VP 729 Command Sets

History

No	Issue Date	Version	Description	Firmware
1	2008/3/19	V1.0	First release	
2	2008/6/24	V1.1	1. Add only those that we can't simulate their pressing using other commands of the protocol, such as MENU, Up, Down, Left, Right. 2. Query the status of the input (valid or invalid input, and (if valid) can provide. details such as the standard or resolution. 3. Update command with Layer C spec. 4. Modify Command format example 5. Add two commands to get input status.	
3	2008/9/9	V1.2	1 Update parameter range 2 Add Output Resolution – 1920x1080@60Hz 3 Gray unavailable command 4 command update for Geometry Diagonal Projection 5 Add error code	
4	2008/11/25	V1.3	1. Add command for Input/Output mode custom 2. Add command for PIP Custom 3. Add command for Aspect Ratio Custom 4. Remove USB PIP Source 5. Change Aspect Ratio name: Anamorphic -> Follow Output, Native -> Follow Input	
5	2009/1/23	V1.4	1. Change parameter range of Input V-position.	
6	2009/04/06	V1.5	1. Add custom1~4 in Output Resolution. 2. Add custom1~4 in Advance Output Mode: Apply. 3. Add Volume up 4. Add Volume down.	VTB1.05

			5. Add 1280x720@60Hz in Output Resolution. 6. Cancel HDMI output device, add HDCP setting 7. Add Custom Input1~4 in Advanced Input Mode 8. Add Custom Output1~4 in Advanced Output Mode 9. Modify Apply to Save in Advanced Input Mode. 10. Modify Apply to Save in Advanced Output Mode.	
7	2009/05/27	V1.6	1. Update Main/PIP input status for new 1280x800 input mode 2. Add command “Y 0 48 111”/”Y 0 48 -111” for VOLUME UP/DOWN ~~3. Remove command 133, 134~~ 4. Rename Aspect Ratio Standard -> Best Fit	VTB1.07
8	2009/7/10	V1.7	1. modify Y 1 103 98: No Input detected 2. modify Y 1 103 99: other	
9	2009/7/14	V1.8	1. remove USB audio : HDMI1, HDMI2	
10	2009/7/27	V1.9	1. Update the range of Input H-Position, Input V-Position and Input Frequency	VTB1.09
11	2009/9/2	V2.0	1. add command set for Overscan 2. add command set for Fast mode 3. add command set to select on or off for auto image function when source switching. 4. add command set for Slideshow	VTB1.11
12	2009/10/21	V2.1	1. modify Y 1 104 98: No Input detected 2. modify Y 1 104 99: other	VTB1.12
13	2010/2/5	V2.2	1. Add input mode for Main input status (Command = 103) / PIP input status (Command = 104) 1680x1050@60 (R) 1366x768@60 1366x768@60 (R) 2. Add Mode3 Command (Command = 147)	VTB1.14
14	2010/3/29	V2.3	1. Command is modified to match with FW	VTB1.15

15	2010/12/16	V2.4	1. Add HDMI Switch Behavior Command (Function = 148 / 149)	VTB1.20
16	2011/03/22	V2.5	1. Add HDMI1 Audio Input (Command = 150) Add HDMI2 Audio Input (Command = 151) 2. Add Custom Output Read HDMI EDID Prefer Timing (Command = 152) 3. Add HDMI1 Input HDCP On/Off (Command = 153) Add HDMI2 Input HDCP On/Off (Command = 154) 4. Add Output Mode (Command = 25) 33: 480P@59.94Hz 34: 720P@59.94Hz 35: 1080i@59.94Hz 36: 1080P@23.98Hz 37: 1080P@29.97Hz 38: 1080P@59.94Hz	VTB1.21
17	2012/03/15	V2.6	1. Fix Example Example function code from 0 change to 1 2. Function 148, 149 『Switch Behavior』 change to 『Hot Plug』	VTB 1.24

***Notice:**

1. **The RS-232 command is for VP-728 and VP-729 only.**
2. **The blue highlight means the latest update**
3. **The yellow highlight means the deleted item.**

1 Serial Configuration:

- Baud rate：9600(Bits per second)
- Data bits：8bits
- Parity：None
- Stop bits：1bit

