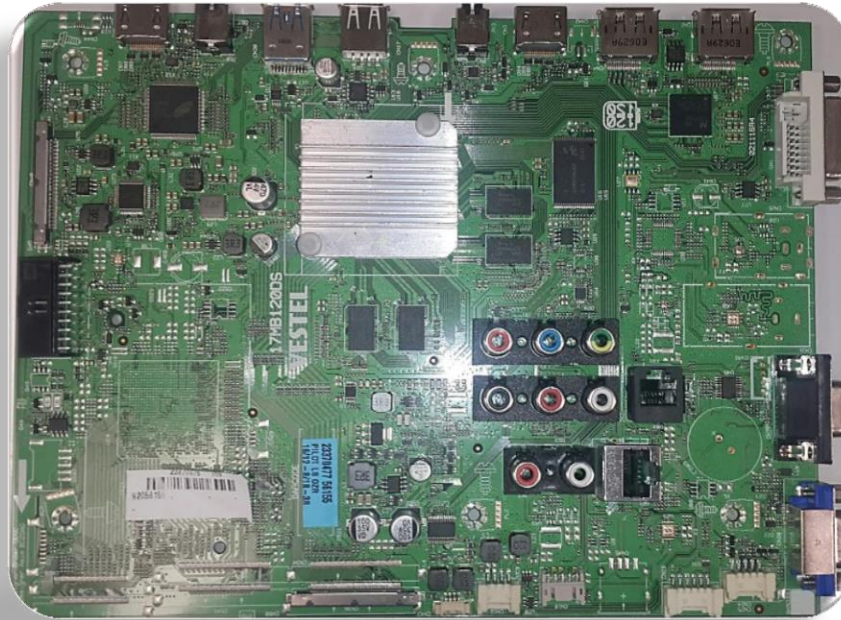


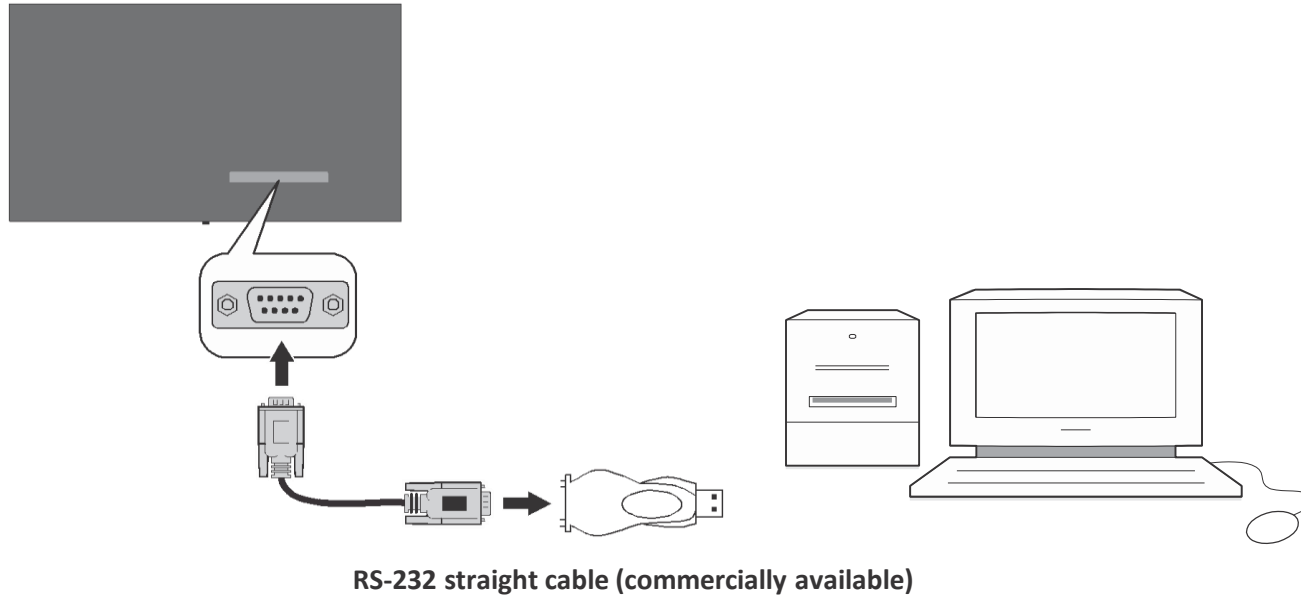
MB120DS LAN/COM COMMANDS



Vestel Application Engineering Department

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•Controlling With An External 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

