

# DVX8044 commands v5.30

## Document updates :

v1.00 : DB : 2010.07.26 : initial release for DVX8044 v5.00  
v1.01 : DB : 2010.10.08 : update for DVX8044 v5.10  
v1.02 : DB : 2011.01.10 : update for DVX8044 v5.20  
v1.03 : DB : 2011.04.26 : update for DVX8044 v5.30

## Short guide :

### A1: Introduction

If you need to use your own Software Control program from a PC or WORKSTATION with an RS-232 or LAN port, the device allows communication through an ASCII code protocol.

The device treats any character that it receives on the RS-232 or LAN as a possible command but only accepts legal commands.

There is no starting/ending code needed in a command string.

A command does not require any special character before or after it. (It is not necessary to press "ENTER" on the keyboard).

When the device receives a valid command, it will execute the command. Then it will send back the status of the parameters that have changed due to this command. (a command can return)

If the command is correct but cannot be executed (no signal on the selected input ...) the device will just send back the current status of the corresponding parameter.

If the command is invalid (value out of range, invalid command, syntax error ...), an error response will be returned to the control device.

All responses returned to the control device end with a carriage return <CR> and a line feed <LF> signaling the end of the response character string (see chapter A-3).

## A2: Commands structure

Commands are made of numerical values followed by the command characters (one or two alphabetical letters). Usually, same characters (letters) are used for **[read command]** and for **[write command]**.

The indexes are defined number indicating on which the command apply. For example a layer number or an input number or a preset ... They are separated with a comma. There are commands without index and others with up to 3 indexes.

**Each index is followed by a comma character.**

a **[write command]** is made of indexes followed by the numerical value followed by the command characters.

Write command = [[index,] ...] + Value + Character (s) code (s)

a **[read command]** is made of indexes followed immediately by the command characters. (no numerical value)

Read command = [[index,] ...] Character (s) code (s)

### A3: Examples

1) Command without index : *SWITCHER\_MODE*

Command to set the switcher mode to mixer mode : 0CM

Answer : CM0<CR><LF> which mean that the device is now working in mixer mode.

2) Command with 1 index : *OFORMAT*

Command to set the Main output format to XGA : 0,12OF

Answer : OF0,12<CR><LF> which mean that the output format is now 1024x768

3) Command with 2 indexes : *PE\_INPUTNUM*

Command to set the input 4 displayed in Layer A of Next Preset : 1,1,4IN

Answer : IN1,1,4<CR><LF> which mean that the layer A of the next preset will display the input 4 signal

4) Read command without index : *TAKEAVA*

Read command to know if the TAKE command is available : TA

Answer : TA1<CR><LF> which mean that the device is ready to accept the TAKE command.

5) Read command with 2 indexes : *SET\_ASPECT\_RATIO\_OUT*

Read command to know how is displayed a DVI signal plugged on the inpt 4 : 3,1,sB

Answer : sB3,1,2<CR><LF> which mean that the DVI plug on input 4 is displayed full screen

### A4: Error codes

Answer : **E10**<CR><LF> which mean invalid command

Answer : **E11**<CR><LF> which mean index value error (index value out of range)

Answer : **E12**<CR><LF> which mean index number error (too or few indexes)

### Document notation :

Some commands are only available as **[Read command]**, they are status and are colored in blue as this line.

Some commands are colored in yellow as this line to indicate they were added or modified in this version.



Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	<b>IN_USR_FORMAT</b>	IU	IU	user corrected input format	Rd/Wr	0	41	0	0 = None 1 = Invalid 2 = unknown 3 = SDTV NTSC 4 = SDTV PAL 5 = SDTV SECAM 6 = SDTV BW 7 = SDTV 480i 8 = SDTV 576i 9 = EDTV 480p 10 = EDTV 576p 11 = HDTV 720p 12 = HDTV 1035i 13 = HDTV 1080i 14 = HDTV 1080p 15 = HDTV 1080pF 16 = CPU 640x480 VGA 17 = CPU 800x600 SVGA 18 = CPU 1024x768 XGA 19 = CPU 1280x960 20 = CPU 1280x1024 SXGA 21 = CPU 1366x768 DILA 4/3 22 = CPU 1400x1050 SXGA+ 23 = CPU 1600x900 24 = CPU 1600x1200 UXGA 25 = CPU 1680x1050 WVGA 26 = CPU 800x480 27 = CPU 1152x864 28 = CPU 1200x900 29 = CPU 1280x768 WXGA 30 = CPU 1280x800 31 = CPU 1366x768 SWXGA 32 = CPU 1366x1024 33 = CPU 1366x800 SWXGA+ 34 = CPU 1200x800 35 = CPU 1680x1050 WSXGA+ 36 = CPU 1080p RGB 37 = CPU 1920x1200 WUXGA 38 = CPU 1920x1440 39 = CPU 1440x900 40 = CPU 2048x1080 2K 16/9 41 = CPU 1366x768	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_TYPE</b>	IK	IK	input signal type	Rd/Wr	0	17	13	0 = composite SDTV 1 = Y/C SDTV 2 = RGBS TTL/Analog SDTV/EDTV/HDTV 3 = RGB SOG SDTV/EDTV/HDTV 4 = YUV SDTV/EDTV/HDTV 5 = SOG Computer 6 = H&V or Composite (TTL/Analog) Computer 7 = B&W Computer 8 = RGB 16-235 DVI-D EDTV/HDTV 9 = YUV DVI-D EDTV/HDTV 10 = RGB 0-255 DVI-D Computer 11 = RGB 16-235 DVI-D Computer 12 = SDI SDTV/HDTV 13 = analog Computer, separate H&V sync 14 = analog Computer, TTL composite sync 15 = analog Computer, analog composite sync 16 = analog video RGB, TTL composite sync 17 = analog video RGB, analog composite sync	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_SYNC_LOAD</b>	II	II	75 ohms analog H sync load	Rd/Wr	0	1	0	0 = High Z 1 = 75 ohms load	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_USED</b>	IU	IU	used input	Rd/Wr	0	1	1	0 = unused input	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_SD_STD</b>	IS	IS	input video standard	Rd/Wr	0	7	0	0 = Auto 1 = NTSC (M,J) 2 = PAL (BDGHN) 3 = PAL (M) 4 = PAL (M-Combination) 5 = NTSC 4.43 6 = SECAM 7 = PAL 60	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_CROPPING</b>	IC	IC	activate input finder for cropping	Rd/Wr	0	1	0		0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	<b>IN_HDCP_ENABLE</b>	IH	IH	enable DVI-D input HDCP answer	Rd/Wr	0	1	1		0 = Input1 1 = Input2 2 = Input3 3 = Input4				
	<b>IN_CROP_MODE</b>	IM	IM	input finder selection	Rd/Wr	0	1	1	0 = direct input cropping 1 = frame displayed to select cropping zone					

