



# Toshiba Embedded Signage RS232 Commands reference

<b>Version</b>	1.4.4
<b>Status</b>	Draft
<b>Owner</b>	Toshiba Europe GmbH
<b>Privacy</b>	Confidential – Distribution under NDA only
<b>File name</b>	ToshibaEmbeddedSignage-RS232CommandSpecification-1.4.4.docx
<b>Last page</b>	17

## Version history

Version	Date	Description/Changes	Writers
1.0	15/01/2017	First version	Davide Pessina
1.1	10/05/2017	Filtered TV commands	Davide Pessina
1.2	17/05/2017	Command result check	Davide Pessina
1.3	22/05/2017	Added new commands	Davide Pessina
1.4	31/05/2017	Commands review	Giovanni Conz
1.4.1	16/06/2017	TSU command	Davide Pessina
1.4.2	19/07/2017	Fixed UNTP result string and SETALLVIDEOWALL description Added details for SETCOUNTRY and UNTP Added valid country strings for SETCOUNTRY	Davide Pessina
1.4.3	29/09/2017	Added OPENRURL and fixed PICTUREMODE parameters	Davide Pessina
1.4.4	23/02/2018	Added SET4KBROWSER, SETBROWSERMEM, SETGPURASTER	Davide Pessina

# Table of contents

- 1. Admin Panel Commands .....4
- 2. Audio Commands .....5
- 3. Browser Commands .....7
- 4. General Monitor Commands .....8
- 5. Network Commands .....11
- 6. PC Commands.....12
- 7. Picture Commands .....13
- 8. Video Wall Commands .....16
- 9. Signage Settings Commands.....17

# 1. Admin Panel Commands

Command	Description	Parameter	Return
TOF	Turn Off monitor	no parameter	##*TV will be sent to Active Standby state.
RST	Restart	no parameter	##*TV will be restarted
TON	Turn On monitor, if monitor is in active standby state	No parameter	##*TV will be turned on
STV	Sets monitor volume. Parameter is the new volume to set	integer (volume level)	##*Volume set level= ...
CTZ	Change Time Zone.	integer (GMT value)	##*Timezone setup SUCCEEDED
GTZ	Get Time Zone	no parameter	##*Timezone is ...
FSU	Update software (restart should be done manually or with RST command)	no parameter	##*Web Software Update search STARTED !!!
UNTP	Update Date and Time. Date and time refer to the country and timezone configured during FTI. To change the country please see SETCOUNTRY command.	none	##*Date and Time is being updated from NTP Client ##*No Internet Connection! Date and Time cannot be updated
SNTP	Set NTP Server IP	string-int ("auto" / ntp server path - 0 )	##*Auto : forced_ntpserver file deleted - SUCCESS !! or ##*Forced_ntpserver written - SUCCESS !!
WAU	SW Auto Upgrade	int ( 1-enabled/ 2- disabled)	##*Auto Software Update Availability - DISABLED !! or ##*Auto Software Update Availability - ENABLED !!
GTNTP	Get NTP Server IP	none	##*NTP server url is ...
SSIP	Set static IP address	string-int (ex: 192.168.0.15)	##*IP address setting Succesfull
ATOF	Auto Monitor Off Mode	int ( 0 <= mode <=8)	##*set auto monitor off mode to ...
SBI	Set Backlight Item	string-string (low/high/off)	##*setBacklightDimming() set to...
TSU	Search, download and install software, and at the end restart the monitor automatically <b>Supported in firmware version &gt;= 7.65</b>	No parameter	##*Web Software Update search STARTED !!!
SETUSERSECLEVEL	Allows to have ADMIN privileges to send RS232 commands through telnet. Not needed for RS232 commands sent from the application through Javascript custom plugin <b>Mandatory in firmware version &gt;= 7.65</b>	ADMIN-int (PIN) Example: ADMIN 1234	##*User security level has been set

