -o<format>[opt] Output Format : default 'xl'. Only valid with numeric data
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.
```

```
        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -dk  [optional] Specify cage depth to loop on. When no ChipSelect specified
                        -dk is default

        -dn  [optional] Specify node depth to loop on.

        -ds  [optional] Specify slot depth to loop on.

        -dp  [optional] Specify pos depth to loop on. When ChipSelect specified
                        -dp is default

        -dc  [optional] Specify core depth to loop on.

        ------------------------------------------------------------------------------

        Examples:       > getconfig SIM_BROADSIDE_MODE -dk
                          SIM_BROADSIDE_MODE = none
                        > getconfig pu PLL_TUNE -dp
                          pu         k0:n0:s0:p00
                          PLL_TUNE = 3
```

3.5.4 makespsystemcall

Syntax:

```
Syntax: makespsystemcall "<Command>"    [-k#] [-n#]

        ECMD:           Core Common Function

        Function:       Run a command on the SE/SP and print the output to stdout.

        Parameters:
        ------------------------------------------------------------------------------
        Command         Command to run on the SE/SP. Place command in ""'s to avoid it
                      being parsed.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        ------------------------------------------------------------------------------

        Examples:       > makespsystemcall "ls"
```

3.5.5 reconfig

Syntax:

```
Syntax: reconfig [<ChipSelect>] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           Core Common Function
```

```
        Function:       Reconfigure a previously deconfigured target from the system.
                        Can reconfigure cages, nodes, slots, chip positions and cores.

                        NOTE : It typically requires rerunning isteps to fully enable
                        the target

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip name to reconfigure

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > reconfig pu -k0 -n1 -p3
                        > reconfig -k1 -n2
```

3.5.6 setconfig

Syntax:

```
Syntax: setconfig [<ChipSelect>] <ConfigName> <Value> [-i<format>] [-k#] [-n#] [-s#]
[-p#] [-c#]
                                [-dk | -dn | -ds | -dp | -dc]

        ECMD:           Core Common Function

        Function:       Write the specified configuration variable

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip to write data to.

        ConfigName      Name of configuration variable to write

        Value           Value to set configuration variable to

        -i<format>[opt] Output Format : default is ascii.
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
```

```
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

-c#  [optional] Specify which processor core to act on (0 is default). Specify
                -call to act on all cores.

-dk  [optional] Specify cage depth to loop on. When no ChipSelect specified
                -dk is default

-dn  [optional] Specify node depth to loop on.

-ds  [optional] Specify slot depth to loop on.

-dp  [optional] Specify pos depth to loop on. When ChipSelect specified
                -dp is default

-dc  [optional] Specify core depth to loop on.

-------------------------------------------------------------------------------

Examples:       > setconfig SIM_BROADSIDE_MODE scan -dk
                > setconfig pu PLL_TUNE 3 -id -dp
```

3.6 System Functions

3.6.1 istep

Syntax:

```
Syntax: istep
        istep <StepName1>[,<StepName2> ...]
        istep <StartStep>..<EndStep>
        istep -s<StepNumbers>
        istep -i<SkipSteps>

        ECMD:           Core Common Function

        Function:       Run iSteps on the system. Default is to run all isteps

        NOTE:           Some plugins support 'istep list' to display all available steps

        Parameters:
        ------------------------------------------------------------------------------
        <Stepname>      Comma seperated list of names of steps to run
                        (ex 'proc_cfaminit')

       <StartStep>     Start Step to run

        <EndStep>       Ending Step to run

        <StepNum>       Step numbers to run (same format as -p arg) (ex -s0,1..5,10)

        <SkipSteps>     Step numbers to NOT run (same format as -p arg) (ex -i0,1..5,10)

        ------------------------------------------------------------------------------

        Examples:       istep
                        istep proc_cfaminit,proc_scaninit
                        istep proc_cfaminit..proc_scominit
                        istep -s0,1..5,10,20
                        istep -i2,3
                      istep list  (NOTE:  only supported by some plugins)
```

3.6.2 setclockspeed

Syntax:

```
Syntax: setclockspeed <ClockType> <Speed> [-steer]    [-k#]

        ECMD:           Core Common Function

        Function:       Change the speed of a clock in the system.

        Parameters:
        ------------------------------------------------------------------------------
        ClockType       Clock type to program in system:
                         - pu_refclock          <-- Processor reference clock
                         - memctrl_refclock     <-- Memory controller reference clock

        Speed           New speed value to program can be specified in mhz (100mhz) or
                        in microseconds (10us)
```

```
        -steer [opt]    Steer to new value.  Default is to move in one operation.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        ------------------------------------------------------------------------------

        Examples:       > setclockspeed pu_refclock 120mhz
                        > setclockspeed memctrl_refclock 10us
```

3.6.3 startclocks

Syntax:

```
Syntax: startclocks                                     [-force] [-k#] [-n#] [-s#]
        startclocks -domain <ConvenienceClockDomain>] [-force] [-k#] [-n#] [-s#]
        startclocks <ChipSelect> [<ClockDomain>]      [-force] [-k#] [-n#] [-s#] [-p#]
[-c#]

        ECMD:           Core Common Function

        Function:       Start clocks on a particular domain/chip or the entire system

                        NOTE : This command typically does not start clocks in a way
                        that the chip will be functional to run instructions.  To do
                        that use the isteps command to initialize the system.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip name to start clocks on

        ClockDomain     Clock domain to start on chip target. Must specify with ChipSelect
                        Names are documented in the scandef for the targetted chip.

