



SL4302K/SL5502K/SL6502K/SL7502K/SL8502K  
RS232 & LAN Protocol  
Installation Guide



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# Introduction

This document describes the hardware interface spec and software protocols of RS232 interface communication between Commercial Display and PC or other control unit with RS232 protocol. This set protocol allow users to assign the ID in the command to control the specify ID monitor. The set protocol contains two sections command: Set-Function and Get-Function



In this document, "PC" represents all the control units that can send or receive the RS232 protocol command.

## Wire arrangement

Wire Arrangement		
P1	Color	P2
1	Black	1
2	Brown	3
3	Red	2
4	Orange	4
5	Yellow	5
6	Green	6
7	Blue	7
8	Purple	8
9	Gray	9
Case	Drain wire	Case

## RS232 pin assignment



Pin	Description	Pin	Description
1	NC	2	RXD
3	TXD	4	NC
5	GND	6	NC
7	RTS	8	CTS
9	NC		



Use of crossover (null modem) cable requires use with PC.

## Communication setting

Baud rate select: 9600bps (fixed)/ Data bits: 8 bits (fixed)

Parity: None (fixed)/ Stop Bits: 1(fixed)

## Command message reference

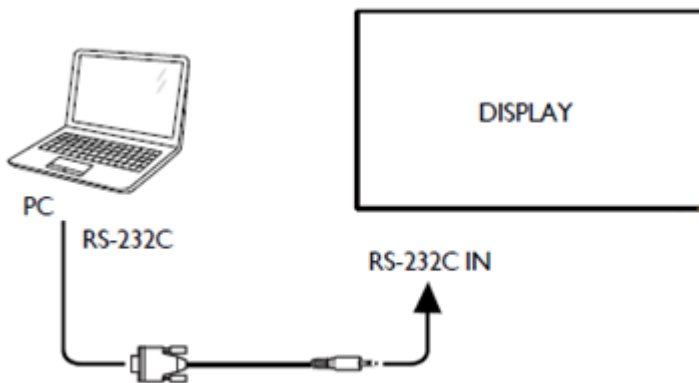
PC sends to Monitor command packet followed by "CR". Every time PC sends control command to the Monitor, the Monitor shall response as follows:

1. If the message is received correctly, it will send "+" (02Bh) followed by "CR" (00Dh).
2. If the message is received incorrectly, it will send "-" (02Dh) followed by "CR" (00Dh).

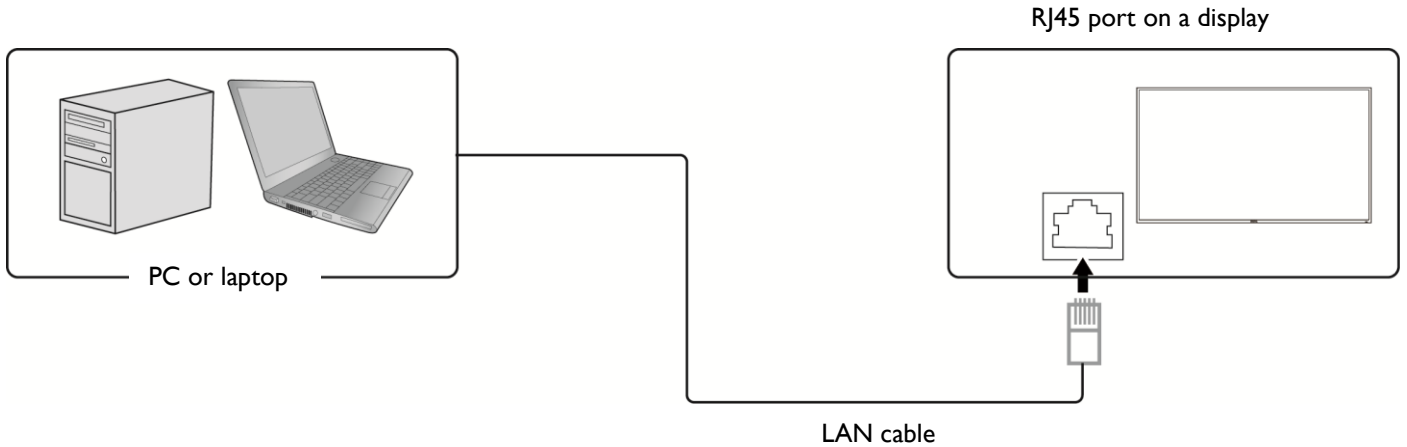
## Connections and communication settings


Choose one of the connections and set up properly before RS232 control.