Abbreviations of Languages		Abbreviations of Languages	
{"en", "eng"}	1 English	{"pl", "pol"}	13 Polish
{"de", "ger"}	2 German	{"tr", "tur"}	14 Turkish
{"fr", "fre"}	3 French	{"ru", "rus"}	15 Russian
{"es", "spa"}	4 Spanish	{"cs", "cze"}	16 Czech
{"it", "ita"}	5 Italian	{"hu", "hun"}	17 Hungarian
{"da", "dan"}	6 Danish	{"sk", "slo"}	18 Slovak
{"fi", "fin"}	7 Finnish	{"sl", "slv"}	19 Slovenian
{"sw", "swe"},	8 Swedish	{"ro", "rum"}	20 Romanian
{"el", "gre"}	9 Greek	{"bg", "bul"}	21 Bulgarian
{"no", "nor"}	10 Norwegian	{"hr", "hrv"}	22 Croatian
{"nl", "dut"}	11 Dutch	{"sr", "srp"}	23 Serbian(Cyrilic)
{"pt", "por"}	12 Portuguese		

Txt languages
txt_lang_group_west
txt_lang_group_east
txt_lang_group_cyrillic
txt_lang_group_turk_gre
txt_lang_group_arabic

## 2. Audio Commands

Command	Description	Parameter	Return
VOLUME	Set volume level.	integer n ( $0 \leq n \leq 100$ )	##set volume to n
GETVOLUME	Volume level information	no parameter	##volume level 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.SETEQUUSERFREQ	integer n (0 = mono, 1 = stereo, 2 = dual I, 3 = dual II, 4 = mono left, 5 = mono	##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
GETDYNAMICBASS	Get dynamic bass state	no parameter	##the dynamic bass state is ... off, 1= on)
SETBASSGAIN	Set bass gain	integer n ( $-6 \leq n \leq 6$ )	##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 $-6 \leq n \leq 6$
SETSURROUND SOUND	Set surround sound state	integer n (0 = off, 1 = on)	##set surround sound state to n
GETDIGITALOUT	Get digital out.	no parameter	##digital out is pcm or ##digital out is compressed
GETEQMODE	Get equalizer mode	no parameter	##the equalizer mode is n Note: Above n is one of Music, Movie, Speech, Flat, Classic, User
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 ...
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 ...

			<pre>... #*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 ...</pre>
--	--	--	---

### 3. Browser Commands

Command	Description	Parameter	Return
SETSETTINGSURL	Sets the settings URL	string	##*Setting URL is set
GETSETTINGSURL	Gets the settings URL	no parameter	##*Setting URL is ...
OPENURL	Open a new URL	string	##*status=n url=...
SETSTARTURL	Sets the permanent start URL	string	##*Start URL is set
GETSTARTURL	Gets the permanent start URL	no parameter	##*Start URL is ...
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
GETTOUCHCONTROL	Touch control is n, where n is one of (off, on)	no parameter	##*Touch control is n
SETTOUCHCONTROL	SETTOUCHCONTROL n, where n is one of (off, on)	string parameter "on" or "off"	##*Set Touch Control on or ##*Set Touch Control off or ##*Touch Control is already on or ##*Touch Control is already off or ##*Touch Device is not available or ##*invalid value entered
SETGPURASTER	Enable/Disable GPU rasterization <b>Supported in firmware version &gt;= 7.65</b>	string (ON / OFF)	##*GPU Raster state is set
SET4KBROWSER	Enable browser to 4k <b>Supported in firmware version &gt;= 7.65</b>	string (ON / OFF)	##*Forced 4K browser is enabled/disabled
SETBROWSERMEM	Set the new memory limit of the browser. Maximum value is 700 MB <b>Supported in firmware version &gt;= 7.65</b>	int (<= 700)	##*Browser memory limit is set