2 Command Format:

2.1 Communication confirm

Send	CR
Reply	CRLF>

2.2 Set Command

Send	Y△Control_Type△Function△ParamCR
Reply	Z△Control_Type△Function△ParamCRLF>

2.3 Get Command

Send	Y△Control_Type△FunctionCR
Reply	Z△Control_Type△Function△ParamCRLF>

2.4 Example: set Input 1 Source Type to Component

Send	Y△0△1△0CR
Reply	Z△0△1△0CRLF>

2.5 Example: get current Input 1 Source Type

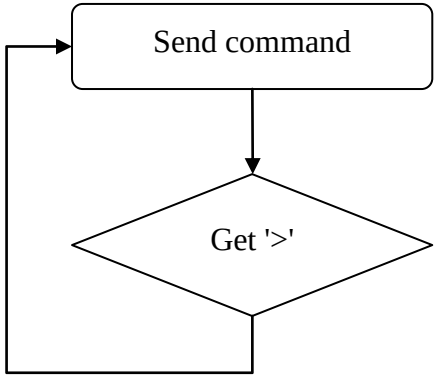
Send	Y△1△1CR
Reply	Z△1△1△0CRLF >

2.6 △：ASCII Code 0x20

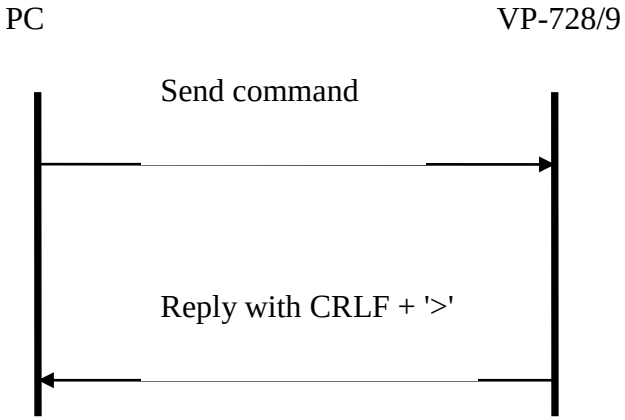
2.7 CR : Ascii Code 0x0D

2.8 CRLF : Ascii Code 0x0D+0x0A

2.9 Communication flow



2.10 Communication limitation



3 Command List:

Control Type		Function	Parameter	Description
Set	Get			
0	1	0	0: Input 1 1: Input 2 2: Input 3 3: Input 4 4: VGA 1 5: VGA 2 6: HDMI 1 7: HDMI 2 8: USB	Input Source
0	1	1	0: Component 1: YC 2: Video	Input 1 Source Type
0	1	2	0: Component 1: YC 2: Video	Input 2 Source Type
0	1	3	0: Component 1: YC 2: Video	Input 3 Source Type
0	1	4	0: Component 1: YC 2: Video	Input 4 Source Type
0	1	5	0: Auto 1: RGB 2: YUV	Input Color Format

Control Type		Function	Parameter	Description
Set	Get			
0	1	6	0: Auto 1: NTSC 2: PAL 3: PAL-M 4: PAL-N 5: NTSC 4.43 6: SECAM 7: PAL-60	Input Video Standard
0	1	7	1 ~ N	Input H-Position, N: changed with different input mode
0	1	8	2 ~ N	Input H-Position, N: changed with different input mode
0	1	9	0 ~ N	Input H-Position, N: changed with different input mode
0	1	10	0 ~ 31	Input Phase
0	-	11	n/a	Input Auto Image
0	1	12	0~100	Picture Brightness
0	1	13	0~100	Picture Contrast
0	1	14	0~100	Picture Color
0	1	15	0~360	Picture Hue
0	1	16	0~100	Picture Sharpness
0	1	17	0: Gamma 1 1: Gamma 2 2: Gamma 3 3: Gamma 4	Picture Output Gamma

Control Type		Function	Parameter	Description
Set	Get			
			4: Gamma 5	
0	1	18	0: Auto 1: Video 2: Film	Picture Film Mode
0	1	19	0: Off 1: Low 2: Medium 3: High	Picture Temporal NR
0	1	20	0: Off 1: Low 2: Medium 3: High	Picture Mosquito NR
0	1	21	0: Off 1: On	Picture Block NR
0	1	22	0: Off 1: Low 2: Medium 3: High	Picture Detail Enhancement
0	1	23	0: Off 1: Low 2: High	Picture Luma Transition Enhance