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Modifications v5.20 to 5.30
	IN_REMAPPING	IR	IR	input processing pending	Rd	0	1	0		0 = No Input 1 = Input1 / Frame1 / Logo1 / MaskFrame1 2 = Input2 / Frame2 / Logo2 3 = Input3 / Frame3 / Logo3 4 = Input4 / Frame4 / Logo4 5 = Input5 / Frame5 / Logo5 6 = Input6 / Frame6 / Logo6 7 = Input7 / Frame7 / Logo7 8 = Input8 / Frame8 / Logo8			
EDID	EDID_FORMAT	EF	EF	EDID preferred format	Rd/Wr	0	20	20	0 = 640x480 VGA 1 = 800x600 SVGA 2 = 1024x768 XGA 3 = 1280x960 4 = 1280x1024 SXGA 5 = 1364x1024 4/3 DILA 6 = 1400x1050 SXGA+ 7 = 1600x1200 UXGA 8 = 852x480 WVGA 9 = 720pRGB 10 = 1280x768 WXGA 11 = 1360x768 SWXGA 12 = 1366x800 SWXGA+ 13 = 1200x800 RGB 14 = 1680x1050 WSXGA+ 15 = 1080pRGB 16 = 1440x900 RGB 17 = 1920x1200 WUXGA 18 = 2048x1080 2K 19 = 1366x768 20 = Custom	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	EDID_RATE	ER	ER	EDID preferred frame frequency	Rd/Wr	6	10	8	0 = Custom Field Rate 1 = 23.97 Hz 2 = 24 Hz 3 = 25 Hz 4 = 29.97 Hz 5 = 30 Hz 6 = 50 Hz 7 = 59.94 Hz 8 = 60 Hz 9 = 72 Hz 10 = 75 Hz	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
Input status	SIG_HPOL	sh	sh	input H sync polarity	Rd	0	0	0	0 = Negative Sync 1 = Positive Sync	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	SIG_VPOL	sv	sv	input V sync polarity	Rd	0	1	0	0 = Negative Sync 1 = Positive Sync	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	SIG_SYNC_TYPE	sK	sK	input sync type	Rd	0	3	0	0 = H&V Sync 1 = TTL Composite Sync 2 = Analog composite Sync 3 = Synchro on green (SOG)	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	SIG_FREQ_FIELD	sf	sf	input frame frequency	Rd	0	65535	0	frame frequency in 1/100 Hz unit	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	SIG_FREQ_LINE	sl	sl	input line frequency	Rd	0	65535	0	line frequency in x100 Hz unit	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		
	SIG_COMPLETE	sc	sc	input scan complete	Rd	0	1	0	1 = input scan operations complete	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug		

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	SIG_DETECTED_FORMAT	sD	sD	detected input format name	Rd	0	41	0	0 = None 1 = Invalid 2 = unknown 3 = SDTV NTSC 4 = SDTV PAL 5 = SDTV SECAM 6 = SDTV BW 7 = SDTV 480i 8 = SDTV 576i 9 = EDTV 480p 10 = EDTV 576p 11 = HDTV 720p 12 = HDTV 1035i 13 = HDTV 1080i 14 = HDTV 1080p 15 = HDTV 1080pF 16 = CPU 640x480 VGA 17 = CPU 800x600 SVGA 18 = CPU 1024x768 XGA 19 = CPU 1280x960 20 = CPU 1280x1024 SXGA 21 = CPU 1366x1024 DILA 4/3 22 = CPU 1400x1050 SXGA+ 23 = CPU 1600x900 24 = CPU 1600x1200 UXGA 25 = CPU 848x480 WVGA 26 = CPU 800x480 27 = CPU 1152x864 28 = CPU 720p RGB 29 = CPU 1280x768 WXGA 30 = CPU 1280x800 31 = CPU 1360x768 SWXGA 32 = CPU 1360x1024 33 = CPU 1366x800 SWXGA+ 34 = CPU 1200x800 35 = CPU 1680x1050 WSXGA+ 36 = CPU 1080p RGB 37 = CPU 1920x1200 WUXGA 38 = CPU 1920x1440 39 = CPU 1440x900 40 = CPU 2048x1080 2K 16/9 41 = CPU 1366x768	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SIG_FORMAT_LIST	sL	sL	compatible detected formats list (bit field)	Rd	0	255	0	bit field, one bit per input format name	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug	0 = bit0 to bit7 slice 1 = bit8 to bit15 slice 2 = bit16 to bit23 slice 3 = bit24 to bit31 slice 4 = bit32 to bit39 slice 5 = bit40 to bit47 slice	5	
	SIG_SCANTYPE	ss	ss	input scan type	Rd	0	3	0	0 = Progressive 1 = Interlaced, Top field first 2 = Interlaced, Bottom field first 3 = Segmented frame	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SIG_WIDTH	sw	sw	displayable input pixel count	Rd	0	65535	0	Unit : pixels	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SIG_SLOTNUMBER	sN	sN	input settings memory slot number	Rd	0	40	40	0 up to 39 = slot number, 40 = no slot	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SIG_HEIGHT	st	st	displayable input line count	Rd	0	65535	0	Unit : pixels	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SIG_HDCP	sn	sn	HDCP input status	Rd	0	1	0	1 = HDCP content	0 = Input1 1 = Input2 2 = Input3 3 = Input4	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
Input Settings	SET_DEFAULT	SK	SK	current input default settings (auto clear)	Rd/Wr	0	7	0	0 = None 1 = positioning & Cropping 2 = Colorimetry 4 = Hard 7 = all	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	SET_HPOS	SH	SH	input signal horizontal position	Rd/Wr	0	2048	1024	1024 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_VPOS	SV	SV	input signal vertical position	Rd/Wr	0	2048	1024	1024 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_HSIZE	Sw	Sw	input signal horizontal size	Rd/Wr	0	4096	2048	2048 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_VSIZE	Sh	Sh	input signal vertical size	Rd/Wr	0	4096	2048	2048 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_BRIGHTNESS	Sg	Sg	input signal brightness	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_CONTRAST	Sc	Sc	input signal contrast	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_COLOR	Sr	Sr	input signal color level	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_HUE	Su	Su	input signal hue (NTSC only)	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_HTOTAL	ST	ST	input signal total pixel per line	Rd/Wr	200	65535	200	Unit : pixels	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_HTOTALMAXI	SX	SX	input signal maximum total pixel per line	Rd	200	65535	200	Unit : pixels	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_PHASE	SS	SS	input signal phase	Rd/Wr	0	63	0	2 pixels range phase	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_AUTOCAD	Sa	Sa	input signal autocentering	Rd/Wr	0	1	0	(auto clear)	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			



Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	SET_USER_GAIN_R	sr	sr	ADC R channel adjustment (advanced setting)	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_USER_GAIN_G	sg	sg	ADC G channel adjustment (advanced setting)	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_USER_GAIN_B	sb	sb	ADC B channel adjustment (advanced setting)	Rd/Wr	0	255	128	128 = neutral	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_PULLDOWN_2_2	Sn	Sn	2:2 pulldown	Rd/Wr	0	1	1	0 = Disabled 1 = Automatic detection	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_PULLDOWN_3_2	Sp	Sp	3:2 pulldown	Rd/Wr	0	1	1	0 = Disabled 1 = Automatic detection	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_ASPECT_RATIO_IN	sA	sA	input picture aspect ratio	Rd/Wr	0	4	0	0 = Native, full screen 1 = LetterBox 1.78, 4/3 with 16/9 content and black bands 2 = LetterBox 2.35, 4/3 with 2.35 content and black bands 3 = PillarBox, 16/9 with 4/3 content and black bands 4 = Anamorphic, 4/3 with 16/9 content without black bands	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_ASPECT_RATIO_OUT	sB	sB	output picture aspect ratio	Rd/Wr	0	3	2	0 = 1:1, not distorted, no zoom, black bands or cropped 1 = centered, not distorted, black bands added 2 = full screen, distorted, input aspect ratio not preserved 3 = cropped, not distorted, without black bands	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_OVER_SCAN	so	so	overscan	Rd/Wr	0	1	1	0 = underscan, 1 = overscan	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_CROP_HSTART	Lh	Lh	input signal H cropping start	Rd/Wr	0	2048	0	0 = 0% = no left cropping	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_CROP_VSTART	Lv	Lv	input signal V cropping start	Rd/Wr	0	2048	0	0 = 0% = no top cropping	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_CROP_HEND	LH	LH	input signal H cropping end	Rd/Wr	0	2048	2048	2048 = 100% = no right cropping	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_CROP_VEND	LV	LV	input signal V cropping end	Rd/Wr	0	2048	2048	2048 = 100% = no top cropping	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	SET_FORCE_TO_4_3	Lf	Lf	force 4/3 aspect ratio (SDTV only)	Rd/Wr	0	1	0	1 = force to 4/3 aspect ratio (SDTV only)	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug			
	SET_MOTION_DETECT	Sm	Sm	Defines moving pixels detection threshold	Rd/Wr	0	60	0	60 = standard setting, 10 = typical camera setting	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8	0 = full deinterlacing 60 = standard deinterlacing			Added command
Preset Elements	PE_INPUTNUM	IN	IN	displayed input number or frame number or logo number	Rd/Wr	0	8	0	0 = No Input 1 = Input1 / Frame1 / Logo1 / MaskFrame1 2 = Input2 / Frame2 / Logo2 3 = Input3 / Frame3 / Logo3 4 = Input4 / Frame4 / Logo4 5 = Input5 / Frame5 / Logo5 6 = Input6 / Frame6 / Logo6 7 = Input7 / Frame7 / Logo7 8 = Input8 / Frame8 / Logo8	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1 2	
	PE_SOURCENUM	IS	IS	source number	Rd/Wr	0	64	0	ARC/ORC source number	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_ID	pl	pl	unique layer identifier number	Rd	0	16	0	computed layer identifier	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_NEW_ID	pN	pN	force a new unique layer identifier number	Rd/Wr	0	1	0		0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_POS_H	pH	pH	layer left H position on output screen	Rd/Wr	0	65535	32768	in pixel with 32768 offset (32768 = left side, visible)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_POS_V	pV	pV	layer top V position on output screen	Rd/Wr	0	65535	32768	in pixel with 32768 offset (32768 = top side, visible)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_SIZE_H	pW	pW	layer H size on output screen (without borders)	Rd/Wr	0	65535	32768	in pixel	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_SIZE_V	pS	pS	layer V size on output screen (without borders)	Rd/Wr	0	65535	32768	in pixel	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	
	PE_CROP_WIN_POS_H	CH	CH	layer cropping H position	Rd/Wr	0	65535	32768	in % (65535 = 100% = full left cropping)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1	