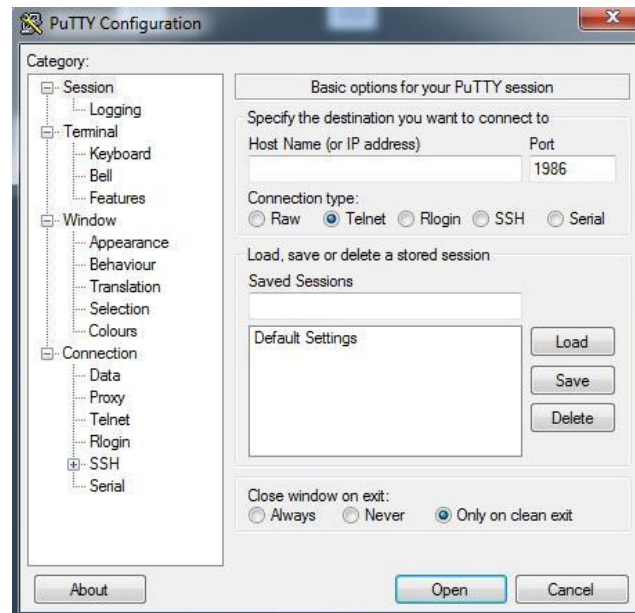
- ☐ RS-232 (female) to RS-232(male) cable or LAN cable (connected via router)
- ☐ USB to RS-232(male) cable
- ☐ Notebook or PC which has USB or LAN port
- ☐ Installed program on remote PC to send commands:

In general, the RS-232 commands are sent for operating the implemented functions via serial port and utility. A suitable utility can be used such as described below.

•Connecting to the Display (LAN port)

Download and install the PuTTY software from the [following link first:](http://www.putty.org/)
<http://www.putty.org/>.

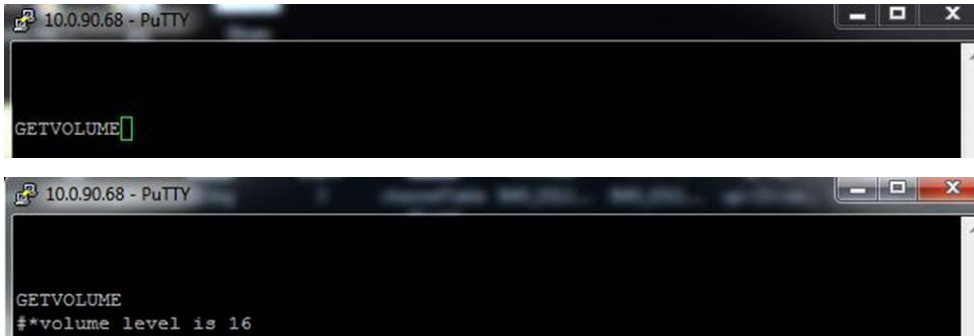
Run the software and enter the Display's IP address in the field Host Name. Enter "**1986**" as a default value in the field Port. Then select "Telnet" as Connection type and click the Open button.



Note: Refer to the Connectivity section of this manual for information on connecting the Display to a network and displaying the IP address of the Display.

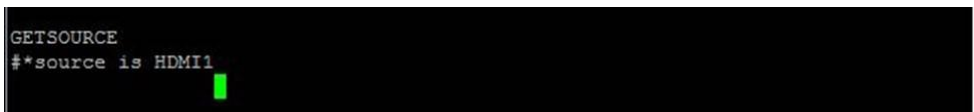
•Connecting to the Display (LAN port)

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.