## 4. General Monitor Commands

Command	Description	Parameter	Return
Led	Turns the led on/off.	integer n (0 = off, 1 = on)	#*Led is ON or #*Led is OFF
GETLED	Get led on/off state.	no parameter	#*LED is on or #*LED is off
SETRC	Enables/disables remote control commands.	string-string s (s = ON, s = OFF)	set remote state to ON or set remote state to OFF or invalid remote state parameter or setting remote state to ON failed or setting remote state to OFF failed
GETRC	Get remote control commands enabled status	no parameter	#*remote state is on or #*remote state is off
irkey	Irkey KeyValue(HEX).	string-integer n (ex: irkey 0x38)	GenericIRKeySet key: n
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, n = DP, n = OPS, n = DVI, n = BACKAV, n = WIDI)  (b = 1(enable), b = 0(disable))	#*Selected source n #*Enable/Disable state: b
GETSOURCE	Gets source.	no parameter	#*source is ...
OSDMENU	Set osd menu mode	integer n (0 = off, 1 = on)	#*set osd menu state to n
AUTOTVOFF	Set auto monitor off level	integer n (0 = off, 1 = on)	#*set auto tv off mode to ON or #*set auto tv off mode to OFF
GETAUTOTVOFF	Get auto tv off mode.	no parameter	#*auto TV off is on or #*auto TV off is off
GETSWVERSION	Returns the software version of monitor.	no parameter	#*V...
BUILDINFO	Reports the build info.	no parameter	#*Build info = ... Revision = ...
FACTORY	Load factory settings to NVRAM.	no parameter	#*Factory Settings were loaded to NVRAM.
USBSWUPDATE	Updates software from usb and re-boots.	no parameter	upgradeSoftwareFromUSB(frost_bool force:1) Successfully written or no ... found
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.
VIDOFF	Select video off.	no parameter	#*Video off.
VIDON	Select video on.	no parameter	#*Video on.
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: Above n is "auto" or "manual".
RTCSET	Set/Query RTC clock	optional integer parameter	First outputs the current RTC time in decimal and hex format:



			<pre> #*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 </pre>
SETRTCDATE	Set/Query RTC date	<pre> str-int (DD/MM/YYYY, 0 &lt; DD &lt;= # of days in the month, 0 &lt; MM &lt; 13)  Example: SETRTCDATE 10/12/2016 </pre>	<pre> #*RTC Date is set to ... or #*Wrong argument format use SETRTCDATE DD/MM/YYYY or #*Invalid month or #*Invalid day </pre>
GETRTCDATE	Get RTC date	no parameter	#*The RTC date is ...
GETSTANDBY	Get standby on/off.	no parameter	<pre> #*standby off or #*standby on </pre>
MAINMENUITEM	Select main menu item.	string-integer n (picture, sound, settings, installation, channellist, mediabrowser)	#*selectMainMenuItem() set to n
GETLANGUAGE	Shows the language.	no parameter	#*Language: X(string)
STARTFTI	Start First Time Installation	no parameter	#*FTI was initialising.
SELECTSOURCE	Select source. (0=TV, other source Indexes (some of them are not enabled))	<pre> integer n (0,14 = TV, 1,15 = SCART1 (CVBS), 3 = SCART2 (CVBS), 5 = FAV, 6 = S-Video, 7 = HDMI1, 8 = HDMI2, 9 = HDMI3, 10 = HDMI4, 11 = YPbPr, 12 = Pc, 13 = SCART2 (S-VIDEO), 16 = SCART1 (S-VIDEO), 17 = DVD, 18 = DVI, 19 = DP, 20 = OPS, 21 = WIDI ) </pre>	<pre> #*select TV source or #*select External source ... </pre>
SETCOUNTRY	<p>Set country in n of channels state. This command has effect on date/time only if monitor is restarted (RST command)</p> <p>Valid country strings are:  ALBANIA, AUSTRALIA, AUSTRIA,  BAHRAIN, BELARUSSIA, BELGIUM,  BULGARIA, CHINA, COLOMBIA,  CROATIA, CYPRUS,  CZECH_REBUPLIC, DENMARK,  ESTONIA, FINLAND, FRANCE,  GERMANY, GREECE, HUNGARY,  ICELAND, INDIA, IRAQ, IRELAND,  ISLE_OF_MAN, ISRAEL, ITALY,  JORDAN, KUWAIT, LATVIA,  LEBANON, LITHUANIA,  LUXEMBOURG, MACEDONIA,  MONTENEGRO, NETHERLANDS,  NEW_ZEALAND, NORWAY, OMAN,  OTHER, PERSIA, POLAND,  PORTUGAL, QATAR, ROMANIA,  RUSSIA, SAN_MARINO,  SAUDI_ARABIA, SERBIA, SLOVAKIA,  SLOVENIA, SOUTH_AFRICA, SPAIN,  SWEDEN, SWITZERLAND, THAILAND,  TURKEY, UKRAINE,  UNITED_ARAB_EMIRATES, UK,  GHANA, EGYPT, LIBERIA, TOGO,  SIERRA_LEONE, COTE_D_IVOIRE,  KENYA, TANZANIA, MOZAMBIQUE,  CONGO, SENEGAL, NIGERIA,  ETHIOPIA, ZAMBIA, UGANDA,  ARGENTINA, ANGOLA, CANADA, US</p>	string-integer n (TURKEY, GERMANY, ...)	<pre> #* setCountry() set to n or #*Country should be set only in the FTI mode (no channels state) </pre>
SETFRONTPANELCLOCK	Sets front panel clock time (values: 10:00 , 12:30 ,... ).	string-integer n( 10:00, 14:00, ...)	<pre> #*Time is set successfully. or #*Given time parameter is wrong!  Time is not set! (Param: 10:00, 12:30 ...) </pre>
GETMODELNO	Get model no.	no parameter	#*Model no: ...

