RS-232/LAN control commands for Vestel Visual Solution Displays

RS232-LAN connection parameters

Baud rate =   115200
Data Bits =   8
Parity =   None
Stop bit =   1
Flow Control=   No

Note. Straight RS232 cable connection should be used (not a crossover cable).

Network (LAN) TCP/IP connection port = 1986

Sending ASCII commands in HEX format

In relation to Controllers sending ASCII command in hex format, the above item 0a must be added to the end of each command line.

For example, TOF command needs to be sent as **54 4f 46 0a**

The tables below show standard responses where Display ID is not set. If display ID has been set then:
- Responses from the display will be preceded with an identifier [#NN], where NN is a 2-digit display ID.
- Response from a specific display can be requested by prepending an identifier to a command parameter string. e.g. GETVOLUME [#02] will only receive a response if sent to a display with ID of 2.
- Commands can be broadcast to all addresses using an identifier [#00] or by omitting the identifier string from command parameters

Controlling with An External PC
RS-232
Input Socket
To COM port
RS-232 straight cable
(commercially available)
RS-232 to
USB Adaptor
PC

You can control the product from an external PC via RS-232 (COM port or LAN(Ethernet port)) on the PC. For instance, system source can be changed by RS-232 from remote computer. When a command is sent from the PC to the product, the product operates according to the received command and sends a response message to the PC.

Equipment/Tools:
• RS-232 (female) to RS-232(male) cable or LAN cable (connected via router).
• USB to RS-232(male) cable
• Notebook or PC which has USB port or LAN

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• Installed program on remote PC to send commands:
In general, the RS-232 commands are sent for operating the implemented functions via serial port and a suitable utility can be used such as described below.

Connecting to the Display LAN port

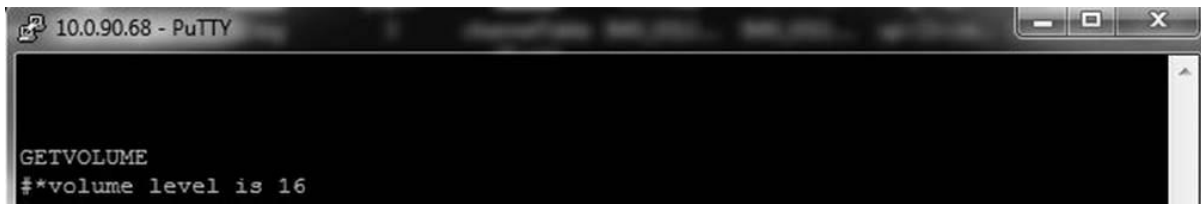Download and install software such as PuTTY from the following link first: http://www.putty.org/.

Run the software and enter the Display's IP address in the field **Host Name**. Enter "**1986**" as a default value in the field **Port**. Then select "**Telnet**" as **Connection**

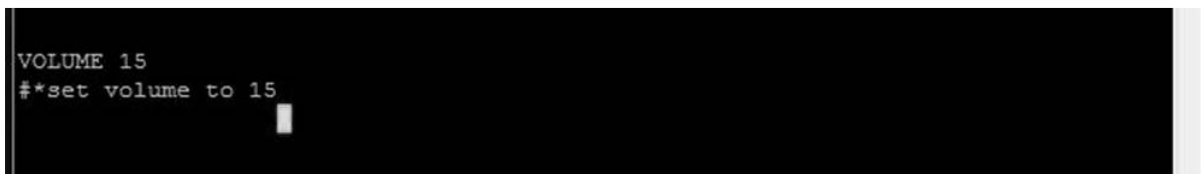**type** and click the **Open** button. SETQUICKSTANDBY
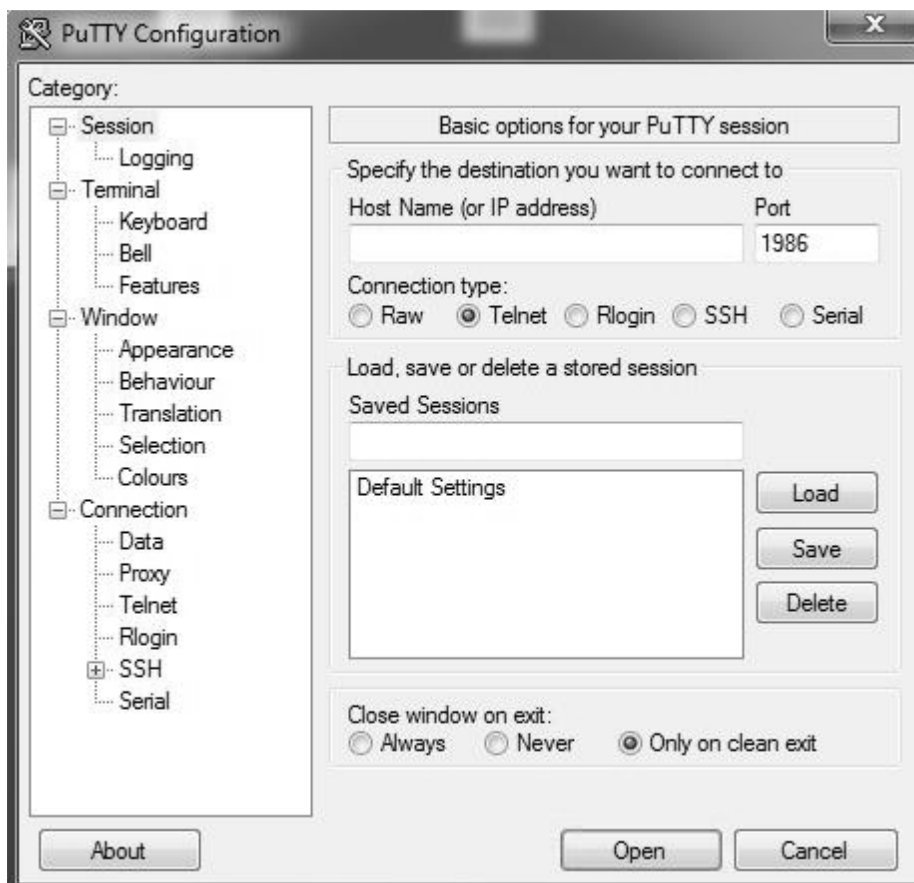
Use the commands in the **RS232 Command Table**. For example, if "GETVOLUME" command is entered, current volume level should be displayed on the putty window as shown in the pictures below.
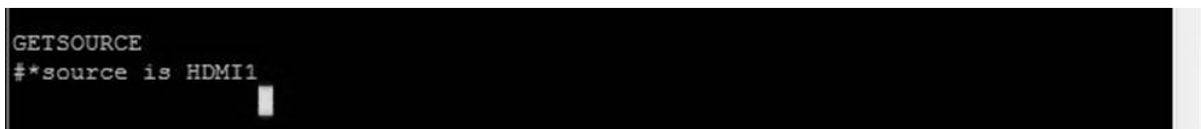
Another example; Volume level can be changed by using "VOLUME" command. After sending this command, you can verify the changes from the Display.