        -domain         Specifies we are using a convenience clock domain.

        ConvenienceClockDomain The convenience clock domains are documented in the eCMD
                        System specific document for your system type. Must be specified
                        with -domain

        -force    [opt] Force clocks on regardless of current state

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > startclocks pu -k0 -n1 -p3
```

```
                        > startclocks pu FBC_DOMAIN -k1 -n2
                        > startclocks
                        > startclocks -domain ALL_PU_CHIPS
```

3.6.4 stopclocks

Syntax:

```
Syntax: stopclocks                                      [-force] [-k#] [-n#] [-s#]
        stopclocks -domain <ConvenienceClockDomain>] [-force] [-k#] [-n#] [-s#]
        stopclocks <ChipSelect> [<ClockDomain>]      [-force] [-k#] [-n#] [-s#] [-p#]
[-c#]

        ECMD:           Core Common Function

        Function:       Stop clocks on a particular domain/chip or the whole system.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip name to stop clocks on

        ClockDomain     Clock domain to stop on chip target. Must specify with ChipSelect
                        Names are documented in the scandef for the targetted chip.

        -domain         Specifies we are using a convenience clock domain.

        ConvenienceClockDomain The convenience clock domains are documented in the eCMD
                        System specific document for your system type. Must be specified
                        with -domain

        -force    [opt] Force clocks off regardless of current state

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > stopclocks pu -k0 -n1 -p3
                        > stopclocks pu FBC_DOMAIN -k1 -n2
                        > stopclocks
                        > stopclocks -domain ALL_PU_CHIPS
```

3.7 GPIO Commands

3.7.1 getgpiolatch

Syntax:

```
Syntax: getgpiolatch <ChipSelect> <EngineId> <Pin> <Mode>
                     [-k#] [-n#] [-s#] [-p#] [-o<format>]

        ECMD:           Core Common Function

        Function:       Read data from the specified latch.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        EngineId        Engine number to operate on in decimal

        Pin             Pin number to operate on in decimal

        Mode            Mode to use on pin.
                        Values : IN(Input) OD(Open Drain) OS(Open Source) PP(Push Pull)

        -o<format>[opt] Specifies the format type of the output : default 'b'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getgpiolatch fsp 0 1 OD
```

3.7.2 getgpiopin

Syntax:

```
Syntax: getgpiopin <ChipSelect> <EngineId> <Pin> [-o<format>] [-k#] [-n#] [-s#] [-p#]
        getgpiopin <ChipSelect> <EngineId> -mask <MaskValue> [-o<format>] [-i<format>]
                                                             [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Read the value of the pin/pins specified

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.
```

```
        EngineId        Engine number to operate on in decimal

        Pin             Pin number to operate on in decimal

        -mask     [opt] To read from multiple pins specify a mask value of pins to read

        -o<format>[opt] Specifies the format type of the output : default 'b'
                        Run 'ecmdquery formats' to view available formats

        -i<format>[opt] Specifies the format type of the input : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getgpiopin fsp 0 1
                        > getgpiopin fsp 0 -mask FFFE0FF7
```

3.7.3 gpioconfig

Syntax:

```
Syntax: gpioconfig <ChipSelect> <EngineId> <Pin> <Mode> [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Configures the specified GPIO pin to the specified mode.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        EngineId        Engine number to operate on in decimal

        Pin             Pin number to operate on in decimal

        Mode            Mode to set on pin.
                        Values : IN(Input) OD(Open Drain) OS(Open Source) PP(Push Pull)

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.
```

```
        ------------------------------------------------------------------------------

        Examples:       > gpioconfig fsp 0 1 IN
```

3.7.4 putgpiolatch

Syntax:

```
Syntax: putgpiolatch <ChipSelect> <EngineId> <Pin> <Mode> <Data>
                        [-k#] [-n#] [-s#] [-p#] [-i<format>]
        putgpiolatch <ChipSelect> <EngineId> -mask <MaskValue> <Mode> <Data>
                        [-k#] [-n#] [-s#] [-p#] [-i<format>]

        ECMD:           Core Common Function

        Function:       Write data to specified latch/latchs.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        EngineId        Engine number to operate on in decimal

        Pin             Pin number to operate on in decimal

        Data            Data to write to latch(s)

        Mode            Mode to use on pin.
                        Values : IN(Input) OD(Open Drain) OS(Open Source) PP(Push Pull)

        -mask     [opt] To write to multiple pins specify a mask value of latchs to write

        -i<format>[opt] Specifies the format type of the input : default 'b'
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > putgpiolatch fsp 0 1 OD 1
                        > putgpiolatch fsp 0 1 -mask FFEC0FF7 PP 01280012 -ix
```

3.8 I2C Commands

3.8.1 geti2c

Syntax:

```
Syntax:
        WITHOUT OFFSET:
        geti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> <Bytes>
                 [-k#] [-n#] [-s#] [-p#] [-o<format> | -f<filename>] [-busspeed <speed>]
        WITH OFFSET:
        geti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> <Bytes> <Offset> <FieldSize>
                 [-k#] [-n#] [-s#] [-p#] [-o<format> | -f<filename>] [-busspeed <speed>]

        ECMD:           Core Common Function

        Function:       Read I2C data from the specified engine/port/device for the
                        specified number of bytes.