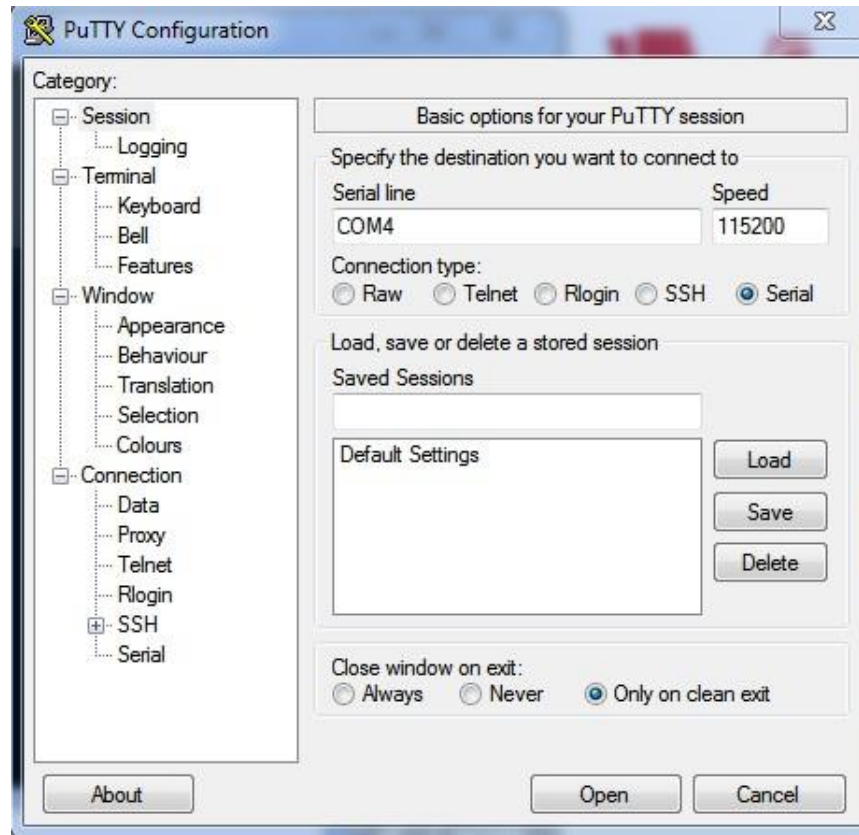
Another example;

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.



GENERAL DISPLAY COMMANDS

BROWSER COMMANDS			
Command	Description	Parameter	Return
OPENURL	Starts the given URL and returns web page load status directly.	string-integer n <load url='n' />	#*status= ... url=n
GETURL	Gets URL of the current page if the portal is active.	no parameter	#*URL : ...
GETUSERAGENT	Gets portal user agent.	no parameter	#*Current UA : ...
GETCURSORPOSITION	Gets cursor position in the browser.	no parameter	#*X: ... Y: ...
SETCURSORPOSITION	Sets cursor position in the browser.	string-integer a,b	#*X: a Y: b
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 ...

GENERAL DISPLAY COMMANDS			
Command	Description	Parameter	Return
SETRC	Enables/disables remote control commands.	string-integer n (n = ON, n = OFF)	set remote state On or set remote state OFF
SETSOURCE	Set source as enable/disable.	"string n, integer b (n = SCART1, n = SCART2, n = FAV, n = SVHS, n = HDMI1, n = HDMI2, n = HDMI3, n = HDMI4, n = YPBPR, n = VGA, n = SCART1S, n = SCART2S) (b = 1(enable), b = 0(disable))"	"#*Selected source n #*Enable/Disable state : b"
GETSOURCE	Gets source.	no parameter	#*source is ...
GETCOUNTRY	Get country in channels state.	no parameter	#*COUNTRY IS : ...
GETSWVERSION	Returns the software version of tv.	no parameter	#*V...
KEY	Send key to Eclipse.	string-integer n (n = 0, n = 1,, n = up,, n = menu,ext.)	n key send to Eclipse
RESET	Reset the device.	no parameter	Reset process was successfully accomplished. You need to establish the connection again.