## RS232 serial port connection



## RS232 via LAN



 Find the Wired LAN IP address of the connected display from the OSD menu and make sure the display and the computer are within the same network.

## Protocol Command Description

Item	Description
Length	Total Bytes of Message excluding "CR"
TV ID	Identification for each of TV TV ID is "01" for LAN control & RS232 control
Command Type	Identify command type, "s" (0x73h): Set Command "g" (0x67h): Get Command "r" (0x72h): Reply Command "+" (0x2Bh): Valid command Reply "- " (0x2Dh): Invalid command Reply
Command	Function command code: One byte ASCII code
Value [1~3]	Three bytes ASCII that defines the value
CR	0x0D

## Set-function listing

The PC can control the LCD Monitor for specific actions. The Set-Function command allows you to control the LCD monitor behavior in a remote sit through the RS232 port. The Set-Function packet format consists of 11 bytes.

## Set-function description

Item	Description
Length	Total Bytes of Message excluding "CR"
TV ID	Identification for each of TV TV ID is "01" for LAN control & RS232 control
Command Type	Identify command type, "s" (0x73h): Set Command
Command	Function command code: One byte ASCII code
Value [1~3]	Three bytes ASCII that defines the value
CR	0x0D

## Set-function format

Send: (Command Type="s")

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Byte count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

Reply: (Command Type="+" or "-")

Name	Length	ID	Command type	CR
Byte count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

Example 1: Set Brightness as 76 and this command is valid.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x73	0x24	0x30	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	CR
Hex	0x34	0x30 0x31	0x2B	0x0D

Example 2: Set Brightness as 176 and this command is NOT valid.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x73	0x24	0x31	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	CR
Hex	0x34	0x30 0x31	0x2D	0x0D

Example 3: Set Balance as 50 this command is valid.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x73	0x39	0x30	0x35	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	CR
Hex	0x34	0x30 0x31	0x2D	0x0D

Example 4: Set Balance as 115 this command is Not valid.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x73	0x39	0x31	0x31	0x35	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	CR
Hex	0x34	0x30 0x31	0x2D	0x0D

## Set-function table

Set Function	Len	Cmd Type	Cmd Code (Hex)	ASCII Bytes	Send Set Command (HEX)
Power	8	s	21	000 :Monitor Off (Backlight off +mute)	38 30 31 73 21 30 30 30 0D
				001 :Monitor On (Backlight on + last status)	38 30 31 73 21 30 30 31 0D
				002 : Standby (android off)	38 30 31 73 21 30 30 32 0D
				003 : Reboot System	38 30 31 73 21 30 30 33 0D
Video Source	8	s	22	000 : VGA	38 30 31 73 22 30 30 30 0D
				001 : HDMI1	38 30 31 73 22 30 30 31 0D
				002: HDMI2	38 30 31 73 22 30 30 32 0D
				007 : DisplayPort	38 30 31 73 22 30 30 37 0D
				101 : android	38 30 31 73 22 31 30 31 0D
Contrast	8	s	23	000 ~ 100	38 30 31 73 23 30 30 30 0D ~ 38 30 31 73 23 31 30 30 0D
Brightness	8	s	24	000 ~ 100	38 30 31 73 24 30 30 30 0D ~ 38 30 31 73 24 31 30 30 0D
Sharpness	8	s	25	000 ~ 100	38 30 31 73 25 30 30 30 0D ~ 38 30 31 73 25 31 30 30 0D
Aspect Ratio	8	s	31	000 : Full	38 30 31 73 31 30 30 30 0D
				001 : 4:3	38 30 31 73 31 30 30 31 0D
				002 : 1:1	38 30 31 73 31 30 30 32 0D
				003 : 16:9	38 30 31 73 31 30 30 33 0D
Language	8	s	32	000: English	38 30 31 73 32 30 30 30 0D
				001: Français	38 30 31 73 32 30 30 31 0D
				002: Español	38 30 31 73 32 30 30 32 0D
				003: 繁中	38 30 31 73 32 30 30 33 0D
				004: 简中	38 30 31 73 32 30 30 34 0D
				005: Português	38 30 31 73 32 30 30 35 0D
				006: German	38 30 31 73 32 30 30 36 0D
				007: Dutch	38 30 31 73 32 30 30 37 0D
				008: Polish	38 30 31 73 32 30 30 38 0D
				009: Russia	38 30 31 73 32 30 30 39 0D
				010:Czech	38 30 31 73 32 30 31 30 0D
				011:Danish	38 30 31 73 32 30 31 31 0D
				012:Swedish	38 30 31 73 32 30 31 32 0D
013:Italian	38 30 31 73 32 30 31 33 0D				