The last example; When "GETSOURCE" command is entered, current

source should be displayed on the putty window as shown in the picture below.

Connecting to the Display (RS232 port)
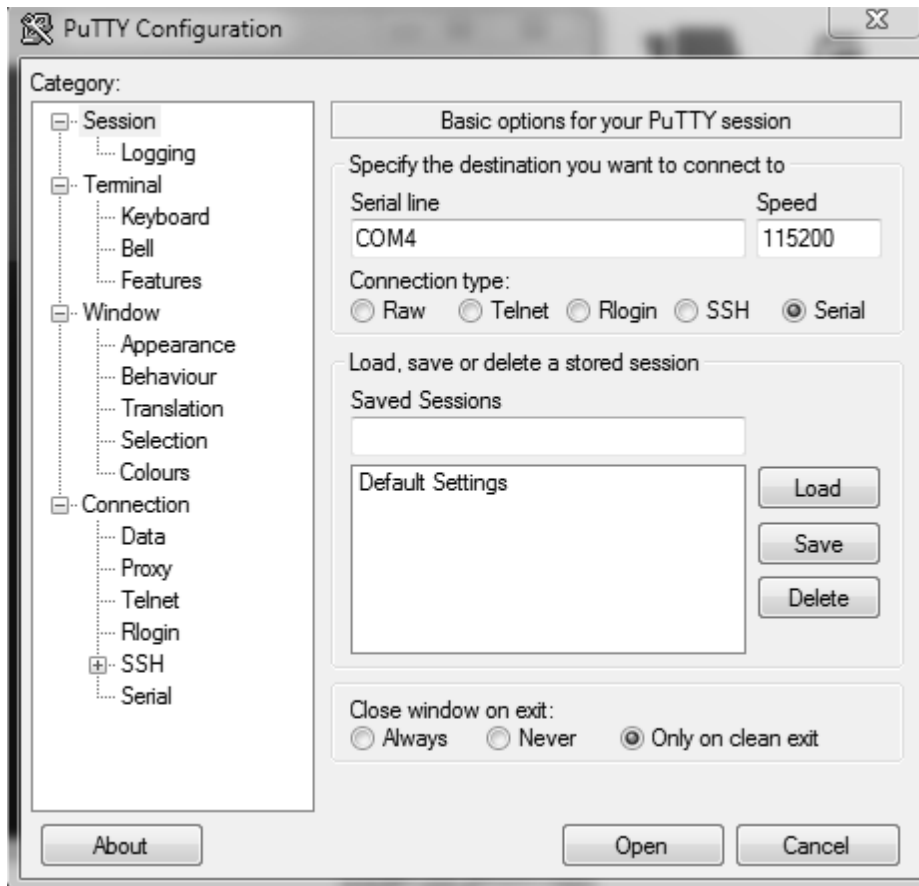
Run the software and select **Serial** as **Connection**

Type. Enter the Display's serial port in the field **Serial Line** (in the following example it is COM4) and **"115200"** in the field Speed. Then click the **Open** button.