GENERAL DISPLAY COMMANDS

STANDBY	"Switch box to Standby mode. (Attention: Television cannot be opened with standby command. You should open it with remote control. If you use STANDBY command, you will need to establish the connection again. Tv state :HARD- STANDBY)"	no parameter	"#*enterLowPowerMode() returns successfully. or #*enterLowPowerMode() returns unsuccessfully! or #*enterStandbyMode() returns successfully. or #*enterStandbyMode() returns unsuccessfully! "
MENUTIMEOUT	Set menu time out mode.	integer n (n = 0 , n = 15, n = 30, n = 60)	"#*set menu timeout mode to OFF or #*set menu timeout mode to 60 or #*Invalid menu timeout mode "
GETMODELNO	Get model no.	no parameter	#*Model no: ...
GETSERIALNO	Get serial no.	no parameter	#*Serial no: ...
GETLED	Get led on/off state.	no parameter	"#*LED is on #*LED is off"
GETRC	Get remote control commands enabled status	no parameter	"#*remote control commands are on #*remote control commands are off"
USBOPERATIONS	Perform USB Operations	no parameter	You may observe prints Bank 0, Bank 1 etc. Be sure or observe debug print outs: "MFC ISP: done" will be written... This may take over 10 minutes.
GETMENUTIMEOUT	Get menu time out mode	no parameter	"#*menu timeout mode is OFF #*menu timeout mode is n #*can not get menu timeout mode Note: Above n is one of (15, 30, 60)"
GETTVLIFETIME	Prints Monitor life time in minutes.	no parameter	#*Monitor Life Time: n
SETPOWERONDELAY	Set poweron delay level	integer n (0<=n<=20, delay is calculated as 100ms*n)	"#*Poweron delay set to ... Ms #*NACK"
GETPOWERONDELAY	Get poweron delay level	no parameter	#*The power on delay is ... ms
SIGNAGERESET	Set all items in the signage settings menu to their default values.	no parameter	#*All signage settings set to default values
SELECTSOURCE	Select source. (0=TV, other source indexes(some of them are not enabled))	integer n (5=FAV, 7=HDMI1, 8=HDMI2, 11=YpPr, 12=Vga, 18=DVI , 19=DP , 20=OPS)	" #*select TV source or #*select External source ..."
KEY standby	Switch box to Standby mode. (For quick standby)	no parameter	standby key send to Eclipse

GENERAL DISPLAY COMMANDS

TIME	Display the current date and time.	no parameter	Time = ...
GETSTANDBY	Get standby on/off.	no parameter	*#*standby off or #*standby on*
STARTFTI	Start First Time Installation.	no parameter	#*FTI was initialising.
CHANGELNG	Change active language.	"integer-integer x y x = language type (0 = System Language, 1 = Event Language, 2 = Primary Audio Language, 3 Secondary Audio Language, 4 = Primary Subtitle Language, 5 = Secondary Subtitle Language, 6 = Primary Teletext Language, 7 = Secondary Teletext Language) y = language (0 = Danish, 1 = German, 2 = Estonian, 3 = English, 4 = Spanish, 5 = Greek, 6 = French, 7 = Gaelic, 8 = Croatian, 9 = Italian, 10 = Latvian, 11 = Lithuanian, 12 = Hungarian, 13 = Dutch, 14 = Norwegian, 15 = Polish, 16 = Portuguese, 17 = Russian, 18 = Romanian, 19 = Albanian, 20 = Slovenian, 21 = Slovak, 22 = Serbian, 23 = Finnish, 24 = Swedish, 25 = Turkish, 26 = Czech, 27 = Ukrainian, 28 = Bulgarian, 29 = Arabic, 30 = Persian, 31 = Hebrew , 32 = Belarussian, 33 = Macedonian, 34 = Montenegrin, 35 = Kazakh, 36 = Thai) Example: CHANGELNG 0 25 (To set system language to Turkish) "	*#*Active language was changed or #*Incorrect item parameter entered"
SETCOUNTRY	Set country in no channels state.	string-integer n(TURKEY, GERMANY, ...)	*#* setCountry() set to n or #*Country should be set only in the FTI mode (no channels state)*
SETQUICKSTANDBY	SETQUICKSTANDBY n, where n is one of (off, 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
USBOPERATIONS	Perform USB Operations	no parameter	You may observe prints Bank 0, Bank 1 etc. Be sure or observe debug print outs: "MFC ISP: done" will be written... This may take over 10 minutes.