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        EngineId        Engine number to operate on in decimal

        Port            Engine port number to operate on in decimal

        SlaveAddress    Slave Device Address in hex

        Bytes           Bytes to read from device

        Offset          Offset into the slave device

        FieldSize       Byte width of the offset

        -busspeed [opt] Specifies the bus speed to run i2c in khz : default 400
                        Valid values are 400, 100, 50

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Run 'ecmdquery formats' to view available formats

        -f<filename>[o] Specifies the filename that the data should be written to
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format
                        Incase multiple chip positions are specified the target string
will
                        be postfixed. E.g. filename "datafile" becomes "datafile.k0n0s0p0"

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > geti2c fsp 0 1 A0 100 -busspeed 100
```

```
                        > geti2c fsp 0 1 A0 100 -foutput
                        > geti2c fsp 0 1 A0 100 2 10
```

3.8.2 i2creset

Syntax:

```
Syntax: i2creset <ChipSelect> <EngineId> <Port> [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Resets the specified engine port

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        EngineId        Engine number to operate on in decimal

        Port            Engine port number to operate on in decimal

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > i2creset fsp 0 1
```

3.8.3 puti2c

Syntax:

```
Syntax:
        WITHOUT OFFSET:
        puti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> <Data>
                        [-k#] [-n#] [-s#] [-p#] [-i<format>] [-busspeed <speed>]
        puti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> -f<filename>
                        [-k#] [-n#] [-s#] [-p#] [-busspeed <speed>]

        WITH OFFSET:
        puti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> <Data> <Offset> <FieldSize>
                        [-k#] [-n#] [-s#] [-p#] [-i<format>] [-busspeed <speed>]
        puti2c <ChipSelect> <EngineId> <Port> <SlaveAddress> -f<filename> <Offset>
<FieldSize>
                        [-k#] [-n#] [-s#] [-p#] [-busspeed <speed>]

        ECMD:           Core Common Function

        Function:       Write I2C data to the specified engine/port/device.
```

```
Parameters:
------------------------------------------------------------------------------
ChipSelect      Specifies the chip to operate on.

EngineId        Engine number to operate on in decimal

Port            Engine port number to operate on in decimal

SlaveAddress    Slave Device Address in hex

Data            Data to write to device

Offset          Offset into the slave device

FieldSize       Byte width of the offset

-busspeed [opt] Specifies the bus speed to run i2c in khz : default 400
                Valid values are 400, 100, 50

-i<format>[opt] Specifies the format type of the input : default 'xl'
                Run 'ecmdquery formats' to view available formats

-f<filename>[o] Specifies the filename that the data should be read from
                Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

-n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

-s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

------------------------------------------------------------------------------

Examples:       > puti2c fsp 0 1 A0 FFAABB -busspeed 100
                > puti2c fsp 0 1 A0 -fdata
                > puti2c fsp 0 1 A0 2 10 -fdata
```

3.9 VPD Commands

3.9.1 getvpdimage

Syntax:

```
Syntax: getvpdimage <ChipSelect> <NumBytes> -o<format>         [-k#] [-n#] [-s#] [-p#]
        getvpdimage <ChipSelect> <NumBytes> -fb<filename>      [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Display the contents of a module VPD image.

        Parameters:
        ------------------------------------------------------------------------------
       ChipSelect      Chip to get the VPD image from

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Not valid with -f option.
                        Run 'ecmdquery formats' to view available formats

        -fb <filename>  Specify full path and filename to binary file to write data from
                        system
                        Not valid with -o option.
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format
                        Incase multiple chip positions are specified the target string
will
                        be postfixed. E.g. filename "datafile" becomes "datafile.k0n0s0p0"

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getvpdimage pu 128 -p0
                        > getvpdimage l3cache 128 -fb datafile
```

3.9.2 getvpdkeyword

Syntax:

```
Syntax: getvpdkeyword <ChipSelect> <RecordName> <Keyword> <NumBytes> -o<format>    [-k#]
[-n#] [-s#] [-p#]
        getvpdkeyword <ChipSelect> <RecordName> <Keyword> <NumBytes> -fb<filename> [-k#]
[-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Display the contents of a module VPD record.
```

```
        Parameters:
        ------------------------------------------------------------------------------
       ChipSelect      Chip to get the module VPD record contents from

        RecordName      VPD Record Name (in quotes)

        KeyWord         VPD Keyword (in quotes)

        -o<format>[opt] Specifies the format type of the output : default 'xl'
                        Not valid with -f option.
                        Run 'ecmdquery formats' to view available formats