Control Type		Function	Parameter	Description
Set	Get			
0	1	24	0: Off 1: Low 2: High	Picture Chroma Transition Enhance
0	1	25	0 : Native HDMI 1 : 640x480@60Hz 2 : 640x480@75Hz 3 : 800x600@50Hz 4 : 800x600@60Hz 5 : 800x600@75Hz 6 : 1024x768@50Hz 7 : 1024x768@60Hz 8 : 1024x768@75Hz 9 : 1280x768@50Hz 10: 1280x768@60Hz 11: 1280x720@60Hz 12: 1280x800@60Hz 13: 1280x1024@50Hz 14: 1280x1024@60Hz 15: 1280x1024@75Hz 16: 1366x768@50Hz 17: 1366x768@60Hz 18: 1400x1050@50Hz 19: 1400x1050@60Hz 20: 1600x1200@50Hz 21: 1600x1200@60Hz	Output Resolution

Control Type		Function	Parameter	Description
Set	Get			
			22: 1680x1050@60Hz 23: 1920x1080@60Hz 24: 1920x1200@60Hz 25: 480p@60Hz 26: 576p@60Hz 27: 720p@50Hz 28: 720p@60Hz 29: 1080i@50Hz 30: 1080i@60Hz 31: 1080p@50Hz 32: 1080p@60Hz 33: 480P@59.94Hz 34: 720P@59.94Hz 35: 1080i@59.94Hz 36: 1080P@23.98Hz 37: 1080P@29.97Hz 38: 1080P@59.94Hz 96: Custom1 97: Custom2 98: Custom3 99: Custom4	
0	1	26	0: Auto 1: HDMI 2: DVI	Output HDMI Type

Control Type		Function	Parameter	Description
Set	Get			
0	1	27	0: Best Fit 1: Letterbox 2: Follow Output 3: Virtual Wide 4: Follow Input 5: Custom	Aspect Ratio
0	1	28	-16 ~ 16	H-Pan
0	1	29	-16 ~ 16	V-Pan
0	1	30	-8 ~ 8	H-Zoom
0	1	31	-8 ~ 8	V-Zoom
0	1	32	0: 100% 1: 150% 2: 200% 3: 225% 4: 250% 5: 275% 6: 300% 7: 325% 8: 350% 9: 375% 10: 400% 11: Custom	Zoom
0	1	33	0 ~ 32	Custom Zoom
0	1	34	0 ~ 31	Zoom H-Pan
0	1	35	0 ~ 31	Zoom V-Pan

Control Type		Function	Parameter	Description
Set	Get			
0	1	36	0: Off 1: On	PIP On/Off
0	1	37	0: Picture-In-Picture 1: Picture + Picture 2: Split	PIP Type
0	1	38	0: Input 1 1: Input 2 2: Input 3 3: Input 4 4: VGA 1 5: VGA 2 6: HDMI 1 7: HDMI 2	PIP Source
0	1	39	0: 1/25 1: 1/16 2: 1/9 3: 1/4 4: Custom	PIP Size
0	1	40	0 ~ 128	PIP H-Position
0	1	41	0 ~ 128	PIP V-Position
0	1	42	0 ~ 255	PIP H-Size
0	1	43	0 ~ 255	PIP V-Size
0	1	44	0: Off 1: On	PIP Frame

Control Type		Function	Parameter	Description
Set	Get			
0	1	45	0: Red 1: Green 2: Blue	PIP Frame Color
0	1	46	0: Analog 1: S/PDIF	Audio Input Type
0	1	47	-22~0~+22	Audio Input Volume
0	1	48	-100~24	Audio Output Volume
0	-		111	Volume Up
0	-		-111	Volume Down
0	1	49	-36~0~+36	Audio Bass
0	1	50	-36~0~+36	Audio Treble
0	1	51	-10~10	Audio Balance
0	1	52	0: Off 1: On	Audio Loudness
0	1	53	0: Dynamic 1: User Define	Audio Delay
	1	54	0~340(step 2)	User Delay
0	1	55	0: No audio 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: VGA1 6: VGA2	Audio Input For USB