Power and input selection

Group	Command	Description	Parameter	Return
Input	SELECTSOURCE	Select source.	integer n (5 = Back AV, 7 = HDMI1, 8 = HDMI2, 11 = YPbPr, 12 = VGA, 18 = DVI, 19 = Displayport, 20 = OPS, 21 = Wireless Display	#*select External source ...
	GETSOURCE	Gets source.	No Parameter	#*source is ...
	SETSOURCE	Set source as enable/disable.	integer n (5 = Back AV, 7 = HDMI, 11 = YPbPr, 12 = VGA, 18 = DVI, 19 = Displayport, 20 = OPS, 21 = Wireless Display	#*selected source n #*enable/disable state b
On/Off	TOF	Turn off Display (active standby)	No Parameter	#* Display will be sent to Active Standby state.
	TON	Turn On Display	TON n N is required volume value (0-100)	#* Display will be turned on with specified volume level
	STANDBY	Switches Display into Full standby. Note the Display will not be able to receive further commands and must be switched back on with either AC cycle or physical remote control unit.	No Parameter	#* will be returned
	GETSTANDBY	Get Standby status	No parameter	#* standby Off Or #* standby On
	SETQUICKSTANDBY	SETQUICKSTANDBY n, where n is one of (off, on). Note. Quick standby On means the display will be switched off into a active standby status. Quick standby off means the display is switched On,	string-integer n (n = ON, n = OFF)	#*Set Quick Standby on Or #*Set Quick Standby off Or #*Quick Standby is not enabled
	GETQUICKSTANDBY	Returns Quick Standby state n (on or off)	No parameter	#*Quick Standby is n
Backlight Control	SETBACKLIGHT	Set Backlight State	str-int ON or str-int OFF	#*setBacklight port to ON or #*setBacklight port to OFF
	GETBACKLIGHT	Get backlight level.	no parameter	#*Energy Saving is ...
	BACKLIGHTDIM	Set backlight dimming level.	str-int n (n = low, high, off)	#*setBacklightDimming()
	GETBACKLIGHTDIM	Get backlight dimming level.	no parameter	#*Energy Saving is ...
Video Control	VIDOFF	Select video off	No parameter	Video off
	VIDON	Select video on	No parameter	Video On

Admin Commands

Group	Command	Description	Parameter	Return
ADMIN	Led	Control device LED	String-integer n (n=1 or n=0) where 1 = LED ON; 0 = LED OFF	Led is ON Or Led is OFF
	SETRC	Enables /disables remote control commands.	string-integer n (n = ON or n = OFF)	set remote state ON Or

				set remote state OFF
	GETCOUNTRY	Get Country Setting information	No parameter	#* COUNTRY IS :…
	GETSWVERSION	Returns the SW version of the Display	No parameter	#*V…
	USBOPERATIONS	Perform USB operations	No parameter	You may observe prints bank 0, bank 1 etc. Ensure debug print "MFC ISP: done" is returned, this may take over 10 minutes
	MENUTIMEOUT	Set menu time out mode.	Integer n (n=0, n=15, n=30, n=60)	#*set menu timeout mode is OFF Or #*setmenu timeout mode to n Or #*Invalid menu timeout mode
	GETMENUTIMEOUT	Get menu time out mode	No parameter	#*menu timeout mode is OFF Or #*menu timeout mode is n Or #*Cannot get menu timeout mode Note. Above n is one of (0, 15, 30, 60)
	STARTFTI	Start First Time Installation	No parameter	#* FTI was initialised
	MAINMENUITEM	Select main menu item	String-integer n (picture, sound, settings, installation, channellist, mediabrowser)	#*selectMainMenuItem() set to n
	SHOWBUILDOPTIONS	Show build options	No parameter	#*…
	OSD_PRINT	Prints an osd in x-y position with the string entered in it(OSD_PRINT X-Y-string).	integer (0 ≤ x< 495) (0 ≤ y< 700) string message	X POS: x Y POS: y MESSAGE: … Or Osd_print command doesn't work at the teletext_mode or EPG_mode
	SETCOUNTRY	Set country in n channels state.	string-integer n(TURKEY, GERMANY, …)	#* setCountry() set to n Or #*Country should be set only in the FTI mode (no channels state)
	GETPORTALMODE	Gets information if display is in portal mode or not	No parameter	#*tv_portal_status:0 #*Portal status 0 is sent to listening socket(if open) Or #*tv_portal_status:1 #*Portal status 1 is sent to listening socket(if open)
	RESET	Resets the display	No parameter	Reset process was

				successfully accomplished. You need to establish the connection again.
	RST	Restarts the display	No parameter	#*Display will be restarted !
	GETMODELNO	Get model information	No parameter	#* Model no:…
	GETSERIALNO	Get serial number information	No parameter	#* Model no:…
	set_ip_address	Set static IP address of eth0 network interface.	str-int n Example: set_IP_address 192.168.0.15	#*IP address setting Successful Or #*IP address setting NOK
	get_ip_address	Get IP address of eth0 network interface. Usage: get_IP_address	No parameter	#*IPaddr: ...
	SAVEWIFIPROFILE	Save access point to wifi_profile	String-integer ssid, bssid key	Profile saved Or Number of profiles exceeds the maximum number to be stored
	Wifi	Checks if given SSID wifi is found or not and returns pass or fail. Works only in portal mode.	String-integer ssid	#* Pass Or #* Fail
	NETCLONE	Clone from FTP server, example: NETCLONE<ip-of-server/path>	<ip-of-server/path>	Cloned
	SETOSDORIENTATION	Set OSD orientation	string-integer n (n = landscape, n = portrait, n = portrait2) (landscape : 0 degree rotation, portrait : 90 degree rotation, portrait2: 270 degree rotation)	#*ACK Or #*NACK
	GETOSDORIENTATION	Get OSD orientation	No parameter	#*The OSD orientation is ...
	SAVEMODELINFO	saves model name and sw version to a removable device	No parameter	#*Model info is saved Or #*Cannot create file (if there is no device connected)