        -fb <filename>  Specify full path and filename to binary file to write data from
                        system
                        Not valid with -o option.
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format
                        Incase multiple chip positions are specified the target string
will
                        be postfixed. E.g. filename "datafile" becomes "datafile.k0n0s0p0"

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > getvpdkeyword pu "record" "key" 128 -p0
                        > getvpdkeyword l3cache "record" "key" 128 -fb datafile
```

3.9.3 putvpdimage

Syntax:

```
Syntax: putvpdimage <ChipSelect> <Data> [-i<format>] [-k#] [-n#] [-s#] [-p#]
        putvpdimage <ChipSelect> -fb<filename>       [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Write the specified data to module VPD

        Parameters:
        ------------------------------------------------------------------------------
       ChipSelect      Chip to write the VPD image into

        Data            Data to write into VPD. Not valid with -f option
                        Format specified by -i<format>

        -fb <filename>  Specify full path and filename to binary file to load to system
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Not valid with -f option
                        Run 'ecmdquery formats' to view available formats
```

```
        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Examples:       > putvpdimage pu deadbeef80000000  -p0,1
                        > putvpdimage l3cache -fb datafile
```

3.9.4 putvpdkeyword

Syntax:

```
Syntax: putvpdkeyword <ChipSelect> <RecordName> <Keyword> <Data> [-i<format>] [-k#] [-n#]
[-s#] [-p#]
        putvpdkeyword <ChipSelect> <RecordName> <Keyword> -fb<filename>       [-k#] [-n#]
[-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Write the specified data to module VPD keyword

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Chip to write the VPD data into

       RecordName      VPD Record Name (in quotes)

        KeyWord         VPD Keyword (in quotes)

        Data            Data to write into VPD. Not valid with -f option
                        Format specified by -i<format>

        -fb <filename>  Specify full path and filename to binary file to load to system
                        Uses ecmdDataBuffer::ECMD_SAVE_FORMAT_BINARY_DATA format

        -i<format>[opt] Specifies the format type of input data : default 'xl'
                        Not valid with -f option
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.
```

```
--------------------------------------------------------------------------------

Examples:       > putvpdkeyword pu "record" "key" deadbeef80000000  -p0,1
                > putvpdkeyword l3cache "record" "key" -fb datafile
```

3.10 Simulation Commands

3.10.1 simaet

Syntax:

```
Syntax: simaet on | off | flush

        ECMD:           Core Common Function

        Function:       Start/Stop Simulation AET logging

        Parameters:
        ------------------------------------------------------------------------------
        on              Enable AET

        off             Disable AET

        flush           Flush AET to disk

        ------------------------------------------------------------------------------

        Example:        simaet on
                        simaet off
```

Examples:

3.10.2 simcheckpoint

Syntax:

```
Syntax: simcheckpoint <checkpoint name>

        ECMD:           Core Common Function

        Function:       Store a checkpoint to the specified file

        Parameters:
        ------------------------------------------------------------------------------
        checkpointname  name to store checkpoint under

        ------------------------------------------------------------------------------

        Example:        simcheckpoint boot
```

Examples:

3.10.3 simclock

Syntax:

```
Syntax: simclock <cycles>

        ECMD:           Core Common Function

        Function:       Clock the simulator

        Parameters:
        ------------------------------------------------------------------------------
        cycles          Number of cycles to clock the simulator

        ------------------------------------------------------------------------------

        Example:        simclock 1000
```

Examples:

3.10.4 simecho

Syntax:

```
Syntax: simecho <message>

        ECMD:           Core Common Function

        Function:       Echo a string to stdout as well as sim logs

        Parameters:
        ------------------------------------------------------------------------------
        message         String to echo to sim

        ------------------------------------------------------------------------------

        Example:        simecho "Hello"
```

Examples:

3.10.5 simexit

Syntax:

```
Syntax: simexit [<rc> <message>]

        ECMD:           Core Common Function

        Function:       Close down a simulation

        Parameters:
        ------------------------------------------------------------------------------

        rc        [opt] Testcase failure return code to pass to simulation

        message   [opt] Testcase failure message to pass to simulation
```

```
        ------------------------------------------------------------------------------

        Example:        simexit
```

Examples:

3.10.6 simEXPECTFAC

Syntax:

```
Syntax: simEXPECTFAC <facname> <data> <length> [<row> <offset>] [-i<format>]

        ECMD:           Core Common Function

        Function:       Perform expect on simulation facility using name

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            Data for expect on facility
                        Format specified by -i<format>

        length          Bit length of data

        row  [optional] Facility row

        offset    [opt] Facility offset

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simEXPECTFAC TITAN.TCKFREQ C 4
```

Examples:

3.10.7 simexpecttcfac

Syntax:

```
Syntax: simexpecttcfac <facname> <data>  [<row> | -subset <startbit> <numbits>]
-i<format>

        ECMD:           Core Common Function

        Function:       Perform expect on a TCFAC Facility

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name
```

```
        data            Data for expect
                        Format specified by -i<format>

        row  [optional] Facility row - not valid with -subset

        startbit  [opt] Facility offset - not valid with row

        numbits   [opt] Number of bits from startbit to read - not valid with row

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simexpecttcfac TITAN.TCKFREQ F
```

Examples:

3.10.8 simgetcurrentcycle

Syntax:

```
Syntax: simgetcurrentcycle

        ECMD:           Core Common Function

        Function:       Retrieve the current cycle count

        Parameters:
        ------------------------------------------------------------------------------

        ------------------------------------------------------------------------------

        Example:        simgetcurrentcycle
```

Examples:

3.10.9 simGETFAC

Syntax:

```
Syntax: simGETFAC <facname> <length> [<row> <offset>] [-o<format>]

        ECMD:           Core Common Function

        Function:       Read a Simulation Facility using a facility name

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        length          Bit length of symbol to read
```

```
        row  [optional] Facility row

        offset    [opt] Facility offset

        -o<format>[opt] Specifies the format type of the output : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simGETFAC TITAN.TCKFREQ 4
```

Examples:

3.10.10 simGETFACX

Syntax:

```
Syntax: simGETFACX <facname> <length> [<row> <offset>]

        ECMD:           Core Common Function

        Function:       Read a Simulation Facility using a facility name
                        Displaying Xstate data. format: 'bX'

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        length          Bit length of symbol to read

        row  [optional] Facility row

        offset    [opt] Facility offset


        ------------------------------------------------------------------------------

        Example:        simGETFACX TITAN.TCKFREQ 4
```

Examples:

3.10.11 simgettcfac

Syntax:

```
Syntax: simgettcfac <facname> [<row> | -subset <startbit> <numbits>] [-o<format>]

        ECMD:           Core Common Function

        Function:       Read a TCFAC Facility

        Parameters:
        ------------------------------------------------------------------------------
```

```
        facname         Must be a facility name

        row  [optional] Facility row - not valid with -subset

        startbit  [opt] Facility offset - not valid with row

        numbits   [opt] Number of bits from startbit to read - not valid with row

        -o<format>[opt] Specifies the format type of the output : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simgettcfac TITAN.TCKFREQ
```

Examples:

3.10.12 simgethierarchy

Syntax:

```
Syntax: simgethierarchy <ChipSelect> [-k#] [-n#] [-s#] [-p#]

        ECMD:           Core Common Function

        Function:       Retrieve the Simulation hierarchy for a give chip position

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect      Specifies the chip to operate on.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        ------------------------------------------------------------------------------

        Example:        > simgethierarchy pu -p2
                        Model hierarchy for target pu      k0:n0:s0:p00       is :
                        P0.B.S.LT.EM.
```

3.10.13 siminit

Syntax:

```
Syntax: siminit [<checkpoint>]

        ECMD:           Core Common Function
```

```
        Function:       Initialize the simulation

        Parameters:
        ------------------------------------------------------------------------------
        checkpoint[opt] Name of checkpoint to load

        ------------------------------------------------------------------------------

        Example:        siminit
                        siminit boot
```

Examples:

3.10.14 simPUTFAC

Syntax:

```
Syntax: simPUTFAC <facname> <data> <length> [<row> <offset>] [-i<format>]

        ECMD:           Core Common Function

        Function:       Write a simulation facility using a name

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            Data to write to facility
                        Format specified by -i<format>

        length          Bit length of symbol to write

        row  [optional] Facility row

        offset    [opt] Facility offset

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simPUTFAC TITAN.TCKFREQ C 4
```

Examples:

3.10.15 simPUTFACX

Syntax:

```
Syntax: simPUTFACX <facname> <data> [<row> <offset>]

        ECMD:           Core Common Function
```

```
        Function:       Write a simulation facility using a name.
                        Write with Xstate data: format 'bX'

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            X-State Data to write to facility

        row  [optional] Facility row

        offset    [opt] Facility offset


        ------------------------------------------------------------------------------

        Example:        simPUTFACX TITAN.TCKFREQ 11XX01
```

Examples:

3.10.16 simputtcfac

Syntax:

```
Syntax: simputtcfac <facname> <data> [<row> <# of rows>] -i<format>

        ECMD:           Core Common Function

        Function:       Put a TCFAC Facility

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            Data to put
                        Format specified by -i<format>

        row  [optional] Facility row

        # of rows [opt] Number of rows to put

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simputtcfac TITAN.TCKFREQ F
```

Examples:

3.10.17 simrestart

Syntax:

```
Syntax: simrestart <checkpoint name>

        ECMD:           Core Common Function

        Function:       Load a checkpoint from the specified file

        Parameters:
        ------------------------------------------------------------------------------
        checkpointname  name to load checkpoint from

        ------------------------------------------------------------------------------

        Example:        simrestart boot
```

Examples:

3.10.18 simSTKFAC

Syntax:

```
Syntax: simSTKFAC <facname> <data> <length> [<row> <offset>] [-i<format>]

        ECMD:           Core Common Function

        Function:       Stick a simulation facility using name

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            Data for operation
                        Format specified by -i<format>

        length          Bit length of data

        row  [optional] Facility row

        offset    [opt] Facility offset

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simSTKFAC TITAN.TCKFREQ C 4
```

Examples:

3.10.19 simstktcfac

Syntax:

```
Syntax: simstktcfac <facname> <data> <length> [<row> <# of rows>] -i<format>

        ECMD:           Core Common Function

        Function:       Stick a TCFAC Facility

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name

        data            Data to stick
                        Format specified by -i<format>

        length          Bit length of data

        row  [optional] Facility row

        # of rows [opt] Number of rows to stick

        -i<format>[opt] Specifies the format type of input data : default 'xr'
                        Run 'ecmdquery formats' to view available formats

        ------------------------------------------------------------------------------

        Example:        simstktcfac TITAN.TCKFREQ F 4
```

Examples:

3.10.20 simSUBCMD

Syntax:

```
Syntax: simSUBCMD <command>

        ECMD:           Core Common Function

        Function:       Run an rtx SUBCMD

        Parameters:
        ------------------------------------------------------------------------------
        command         rtx command to run

        ------------------------------------------------------------------------------

        Example:        simSUBCMD run left
```

Examples:

3.10.21 simtckinterval

Syntax:

```
Syntax: simtckinterval <interval>
```

```
        ECMD:           Core Common Function

        Function:       Adjust the TCK Interval

        Parameters:
        ------------------------------------------------------------------------------
        interval        New Interval

        ------------------------------------------------------------------------------

        Example:        simtckinterval 18
```

3.10.22 simUNSTICK

Syntax:

```
Syntax: simUNSTICK <facname> <length> [<row> <offset>]

        ECMD:           Core Common Function

        Function:       Unstick a Simulation Facility using a name

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility symbol name

        length          Bit length of symbol

        row  [optional] Facility row

        offset    [opt] Facility offset

        ------------------------------------------------------------------------------

        Example:        simUNSTICK TITAN.TCKFREQ 4
```

Examples:

3.10.23 simunsticktcfac

Syntax:

```
Syntax: simunsticktcfac <facname> [<data> <length> [<row> <# of rows>]] -i<format>

        ECMD:           Core Common Function

        Function:       Unstick a TCFAC Facility

        Parameters:
        ------------------------------------------------------------------------------
        facname         Must be a facility name
```

```
data      [opt] Data to write with unstick
                Format specified by -i<format>

length    [opt] Bit length of data

row  [optional] Facility row

# of rows [opt] Number of rows to unstick

-i<format>[opt] Specifies the format type of input data : default 'xr'
                Run 'ecmdquery formats' to view available formats

-------------------------------------------------------------------------------

Example:        simunsticktcfac TITAN.TCKFREQ
```

Examples:

4 CIP (Cronus/IP) Extension Commands

These are functions that are only support by Cronus and GFW on IP Series Systems.

4.1 Processor Functions

4.1.1 cipbreakpoint

Syntax:

```
Syntax: cipbreakpoint set|clear <Type> <Address> [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]

        ECMD:           CIP (Cronus/IP) Extension

        Function:       Set|Clear a processor hardware breakpoint using a real address

        Parameters:
        ------------------------------------------------------------------------------
        set/clear       Set or Clear the breakpoint

        Type            Type of breakpoint to use either (IABR, DABR, CIABR)

        Address         64 bit address of breakpoint (Hex-Right)

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------

        Examples:       > cipbreakpoint set IABR 8000000000FAC230
```

4.1.2 cipinstruct

Syntax:

```
Syntax: cipinstruct start|sreset|stop|step [<steps>] [all] [-v] [-k#] [-n#] [-s#] [-p#]
[-c#] [-t#]

        ECMD:           CIP (Cronus/IP) Extension

        Function:       Start/Stop/Step Processor instruction execution.  Processors are
                        looped upon to perform action they are not performed to all
```

```
                processors in sync.

 Parameters:
 ------------------------------------------------------------------------------
 start/stop/step/sreset Start, stop, or step the processors.

 steps     [opt] Number of steps to execute

 all  [optional] Start/Stop all processors configured in system

 -v   [optional] Print out IAR after each instruction step

 -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                 to act on all cages.

 -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                 to act on all nodes.

 -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                 to act on all slots.

 -p#  [optional] Specify which chip position to act on (0 is default). Specify
                 -pall to act on all chips.

 -c#  [optional] Specify which processor core to act on (0 is default). Specify
                 -call to act on all cores.

 -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                 -tall to act on all threads, -talive to act on all alive threads.

 ------------------------------------------------------------------------------

 Examples:       > cipinstruct step 10 -p2 -c1
                 > cipinstruct start all
                 > cipinstruct stop -p3 -c0
```

5 CRO (Cronus) Extension Commands

These are functions that are only supported by Cronus.

5.1 Memory Display/Alter Commands

5.1.1 crodmarandtest

Syntax:

```
Syntax: crodmarandtest NumLoops [-f<filename> | StartAddr EndAddr [AccessRest]] [-s#]


         ECMD:           CRO (Cronus) Extension

        Function:      Runs crodmarandtest - Dma/PSI Exerciser

        IMPORTANT NOTE:       crodmarandtest is limited to < 4G addresses because of the
FSP

        Parameters:
        ------------------------------------------------------------------------------
        NumLoops       Number of loops to execute. Set to -1 for infinite

        -s#  [optional]       Max Size of DMA Transfers in Decimal - DEFAULT 32K

        -f<> [optional]       Address Map file

         -proc           Use putMemProc/getMemProc rather than putMemDma/getMemDma

        StartAddr      Start of Address range in Hex

        EndAddr               End of Address range in Hex - enter 'MAX' to default to
                       Maximum memory, See below.