				014:Romanian	38 30 31 73 32 30 31 34 0D
				015:Norwegian	38 30 31 73 32 30 31 35 0D
				016:Finnish	38 30 31 73 32 30 31 36 0D
				017:Greek	38 30 31 73 32 30 31 37 0D
				019:Arabic	38 30 31 73 32 30 31 39 0D
				020:Japanse	38 30 31 73 32 30 32 30 0D
				021: Thailand	38 30 31 73 32 30 32 31 0D
				022: Korean	38 30 31 73 32 30 32 32 0D
				023 : Hungarian	38 30 31 73 32 30 32 33 0D
				024 : Persian	38 30 31 73 32 30 32 34 0D
				025 : Vietnamese	38 30 31 73 32 30 32 35 0D
Sound Mode	8	s	33	001 : Standard	38 30 31 73 33 30 30 31 0D
				002: Cinema	38 30 31 73 33 30 30 32 0D
				003: Meeting	38 30 31 73 33 30 30 33 0D
				004: Class	38 30 31 73 33 30 30 34 0D
				005: Custom	38 30 31 73 33 30 30 35 0D
Volume	8	s	35	000 ~ 100	38 30 31 73 35 30 30 30 0D ~ 38 30 31 73 35 31 30 30 0D
Mute	8	s	36	000: Off	38 30 31 73 36 30 30 30 0D
				001: On	38 30 31 73 36 30 30 31 0D
Balance	8	s	39	000~100	38 30 31 73 39 30 30 30 0D ~ 38 30 31 73 39 31 30 30 0D
Treble	8	s	37	000~100	38 30 31 73 37 30 30 30 0D ~ 38 30 31 73 37 31 30 30 0D
Bass	8	s	38	000~100	38 30 31 73 38 30 30 30 0D ~ 38 30 31 73 38 31 30 30 0D
Remote control command	8	s	40	000 : Vol +	38 30 31 73 40 30 30 30 0D
				001 : Vol -	38 30 31 73 40 30 30 31 0D
				010 : Remote up	38 30 31 73 40 30 31 30 0D
				011 : Remote down	38 30 31 73 40 30 31 31 0D
				012 : Remote left	38 30 31 73 40 30 31 32 0D
				013 : Remote right	38 30 31 73 40 30 31 33 0D
				014 : Remote OK	38 30 31 73 40 30 31 34 0D
				020 : Remote Menu Key	38 30 31 73 40 30 32 30 0D
				021 : Remote Input source	38 30 31 73 40 30 32 31 0D
				022 : Remote Exit	38 30 31 73 40 30 32 32 0D
				040 : X-Sign	38 30 31 73 40 30 34 30 0D
				041 : WPS	38 30 31 73 40 30 34 31 0D
				042 : Mediaplayer	38 30 31 73 40 30 34 32 0D
043 : Android Setting	38 30 31 73 40 30 34 33 0D				