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Modifications v5.20 to 5.30
	PE_CROP_WIN_POS_V	CV	CV	layer cropping V position	Rd/Wr	0	65535	32768	in % (65535 = 100% = full top cropping)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_CROP_WIN_SIZE_H	CW	CW	layer H cropping size	Rd/Wr	0	58981	0	in % (65535 = 100%)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_CROP_WIN_SIZE_V	CS	CS	layer V cropping size	Rd/Wr	0	58981	0	in % (65535 = 100%)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_ALPHA	pA	pA	layer transparency	Rd/Wr	0	255	0	0 = opaque, 255 = 100% = full transparency	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_STYLE	bs	bs	border style	Rd/Wr	0	4	0	0 = No Border 1 = Edges 2 = Smooth 3 = Shadow 4 = Smooth shadow	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_COLOR	bc	bc	border color	Rd/Wr	0	544	0	color number	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_ALPHA	ba	ba	border transparency	Rd/Wr	0	255	128	255 = full transparency	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_SIZE_H	bh	bh	border H size	Rd/Wr	0	127	10	in pixel	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_SIZE_V	bv	bv	border V size	Rd/Wr	0	127	10	in pixel	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_BORDER_SHADOW_POS	bP	bP	layer shadow position	Rd/Wr	0	3	0	0 = SE = Bottom Right 1 = SW = Bottom Left 2 = NW = TOP Left 3 = NE = TOP Right	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_OPENING_TRANSITION	oT	oT	layer opening transition	Rd/Wr	0	2	1	0 = Cut Transition 1 = Fade Transition 2 = Slide Transition	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_OPENING_TRANSITION_WAY	oW	oW	opening transition direction	Rd/Wr	0	3	0	0 = Left to right Transition 1 = Right to left Transition 2 = Bottom to top Transition 3 = Top to bottom Transition	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Modifications v5.20 to 5.30
	PE_OPENING_DURATION	oD	oD	opening transition time	Rd/Wr	0	255	10	in 1/10 second (ex : 105 = 10.5s)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_CLOSING_TRANSITION	cT	cT	layer closing transition	Rd/Wr	0	2	1	0 = Cut Transition 1 = Fade Transition 2 = Slide Transition	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_CLOSING_TRANSITION_WAY	cW	cW	closing transition direction	Rd/Wr	0	3	1	0 = Left to right Transition 1 = Right to left Transition 2 = Bottom to top Transition 3 = Top to bottom Transition	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_CLOSING_DURATION	cD	cD	closing transition time	Rd/Wr	0	255	10	in 1/10 second (ex : 105 = 10.5s)	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
	PE_FREEZE_INPUT	pZ	pZ	input image freeze	Rd/Wr	0	1	0	1 = input freeze	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask		1
Presets	P_PLUGNUM	IP	IP	active plug on input	Rd/Wr	0	2	0	0 = Analog Plug 1 = DVI Plug 2 = SDI Plug	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8		
	P_KEYING_ENABLE	KE	KE	keying/tilting enable	Rd/Wr	0	1	0	1 = enable keying/tilting	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			
	P_KEYING_LAYER	KL	KL	keying layer	Rd/Wr	1	4	2	1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			
	P_KEYING_TYPE	KT	KT	keying type	Rd/Wr	0	3	3	0 = Luma tiling 1 = Chroma tiling 2 = luma keying 3 = chroma keying	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			
	P_KEYING_SHADOW	KS	KS	shadow level under titling layer	Rd/Wr	0	255	0	0 = 0% = background attenuated, 255 = 100% = black background	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			
	P_KEYING_R_LEVEL	KR	KR	keying red level	Rd/Wr	0	255	0	0 = 0%, 255 = 100%	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			
	P_KEYING_G_LEVEL	KG	KG	keying green level or luma level	Rd/Wr	0	255	255	0 = 0%, 255 = 100%	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4			



Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	CLIGN_LAYER	NC	NC	selected layer	Rd/Wr	0	7	0	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask					
	CLIGN_ENABLE	NE	NE	blinking enable	Rd/Wr	0	1	0						
	COPY_FROM	Nf	Nf	source for preset copy	Rd/Wr	0	6	0	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4					
	COPY_TO	Nt	Nt	destination for preset copy	Rd/Wr	0	6	1	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4					
	COPY_CTRL	Nc	Nc	preset copy control	Rd/Wr	0	1	0	(auto clear)					
Layer Controls	COPY_LAYER_PRESET	LP	LP	preset for layer copy	Rd/Wr	0	6	0	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4					
	COPY_LAYER_FROM	LF	LF	source for layer copy	Rd/Wr	0	7	0	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask					
	COPY_LAYER_TO	LT	LT	destination for layer copy	Rd/Wr	0	7	0	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask					
	COPY_LAYER_CTRL	LC	LC	layer copy control (auto clear)	Rd/Wr	0	1	0	0 = operation complete 1 = execute one layer copy					
Settings	R_FLICK	Rf	Rf	antiflicker level	Rd/Wr	0	7	2	0 = no anti-flicker	0 = Main Output 1 = Preview Output 2 = Recording Output				
	R_GAMMA	Rg	Rg	gamma correction level	Rd/Wr	5	40	10	gamma value in 1/10 (ex : 22 for 2.2)	0 = Main Output 1 = Preview Output 2 = Recording Output				
Output	OFORMAT	OF	OF	output format	Rd/Wr	0	38	12	0 = PAL 1 = NTSC 2 = 480p 3 = 575p 4 = SMPTE266M (720p) 5 = SMPTE260M (1035i) 6 = SMPTE274M (1080i) 7 = SMPTE274M (1080p) 8 = SMPTE274M (1080sF) 9 = 640 x 480 4/3 10 = 848 x 480 16/9 11 = 800 x 600 4/3 12 = 1024 x 768 4/3 13 = 1360 x 768 16/9 14 = 1280 x 800 16/9 15 = 1280 x 1024 5/4 16 = 1408 x 1050 5/3 17 = 1680 x 1050 16/9 18 = 1600 x 1200 4/3 19 = 1520 x 1200 16/9 20 = 2048 x 1080 21 = 1280 x 720 16/9 22 = 1920 x 1080 16/9 23 = 1920 x 1080 16/9 (SHARP) 24 = 1440 x 960 16/10 25 = 1280 x 768 15/9 26 = 1366 x 800 15/9 27 = 1520 x 1080 16/9 (HDTV) 28 = 1920 x 1080 16/9 (SHARP2) 29 = 1366 x 768 16/9 30 = 1280 x 720 16/9 (HDTV)	0 = Main Output 1 = Preview Output 2 = Recording Output				
	ORATE	OR	OR	output rate	Rd/Wr	0	10	8	0 = Custom Field Rate 1 = 23.97 Hz 2 = 24 Hz 3 = 25 Hz 4 = 29.97 Hz 5 = 30 Hz 6 = 50 Hz 7 = 59.94 Hz 8 = 60 Hz 9 = 72 Hz 10 = 75 Hz	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OSIGTYPEANALOG	OA	OA	analog output type	Rd/Wr	0	3	2	0 = RGBs 1 = RGSB (SOG) 2 = RGB H&V 3 = YUV	0 = Main Output 1 = Preview Output 2 = Recording Output				