GETSERIALNO	Get serial no.	no parameter	##*Serial no: ...
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
SETPOWERONDELAY	Set poweron delay level	integer n (0<=n<=20, delay is calculated as 100ms*n)	##*Poweron delay set to ... ms or ##*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
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
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 (15, 30, 60)
SETFTIPIN	Set FTI PIN number	integer n (n is a four digit number)	##*FTI PIN was set to n or ##*PIN can not be set to n
GETFTIPIN	Get FTI PIN number	no parameter	##*The FTI PIN is n

## 5. 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 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	str-int 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	str-int ssid	##Pass or ##FAIL
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 or ##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 or ##setting default gateway is failed
GETDEFAULTGATEWAY	get default gateway (eg. GETDEFAULTGATEWAY)	no parameter	##the default gateway is nnn.nnn.nnn.nnn
SETDNSCONFIGURATION	set DNS configuration mode (auto,manual) (eg. SETDNSCONFIGURATION mode (auto,manual))	string n ('auto' or 'manual')	##set DNS configuration to: <dns-conf-mode> or ##setting DNS configuration is failed
GETDNSCONFIGURATION	get DNS configuration mode (auto,manual) (eg. GETDNSCONFIGURATION)	no parameter	##the DNS configuration is manual or ##the DNS configuration is auto or on error: ##the DNS configuration is unknown
SETDNS1	set DNS server 1 (DNS server value should be of format nnn.nnn.nnn.nnn) (eg. SETDNS1 nnn.nnn.nnn.nnn)	string "nnn.nnn.nnn.nnn"	##set DNS server 1 to: nnn.nnn.nnn.nnn or ##setting DNS server 1 failed
GETDNS1	get DNS server 1 (eg. GETDNS1)	no parameter	##DNS server 1 is nnn.nnn.nnn.nnn
SETDNS2	set DNS server 2 (DNS server value should be of format nnn.nnn.nnn.nnn) (eg. SETDNS2 nnn.nnn.nnn.nnn)	string "nnn.nnn.nnn.nnn"	##set DNS server 2 to: nnn.nnn.nnn.nnn or ##setting DNS server 2 failed
GETDNS2	get DNS server 2 (eg. GETDNS2)	no parameter	##DNS server 1 is nnn.nnn.nnn.nnn

## 6. PC Commands

Command	Description	Parameter	Return
SETOSDORIENTATION	Set OSD orientation	string-integer n (n = landscape, n = portrait, n = portrait2)  (landscape: 0 degrees rotation, portrait: 90 degree rotation, portrait2: 270 degree rotation)	#*ACK or #*NACK
GETOSDORIENTATION	Get OSD orientation	no parameter	#*The OSD orientation ...
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 the 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	Set auto position	no parameter	#*set auto position