Control Type		Function	Parameter	Description
Set	Get			
0	1	56	0: Keystone 1: Anyplace 2: Rotation	Geometry Application
0	1	57	0: Front 1: Ceiling 2: Rear 3: Rear ceiling	Geometry Location
0	1	58	-40 ~ 40	Geometry Horizontal Keystone
0	1	59	-30~30	Geometry Vertical Keystone
0	1	60	-2000~2000	Geometry Diagonal Projection – Top Left H
0	1	61	-2000~2000	Geometry Diagonal Projection – Top Left V
0	1	62	-2000~2000	Geometry Diagonal Projection – Top Right H
0	1	63	-2000~2000	Geometry Diagonal Projection – Top Right V
0	1	64	-2000~2000	Geometry Diagonal Projection – Bottom Left H
0	1	65	-2000~2000	Geometry Diagonal Projection – Bottom Left V
0	1	66	-2000~2000	Geometry Diagonal Projection – Bottom Right H
0	1	67	-2000~2000	Geometry Diagonal Projection – Bottom Right V
0	-	68	n/a	Geometry Diagonal Projection – Reset
0	1	69	-20 ~ 20	Geometry Pincushion/Barrel
0	1	70	-180 ~ 180	Geometry Rotation
0	-	71	n/a	Geometry Reset all
0	-	72	0: Profile 1 1: Profile 2	Save Setting

Control Type		Function	Parameter	Description
Set	Get			
			2: Profile 3 3: Profile 4 4: Profile 5 5: Profile 6 6: Profile 7 7: Profile 8	
0	-	73	0: Profile 1 1: Profile 2 2: Profile 3 3: Profile 4 4: Profile 5 5: Profile 6 6: Profile 7 7: Profile 8	Recall Setting
0	1	74	0: Off 1: On	Frame Lock
0	-	75	n/a	Factory Reset
-	1	76	n/a	Firmware Revision
0	1	77	0: 1400x1050x60 1: 1680x1050x60	Mode Set – Mode 1
0	1	78	0: 1280x1024x75 1: 1280x1024x76	Mode Set – Mode 2
0	1	79	0: Center 1: Top Left 2: Top Right	OSD Menu Position

Control Type		Function	Parameter	Description
Set	Get			
			3: Bottom Left 4: Bottom Right	
0	1	80	0: 5 sec 1: 10 sec 2: 20 sec 3: 30 sec 4: 60 sec 5: 90 sec 6: Off	OSD Time Out
0	1	81	0: Off 1: On 2: Custom	Logo
0	1	82	0: Black 1: Blue	Blank Color
0	-	83	n/a	Capture
0	1	84	0: Black 1: Blue 2: Custom 3: Disable Analog Sync	Background
0	1	85	0: Off 1: On	Save Lock
0	1	86	0: Off 1: On	Input Lock
0	1	87	0: Blank & Mute 1: Blank	Blank key function

Control Type		Function	Parameter	Description
Set	Get			
			2: Mute	
0	1	88	0: Freeze & Mute 1: Freeze 2: Mute	Freeze key function
0	1	89	0: Off 1: On	Freeze
0	1	90	0: Off 1: On	Blank
0	1	91	0: Off 1: On	Power
0	-	92	n/a	Info
0	-	93	n/a	Menu
0	-	94	n/a	Top
0	-	95	n/a	Down
0	-	96	n/a	Left
0	-	97	n/a	Right
0	-	98	n/a	Enter
0	-	99	n/a	Picture
0	-	100	n/a	Swap
0	1	101	0: Off 1: On	Mute

Control Type		Function	Parameter	Description
Set	Get			
0	1	102	0: Off 1: On	Lock
-	1	103	0: 640x480 60 1: 640x480 67 Mac13 2: 640x480 72 3: 640x480 75 4: 640x480 85 5: 720x400 70 6: 720x400 85 7: 800x600 56 8: 800x600 60 9: 800x600 72 10: 800x600 75 11: 800x600 85 12: 832x624 75 Mac16 13: 1024x768 60 14: 1024x768 70 15: 1024x768 75 16: 1024x768 75 Mac19 17: 1024x768 85 18: 1024x800 84 Sun 19: 1152x864 75 20: 1152x870 75 Mac21 21: 1152x900 66 Sun 22: 1152x900 76 Sun	Main Input status