AUDIO COMMANDS

AUDIO COMMANDS			
Command	Description	Parameter	Return
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 is ...
GETMUTE	Get mute value on/off.	no parameter	##*MUTE OFF or ##*MUTE ON
SETMUTE	Set mute value on/off.	no parameter	##*MUTE OFF or ##*MUTE ON
SETSOUNDMODE	"Set sound mode. SETEUSERFREQ 100Hz 10"	"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 level 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
SETEUSERFREQ	Set equalizer user freq. value for any band.	"string n (120Hz, 500Hz, 1.5KHz, 5KHz, 10KHz) integer n -13 < n < 13 Example: SETEUSERFREQ 120Hz 10"	##*setEQUserFreq() set to n or ##*Incorrect sound system parameter entered or ##*Incorrect equalizer mode. It should be USER mode"
GETDIGITALOUT	Get digital out.	no parameter	##*digital out is pcm or ##*digital out is compressed
SETEQMODE	Set equalizer mode.	string n (Music, Movie, Speech, Flat, Classic, User)	##*setEQMode() set to n or ##*Incorrect equalizer parameter entered"
SETDIGITALOUT	Set digital out.	string n (compressed, pcm)	##*setDigitalOut() set to n OR ##*Incorrect digital out mode parameter entered
VOLUMEUP	"Increase Volume Level by 1 step (Until max volume) "	no parameter	##*volume LEVEL is increased to ... or ##*You can NOT increase volume LEVEL further. Confirmed Max Volume Level is ..."
VOLUMEDOWN	Decrease Volume Level by 1 step	no parameter	##*volume LEVEL is decreased to ... or ##*You can NOT decrease volume LEVEL further. Current Volume level is ... "

AUDIO COMMANDS

SETHEADPHONEOUTPUT	Set headphone output	string n (headphone,lineout)	"#*set headphone output to n or #*Invalid Parameter"
GETHEADPHONEOUTPUT	Get headphone output	no parameter	#*LINEOUT or #*HEADPHONE
GETDYNAMICBASS	Get dynamic bass state.	no parameter	#*the dynamic bass state is ... (0 = off, 1= on)
GETBASSGAIN	Get bass gain	no parameter	"#*the bass gain level is n Note: Above n is -6 <= n <= 6"
GETEQUSERFREQ	Get equalizer user freq. value of specified band	string n (120Hz, 500Hz, 1.5KHz, 5KHz, 10KHz)	"#*the equalizer value for the band is n or #*Incorrect sound system parameter entered Note: Above n is -13 < n < 13"
GETEQMODE	Get equalizer mode	no parameter	"#*the equalizer mode is n Note: Above n is one of Music, Movie, Speech, Flat, Classic, User"
SOUNDRESET	Reset sound settings	no parameter	"#*Fixed Volume is set to ... #*Fixed volume availability is set to ... #*Headphone volume control availability is set to ... #*Start volume availability is set to ... #*Start volume limit is set to ... #*Start headphone volume limit is set to ... #*Lower volume limit is set to ... #*Upper volume limit is set to ... #*Headphone volume limit is set to ... #*Wakeup time volume is set to ... #*All equalizer bands are set to ... #*Volume is set to ... #*Headphone volume is set to ... #*Headphone balance is set to ... #*Headphone bass is set to ... #*Headphone treble is set to ... #*Digital audio out is set to ... #*Audio output description path is set to ... #*Audio description is ... #*Audio description relative volume is set to ... #*Audio description language is set to ... #*Sound Loudness is set to ... #*Sound mode digital is set to ... #*Sound mode is set to ... #*Sound subwoofer is set to ... #*SPDIF out is ... #*DTS is ... #*Bass gain is set to .. or #*Dynamic bass is ... "