Scheduler

Group	Command	Description	Parameter	Return
	SETSCHEDULER	enables/disables scheduler	Integer String n"SETSCHEDULER N_X" (N is scheduler number, X is "ON" or "OFF")	#*The scheduler is set to .... (ON, OFF)
	GETSCHEDULER	get scheduler enabled/disabled	Integer string n "GETSCHEDULER N" (N is scheduler number)	#*The scheduler is .... (ON, OFF)
	SETSCHEDULEOP	set scheduler parameters	Integer string n "SETSCHEDULEOP number_enabled_ontime_offenabled_offtime_days_source"	#*Schedule parameters are ... (set/not set).

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			(SETSCHEDULEOP 4_1_08:00_1_22:00_0111110_HDMI)	
	GETSCHEDUL EOP	set scheduler parameters	Integer string n "GETSCHEDULEOP N" (N is scheduler number)	#*Scheduler on/off time and source is: ...... (hh:mm_hh:mm_sour ce)

Key Commands

Note. It is possible to send any of the available remote-control commands through the RS232-LAN connection.

Group	Command	Description	Parameter	Return
	KEY	Send keypress event to display bypassing IR key handling	String n, where n is one of the keyname values returned by the display if sent 'KEY get' string. e.g. KEY menu	… key send to Eclipse Or … is not a valid key string
	irkey	irkey keyvalue (hex)	String-integer n (ex:irkey 0x38)	GenericIRKeySet key:n

Remote Control Key Summary

Symbol	Function	SYS CODE: 01 Code (RC5)	'KEY'
⏻	Stand By	0C	standby
RED		37	red
GREEN		36	green
YELLOW		32	yellow
BLUE		34	blue
1	Direct Programme	01	1
2	Direct Programme	02	2
3	Direct Programme	03	3
4	Direct Programme	04	4
5	Direct Programme	05	5
6	Direct Programme	06	6
7	Direct Programme	07	7
8	Direct Programme	08	8
9	Direct Programme	09	9
0	0	00	0
BACK	Back (Return)	0A	exit
- V	Volume Decrease -	11	vol-
+ V	Volume Increase +	10	vol+
MUTE	Mute	0D	mute
- P	Programme/Channel -	21	prog-
+ P	Programme/Channel +	20	prog+
SOURCE	Source	38	aux
▲	Cursor Up	14	up
◄	Cursor Left	15	left
OK	OK (Select)	35	ok
►	Cursor Right	16	right
▼	Cursor Down	13	down
MENU	Menu	30	menu
Q.MENU	Quick Menu	2B	quick_menu
EXIT	EXIT	25	exit2
AUDIO	Audio Settings	0F	audio
S	Signage	1F	signage
ASPECT	Aspect Ratio	0B	wide
BROWSER	Browser	3B	browser
PICTURE	Picture	26	picture
PICTURE MODE	dynamic, cinema, game...	33	preset
PLAY		19	play
STOP		18	stop
PAUSE		31	pause
SEARCH BACK		1B	fforward
SEARCH FORWARD		1C	rewind
MEDIA PLAYER	Media Player	39	media_browser
CMS	Settings URL	3C	cms / long_cms
WIRELESS	Wireless Display	2F	wireless
NETWORK	Network	22	internet_settings
TILING	Tiling Menu	1A	tiling
INFO	Info	12	info
*		27	star_key

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Audio Commands

Group	Command	Description	Parameter	Return
Volume	VOLUME	Set Volume Level	Integer n (0 ≤ n ≤ 100)	#*set volume to n
	GETVOLUME	Volume Level Information	No Parameter	#* volume level is…
	HEADPHONEVOLUME	Set headphone volume level.	Integer n (0 ≤ n ≤ 100)	#*set headphone volume to n
	GETHEADPHONEVOLUME	Headphone volume level information	No Parameter	#* headphone volume level is…
	VOLUMEUP	Increase volume level by 1 step (until maximum volume)	No parameter	#* volume LEVEL is increased to… Or #* you cannot increase volume level further. Confirmed Max Volume level is…
	VOLUMEDOWN	Decrease volume level by 1 step (until minimum volume)	No parameter	#* volume LEVEL is decreased to… Or #* you cannot decrease volume level further. Confirmed Max Volume level is…
Mute	SET MUTE	Set mute value on/off	No Parameter	#* MUTE OFF Or #* MUTE ON
	GET MUTE	Get mute value on/off	No Parameter	#* MUTE OFF Or #* MUTE ON
	SETSOUNDMODE	Set sound mode	Integer n (0=mono, 1= stereo, 2 = dual I, 3 = dual II, 4 = mono left, 5 = mono right)	#*setSoundMode() set to n Or #*Invalid sound mode entered
	SETBALANCE	Set balance value	Integer n (-50 < n <50)	#*set balance level to n Or #*invalid balance level entered
	GETBALANCE	Get balance value	No parameter	#*balance value is
	SETAVL	Set AVL state	Integer n (0 = off, 1 = on)	#*set avl state to n
	GETAVL	Get AVL state	No Parameter	#* avl state is….
	SETDYNAMICBASS	Set dynamic bass state.	integer n (0 = off, 1 = on)	#*set dynamic bass state to n
	GETDYNAMICBASS	Get dynamic bass state.	No parameter	#*the dynamic bass state is… (0 = off, 1 = on)
	SETBASSGAIN	Set bass gain	integer n (-6 <= n <= 6)	#*set bass gain to n Or #*Incorrect sound system parameter Entered
	GETBASSGAIN	Get bass gain	No parameter	#*the bass gain level is n Note: Above n is -6 < n < =6
	SETSURROUNDSOUND	Set surround sound state	Integer n (0 = off, 1 = on)	#*set surround sound state to n
	SETEQUSERFREQ	Set equalizer user freq. value for any band	String n (120Hz, 500Hz, 1.5KHz, 5KHz, 10KHz) Integer n -13, <n < 13 Example:	#*setEQUserFreq() set to n Or #*Incorrect sound system parameter entered