IR Control	8	s	42	000: Disable	38 30 31 73 42 30 30 30 0D
				001: Enable	38 30 31 73 42 30 30 31 0D
Button&IR Control	8	s	43	000: Disable	38 30 31 73 43 30 30 30 0D
				001: Enable	38 30 31 73 43 30 30 31 0D
Button Control	8	s	45	000: Disable	38 30 31 73 45 30 30 30 0D
				001: Enable	38 30 31 73 45 30 30 31 0D
Pixel Shift	8	s	47	000: Off	38 30 31 73 47 30 30 30 0D
				001: On	38 30 31 73 47 30 30 31 0D
Picture Mode		s	81	000: Standard	38 30 31 73 81 30 30 30 0D
				001: M-Book	38 30 31 73 81 30 30 31 0D
				002 : Cinema	38 30 31 73 81 30 30 32 0D
				003: Photo	38 30 31 73 81 30 30 33 0D
				004 : Custom	38 30 31 73 81 30 30 34 0D
Saturation / Chroma	8	s	82	000 ~ 100	38 30 31 73 82 30 30 30 0D ~ 38 30 31 73 82 31 30 30 0D
Hue	8	s	83	000 ~ 100	38 30 31 73 83 30 30 30 0D ~ 38 30 31 73 83 31 30 30 0D
Backlight	8	s	84	000 ~ 100	38 30 31 73 84 30 30 30 0D ~ 38 30 31 73 84 31 30 30 0D
DCR	8	s	85	000: Off	38 30 31 73 85 30 30 30 0D
				001: On	38 30 31 73 85 30 30 31 0D
Color Temp	8	s	86	000 : Cool	38 30 31 73 86 30 30 30 0D
				001 : Standard	38 30 31 73 86 30 30 31 0D
				002 : Warm	38 30 31 73 86 30 30 32 0D
Auto Adjustment Execute	8	s	8F		38 30 31 73 8F 30 30 30 0D
RTC Year	8	s	98	000 ~ 099	38 30 31 73 98 30 30 30 0D ~ 38 30 31 73 98 30 39 39 0D
RTC Month	8	s	99	001 ~ 012	38 30 31 73 99 30 30 31 0D ~ 38 30 31 73 99 30 31 32 0D
RTC Day	8	s	9A	001 ~ 031	38 30 31 73 9A 30 30 31 0D ~ 38 30 31 73 9A 30 33 31 0D
RTC Hour	8	s	9B	000 ~ 023	38 30 31 73 9B 30 30 30 0D ~ 38 30 31 73 9B 30 32 33 0D
RTC Minute	8	s	9C	000 ~ 059	38 30 31 73 9C 30 30 30 0D ~ 38 30 31 73 9C 30 35 39 0D
Power Save	8	s	A9	000: Off	38 30 31 73 A9 30 30 30 0D
				001: Low	38 30 31 73 A9 30 30 31 0D

				002: High	38 30 31 73 A9 30 30 32 0D
Switch on status	8	s	AB	000 : Power Off	38 30 31 73 AB 30 30 30 0D
				001 : Force On	38 30 31 73 AB 30 30 31 0D
				002 : Last Status	38 30 31 73 AB 30 30 32 0D
On/Off Timer	14	s	E0	<p>Byte1~Byte9</p> <p>(1) Byte1: Decide which Timer is selected, and its enable/disable setting. Byte1[3:0]=0x1~0x07. There are totally 7 Timers, this value is used to decide which Timer is selected.</p> <p>Byte1[7]: Reserved, should be 0.</p> <p>Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable.</p> <p>Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable.</p> <p>Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable.</p> <p>(2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everyday.</p> <p>(3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17.</p> <p>(4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B.</p> <p>(5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17.</p> <p>(6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B.</p> <p>(7) Byte7: Select the Video Source.( depends on actual I/O)  0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YpPr, 0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media. 0x0A=Network, 0x0B=USB Display, 0x21=HDMI3, 0x22=HDMI4, 0x23=HDMI5, 0x1F=VGA2, 0x20=VGA3, 0x21=VGA4, 0x29=DP2, 0x2A=DP3, 0x2B=DP3, 0x65=Android, 0x66=OPS,0xFF=Last Channel</p>	

				(8) Byte8~9 are reserved, and should be 0x00.	
WOL	8	s	F0	000: Off	38 30 31 73 F0 30 30 30 0D
				001: On	38 30 31 73 F0 30 30 31 0D
Image Noise Reduction	8	s	F1	000 : Off	38 30 31 73 F1 30 30 30 0D
				001 : Low	38 30 31 73 F1 30 30 31 0D
				002 : Middle	38 30 31 73 F1 30 30 32 0D
				003 : Highest	38 30 31 73 F1 30 30 33 0D
EDID	8	s	F2	000 : EDID 1.4	38 30 31 73 F2 30 30 30 0D
				001 : EDID 2.0	38 30 31 73 F2 30 30 31 0D

## Get-function listing

The PC can interrogate the LCD Monitor for specific information. The Get-Function packet format consists of 5 bytes which are similar to the Set-Function packet structure. Note that the "Value" byte is always = 00.