Control Type		Function	Parameter	Description
Set	Get			
			23: 1280x960 60 24: 1280x960 85 25: 1280x768 60 26: 1280x1024 60 27: 1280x1024 75 28: 1280x1024 76 Sun 29: 1280x1024 85 30: 1400x1050 60 31: 1400x1050 75 32: 1600x1200 60 33: 1680x1050 60 34: 1080i 60 35: 1080i 50 36: 1080p 60 37: 1080p 50 38: 720p 60 60 39: 720p 50 50 40: 480i 41: 480p 42: 576i 43: 576p 44: 1280x800 60(Reduce blank) 45: 1920x1200 60 46: 1920x1080 60 47: 1280x720 60	

Control Type		Function	Parameter	Description
Set	Get			
			48: 1080p 24 49: 1280x800 60 50: 1440x900 60 51: 1440x900 60(Reduce blank) 52: 1280x768_60 (Reduce blank) 53: 1680x1050 60(Reduce blank) 54: 1366x768 60 55: 1366x768_60 (Reduce blank) 94: Custom1 95: Custom2 96: Custom3 97: Custom4 98: No Input detected 99: other 101: NTSC 102: PAL 103: PAL-M 104: PAL-N 105: NTSC 4.43 106: SECAM 107: PAL-60	

Control Type		Function	Parameter	Description
Set	Get			
-	1	104	0: 640x480 60 1: 640x480 67 Mac13 2: 640x480 72 3: 640x480 75 4: 640x480 85 5: 720x400 70 6: 720x400 85 7: 800x600 56 8: 800x600 60 9: 800x600 72 10: 800x600 75 11: 800x600 85 12: 832x624 75 Mac16 13: 1024x768 60 14: 1024x768 70 15: 1024x768 75 16: 1024x768 75 Mac19 17: 1024x768 85 18: 1024x800 84 Sun 19: 1152x864 75 20: 1152x870 75 Mac21 21: 1152x900 66 Sun 22: 1152x900 76 Sun 23: 1280x960 60 24: 1280x960 85	PIP Input status

Control Type		Function	Parameter	Description
Set	Get			
			25: 1280x768 60 26: 1280x1024 60 27: 1280x1024 75 28: 1280x1024 76 Sun 29: 1280x1024 85 30: 1400x1050 60 31: 1400x1050 75 32: 1600x1200 60 33: 1680x1050 60 34: 1080i 60 35: 1080i 50 36: 1080p 60 37: 1080p 50 38: 720p 60 39: 720p 50 40: 480i 41: 480p 42: 576i 43: 576p 44: 1280x800 60(Reduce blank) 45: 1920x1200 60 46: 1920x1080 60 47: 1280x720 60 48: 1080p 24 49: 1280x800 60	

Control Type		Function	Parameter	Description
Set	Get			
			50: 1440x900 60 51: 1440x900 60(Reduce blank) 52: 1280x768_60 (Reduce blank) 53: 1680x1050 60(Reduce blank) 54: 1366x768 60 55: 1366x768_60 (Reduce blank) 94: Custom1 95: Custom2 96: Custom3 97: Custom4 98: No Input detected 99: other 101: NTSC 102: PAL 103: PAL-M 104: PAL-N 105: NTSC 4.43 106: SECAM 107: PAL-60	
0	1	105	512~3071	Advance Input Mode: HT

Control Type		Function	Parameter	Description
Set	Get			
0	1	106	32~(HS-48)	Advance Input Mode: HW
0	1	107	80~(HT-HA-12)	Advance Input Mode: HS
0	1	108	640~1920 <= (HT-92)	Advance Input Mode: HA
0	1	109	0: Negative polarity 1: Positive polarity	Advance Input Mode: HP

Control Type		Function	Parameter	Description
Set	Get			
0	1	110	384~2047	Advance Input Mode: VT
0	1	111	2~(HS-13)	Advance Input Mode: VW
0	1	112	15~(VT-VA-1)	Advance Input Mode: VS
0	1	113	480~1200 <= (VT-16)	Advance Input Mode: VA