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			SETUSERFREQ 120Hz 10	Or #*Incorrect equaliser mode. It should be user mode
	GETEQUSERFREQ	Set equalizer user freq. value of specified band	String n (120Hz, 500Hz, 1.5KHz, 5KHz, 10KHz)	#*the equaliser value for the band is n Or #* incorrect sound system parameter entered Note: Above n is -13 < n < 13
	SETDIGITALOUT	Set digital output	String n (compressed, pcm)	#* setDigitalOut () set to n Or #* Incorrect equaliser parameter entered
	GETDIGITALOUT	Get digital output	No parameter	#* digital out is pcm Or #* digital out is compressed
	SETEQMODE	Set equaliser mode	String n (Music, Movie, Speech, Flat, Classic, User)	#*setEQmode() set to n Or #* Incorrect equaliser parameter entered
	GETEQMODE	Get equaliser mode	No parameter	#* the equaliser mode is n Note above is one of Music, Movie, Speech, Flat, Classic, User

Browser/CMS commands

Group	Command	Description	Parameter	Return
Browser	SETURL	Loads the portal with the given URL as the start page. Returns web page load status via portal.	String-integer n<load url='n'/>	#* status =… url = n inject_url = …
	GETURL	Gets url of the current page of the portal is active.	No parameter	#* URL = …
	OPENURL	Starts the given URL and returns web page load status directly.	String-integer n<load url='n'/>	#* status =… url
CMS	SETSETTINGSURL	Sets the settings URL	string	#*setting url is set
	GETSETTINGSURL	Gets the settings URL	No parameter	#*setting url is…
	SETSTARTURL	Sets the start URL	string	#*start url is set
	GETSTARTURL	Gets the start URL	No parameter	#*start url is…
	GETUSERAGENT	Gets portal useragent	No parameter	#* Current UA:…
	SETCURSORPOSITION	Sets cursor position in browser.	String-integer a,b	#* X:a Y:b
	GETCURSORPOSITION	Gets cursor position in browser.	No parameter	#* X:… Y:…

Mediaplayer control

Group	Command	Description	Parameter	Return
Mediaplayer	MP3PLAY	Play MP3 audio file	String-integer n Example:	#* playing audio: n

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				MP3play/mnt/hd0a/audio.mp3	
	MP3STOP	Stop MP3 audio file	No parameter	#* select display source #* MP3 file stop
	VIDEOPLAY	Play video file	String-integer n Example: VIDEOPLAY/mnt/hd0a/video.mkv	#* playing video: n
	VIDEOSTOP	Stop video file	No parameter	#* select display source #* Video file stop
	IMGSHOW	Display image	String-integer n i.e.: IMGSHOW /mnt/hd0a/picture.jpg	#* Showing image: n
	IMGHIDE	Stop image display	No parameter	#* select display source #* Image file is hidden
	RDCONN	Connect a removable device read or read/write	String-integer n (n=r or n=rw)	#*Connecting removable device read-only Or #*Connecting removable device read-write
	RDDIS	Disconnect a removable device (as set by RDCONN)	No parameter	Disconnect a removable device (as set by RDCONN)
	SETVIEWSTYLE	set view style (Flat or Folder)	string n (Flat, Folder)	#*The view style is set to ... (Flat or Folder)
	GETVIEWSTYLE	get view style (Flat or Folder)	No Parameter	#*The view style is ... (Flat or Folder)
	SETSLIDESHOWINTERVAL	set slide show interval	integer n (5, 10, 15, 20, 25, 30)	#*The slideshow interval is set to ... seconds
	GETSLIDESHOWINTERVAL	get slide show interval	No parameter	#*The slideshow interval is ... seconds
	SETUSBAUTOPLAY	set usb autoplay mode	string n (ON, OFF)	#*The USB autoplay is set to ... (ON, OFF)
	GETUSBAUTOPLAY	get usb autoplay mode	No parameter	#*The USB autoplay is ... (ON, OFF)

Time and Date

Group	Command	Description	Parameter	Return
TIME and DATE	TIME	Display the current date and time	No parameter	Time = …
	SETTIMEMODE	Set time mode	String n ("auto", "manual")	#* set time mode to n Or #*Invalid input type Or #*Cannot set time mode
	GETTIMEMODE	Get time mode	No parameter	#* time mode is : n Or #*Cannot get time mode Note. n = auto or