## 7. Picture Commands

Command	Description	Parameter	Return
FREEZE	Freeze/Unfreeze.	no parameter	#*Video is frozeed or #*Video is unfreezeed
ENERGYSAVING	Set energy saving mode. (if enabled from profile)	str-int n (n = off, minimum, medium, maximum, auto, screen_off)	#*setEnergySaving() set to n
POWERSAVE	Set power save mode.	str-int n (n = ON, n = OFF)	#*set Power save mode to ON, backlight to its default value or #*set Power save mode to OFF, set to last backlight mode
GETPOWERSAVE	Get power save mode	no parameter	#*Powersavemode is ON or #*Powersavemode is OFF
SETBACKLIGHT	Set backlight level.	str-int n (n = ON, n = OFF)	#*setBacklight port to ON or #*setBacklight port to OFF
BACKLIGHTDIM	Set backlight dimming level. (if enabled from profile)	str-int n (n = low, high, off)	#*setBacklightDimming() set to n
GETBACKLIGHTDIM	Get backlight dimming level.	no parameter	#*Energy Saving is ...
GETBACKLIGHT	Get backlight level.	no parameter	#*Energy Saving is ...
BLUEBACK	Set bluebackground state.	int n (0 = OFF, 1 = ON)	#*set bluebackground state to n
COLOURTEMP	Set colour temperature.	str-int n (n = normal, warm, cool)	#*setColourTemp() set to n
GETCOLOURTEMP	Get colour temperature.	no parameter	#*Colour temp is ...
GETPICTUREMODE	Get picture mode.	no parameter	#*Picture Mode is ... for current source
PICTUREMODE	Select picture mode.	int n (1 = signage, 2 = natural, 3 = text, 4 = game)	#*setPictureMode() set to n or #*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 or #*Same value is set. Do nothing. or #*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 or #*Same value is set. Do nothing. or #*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 or #*Same value is set. Do nothing. or #*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 or #*Same value is set. Do nothing. or #*Incorrect value must

			between defined ranges 0-100
SETHUE	Set picture hue value.	int n ( $-50 \leq n \leq 50$ )	#*Picture hue value is set to n or #*Incorrect value must be between defined ranges -50-50
GETHUE	Get picture hue value.	no parameter	#*Hue level is ...
SETSKINTONE	Set picture skin tone value.	int n ( $-5 \leq n \leq 5$ )	#*Picture skin tone value is set to n or #*Same value is set. Do nothing. or #*Incorrect value must be 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), panoromic, cinema)	#*setPictureZoomMode() set to n or #*Incorrect picture zoom mode parameter entered
GETPICTUREZOOM	Get picture zoom mode.	no parameter	#*Picture zoommode is ...
SETHDMITRUEBLACK	Set hdmi trueblack status	str-int n (n = ON, n = OFF)	#*HDMITrueBlack set to ON or #*HDMITrueBlack set to OFF
GETHDMITRUEBLACK	Get hdmi trueblack status	no parameter	#*HDMITrueBlack is ...
SETDYNAMICCONTRAST	Set dynamic contrast.	str-int n (n = OFF, n = LOW, n = MEDIUM, n = HIGH)	#*Dynamic contrast set to n or #*Missing dynamic contrast state
GETDYNAMICCONTRAST	Get dynamic contrast.	no parameter	#*Dynamic contrast is ...
SETFILMMODE	Set film mode.	str-int n (n = OFF, n = AUTO)	#*FilmMode set to n or #*Missing film mode state
GETFILMMODE	Get film mode.	no parameter	#*FilmMode is ...
SETCOLOURSHIFT	Set colour shift.	int n ( $-50 < n < 50$ )	#*Colour shift set to n or #*Incorrect value, it must be defined between ranges -50 and 50
GETCOLOURSHIFT	Get colour shift.	no parameter	#*Colour shift is ...
SETNOISEREDUCTION	Set noise reduction.	str-int n (n = OFF, n = LOW, n = MEDIUM, n = HIGH)	#*NoiseReduction set to n or #*Missing noise reduction state
GETNOISEREDUCTION	Get noise reduction.	no parameter	#*NoiseReduction 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 ... #*Picture contrast value is set to ... #*Picture hue value is set to ... #*Picture skin tone value is set to ...
SETWB	Set white balance value.	str-int type, value (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) ( $0 \leq \text{value} \leq 250$ )	#*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.	str-int type n (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset) ( $0 \leq n \leq 250$ )	#*White Balance is set to value or Invalid value for White Balance (0-255) or Invalid type for White Balance
DECWB	Decrement white balance value by n.	str-int type n (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset)	#*White Balance is set to ...

