

VP720XL/724XL Protocol Series Protocol & Command sets (NEW)

History

No	Issue Date	Version	Description	Apply Firmware
1	2005/09/23	1.00	1. This is the first version for both XL and DS series. 2. Add new protocol commands for sending parameter directly.	KB2.33
2	2006/06/28	1.02	Add new protocol for 1080P resolution. (P.22, Resolution 17.1080P)	KI2.38
3	2006/10/05	1.03	Add SOG setting. (P.23)	KI2.39
4	2007/03/22	1.05	Add OSD timeout, user define, Audio functions.(P.20, P.24)	KI2.42
5	2008/06/18	1.06	1. Word mark in blue is new protocol for no signal with no sync output	KI2.49

Notice:

1. There is a remark behind the commands if it only works in some models.

1. Serial Configuration

- Baud Rate: 9600/1152000bps
- Data Bits: 8bits
- Stop Bits: 1bit

2. Command Format

2.1 Set Command

Send	Y□Control_Type□Function□Param□CR
Reply	Z□Control_Type□Function□Param□CRDone>CR

2.2 Set Command

Send	Y□Control_Type□Function□Param□CR
Reply	Z□Control_Type□Function□Param□CR

2.3 example:

"Y□ 1□0□32□CR" -> set Contrast value as 32

"Z□1□0□32□CR>" --> Reply value

"DoneCR" --> command setting success

"Y□10□5□CR" -> get current output resolution

"Z□10□5□2□CR>" -> current resolution is 1024x768

"Y□0□35□CR" -> Keypad/Remote controller set Menu ON/Off

"Z□0□35□CR>"-->Reply value

"DoneCR" --> command setting success

□ : ASCII Code 0x20

CR : Ascii Code 0xD or 0xA

After set type Command setting,system will respond a string as "Done"

3. Command List:

Control Type	Function	Parameter (for Set)	Function Description	Comment
0	0	N/A	Output	
0	1	N/A	Freeze	
0	2	N/A	Power	
0	3	N/A	AV1	
0	4	N/A	AV2	
0	5	N/A	Comp	
0	6	N/A	YC1	
0	7	N/A	YC2	
0	8	N/A	VGA1	
0	9	N/A	VGA2	VP724 DS/XL Only
0	10	N/A	DVI	
0	11	N/A	Information	
0	12	N/A	Area Left Up	
0	13	N/A	Area Middle Up	
0	14	N/A	Area Right Up	
0	15	N/A	Area Left Center	
0	16	N/A	Area Middle Center	
0	17	N/A	Area Right Center	
0	18	N/A	Area Left Down	
0	19	N/A	Area Middle Down	
0	20	N/A	Area Right Down	

Control Type	Function	Parameter (for Set)	Function Description	Comment
0	21	N/A	Auto Image	
0	22	N/A	Menu	
0	23	N/A	Up	
0	24	N/A	Left	
0	25	N/A	Enter	
0	26	N/A	Right	
0	27	N/A	Down	
0	28	N/A	Auto Gain	
0	29	N/A	PIP	
0	30	N/A	Swap	
0	31	N/A	Contrast	
0	32	N/A	Brightness	
0	33	N/A	Zoom In	
0	34	N/A	Zoom Out	
0	35	N/A	Volume Down	
0	36	N/A	Mute	
0	37	N/A	Volume Up	
0	38	N/A	Color Mode	
0	39	N/A	Aspect Ratio	
1: Set 2: Get	0	-10~10	Gamma and Color:User1 Gamma	
1: Set	1	0~127	Gamma and Color:User1 Color Temp Red	

Control Type	Function	Parameter (for Set)	Function Description	Comment
2: Get				
1: Set 2: Get	2	0~127	Gamma and Color: User1 Color Temp Green	
1: Set 2: Get	3	0~127	Gamma and Color: User1 Color Temp Blue	
1: Set 2: Get	4	0~32	Gamma and Color: User1 Color Manager Red	
1: Set 2: Get	5	0~32	Gamma and Color: User1 Color Manager Green	
1: Set 2: Get	6	0~32	Gamma and Color: User1 Color Manager Blue	
1: Set 2: Get	7	0~32	Gamma and Color: User1 Color Manager Yellow	
1: Set 2: Get	8	-10~10	Gamma and Color: User2 Gamma	
1: Set 2: Get	9	0~127	Gamma and Color: User2 Color Temp Red	
1: Set 2: Get	10	0~127	Gamma and Color: User2 Color Temp Green	
1: Set 2: Get	11	0~127	Gamma and Color: User2 Color Temp Blue	
1: Set	12	0~32	Gamma and Color: User2 Color Manager Red	