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Index #4	Modifications v5.20 to 5.30
	OSIGTYPEDIGITAL	OD	OD	digital output type	Rd/Wr	0	2	0	0 = RGB 0-255 (Full Scale) 1 = RGB 16-235 (Reduced Scale) 2 = YUV	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OPATTERN	OP	OP	output pattern	Rd/Wr	0	9	0	0 = No pattern 1 = Vertical Grey Scale 2 = Horizontal Grey Scale 3 = Vertical Color Bar 4 = Horizontal Color Bar 5 = Grid 6 = SMPTE 7 = Burst 8 = Centering 9 = Soft Edge Centering	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OBLACK_REQ	OB	OB	black output control	Rd/Wr	0	1	0	1 = black output	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OUTIL_H	OH	OH	output horizontal size status	Rd	0	65535	0	in pixel	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OUTIL_V	OV	OV	output vertical size status	Rd	0	65535	0	in pixel	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OFIELDRATE	OT	OT	output frame frequency	Rd	100	65000	6000	frequency in 1/100 Hz	0 = Main Output 1 = Preview Output 2 = Recording Output				
	OISHDCP	On	On	output HDCP status	Rd	0	1	0	1 = output connected to HDCP display	0 = Main Output 1 = Preview Output 2 = Recording Output				
	ODETECT_HDCP	OC	OC	output HDCP detection enable	Rd/Wr	0	1	1		0 = Main Output 1 = Preview Output 2 = Recording Output				
Reference	REFREQUEST	Xr	Xr	framelock type requested	Rd/Wr	0	14	0	0 = Internal Reference 1 = (SDTV) Genlock input 2 = (HDTV) Genlock input 3 = Analog Input on DVI 1 4 = Digital Input DVI 1 5 = SDI 1 Input 6 = Analog Input on DVI 2 7 = Digital Input DVI 2 8 = SDI 2 Input 9 = Analog Input on DVI 3 10 = Digital Input DVI 3 11 = SDI 3 Input 12 = Analog Input on DVI 4 13 = Digital Input DVI 4 14 = SDI 4 Input	0 = Main Output 1 = Preview Output 2 = Recording Output				3
	REFSTATUS	Xa	Xa	framelock type status	Rd	0	14	0	0 = Internal Reference 1 = (SDTV) Genlock input 2 = (HDTV) Genlock input 3 = Analog Input on DVI 1 4 = Digital Input DVI 1 5 = SDI 1 Input 6 = Analog Input on DVI 2 7 = Digital Input DVI 2 8 = SDI 2 Input 9 = Analog Input on DVI 3 10 = Digital Input DVI 3 11 = SDI 3 Input 12 = Analog Input on DVI 4 13 = Digital Input DVI 4 14 = SDI 4 Input	0 = Main Output 1 = Preview Output 2 = Recording Output				

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Notes	Modifications v5.20 to 5.30
	REFORMAT	Xf	Xf	frame lock signal name status	Rd	0	41	0	0 = None 1 = Invalid 2 = unknown 3 = SDTV NTSC 4 = SDTV PAL 5 = SDTV SECAM 6 = SDTV BW 7 = SDTV 480i 8 = SDTV 576i 9 = EDTV 480p 10 = EDTV 576p 11 = HDTV 720p 12 = HDTV 1035i 13 = HDTV 1080i 14 = HDTV 1080p 15 = HDTV 1080sp 16 = CPU 640x480 VGA 17 = CPU 800x600 SVGA 18 = CPU 1024x768 XGA 19 = CPU 1280x960 20 = CPU 1280x1024 SXGA 21 = CPU 1366x1024 DILA 4/3 22 = CPU 1400x1050 SXGA+ 23 = CPU 1600x900 24 = CPU 1600x1200 UXGA 25 = CPU 848x480 WVGA 26 = CPU 800x480 27 = CPU 1152x864 28 = CPU 720p RGB 29 = CPU 1280x768 WXGA 30 = CPU 1280x800 31 = CPU 1366x768 SWXGA 32 = CPU 1360x1024 33 = CPU 1366x800 SWXGA+ 34 = CPU 1200x800 35 = CPU 1680x1050 WSXGA+ 36 = CPU 1080p RGB 37 = CPU 1920x1200 WUXGA 38 = CPU 1920x1440 39 = CPU 1440x900 40 = CPU 2048x1080 2K 16/9 41 = CPU 1366x768	0 = Main Output 1 = Preview Output 2 = Recording Output				
	REFFREQ	Xt	Xt	frame lock rate status	Rd	0	65535	0	frequency in 1/100 Hz	0 = Main Output 1 = Preview Output 2 = Recording Output				
	REFFACTOR	Xf	Xf	frame lock rate multiplier	Rd/Wr	0	3	1	0 = x 0.5 1 = x 1 2 = x 2 3 = x 3	0 = Main Output 1 = Preview Output 2 = Recording Output				
	REFLOCKSTATUS	Xi	Xi	frame lock locked status	Rd	0	1	0	1 = output frequency locked on reference frequency	0 = Main Output 1 = Preview Output 2 = Recording Output				
	REFINSYNC	Xi	Xi	indicate other synchronous inputs (bit field)	Rd/Wr	0	255	0	0 = no input 1 = Input1 2 = Input2 4 = Input3 8 = Input4 16 = Input5 32 = Input6 64 = Input7 128 = Input8 255 = All Inputs				5	
Recording	RECORDING_MODE	Rm	Rm	recording display mode	Rd/Wr	0	11	0	0 = display current Main1/Out1 1 = display current Out2 (Matrix) 2 = display currents Out1 & Out2 (Matrix)(L/R) 3 = display currents Out1 & Out2 (Matrix)(T/B) 4 = display next Main1/Out1 5 = display next Out2 (Matrix) 6 = display Main1 & Preview1 (L/R) 7 = display Main1 & Preview1 (T/B) 8 = display Out1 & Out2 & Preview1 (Matrix) 9 = display Out1 & Out2 & Preview2 (Matrix) 10 = display Out1 & Out2 & Preview1 & Preview2 (Sync Matrix) 11 = display Preview1 & Preview2 (Sync Matrix)					
	BKG_COLOR_R	RR	RR	recording background color (Red)	Rd/Wr	0	1024	0		0 = one window display mode 1 = multiple windows display mode				
	BKG_COLOR_G	RG	RG	recording background color (Green)	Rd/Wr	0	1024	0		0 = one window display mode 1 = multiple windows display mode				
	BKG_COLOR_B	RB	RB	recording background color (Blue)	Rd/Wr	0	1024	0		0 = one window display mode 1 = multiple windows display mode				
Output screen	OSCREEN_UTIL_H	SH	SH	output screen horizontal size (total screen in softedge)	Rd	0	65535	0	in pixel					
	OSCREEN_UTIL_V	SV	SV	output screen vertical size (total screen in softedge)	Rd	0	65535	0	in pixel					
	OSCREEN_DEVICE_COUNT	sC	sC	output screen machine count	Rd/Wr	1	16	1						
	OSCREEN_DEVICE_POSITION	sP	sP	output screen machine position	Rd/Wr	1	16	1	1 = left or top					
Softedge	SOFTEDGE_MODE	SM	SM	softedge direction	Rd/Wr	0	1	0	0 = Horizontal Softedge 1 = Vertical Softedge					
	SOFTEDGE_COVERING_SIZE	SZ	SZ	covering size	Rd/Wr	0	1023	0	in pixel					
	SOFTEDGE_ENABLE_CURVES	SE	SE	blending enable	Rd/Wr	0	1	0	1 = blending enable					
	SOFTEDGE_POINT	SP	SP	blending curve points	Rd/Wr	0	65535	0	coordinate point in % + 32768 offset (ex.: coordinate 26 = 32768 + 26)	0 = Left/Top Border 1 = Bottom/Right Border	0 = Point 0 1 = Point 1	0 = X Coord 1 = Y Coord		
	SOFTEDGE_BLACK_SIZE	Sb	Sb	black level correction areas	Rd/Wr	0	127	0	in pixel	0 = Left/Top Border 1 = Bottom/Right Border				
	SOFTEDGE_BLACK_R_LEVEL	SR	SR	red component level in black area	Rd/Wr	0	63	0	0 = Black	0 = Left/Top Border 1 = Bottom/Right Border				



Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Modifications v5.20 to 5.30
	SOFTEDGE_BLACK_G_LEVEL	SG	SG	green component level in black area	Rd/Wr	0	63	0	0 = Black	0 = Left/Top Border 1 = Bottom/Right Border			
	SOFTEDGE_BLACK_B_LEVEL	SB	SB	blue component level in black area	Rd/Wr	0	63	0	0 = Black	0 = Left/Top Border 1 = Bottom/Right Border			
Logos Frames	PMODE	PM	PM	logo/frame mode	Rd/Wr	0	9	0	0 = Use Logo Frame mode 1 = Logo recording mode 2 = Live logo recording mode 3 = Frame recording mode 4 = Frame mask recording mode 5 = Logo clear mode 6 = Frame clear mode 7 = Frame mask clear mode 8 = Complete frame, logo and maskFrame clear mode 9 = Transfer Mode				
	PEXECUTE	PG	PG	logo/frame control	Rd/Wr	0	1	0	start operation requested by logo/frame mode. (recording or erasure)(auto clear)				
	PABORT	PA	PA	logo/frame recording abort	Rd/Wr	0	1	0	(auto clear)				
	PSTATUS	PE	PE	logo/frame control status	Rd	0	5	0	0 = Frame 1 = Logo/Frame Recalling 2 = Logo/Frame storing 3 = Logo/Frame Format and output format not compatible 4 = Logo/Frame clearing 5 = Flash memory error				
	PFRAMES_VALID	PF	PF	frame available status, bit field with bit0=frame1 ... bit7=frame8, bit8=maskFrame	Rd	0	1023	0	0 = no logo/frame available				5
	PLOGOS_VALID	PZ	PZ	logo available status, bit field with bit0=logo1 ... bit7=logo8	Rd	0	511	0	0 = no logo/frame available				5
	PCAPTURE_LEFT	PL	PL	logo/frame horizontal position	Rd/Wr	0	32767	0	in pixel				
	PCAPTURE_TOP	PT	PT	logo/frame vertical position	Rd/Wr	0	32767	0	in pixel				
	PCAPTURE_WIDTH	PW	PW	logo/frame capture horizontal size	Rd/Wr	0	32767	400	in pixel				
	PCAPTURE_HEIGHT	PH	PH	logo/frame capture vertical size	Rd/Wr	0	32767	300	in pixel				
	PCAPTURE_LUMAKEY_TYPE	PY	PY	logo/frame keying mode	Rd/Wr	0	1	0	0 = Black 1 = White				
	PCAPTURE_LUMAKEY_LEVEL	PI	PI	logo/frame luma key level	Rd/Wr	0	255	0	0 = black, 255 = white	0 = Main Output 1 = Preview Output 2 = Recording Output	0 = Black 1 = White		
	PCAPTURE_BACK_COLOR	Pc	Pc	matting color during logo/frame lumakey	Rd/Wr	0	7	4	color number in 0 to 7	0 = Main Output 1 = Preview Output 2 = Recording Output	0 = Black 1 = White		
	PCAPTURE_LUMAKEY_INVERT	Pv	Pv	key invert	Rd/Wr	0	1	0		0 = Main Output 1 = Preview Output 2 = Recording Output			
	PCAPTURE_INDEX	PX	PX	logo/frame number for recording	Rd/Wr	0	17	0	0 = No Picture 1 = Logo 1 2 = Logo 2 3 = Logo 3 4 = Logo 4 5 = Logo 5 6 = Logo 6 7 = Logo 7 8 = Logo 8 9 = Frame 1 10 = Frame 2 11 = Frame 3 12 = Frame 4 13 = Frame 5 14 = Frame 6 15 = Frame 7 16 = Frame 8 17 = Frame mask 1				
	PSTATUS_WIDTH	Pw	Pw	logo/frame horizontal size status	Rd	0	32767	0		0 = No Picture 1 = Logo 1 2 = Logo 2 3 = Logo 3 4 = Logo 4 5 = Logo 5 6 = Logo 6 7 = Logo 7 8 = Logo 8 9 = Frame 1 10 = Frame 2 11 = Frame 3 12 = Frame 4 13 = Frame 5 14 = Frame 6 15 = Frame 7 16 = Frame 8 17 = Frame mask 1			