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				manual
	RTCSET	Set/Query RTC clock	optional integer parameter	First outputs the current RTC time in decimal and hex format: #*RTC time is 200 0xc8 If a non-zero parameter is passed, sets it as RTC time and outputs the following: #*RTC set time to 255 #*RTC new time is 255 0xff
	UNTP	Update date and time	No parameter	#*Internet connection successful file size=2048 Date and time have been updated from NTP client Date =… Time =… #*No internet connection! Date and tiem cannot be updated
	SNTP	Set NTP server IP	String-integer ("auto"/ntp server path – 0) e.g. SNTP pool.ntp.org	#*Auto: forced_ntpserver file deleted –SUCCESS!! Or #*Forced_ntpserver written – SUCCESS!!
	GTNTP	Get NTP server IP	No parameter	#* NTP server url is…

PC Input control (DSUB)

Group	Command	Description	Parameter	Return
PC INPUT	HPOS	Set horizontal position	int n (-25 ≤ n ≤ 25)	set horizontal position to ... (percentage in the range) Or #*invalid value entered
	GETHPOS	Get horizontal position	No parameter	#*The horizontal position is…
	VPOS	Set vertical position	int n (-25 ≤ n ≤ 25)	set vertical position to ... (percentage in the range) Or #*invalid value entered
	GETVPOS	Get vertical position	No parameter	#*The vertical position is…
	DOTCLOCK	Set dot clock	int n (-50 ≤ n ≤ 50)	#*set dot clock to ... (percentage in range) Or #*invalid value entered
	GETDOTCLOCK	Get dot clock.	No parameter	#*The dot clock is ...
	PHASE	Set phase.	int n (-30 ≤ n ≤ 30)	#*set dot clock to ... (percentage in the range)

				Or
				#*invalid value entered
	GETPHASE	Get phase	No parameter	#* The phase is...
	AUTOPOS	Start Auto-position	No parameter	#* Set auto position

Display Controls

Group	Command	Description	Parameter	Return
DISPLAY	FREEZE	Freeze/Unfreeze	No parameter	#*Video is freezed

Or

#*Video is unfreezed |
	ENERGYSAVING	Set energy saving mode. (if enabled from profile)	string-integer n (n = off, minimum, medium, maximum, auto, screen_off)	#*setEnergySaving() set to n
	GETENERGYSAVING	Get energy saving mode	No parameter	#*Energy Saving is …
	BLUEBACK	Set bluebackground state.	String integer n (0 = OFF, 1 = ON)	#*set bluebackground state to n
	COLOURTEMP	Set colour temperature.	string-integer n (n = normal, warm, cool)	#*setColourTemp() set to n
	GETCOLOURTEMP	Get colour temperature.	No parameter	#*Colour temp is ...
	PICTUREMODE	Select picture mode.	String integer n (1 = signage, 2 = natural, 3 = text, 4 = game)	#*setPictureMode() set to n

Or

#*Incorrect picture mode parameter entered |
| | GETPICTUREMODE | Get picture mode. | No parameter | #*Picture Mode is ... for current source |
| | SETCONTRAST | Set picture contrast value | String integer n (0 ≤ n ≤ 100) | #*Picture contrast value is set to n

Or

#*Same value is set. Do nothing

Or

#*Incorrect value must between defined ranges0-100 |
	GETCONTRAST	Get picture contrast value.	No parameter	#* The contrast value is:….
	CONTRASTUP	Increase Contrast Level by 1 step	No parameter	Picture contrast value is set to….
	CONTRASTDOWN	Decrease Contrast Level by 1 step	No parameter	Picture contrast value is set to….
	SETBRIGHTNESS	Set picture brightness value.	String integer n (0 ≤ n ≤ 100)	#*Picture brightness value is set to n

Or

#*Same value is set. Do nothing

Or

#*Incorrect value must between defined ranges0-100 |
	GETBRIGHTNESS	Get picture brightness value.	No parameter	#* The brightness value is:….
	BRIGHTNESSUP	Increase brightness Level by 1 step	No parameter	Picture brightness value is set to….
	BRIGHTNESSDOWN	Decrease brightness Level by 1 step	No parameter	Picture brightness value is set to….
	SETSHARPNESS	Set picture sharpness value.	String integer n (0 ≤ n ≤ 100)	#*Picture sharpness value is set to n