## Get-function description

Item	Description
Length	Total Bytes of messages excluding "CR"
TV ID	Identification for each of TV TV ID is "01" for LAN control & RS232 control
Command Type	Identify command type, "g" (0x67h): Get Command
Command	Function command code: One byte ASCII code
Value [1~3]	Three bytes ASCII that defines the value NOTE: To get backlight sensor, thermal sensor, and ambient sensor, you need four bytes ASCII that defines the value and the length is 9.
CR	0x0D

## Get-function format

Send: (Command Type="g")

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Byte count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

Reply: (Command Type="r" or "-")

If the Command is valid, Command Type = "r"

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Byte count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

If the Command is Not valid, Command Type = "-"

Name	Length	ID	Command type	CR
Byte count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

Example 1: Get Brightness and this command is valid.

The Brightness value is 67.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x67	0x62	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x72	0x62	0x30	0x36	0x37	0x0D

Example 3: Get Balance from and this command is valid.

The Balance value is 32.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x67	0x39	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x72	0x39	0x30	0x33	0x32	0x0D

Example 4: Get Balance, but the Balance command ID is error and it is NOT in the command table.

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x31	0x67	0xD7	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	CR
Hex	0x34	0x30 0x31	0x2D	0x0D

Example 5: Get Operation time from system and this command is valid.

The System Operation time value is 1786 (ASCII code).

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	Value4	Value5	CR
Hex	0x38	0x30 0x31	0x67	0x76	0x30	0x30	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	Value4	Value5	CR
Hex	0x38	0x30 0x31	0x72	0x76	0x30	0x31	0x37	0x38	0x36	0x0D

Example 6: Get CO2 Value from System and this command is valid.

The lux value is 786 (ASCII code).

Send (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	Value4	Value5	CR
Hex	0x38	0x30 0x31	0x67	0xAB	0x30	0x30	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command type	Command	Value1	Value2	Value3	Value4	Value5	CR
Hex	0x38	0x30 0x31	0x72	0xAB	0x30	0x30	0x37	0x38	0x36	0x0D





Bass	8	g	38	000~100	38 30 31 67 38 30 30 30 0D	38 30 31 72 38 30 30 30 0D ~ 38 30 31 72 38 31 30 30 0D
Balance	8	g	39	000~100	38 30 31 67 39 30 30 30 0D	38 30 31 72 39 30 30 30 0D ~ 38 30 31 72 39 31 30 30 0D
Contrast	8	g	61	000 ~ 100	38 30 31 67 61 30 30 30 0D	38 30 31 72 61 30 30 30 0D ~ 38 30 31 72 61 31 30 30 0D
Brightness	8	g	62	000 ~ 100	38 30 31 67 62 30 30 30 0D	38 30 31 72 62 30 30 30 0D ~ 38 30 31 72 62 31 30 30 0D
Sharpness	8	g	63	000 ~ 100	38 30 31 67 63 30 30 30 0D	38 30 31 72 63 30 30 30 0D ~ 38 30 31 72 63 31 30 30 0D
Sound Mode	8	g	65	001 : Standard	38 30 31 67 65 30 30 30 0D	38 30 31 72 65 30 30 31 0D
				002: Cinema		38 30 31 72 65 30 30 32 0D
				003: Meeting		38 30 31 72 65 30 30 33 0D
				004: Class		38 30 31 72 65 30 30 34 0D
				005: Custom		38 30 31 72 65 30 30 35 0D
Volume	8	g	66	000 ~ 100	38 30 31 67 66 30 30 30 0D	38 30 31 72 66 30 30 30 0D ~ 38 30 31 72 66 31 30 30 0D
Mute	8	g	67	000: Off	38 30 31 67 67 30 30 30 0D	38 30 31 72 67 30 30 30 0D
				001: On		38 30 31 72 67 30 30 31 0D
IR Control	8	g	68	000: Disable	38 30 31 67 68 30 30 30 0D	38 30 31 72 68 30 30 30 0D
				001: Enable		38 30 31 72 68 30 30 31 0D
Button&IR Control	8	g	69	000: Disable	38 30 31 67 69 30 30 30 0D	38 30 31 72 69 30 30 30 0D
				001: Enable		38 30 31 72 69 30 30 30 0D
Video Source	8	g	6A	000 : VGA	38 30 31 67 6A 30 30 30 0D	38 30 31 72 6A 30 30 30 0D
				001 : HDMI1		38 30 31 72 6A 30 30 31 0D
				002: HDMI2		38 30 31 72 6A 30 30 32 0D
				007 : DisplayPort		38 30 31 72 6A 30 30 37 0D
				101 : android		38 30 31 72 6A 31 30 31 0D
Power	8	g	6C	000 :Monitor Off (Backlight off +mute)	38 30 31 67 6C 30 30 30 0D	38 30 31 72 6C 30 30 30 0D
				001 :Monitor On (Backlight on + last status)		38 30 31 72 6C 30 30 31 0D
				X		38 30 31 72 6C 30 30 32 0D
Pixel Shift	8	g	72	000: Off	38 30 31 67 72 30 30 30 0D	38 30 31 72 72 30 30 30 0D
				001: On		38 30 31 72 72 30 30 31 0D
Button Control	8	g	73	000: Disable	38 30 31 67 73 30 30 30 0D	38 30 31 72 73 30 30 30 0D
				001: Enable		38 30 31 72 73 30 30 31 0D
Operation Time	10	g	76	00000 ~ 99999	3A 30 31 67 76 30 30 30 30 30 0D	3A 30 31 72 76 30 30 30 30 0D ~ 3A 30 31 72 76 39 39 39 39 0D