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Modifications v5.20 to 5.30
	PSTATUS_HEIGHT	Ph	Ph	logo/frame vertical size status	Rd	0	32767	0		0 = No Picture 1 = Logo 1 2 = Logo 2 3 = Logo 3 4 = Logo 4 5 = Logo 5 6 = Logo 6 7 = Logo 7 8 = Logo 8 9 = Frame 1 10 = Frame 2 11 = Frame 3 12 = Frame 4 13 = Frame 5 14 = Frame 6 15 = Frame 7 16 = Frame 8 17 = Frame mask 1			
LAN	LANENABLE	ne	ne	LAN enable	Rd/Wr	0	1	0	0 = RS232 enable (LAN disabled) 1 = LAN enable (RS232 disabled)				
	LANRESET	nr	nr	LAN factory parameters reset	Rd/Wr	0	1	0	(auto clear)				
	LANSTORE	ns	ns	LAN parameters update	Rd/Wr	0	1	0	(auto clear)				
	LANIP	nw	nw	LAN devices addresses	Rd/Wr	0	255	192	0 up to 255	0 = Device side(DVX8044) 1 = Remote side(RK8044) 2 = Gateway	0 = IP address 1st Byte 1 = IP address 2nd Byte 2 = IP address 3rd Byte 3 = IP address 4th Byte		
	LANPORT	np	np	LAN port numbers	Rd/Wr	0	65535	10500	local port : 10000 up to 10999 distant port : 0 up to 65535	0 = Device side(DVX8044) 1 = Remote side(RK8044) 2 = Gateway			
	LANNETMASK	nk	nk	LAN netmask	Rd/Wr	0	24	8	0 value bit count from right				
	LANPROTOCOL	nt	nt	LAN protocol	Rd/Wr	0	2	1	0 = UDP 1 = TCP 2 = AMX				
AUDIO	AUDIO_TYPE	AT	AT	audio mode	Rd/Wr	0	1	1	0 = BreakAway, listened input is independent of displayed inputs 1 = FollowLastLayer, listened input is last selected layer input				
	AUDIO_LEVEL	AL	AL	audio input level	Rd/Wr	0	63	63	with balanced signal : 1 = -63dB 63 = 0dB	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8			
	AUDIO_AUX_LEVEL	AI	AI	audio auxiliary input level	Rd/Wr	0	63	63	with balanced signal : 1 = -63dB 63 = 0dB				
	AUDIO_BALANCE	AB	AB	audio input balance	Rd/Wr	0	200	100	in %, 0 = right muted, 100 = standard, 200 = left muted	0 = Input1 1 = Input2 2 = Input3 3 = Input4 4 = Input5 5 = Input6 6 = Input7 7 = Input8			
	AUDIO_AUX_BALANCE	Ab	Ab	audio auxiliary input balance	Rd/Wr	0	200	100	in %, 0 = right muted, 100 = standard, 200 = left muted				
	AUDIO_SOURCE	AS	AS	audio input select	Rd/Wr	0	8	0	0 = No Input 1 = Input1 / Frame1 / Logo1 / MaskFrame1 2 = Input2 / Frame2 / Logo2 3 = Input3 / Frame3 / Logo3 4 = Input4 / Frame4 / Logo4 5 = Input5 / Frame5 / Logo5 6 = Input6 / Frame6 / Logo6 7 = Input7 / Frame7 / Logo7 8 = Input8 / Frame8 / Logo8	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask	4	
	AUDIO_AUX_MUTE	Aa	Aa	audio auxiliary input mute	Rd/Wr	0	1	0	1 = enable	0 = Current Preset 1 = Next Preset 2 = Previous Preset 3 = Memorized Preset 1 4 = Memorized Preset 2 5 = Memorized Preset 3 6 = Memorized Preset 4	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask	4	
	AUDIO_MUTE	Au	Au	audio input mute	Rd/Wr	0	1	0	1 = muted	0 = Main Output 1 = Preview Output			
	AUDIO_MASTER_VOLUME	AV	AV	audio output master volume	Rd/Wr	0	63	63	with balanced signal : 0 = min volume, 57 = 0dB attenuation, 63 = max volume(+6dB)	0 = Main Output 1 = Preview Output			
	AUDIO_MODE	Am	Am	audio stereo mode	Rd/Wr	0	1	1	0 = mono, 1 = Stereo	0 = Main Output 1 = Preview Output			
TALLY GPIO	GPIO_MODE	GP	GP	GPIO or GPIO mode	Rd/Wr	0	1	0	0 = 4 outputs mode 1 = 2 inputs and 2 outputs mode				
	GPIO_TYPE	GT	GT	GPIO or TALLY mode	Rd/Wr	0	1	1	0 = tally mode 1 = GPIO mode	0 = GPIO 1 1 = GPIO 2 2 = GPIO 3 3 = GPIO 4			