Control Type	Function	Parameter (for Set)	Function Description	Comment
2: Get				
1: Set 2: Get	13	0~32	Gamma and Color: User2 Color Manager Green	
1: Set 2: Get	14	0~32	Gamma and Color: User2 Color Manager Blue	
1: Set 2: Get	15	0~32	Gamma and Color: User2 Color Manager Yellow	
1: Set 2: Get	16	0~127	Brightness	
1: Set 2: Get	17	0~127	Contrast	
1: Set 2: Get	18	-32~32	Aspect Ratio: User Define H-Zoom	
1: Set 2: Get	19	-32~32	Aspect Ratio: User Define V-Zoom	
1: Set 2: Get	20	-32~32	Aspect Ratio: User Define H-Pan	
1: Set 2: Get	21	-32~32	Aspect Ratio: User Define V-Pan	
1: Set 2: Get	22	0~255	Graphics Setting: H-Position	

Control Type	Function	Parameter (for Set)	Function Description	Comment
1: Set 2: Get	23	0~255	Graphics Setting: V-Position	
1: Set 2: Get	24	0~127	Graphics Setting: Color	
1: Set 2: Get	25	0~127	Graphics Setting: Hue	
1: Set 2: Get	26	0~16	Graphics Setting: Sharpness	
1: Set 2: Get	27	0~100	Graphics Setting: Frequency	
1: Set 2: Get	28	0~31	Graphics Setting: Phase	
1: Set 2: Get	29	0~127	Video Setting: Color	
1: Set 2: Get	30	0~127	Video Setting: Hue	
1: Set 2: Get	31	0~16	Video Setting: Sharpness	
1: Set 2: Get	32	0~20	Video Setting: H-Position	
1: Set	33	0~20	Video V-Position for NTSC/NTSC 4.43/PAL-M/PAL 60	
2: Get		0~39	Video V-Position for PAL/PAL-N/SECAM/NTSC 4.43 50	

Control Type	Function	Parameter (for Set)	Function Description	Comment
1: Set 2: Get	34	0~32	Audio Setting: Volume	
1: Set 2: Get	35	0~12	Audio Setting: Treble	
1: Set 2: Get	36	0~12	Audio Setting: Bass	
1: Set 2: Get	37	0~36	PIP Setting: H-Position	
1: Set 2: Get	38	0~36	PIP Setting: V-Position	
1: Set 2: Get	39	0~255	PIP Setting: User Define V-Size	
1: Set 2: Get	40	0~255	PIP Setting: User Define H-Size	
1: Set 2: Get	41	0~36	OSD Setting :H-Position	
1: Set 2: Get	42	0~36	OSD Setting: V-Position	
1: Set 2: Get	43	3~60	OSD Setting: OSD Time Out	
1: Set 2: Get	44	> 100	HT, H-Sync Cycle	1. Setting Command should be a reasonable value

Control Type	Function	Parameter (for Set)	Function Description	Comment
1: Set 2: Get	45	> 0	HW, H-Sync Width	2. Getting Command return the current group parameter (refer to command "Y 3 29 X" or "Y 4 29 ")
1: Set 2: Get	46	> 0	HS, Active Pixel Start	1. Setting Command should be a reasonable value 2. Getting Command return the current group parameter (refer to command "Y 3 29 X" or "Y 4 29 ")
1: Set 2: Get	47	-	HA, Active Pixel	
1: Set 2: Get	48	0~1	HP, H-Sync Polarity 0 for positive polarity 1 for negative polarity	
1: Set 2: Get	49	> 0	VT, V-Sync Cycle	
1: Set 2: Get	50	> 0	VW, V-Sync Width	
1: Set 2: Get	51	> 0	VS, Active Line Start	
1: Set 2: Get	52	-	VA, Active Line	
1: Set 2: Get	53	0~1	VP, V-Sync Polarity 0 for positive polarity 1 for negative polarity	

Control Type	Function	Parameter (for Set)	Function Description		Comment
1: Set 2: Get	54	> 100	OCLK	1. Oclk = Param / 10 Mhz 2. Should be a reasonable value	
3: Set 4: Get	0	0~9	Select Input Source	0: VGA-1 1: VGA-2(VP-724 Only) 2: DVI 3: Component 4: YC-1 5: AV-1 6: YV-2 7: AV-2 8: Scart 9: TV	
3: Set 4: Get	1	0~5	Geometry: Video Aspect Ratio	0:Normal 1:Wide Screen 2:Pan&Scan 3:4:3 4:16:9 5:UserDefine	
3: Set 4: Get	2	0~3	Geometry: Video Nonlinear	0:Off 1:Side 2:Middle	
3:Set 4:Get	3	0~5	Geometry: VGA Aspect Ratio	0:Full Screen 1:Native 2:NonLinear 3:4:3 4:16:9 5:UserDefine	
3: Set 4: Get	4	0~10	Zoom: Zoom Ratio	0: Off 1: 150% 2: 200% 3: 225% 4: 250% 5: 275% 6: 300% 7: 325% 8: 350% 9: 375% 10: 400%	
3: Set 4: Get	5	0~2	Graphics Setting: Color Format	0: Default 1: RGB 2: YUV	
3: Set	6	0~2	Video Setting: Color Format	0: Default 1: RGB 2: YUV	