        AccessRest[opt]       Access Restrictions to this address range
                       'W'   - Write Only
                       'R'   - Read Only
                       'N'   - None - Does Data Compares - DEFAULT
                       'AW'  - Writes address as data for entire range - see NOTE below
                       'AR'  - Reads and expects data to be address - see NOTE below
                       'AWR' - Writes address as data for entire range, then compares
entire range
                                - see NOTE below
        ------------------------------------------------------------------------------

        Examples:      crodmarandtest 10 0 100000
                       crodmarandtest -1 100000 200000 W -s1024
                       crodmarandtest -1 100000 MAX R -s4096
                       crodmarandtest 10 -fmem.map

        MEMORY MAP FILE FORMAT:

        #START   END      - PERM   COMMENTS
        00000000 00003FFF x R Interrupt Handlers
        00004000 00007FFF x W Supervisor
        0000D000 0000DFFF N A UNUSED

        NOTE: The PERM column is for Access permissions, either R(ead) W(rite) or A(ny)
              The column with a '-' is unused for dmaXer.
```

```
              The PERM's AW, AR, AWR are not supported in the memory map files
              '#' starts comment lines

       ------------------------------------------------------------------------------

       NOTE: For speed reasons, the address written to memory using the 'AW' 'AR' 'AWR'
tests
               will be byte swapped in memory. Example: 0xFEEDBEEF will be in memory as
               0xEFBEEDFE.
```

5.1.2 crogetl2data

Syntax:

```
Syntax: crogetl2data Slice CongClass Set [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Displays full cache line of L2 cache data.

       Note:          Data is displayed in hex as follows:

                      word0 word1 bit65 word2 word3 bit65
                      word4 word5 bit65 word6 word7 bit65
                      ..


        Parameters:
        ------------------------------------------------------------------------------
        Slice                 A or B.

        CongrClass    Congruence class(0:7).  Right-aligned hex.

        Set           Set(0:7)  P6 L2 cache is 8-way set associative.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > crogetl2data b 3 1 -p0
                        > crogetl2data a 8 8 -p4
```

5.1.3 crogetl2dir

Syntax:

```
Syntax: crogetl2dir Slice CongClass Set [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Displays an L2 directory entry.

        Parameters:
        ------------------------------------------------------------------------------
        Slice                A or B.

        CongrClass    Congruence class(0:7).  Right-aligned hex.

        Set           Set(0:7)  P6 L2 cache is 8-way set associative.

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > crogetl2dir b 3 1 -p0
                        > crogetl2dir a 8 8 -p4
```

5.1.4 crogetl2

Syntax:

```
Syntax: crogetl2 Address [Num] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Displays cache lines from Level 2 processor cache.  Looks for
valid
                       entries in the L2 directory to match the tag id given in the real
address.

        Parameters:
        ------------------------------------------------------------------------------
        Address       Real address(0:63) from which to get data.  Right-aligned hex.

        Num  [optional]      Decimal number of cache lines to display (1 is default),
starting
                        at Address.
```

```
        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > crogetl2 100 3 -p0
                        > crogetl2 ffb0001f00 -p1
```

5.1.5 croputl2data

Syntax:

```
Syntax: croputl2data Slice CongClass Set Data[-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Writes up to a full cache line of L2 cache data.
                       Data previously stored in the entry is over-written.

        Parameters:
        ------------------------------------------------------------------------------
        Slice                A or B.

        CongrClass    Congruence class(0:7).  Right-aligned hex.

        Set           Set(0:7)  P6 L2 cache is 8-way set associative.

       Data           Words are in hex.  Bit65 is 0 or 1.  Format is as follows:

                          word0 word1 b65 word2 word3 b65 [word4 word5 b65...]


        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------
```

```
        Examples:       > croputl2data b 3 1 FEEDBEEF FEEDB0B0 1 11223344 55667788 0 -p1
                        > croputl2data a 8 8 BFBFBFBF DFDFDFDF 1 AFAFAFAF AFAFAFAF 1 -p4
```

5.1.6 croputl2dir

Syntax:

```
Syntax: croputl2dir Slice CongClass Set Data [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Writes an L2 directory entry.  Data previously stored in the
entry
                       is over-written.

        Parameters:
        ------------------------------------------------------------------------------
        Slice                A or B.

        CongrClass    Congruence class(0:7).  Right-aligned hex.

        Set           Set(0:7)  P6 L2 cache is 8-way set associative.

       Data           Right-aligned hex, bits(0:37) of the directory entry

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > croputl2dir b 3 1 0FF1238068 -p0
                        > croputl2dir a 8 8 0FFFF4334C -p4
```

5.1.7 croputl2

Syntax:

```
Syntax: croputl2 Address Set Data [-mesi mesiState] [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Replaces up to one cache line in Level 2 processor cache.

        Parameters:
```

```
        ------------------------------------------------------------------------------
        Address       Real address(0:63) from which to get data.  Right-aligned hex.