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				Or
				#*Same value is set. Do nothing
				Or
				#*Incorrect value must between defined ranges0-100
	GETSHARPNESS	Get picture sharpness value.	No parameter	#* The sharpness value is:….
	SETCOLOUR	Set picture colour value.	String integer n (0 ≤ n ≤ 100)	#*Picture colour value is set to n
				Or
				#*Same value is set. Do nothing
				Or
				#*Incorrect value must between defined ranges0-100
	GETCOLOUR	Get picture colour value.	No parameter	#* The colour value is:….
	SETHUE	Set picture hue value.	String integer n (-50 ≤ n ≤ 50)	#*Picture hue value is set to n
				Or
				#*Same value is set. Do nothing
				Or
				#*Incorrect value must between defined ranges -50 to 50
	GETHUE	Get picture hue value.	No parameter	#* The hue value is:….
	SETSKINTONE	Set picture skin tone value.	String integer n (-5 ≤ n ≤ 5)	#*Picture skintone value is set to n
				Or
				#*Same value is set. Do nothing
				Or
				#*Incorrect value must between defined range -5 to 5
	PICTUREZOOM	Set picture zoom mode.	str-int n (n = auto, 16:9, subtitle, 14:9, 14:9zoom, 4:3, full(only for HD channels), panaromic, cinema)	#*setPictureZoomMode()set to n
				Or
				#*Incorrect picture zoom mode parameter entered
	GETPICTUREZOOM	Get picture zoom mode.	No parameter	#* Picture zoom mode is:….
	SETHDMITRUEBLACK	Set hdmi trueblack status	string-integer n (n = ON, n = OFF)	#*HDMITrueBlack set to On
				Or
				#*HDMITrueBlack set to Off
	GETHDMITRUEBLACK	Get hdmi trueblack status	No parameter	#*HDMITrueBlack is …
	PICTURERESET	Reset picture settings.	No parameter	#*Picture brightness value is set to …
				#*Picture sharpness value is set to …
				#*Picture colour value is set to …

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				#*Picture contrast value is set to ... #*Picture hue value is set to ... #*Picture skintone value is set to ...
	SETWB	Set white balance value.	string-integer type, value (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) (0 ≤ value ≤250)	#*White Balance is set to value Or Invalid value for White Balance (0-255) Or Invalid type for White balance
	INCWB	Increment white balance value by n.	string-integer type, n (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) (0 ≤ value ≤250)	#*White Balance is set to… Or Invalid value for White Balance (0-255) Or Invalid type for White balance
	DECWB	Decrement white balance value by n.	string-integer type, n (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) (0 ≤ value ≤250)	#*White Balance is set to… Or Invalid value for White Balance (0-255) Or Invalid type for White balance
	GETWB	Get white balance value.	string-integer type (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset)	#* type ...
	ADCCAL	Start ADC auto calibration.	String integer n (0 = SCART-RGB, 1 = YPbPr, 2 = PC/VGA)	#*ADC Auto Calibration completed R_Gain= ... G_Gain= ... B_Gain= ... R_Offset= ... G_Offset= ... B_Offset= ...
	PATTERN	Set display screen to selected pattern	string-integer n (n = WHITE, RED, GREEN, BLUE, MAGENTA, CYAN, YELLOW, GRAY, BLACK, CLEAR, r-g-b) [r, g, b are bytes representing colour component values]	#*set pattern to n
	GETPATTERN	Get selected pattern of the display screen	No parameter	The pattern is…

Videowall

Group	Command	Description	Parameter	Return
VIDEOWALL	SETROWCOUNT	Set Row Count	String integer n (0 ≤ n	#*set row count to …

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			≤ 100)	
	GETROWCOUNT	Get Row Count	No parameter	#*row count is …
	SETCOLUMNCOUNT	Set Column Count	String integer n (0 ≤ n ≤ 100)	#*set column count to …
	GETCOLUMNCOUNT	Get Column Count	No parameter	#*column count is …
	SETCELL	Set Cell	String integer n (0 ≤ n ≤ 100)	#*set cell to …
	GETCELL	Get Cell	No parameter	#*cell is …
	SETOFFSET	Set Offset	String integer n (0 ≤ n ≤ 100). n is the number of pixels which will be cropped from all four sides.	#*set offset to …
	GETOFFSET	Get Offset	No parameter	#*offset is …
	SETVIDEOWALL	Set videowall parameters	parameters can be set for items in following format: RowCount-ColumnCount-Cell-Offset e.g. SETVIDEOWALL 2-2-3-0	#*set row count to …, set column count to …, set cell to …, set offset to …
	GETVIDEOWALL	Get videowall parameters	No parameter	#*row count is …, column count is …, cell is …, offset is …
	SETALLVIDEOWALL	Set all videowall parameters	parameters for items in following format: picture_mode-contrast-brightness-sharpness-color-powesave_mode-backlight_mode-colortemp-zoom_mode	#*setPictureMode() set to … #*Picture contrast value is set to … #*Picture brightness value is set to … #*Picture sharpness value is set to … #*Picture colour value is set to … #*set Power save mode to … #*setBacklightDimming() set to … #*setColourTemp() set to … #*setPictureZoomMode() set to …l #*HDMITrueBlack set to … #*Picture hue value is set to … #*set volume to … #*set headphone volume to …
	GETALLVIDEOWALL	Get all videowall parameters	No parameter	#*Picture Mode is … for current source #*THE CONTRAST VALUE : … #*THE BRIGHTNESS VALUE : … #*THE SHARPNESS VALUE : … #*THE COLOUR VALUE : … #*Powersavemode is … #*Energy Saving is … #*Colour temp is … #*Picture zoommode is … #*HDMITrueBlack is … #*Hue level is … #*volume level is … #*headphone volume is …
	SETPIXELSHIFT	Set pixel shifting is enabled or disabled	string-integer n (n = on, n = off)	#*ACK Or #*NACK
	GETPIXELSHIFT	Get pixel shifting setting	No parameter	#*Pixel Shift is …
	SETSIGNAGEID	Set Signage ID	String-integer n (1 ≤ n ≤ 100). n is the Signage ID	[#...] #*ACK
	GETSIGNAGEID	Get Signage ID	No parameter	[#...] #*The signage ID is …

VESTEL

RS232 Legacy HEX COMMANDS

Some Hex commands are available in order to accommodate systems which include legacy products. For most systems it is recommended to use the ACSII codes in the section above.