Control Type	Function	Parameter (for Set)	Function Description		Comment
4: Get					
3: Set 4: Get	7	0~6	Video Setting: Video Standard	0: Video Standard - Auto 1: Video Standard - NTSC 2: Video Standard - NTSC 4.43 3: Video Standard - PAL 4: Video Standard - PAL-N 5: Video Standard - PAL-M 6: Video Standard - SECAM	
3: Set 4: Get	8	0~1	Video Setting: Film Mode	0: Off 1: On	
3: Set 4: Get	9	0~1	Audio Setting: Stereo	0: Off 1: On	
3: Set 4: Get	10	0~1	PIP Setting: PIP On/Off	0:Off 1:On	
3: Set 4: Get	11	0~9	PIP Setting: PIP Source	0: VGA-1 1: VGA-2(VP-724 Only) 2: DVI 3: Component 4: YC-1 5: AV-1 6: YV-2 7: AV-2 8: SCART 9: TV	
3: Set 4: Get	12	0~5	PIP Setting: PIP Size	0: 1/25 1: 1/16 2: 1/9 3: 1/4 4: Split 5: User Define	
3: Set 4: Get	13	0~1	PIP Setting: PIP Frame	0: Off 1: On	

Control Type	Function	Parameter (for Set)	Function Description		Comment
3: Set 4: Get	14	0~2	Seamless Switch: Mode	0: Fast 1: Moderate 2: Safe	
3: Set 4: Get	15	0~2	Seamless Switch: Background	0: Black 1: Blue 2: Disable Analog Syncs	
3: Set 4: Get	16	0~2	Seamless Switch: Auto Search	0: Off 1: On	
3: Set 4: Get	17	0~1	OSD Setting: Startup Logo	0: Off 1: On	
3: Set 4: Get	18	0~1	OSD Setting: Size	0: Normal 1: Double	
3: Set 4: Get	19	0~1	OSD Setting: Source Prompt	0: Off 1: On	
3: Set 4: Get	20	0~1	OSD Setting: Blank Color	0: Blue 1: Black	
3: Set 4: Get	21	0~17	Output Resolution	0: 640x480 1: 800x600 2: 1024x768 3: 1280x1024 4: 1600x1200 5: 852x1024i 6: 1024x1024i 7: 1366x768 8: 1365x1024 9: 1280x720 10: 720x483 11: 852x480 12: 1400x1050 13: 480P 14: 720P 15: 1080i 16: 576P 17: 1080P 18: 1280x768 19: User Define	HDTV output is VP723/724 Only 1080P only on KI238 and 80P DAC Board

Control Type	Function	Parameter (for Set)	Function Description		Comment
3: Set 4: Get	22	0~3	Output Refresh Rate	0: 60Hz 1: 75Hz 2: 85Hz 3: 50Hz	
3: Set 4: Get	23	0~1	Factory Reset	0:Cancel, 1:ok	
3: Set 4: Get	24	0~3	Advanced: Input Button	0: Freeze/Blank 1: Freeze 2: Blank 3: Ignore	
3: Set 4: Get	25	0~1	Key Lock Save		
3: Set 4: Get	26	0~1	Input Lock		
3: Set 4: Get	27	0~1	SOG Setting	0:Auto, 1:RGBsB, 2:DTV	KI239 Only
3: Set 4: Get	28	0~1	Enable OSD Timeout	0: Disable 1: Enable	
3: Set 4: Get	29	0~2	Select Output Mode Userdefined Parameter Group	0: Group 1 1: Group 2 2: Group 3	Select which group of User Define Display Mode to be saved or loaded
3: Set 4: Get	30	0~2	Set the control way of Saving Audio Volume / Treble / Bass values	0: Master 1: Individual 2: Linked	
5	0	N/A	Load Gamma/Color - Normal		
5	1	N/A	Load Gamma/Color - Presentation		

Control Type	Function	Parameter (for Set)	Function Description		Comment
5	2	N/A	Load Gamma/Color - Cinema		
5	3	N/A	Load Gamma/Color - Nature		
5	4	N/A	Load Gamma/Color - User1		
5	5	N/A	Load Gamma/Color - User2		
6: Set 7: Get	0	0~1	Power	0: Power Down 1: Power On	
6: Set 7: Get	1	0~1	Freeze	0: Off 1: On	
6: Set 7: Get	2	0~1	Blank	0: Off 1: On	
6: Set 7: Get	3	0~1	Mute	0: Off 1: On	
6: Set 7: Get	4	0~1	Key Lock	0: Off 1: On	
8	0	N/A	"Resolution/Refresh Rate" Or "Video Stand"		example: "Y 8 0 CR" return: "Z 8 0 1080i CR"