       Set            Set(0:7)  P6 L2 cache is 8-way set associative.

       Data           Words are in hex.  Bit65 is 0 or 1.  Format is as follows:

                          word0 word1 b65 word2 word3 b65 [word4 word5 b65...]

        -mesi [optional] Mesi state setting (M, Modified is default):
                         I  = Invalid
                         S  = Shared
                          SI = SI Shared
                         T  = Tagged
                         TE = Tagged Exclusive
                          M  = Modified
                         ME = Modified Exclusive
                         MU = Unsolicitied Modified

        -k#   [optional] Specify which cage to act on (0 is default). Specify -kall
                         to act on all cages.

        -n#   [optional] Specify which node to act on (0 is default). Specify -nall
                         to act on all nodes.

        -s#   [optional] Specify which slot to act on (0 is default). Specify -sall
                         to act on all slots.

        -p#   [optional] Specify which chip position to act on (0 is default). Specify
                         -pall to act on all chips.

        -c#   [optional] Specify which processor core to act on (0 is default). Specify
                         -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:        > croputl2 100 3 FFFFB0B0 AAAABBBB 1 -state ME  -p0
                         > croputl2 1f0000 7 FFFFB0B0 AAAABBBB 1 FFFFB0B0 AAAABBBB 1
FFFFB0B0 AAAABBBB 1 -p1
```

6 EIP (Eclipz IP) Extension Commands

These are functions that are only supported by Cronus and GFW on Eclipz IP Series Systems.

6.1 Processor Functions

6.1.1 eipgetslb

Syntax:

```
Syntax: eipgetslb <StartEntry> [<numEntries>] [-k#] [-n#] [-s#] [-p#] [-c#] [-t#]

        ECMD:           EIP (Eclipz/IP) Extension

        Function:       Gets Segment Lookaside Buffer entry.

        Parameters:
        ------------------------------------------------------------------------------

        StartEntry      SLB Entry to read (Decimal)

        numEntries      Specifies number of entries to get from starting entry (Decimal)

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        -t#  [optional] Specify which processor thread to act on (0 is default). Specify
                        -tall to act on all threads, -talive to act on all alive threads.

        ------------------------------------------------------------------------------
        Notes:          Entries are in the range of 0 to 63 for each thread.

        Example:        > eipgetslb 6 -p0,1 -t1
```

6.1.2 eipproccleanup

Syntax:

```
Syntax: eipproccleanup [-k#]

        ECMD:           EIP (Eclipz/IP) Extension

        Function:       Cleans up processors to enable memory DA after a checkstop
```

```
Parameters:
------------------------------------------------------------------------------

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

------------------------------------------------------------------------------

Example:        > eipproccleanup -k0
```

6.2 Miscellaneous Commands

6.2.1 crogetconfig

Syntax:

```
Syntax: crogetconfig [<ChipSelect>] <ConfigName> [-o<format>]
                                [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Read the specified configuration variable and display to screen

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip to read data from.

        ConfigName      Name of configuration variable to fetch

        -o<format>[opt] Output Format : default 'xl'. Only valid with numeric data
                        Run 'ecmdquery formats' to view available formats

        -k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                        to act on all cages.

        -n#  [optional] Specify which node to act on (0 is default). Specify -nall
                        to act on all nodes.

        -s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                        to act on all slots.

        -p#  [optional] Specify which chip position to act on (0 is default). Specify
                        -pall to act on all chips.

        -c#  [optional] Specify which processor core to act on (0 is default). Specify
                        -call to act on all cores.

        ------------------------------------------------------------------------------

        Examples:       > crogetconfig SIM_BROADSIDE_MODE
                          SIM_BROADSIDE_MODE = none
                        > crogetconfig pu PLL_TUNE
                          pu         k0:n0:s0:p00
                          PLL_TUNE = 3
```

6.2.2 crosetconfig

Syntax:

```
Syntax: crosetconfig [<ChipSelect>] <ConfigName> <Value> [-i<format>]
                                [-k#] [-n#] [-s#] [-p#] [-c#]

        ECMD:           CRO (Cronus) Extension

        Function:       Write the specified configuration variable

        Parameters:
        ------------------------------------------------------------------------------
        ChipSelect[opt] Chip to write data to.
```

```
ConfigName      Name of configuration variable to write

Value           Value to set configuration variable to

-i<format>[opt] Output Format : default is ascii.
                Run 'ecmdquery formats' to view available formats

-k#  [optional] Specify which cage to act on (0 is default). Specify -kall
                to act on all cages.

-n#  [optional] Specify which node to act on (0 is default). Specify -nall
                to act on all nodes.

-s#  [optional] Specify which slot to act on (0 is default). Specify -sall
                to act on all slots.

-p#  [optional] Specify which chip position to act on (0 is default). Specify
                -pall to act on all chips.

-c#  [optional] Specify which processor core to act on (0 is default). Specify
                -call to act on all cores.

-------------------------------------------------------------------------------

Examples:       > crosetconfig SIM_BROADSIDE_MODE scan
                > crosetconfig pu PLL_TUNE 3 -id
```