Activate HEX protocol on Display.
a. Enter Signage Settings Controls Menu.
b. Change ASCII option to HEX in UART 0 or UART 1 sub-menu item where UART0 is the external RS232 port and UART1 is the OPS UART.

Note. UART selection is different on videowall models.

Configuration

Open any serial port communications program capable of sending hex packets (e.g Realterm). Configure serial communication settings as below:

Baud Rate : 19200 for UART0, 9600 for UART1
Parity : None
Data Bits : 8
Stop Bits : 1
Handshake : None

Notes.

Default value: UART0 - ASCII, UART1 - HEX
In the tables given below, XY represents are variable byte.
All byte values are hexadecimal.

Name	Operation	Header code L	Header code H	Packet	Data Size L	Data Size H	CRC flag L	CRC flag H	Action L	Action H	Type L	Type H	Setting code L	Setting code H	Reply 0	Reply 1	Reply 2	Notes
Monitor	ON	BE	EF	03	06	00	19	D3	02	00	00	60	02	00	06			
	OFF	BE	EF	03	06	00	19	D3	02	00	00	60	01	00	06			
	GET	BE	EF	03	06	00	19	D8	03	00	00	60	07	00	1D	00	XY	XY can be either 00 or 01. 00 means OFF, 01 means ON.
Mute	ON	BE	EF	03	06	00	D6	D2	01	00	02	20	01	00	06			
	OFF	BE	EF	03	06	00	46	D3	01	00	02	20	00	00	06			
	GET	BE	EF	03	06	00	75	D3	02	00	02	20	00	00	1D	00	XY	XY can be either 00 or 01. 00 means OFF, 01 means ON.
Screen	ON	BE	EF	03	06	00	6B	D9	01	00	20	30	01	00	06			
	OFF	BE	EF	03	06	00	FB	D8	01	00	20	30	00	00	06			
	GET	BE	EF	03	06	00	C8	D8	02	00	20	30	00	00	1D	00	XY	XY can be either 00 or 01. 00 means OFF, 01 means ON.
Source	OPS	BE	EF	03	06	00	FE	D2	01	00	00	20	00	00	06			
	HDMI	BE	EF	03	06	00	0E	D2	01	00	00	20	03	00	06			
	VGA	BE	EF	03	06	00	6E	D2	01	00	00	20	01	00	06			
	SCART2(CVBS)	BE	EF	03	06	00	00	00	01	00	00	20	04	00	06			
	FAV	BE	EF	03	06	00	00	00	01	00	00	20	05	00	06			
	S-Video	BE	EF	03	06	00	00	00	01	00	00	20	06	00	06			
Source	HDMI2	BE	EF	03	06	00	00	00	01	00	00	20	08	00	06			
	HDMI3	BE	EF	03	06	00	00	00	01	00	00	20	09	00	06			
	HDMI4	BE	EF	03	06	00	00	00	01	00	00	20	0A	00	06			
	YPbPr	BE	EF	03	06	00	00	00	01	00	00	20	0B	00	06			
	SCART2 (S-Video)	BE	EF	03	06	00	00	00	01	00	00	20	0D	00	06			
	TV	BE	EF	03	06	00	00	00	01	00	00	20	0E	00	06			
	SCART1(CVBS)	BE	EF	03	06	00	00	00	01	00	00	20	0F	00	06			
	SCART1 (S-Video)	BE	EF	03	06	00	00	00	01	00	00	20	10	00	06			
	DVD	BE	EF	03	06	00	00	00	01	00	00	20	11	00	06			
	DVI	BE	EF	03	06	00	00	00	01	00	00	20	12	00	06			
	DP	BE	EF	03	06	00	00	00	01	00	00	20	13	00	06			
	WIDI	BE	EF	03	06	00	00	00	01	00	00	20	15	00	06			
	GET	BE	EF	03	06	00	CD	D2	02	00	00	20	00	00	1D	00	XY	XY can be one of the following: 01: OPS, 02: HDMI, 03: VGA, 04: SCART2(CVBS), 05: FAV, 06: S-Video, 08: HDMI2, 09: HDMI3, 0A: HDMI4, 0B: YPbPr, 0D: SCART2(S-Video), 0E: TV, 0F: SCART1(CVBS), 10: SCART1(S-Video), 11: DVD, 12: DVI, 13: DP, 15: WIDI Note that all of the sources are not enabled.
Volume	GET	BE	EF	03	06	00	31	D3	02	00	01	20	00	00	1D	00	XY	
	INCREMENT	BE	EF	03	06	00	57	D3	04	00	01	20	00	00	06			
	DECREMENT	BE	EF	03	06	00	86	D2	05	00	01	20	00	00	06			
	SET	BE	EF	03	06	00	31	D3	03	00	01	20	01	XY	06			XY can take 00 as a minimum and 1D as a maximum.

Error Responses

• **NAK reply: 15** When the display cannot understand the received command, it returns this value. In such a case check the sending code and send the same command again.

Error reply: 1C 00 00 When the display cannot execute the received command for any reasons, it returns
this value. In such a case, check the sending code and the setting status of the display.