NETWORK COMMANDS

NETWORK COMMANDS			
Command	Description	Parameter	Return
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 Succesfull ##IP address setting NOK"
get_IP_address	Get IP address of eth0 network interface. Usage: get_IP_address	no parameter	##IPaddr: ...
SETNETWORKTYPE	set network type (eg. SETNETWORKTYPE value) (value should be 'wired', 'wireless' or 'disabled' as string)	string n ('wired', 'wireless' or 'disabled')	##Network type is set to: <network- type>
GETNETWORKTYPE	get network type (eg. GETNETWORKTYPE)	no parameter	##the network type is <network- type>
SETSUBNETMASK	set subnet mask (subnet mask value should be of format nnn.nnn.nnn.nnn) (eg. SETSUBNETMASK nnn.nnn.nnn.nnn)	string "nnn.nnn.nnn.nnn"	"##set subnet mask: nnn.nnn.nnn. nnn ##setting subnet mask is failed"
GETSUBNETMASK	get subnet mask (eg. GETSUBNETMASK)	no parameter	##the subnet mask is nnn.nnn. nnn.nnn
SETDEFAULTGATEWAY	set default gateway (default gateway value should be of format nnn.nnn.nnn.nnn) (eg. SETDEFAULTGATEWAY nnn.nnn.nnn.nnn)	string "nnn.nnn.nnn.nnn"	"##set default gateway: nnn.nnn. nnn.nnn ##setting default gateway is failed"
GETDEFAULTGATEWAY	get default gateway (eg. GETDEFAULTGATEWAY)	no parameter	##the default gateway is nnn.nnn. nnn.nnn
GETDNS1	get DNS server 1 (eg. GETDNS1)	no parameter	##DNS server 1 is nnn.nnn.nnn. nnn
GETDNS2	get DNS server 2 (eg. GETDNS2)	no parameter	##DNS server 1 is nnn.nnn.nnn. nnn
INTERNETSPEED	start internet speed test	no parameter	" Speed test is started. Prints ""No internet connection found"" message if fails."

VGA/PC COMMANDS

VGA/PC COMMANDS			
Command	Description	Parameter	Return
HPOS	Set horizontal position.	int n ($-25 \leq n \leq 25$)	"set horizontal position to ... (percentage in the range) #*invalid value entered"
VPOS	Set vertical position.	int n ($-25 \leq n \leq 25$)	"#*set vertical position to ... (percentage in the range) #*invalid value entered"
DOTCLOCK	Set dot clock.	int n ($-50 \leq n \leq 50$)	"#*set dot clock to ... (percentage in the range) #*invalid value entered"
AUTOPOS	Set auto position	no parameter	#*set auto position
GETOSDORIENTATION	Get OSD orientation	no parameter	#*The OSD orientation ...
GETHPOS	Get horizontal position.	no parameter	#*The horizontal position is ...
GETVPOS	Get vertical position.	no parameter	#*The vertical position is ...
GETDOTCLOCK	Get dot clock.	no parameter	#*The dot clock is ...
SETOPSPower	Set OPS power status	string parameter "on" or "off"	"#*Turning OPS on #*Turning OPS off #*The OPS is already on #*The OPS if already off #*The OPS is not enabled #*The OPS is not plugged in #*invalid value entered"