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Index #4	Modifications v5.20 to 5.30
	GPIO_TRIG_EVENT	GE	GE	GPIO trigger event	Rd/Wr	0	207	0	0 = no event 100 = TAKE (input event) 101 = TAKE when ready (input event) 102 = Full status enumeration (input event) 103 = Factory reset (input event) 104 = Black all (input event) 105 = Freeze all (input event) 106 = AUTOSET (input event) 107 = AUTOCENTER all (input event) 108 = Set default (input event) 109 = Next PRESET layout (input event) 110 = Next recording mode (input event) 111 = Standby or WakeUp (input event) 200 = TAKE available (output event) 201 = TAKE pending (output event) 202 = Ready (output event) 203 = Full status enumeration status (output event) 204 = HDCP conflict (output event) 205 = Sequenced TAKE (output event) 206 = TBar is ready (output event) 207 = Output reference locked (output event)	0 = GPIO 1 1 = GPIO 2 2 = GPIO 3 3 = GPIO 4				
	GPIO_STATUS	GS	GS	GPIO status	Rd/Wr	0	1	0		0 = GPIO 1 1 = GPIO 2 2 = GPIO 3 3 = GPIO 4				
	TALLY_MODE	tm	tm	TALLY input range mode	Rd/Wr	0	2	0	0 = 4 Tally outputs, triggered by Input number (from 1 to 8) 1 = 4 Tally outputs, triggered by Plug number (from 1 to 16) 2 = 4 Tally outputs, triggered by Source number (from 1 to 48)					
	TALLY_TRIG	tt	tt	machine input tally trigger	Rd/Wr	0	64	0	0 = no input 1 = Input 1 or analog Plug on 1st DVI or Source 1 2 = Input 2 or digital Plug on 1st DVI or Source 2 3 = Input 3 or 1st SDI Plug or Source 3 4 = Input 4 or analog Plug on 2nd DVI or Source 4 5 = Input 5 or digital Plug on 2nd DVI or Source 5 6 = Input 6 or 2nd SDI Plug or Source 6 7 = Input 7 or analog Plug on 3rd DVI or Source 7 8 = Input 8 or digital Plug on 3rd DVI or Source 8 9 = 3rd SDI Plug or Source 9 10 = analog Plug on 4th DVI or Source 10 11 = digital Plug on 4th DVI or Source 11 12 = 4th SDI Plug or Source 12 13 = analog Plug on HD15 number 5 or Source 13 14 = analog Plug on HD15 number 6 or Source 14 15 = analog Plug on HD15 number 7 or Source 15 16 = analog Plug on HD15 number 8 or Source 16 17 = Source 17 18 = Source 18 19 = Source 19 20 = Source 20 21 = Source 21 22 = Source 22 23 = Source 23 24 = Source 24 25 = Source 25 26 = Source 26 27 = Source 27 28 = Source 28 29 = Source 29 30 = Source 30 31 = Source 31 32 = Source 32 33 = Source 33  64 = Source 64	0 = Tally 1 output 1 = Tally 2 output 2 = Tally 3 output 3 = Tally 4 output				
	TALLY_STATUS	ts	ts	tally status	Rd	0	1	0	0 = OFF 1 = ON	0 = Tally 1 output 1 = Tally 2 output 2 = Tally 3 output 3 = Tally 4 output				
devices sync	DEV_SYNC_STATUS	Ss	Ss	devsync status	Rd	0	10	0	0 = sync pending 1 = sync OK 2 = no sync used (only one machine) 3 = error : duplicate machine positions 4 = error : not enough machines 5 = error : too many machines 6 = Sync Error 4 7 = Sync Error 5 8 = Sync Error 6 9 = Sync Error 7 10 = Sync Error 8					
Copy settings	COPY_MEM_REQUEST	MR	MR	input setting copy, control	Rd/Wr	0	2	0	0 = None 1 = read request 2 = write request					
	COPY_MEM_SLOT	MS	MS	input setting copy, slot number	Rd/Wr	0	40	0						
	COPY_MEM_VALUE	MV	MV	input setting copy, value	Rd/Wr	0	65535	0		min = 0 max = 30				
Layouts	PRESET_LAYOUT	pL	pL	preset layout (auto clear)	Rd/Wr	0	14	0	0 = None 1 = 4 PIP : same size, inside screen 2 = 4 PIP : same size, outside screen 3 = 4 PIP : Background layer A + BCD diagonally stacked 4 = 3 PIP : 1 left + 2 vertical right 5 = 3 PIP : 1 right + 2 vertical left 6 = 3 PIP : 1 bottom + 2 horizontal top 7 = 3 PIP : 1 bottom + 2 horizontally spaced top 8 = 3 PIP : 1 top + 2 horizontal bottom 9 = 2 PIP : 1 left + 1 right 10 = 2 PIP : 1 left + 1 right spaced 11 = 2 PIP : 1 top + 1 bottom 12 = 2 PIP : 1 top + 1 bottom spaced 13 = 2 PIP : Background + titling top 14 = 2 PIP : Background + titling bottom					

Group	Name	Command	Answer	Command Description	Read/Write	Min	Max	Default Value	Value	Index #1	Index #2	Index #3	Note	Modifications v5.20 to 5.30
	LAYER_LAYOUT	LL	LL	layer layout (auto clear)	Rd/Wr	0	9	0	0 = None 1 = full screen PIP 2 = top left PIP, inside screen 3 = top left PIP, outside screen 4 = top right PIP, inside screen 5 = top right PIP, outside screen 6 = bottom left PIP, inside screen 7 = bottom left PIP, outside screen 8 = bottom right PIP, inside screen 9 = bottom right PIP, outside screen	0 = Background Frame 1 = Layer A 2 = Layer B 3 = Layer C 4 = Layer D 5 = Logo A 6 = Logo B 7 = Frame Mask				
	LAYOUT_KEEP_SIZE	LK	LK	layer layout, keep size	Rd/Wr	0	1	0						
Standby	STDBYSTATUS	wS	wS	standby status	Rd	0	1	0	0 = Running 1 = Sleeping					
	STDBYREQUEST	wQ	wQ	standby request	Rd/Wr	0	1	0	0 = Running 1 = Sleeping					

Note	Comment
1	In Matrix mode, use Layer A index value to access OUT1 commands and Layer C index value to access OUT2 commands.
2	Use values from 1 to 8 to access Frame and Logos.
3	only one input reference for every output.
4	In Mixer/Eseb mode, use Layer A to access Next Preset ( Prelist audio output ) or Current Preset ( Main audio output ) In Matrix mode, Layer A corresponds to Audio Output 1 and Layer C to Audio Output 2 for each Preset
5	Values of the command are bit masked