		(0 ≤ n ≤ 255)	or Invalid value for White Balance (0-255) or Invalid type for White Balance
GETWB	Get white balance value.	str-int type (type = redgain, greengain, bluegain, redoffset, greenoffset, blueoffset)	## type ...
ADCCAL	Start ADC auto calibration.	int 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= ...
GETPATTERN	Get selected pattern of the screen	no parameter	The pattern 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 ...
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 ...

## 8. Video Wall Commands

When Signage is enabled, commands can be sent to each device using Signage IDs.

Format: COMMAND #[signage\_id] PARAMETER

n = 0 is the broadcast id.

Command	Description	Parameter	Return
SETROWCOUNT	Set row count.	integer n ( $0 \leq n \leq 100$ )	
GETROWCOUNT	Get row count.	no parameter	
SETCOLUMNCOUNT	Set column count.	integer n ( $0 \leq n \leq 100$ )	
GETCOLUMNCOUNT	Get column count.	no parameter	
SETCELL	Set cell.	integer n ( $0 \leq n \leq 100$ )	
GETCELL	Get cell.	no parameter	
SETOFFSET	Set offset.	integer n ( $0 \leq n \leq 100$ ). n is the number of pixels which will be cropped from all four sides.	
GETOFFSET	Get offset.	no parameter	
SETVIDEOWALL	Set videowall parameters	parameters for items in following format: RowCount-ColumnCount-Cell-Offset	
GETVIDEOWALL	Get all videowall parameters	no parameter	
SETALLVIDEOWALL	Set all videowall parameters	parameters for items in following format: picture_mode-contrast-brightness-sharpness-color-powesave_mode-backlight_mode-colortemp-zoom_m	
GETALLVIDEOWALL	Get all videowall parameters	no parameter	
SETPIXELSHIFTING	Set pixel shifting is enabled or not	string-integer n (n = on, n = off)	
GETPIXELSHIFTING	Get pixel shifting	no parameter	
SETSIGNAGEID	Set Signage ID	integer n ( $1 \leq n \leq 100$ ). n is the Signage ID	
GETSIGNAGEID	Get Signage ID	no parameter	



## 9. 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 free 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	integer n (schedule number), string x (ON, OFF)	##*The scheduler is set to ... (ON, OFF)
GETSCHEDULER	get scheduler enabled/disabled	integer n (n is the schedule number)	##*The scheduler is ... (ON, OFF)
SETSCHEDULEOP	set scheduler parameters	number_enabled_ontime_offenabled_offtime_days_source Example: SETSCHEDULEOP 4_1_08:00_1_22:00_0111110_HDMI	##*Schedule parameters are ... (set/not set).
GETSCHEDULEOP	get scheduler parameters	integer n (n is scheduler number)	##*Scheduler on/off time and source is: ..... (hh:mm_hh:mm_source)
SETRCU	set RCU Inhibit to on,off	string n ( ON, OFF )	##*set RCU inhibit ... (ON, OFF) OR ##*Missing RCU Inhibit selection OR ##*wrong string parameter for RCU Inhibit
GETRCU	get RCU Inhibit value	no parameter	##*RCU Inhibit is .... (ON, OFF) OR ##*NACK