PICTURE COMMANDS

PICTURE COMMANDS			
Command	Description	Parameter	Return
COLOURTEMP	Set colour temperature.	str-int n (n = normal, warm, cool)	#*setColourTemp() set to n
GETPICTUREMODE	Get picture mode.	no parameter	#*Picture Mode is ... for current source
PICTUREMODE	Select picture mode.	int n (1 = dynamic, 2 = natural, 3 = cinema, 4 = game)	"#*setPictureMode() set to n #*Incorrect picture mode paramater entered"
GETCONTRAST	Get picture contrast value.	no parameter	#*THE CONTRAST VALUE : ...
SETCONTRAST	Set picture contrast value.	int n (0 ≤ n ≤ 100)	"#*Picture contrast value is set to n #*Same value is set. Do nothing. #*Incorrect value must between defined ranges 0-100"
GETBRIGHTNESS	Get picture brightness value.	no parameter	#*THE BRIGHTNESS VALUE : ...
SETBRIGHTNESS	Set picture brightness value.	int n (0 ≤ n ≤ 100)	"#*Picture brightness value is set to n #*Same value is set. Do nothing. #*Incorrect value must between defined ranges 0-100"
GETSHARPNESS	Get picture sharpness value.	no parameter	#*THE SHARPNESS VALUE : ...
SETSHARPNESS	Set picture sharpness value.	int n (0 ≤ n ≤ 100)	"#*Picture brightness value is set to n #*Same value is set. Do nothing. #*Incorrect value must between defined ranges 0-100"
GETCOLOUR	Get picture colour value.	no parameter	#*THE COLOUR VALUE : ...
SETCOLOUR	Set picture colour value.	int n (0 ≤ n ≤ 100)	"#*Picture colour value is set to n #*Same value is set. Do nothing. #*Incorrect value must between defined ranges 0-100"
SETSKINTONE	Set picture skin tone value.	int n (-5 ≤ n ≤ 5)	"#*Picture skin tone value is set to n #*Same value is set. Do nothing. #*Incorrect value must between defined ranges -5-5"
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 #*Incorrect picture zoom mode parameter entered"
SETWB	Set white balance value.	str-int type, value (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) (0 ≤ value ≤ 250)	"#*White Balance is set to value Invalid value for White Balance (0-255) Invalid type for White Balance"

PICTURE COMMANDS

GETWB	Get white balance value.	str-int type (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset)	#* type ...
SET3DMODE	Set 3D mode values (values are off, auto, side by side, top bottom and game)	int n (n = off, auto, side by side, top bottom, game)	"#*set3DMode() set to n #*Incorrect 3d mode parameter entered"
SETVIRTUAL3D	Set virtual 3d values.	int n (0 = off, 1 = low, 2 = medium, 3 = high)	"seMonitorirtual3D() set to n Incorrect virtual 3d mode paramater entered"
CONTRASTUP	Inrease 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 ...
GETENERGYSAVING	Get energy saving mode. (if enabled from profile)	no parameter	#*The energy saving mode is ...
GETPOWERSAVE	Get power save mode	no parameter	"#*Powersavemode is ON #*Powersavemode is OFF"
GETCOLOURTEMP	Get colour temperature.	no parameter	#*Colour temp is ...
GETHUE	Get picture hue value.	no parameter	#*Hue level is ...
GETSKINTONE	Get picture skin tone value.	no parameter	#*Picture skin tone is ...
GETPATTERN	Get selected pattern of the Monitor screen	no parameter	The pattern is ...

VIDEO WALL COMMANDS

VIDEO WALL COMMANDS			
Command	Description	Parameter	Return
SETROWCOUNT	Set row count.	integer n ($0 \leq n \leq 100$)	#*set row count to n
GETROWCOUNT	Get row count.	no parameter	#*row count is ...
SETCOLUMNCOUNT	Set column count.	integer n ($0 \leq n \leq 100$)	#*set column count to n
GETCOLUMNCOUNT	Get column count.	no parameter	#*column count is ...
SETCELL	Set cell.	integer n ($0 \leq n \leq 100$)	#*set cell to n
GETCELL	Get cell.	no parameter	#*cell is ...
SETOFFSET	Set offset.	integer n ($0 \leq n \leq 100$). n is the number of pixels which will be cropped from all four sides.	#*set offset to n
GETOFFSET	Get offset.	no parameter	#*offset is ...
SETVIDEOWALL	Set videowall parameters	"parameters for items in following format: RowCount-ColumnCount- Cell-Offset"	#*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-hdmi_trueblack-picture_hue-volume- headphone_volume"	#*... ("set to" for each parameter in order)
GETALLVIDEOWALL	Get all videowall parameters	no parameter	#*picture_mode-contrast- brightness-sharpness-color-powesave_mode-backlight_mode- colortemp-zoom_mode-hdmi_trueblack-picture_hue-volume- headphone_volume
SETPIXELSHIFT	Set pixel shift is enabled or not	string-integer n (n = on, n = off)	"#*ACK #*NACK"
GETPIXELSHIFT	Get pixel shift	no parameter	#*Pixel Shift is ...
SETSIGNAGEID	Set Signage ID	integer n ($1 \leq n \leq 100$). n is the Signage ID	"#*ACK #*NACK"
GETSIGNAGEID	Get Signage ID	no parameter	"#*The signage ID is ... (If return value is 0, then it means no signage id is assigned. 0 is the default value.)"