Control Type		Function	Parameter	Description
Set	Get			
0	1	114	0: Negative polarity 1: Positive polarity	Advance Input Mode: VP
0	1	115	25 < OCLK < 165	Advance Input Mode: OCLK(Integer)
0	1	116	25 < OCLK < 165	Advance Input Mode: OCLK(Decimal)
0	1	117	0: Off 1: On	Advance Input Mode: Enable

Control Type		Function	Parameter	Description
Set	Get			
0	-	118	n/a	Advance Input Mode: Save
0	1	119	512~3071	Advance Output Mode: HT
0	1	120	32~(HS-48)	Advance Output Mode: HW
0	1	121	80~(HT-HA-12)	Advance Output Mode: HS

Control Type		Function	Parameter	Description
Set	Get			
0	1	122	640~1920 <= (HT-92)	Advance Output Mode: HA
0	1	123	0: Negative polarity 1: Positive polarity	Advance Output Mode: HP
0	1	124	384~2047	Advance Output Mode: VT
0	1	125	2~(HS-13)	Advance Output Mode: VW

Control Type		Function	Parameter	Description
Set	Get			
0	1	126	15~(VT-VA-1)	Advance Output Mode: VS
0	1	127	480~1200 <= (VT-16)	Advance Output Mode: VA
0	1	128	0: Negative polarity 1: Positive polarity	Advance Output Mode: VP
0	1	129	25 < OCLK < 165	Advance Output Mode: OCLK(Integer)

Control Type		Function	Parameter	Description
Set	Get			
0	1	130	25 < OCLK < 165	Advance Output Mode: OCLK(Decimal)
0	-	131	n/a	Advance Output Mode: Save
0	-	132	n/a	Advance Output Mode: Set Current
0	-	133	n/a	Volume Up
0	-	134	n/a	Volume Down
0	1	135	0: Follow Output 1: Follow Input	HDCP Setting
0	1	136	0:Custom1 1:Custom2 2:Custom3 3:Custom4	Advance Input Mode: Custom Input

Control Type		Function	Parameter	Description
Set	Get			
0	1	137	0:Custom1 1:Custom2 2:Custom3 3:Custom4	Advance Output Mode: Custom Output
0	1	138	0: Off 1: On	Overscan
0	1	139	0: Seamless 1: Fast	Switching Mode
0	1	140	0: Manual 1: Auto	Auto Image Mode
0	-	141	n/a	Slideshow Start
0	-	142	n/a	Slideshow Stop
0	-	143	n/a	Slideshow Pause
0	-	144	n/a	Slideshow Next
0	-	145	n/a	Slideshow Previous

Control Type		Function	Parameter	Description
Set	Get			
0	1	146	0: Min 1: Low 2: Mid 3: Long 4: Max 5: Off	Slideshow
0	1	147	0: 1280x768x60 1: 1366x768x60	Mode Set – Mode 3
0	1	148	0 : Off 1 : On	HDMI1 Hot Plug
0	1	149	0 : Off 1 : On	HDMI2 Hot Plug
0	1	150	0 : Input 1 1 : Input 2 2 : Input 3 3 : Input 4 4 : VGA 1 5 : VGA 2 6 : HDMI 1	HDMI1 Audio Input
0	1	151	0 : Input 1 1 : Input 2 2 : Input 3 3 : Input 4 4 : VGA 1	HDMI2Audio Input

Control Type		Function	Parameter	Description
Set	Get			
			5 : VGA 2 6 : HDMI 2	
0	-	152	-	Custom Output Read HDMI EDID Prefer Timing
0	1	153	0 : Off 1 : On	HDMI1 Input HDCP On/Off
0	1	154	0 : Off 1 : On	HDMI2Input HDCP On/Off

4 Error Code

Error code	Description
ERR 1	Unknown command
ERR 2	Unknown function
ERR 3	Unavailable function
ERR 4	Unknown control type
ERR 5	Unavailable get function
ERR 6	Unavailable set function
ERR 7	Unavailable parameter
ERR 8	Too few arguments