MEDIA BROWSER COMMANDS

MEDIA BROWSER COMMANDS			
Command	Description	Parameter	Return
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
SETUSBPLAY	set usb autoplay mode	string n (ON, OFF)	#*The USB autoplay is set to ... (ON, OFF)
GETUSBPLAY	get usb autoplay mode	no parameter	#*The USB autoplay is ... (ON, OFF)

ADMIN PANEL COMMANDS

ADMIN PANEL COMMANDS			
Command	Description	Parameter	Return
RST	Restart	no parameter	#Monitor will be restarted
STV	Sets Monitor Volume, parameter value will ve set for volume level	integer (volume level)	#Volume set level= ...
STL	Set Monitor Language	string-int (please look at abbreviations of languages)	#Language changed to ...
STWA	Stop wake up alarm	no parameter	#WakeupAlarm stopped !!!
STEA	Stop emergency alarm	none	#Emergency Alarm is stopped !!!
UNP	Send Message	"string-int (message text - 0) [message content should be ""word1+ word2+word3 ..."]"	#Message Sent in SUCCESS !!!
GTSURL	Get Monitor Portal URL	none	#StartUp url is

SIGNAGE SETTINGS COMMANDS

SIGNAGE SETTINGS COMMANDS			
Command	Description	Parameter	Return
GETTOTALSPACE	get total usb space (in MB)	no parameter	##The total space is ... MB
GETFREESPACE	get free usb space (in MB)	no parameter	##The total space is ... MB
SAVEMODELINFO	saves model name and sw version to a removable device	no parameter	##Model info is saved OR ##No Removable drive is connected (If there is no device connected)
SETSCHEDULER	enables/disables scheduler	string n (ON, OFF)	##The scheduler is set to (ON, OFF)
GETSCHEDULER	get scheduler enabled/disabled	no parameter	##The scheduler is (ON, OFF)
SETSCHEDULEOP	set scheduler parameters	string n (on time_off time_ source in format: hh:mm_ hh:mm_source)	##Schedule parameters are ... (set/not set).
GETSCHEDULEOP	get scheduler parameters	no parameter	##Scheduler on/off time and source is: (hh:mm_hh:mm_source)

RS232 HEX COMMANDS

Protocol Test Steps

- Before testing, please know the board type you have. There are two types of board. The UART 0 and UART 1 connections of the these boards are explained below:

1. RJ12 is connected to UART 0, DSUB9 is connected to UART 1. Therefore, UART 0 and UART 1 could be tested separately in this type of the board
2. RJ12 and DSUB9 both are connected to UART 0. UART 1 is supported for OPS module but not reachable. Therefore, only UART 0 could be tested in this type of the board.

- Activate HEX protocol on TV.

- a. Enter Signage Settings Menu.

- b. Change ASCII option to HEX in UART 0 or UART 1 sub-menu item

- Open any serial port communications program (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

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

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.

RS232 HEX COMMANDS

Command received by display														Reply sent by display for successful operation			Notes	
Byte Number		0	1	2	3	4	5	6	7	8	9	10	11	12	0	1		2
		Header		Packet	Data Size		CRC flag	Data		Action		Type		Setting code				
Name	Operation	L	H			L		H	L	H	L	H	L	H	L	H		
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			
Source	S-Video	BE	EF	03	06	00	00	00	01	00	00	20	06	00	06			
	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.

THANK YOU

Vestel Application Engineering Department

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