Aspect Ratio	8	g	77	000 : Full	38 30 31 67 77 30 30 30 0D	38 30 31 72 77 30 30 30 0D
				001 : 4:3		38 30 31 72 77 30 30 31 0D
				002 : 1:1		38 30 31 72 77 30 30 32 0D
				003 : 16:9		38 30 31 72 77 30 30 33 0D
Language	8	g	78	000: English	38 30 31 67 78 30 30 30 0D	38 30 31 72 78 30 30 30 0D
				001: Français		38 30 31 72 78 30 30 31 0D
				002: Español		38 30 31 72 78 30 30 32 0D
				003: 繁中		38 30 31 72 78 30 30 33 0D
				004: 簡中		38 30 31 72 78 30 30 34 0D
				005: Português		38 30 31 72 78 30 30 35 0D
				006: German		38 30 31 72 78 30 30 36 0D
				007: Dutch		38 30 31 72 78 30 30 37 0D
				008: Polish		38 30 31 72 78 30 30 38 0D
				009: Russia		38 30 31 72 78 30 30 39 0D
				010:Czech		38 30 31 72 78 30 31 30 0D
				011:Danish		38 30 31 72 78 30 31 31 0D
				012:Swedish		38 30 31 72 78 30 31 32 0D
				013:Italian		38 30 31 72 78 30 31 33 0D
				014:Romanian		38 30 31 72 78 30 31 34 0D
				015:Norwegian		38 30 31 72 78 30 31 35 0D
				016:Finnish		38 30 31 72 78 30 31 36 0D
				017:Greek		38 30 31 72 78 30 31 37 0D
				019:Arabic		38 30 31 72 78 30 31 39 0D
				020:Japanse		38 30 31 72 78 30 32 30 0D
				021: Thailand		38 30 31 72 78 30 32 31 0D
				022: Korean		38 30 31 72 78 30 32 32 0D
				023 : Hungarian		38 30 31 72 78 30 32 33 0D
				024 : Persian		38 30 31 72 78 30 32 34 0D
				025 : Vietnamese		38 30 31 72 78 30 32 35 0D
Picture Mode	8	g	B1	000: Standard	38 30 31 67 B1 30 30 30 0D	38 30 31 72 B1 30 30 30 0D
				001: M-Book		38 30 31 72 B1 30 30 31 0D
				002 : Cinema		38 30 31 72 B1 30 30 32 0D
				003 : Photo		38 30 31 72 B1 30 30 33 0D
				004 : Custom		38 30 31 72 B1 30 30 34 0D
Chroma (Color)	8	g	B2	000 ~ 100	38 30 31 67 B2 30 30 30 0D	38 30 31 72 B2 30 30 30 0D ~ 38 30 31 72 B2 31 30 30 0D
Hue	8	g	B3	000 ~ 100	38 30 31 67 B3 30 30 30 0D	38 30 31 72 B3 30 30 30 0D ~ 38 30 31 72 B3 31 30 30 0D
Backlight	8	g	B4	000 ~ 100	38 30 31 67 B4 30 30 30 0D	38 30 31 72 B4 30 30 30 0D ~ 38 30 31 72 B4 31 30 30 0D

DCR	8	g	B5	000: Off	38 30 31 67 B5 30 30 30 0D	38 30 31 72 B5 30 30 30 0D
				001: On		38 30 31 72 B5 30 30 31 0D
Color Temp	8	g	B6	000 : Cool	38 30 31 67 B6 30 30 30 0D	38 30 31 72 B6 30 30 30 0D
				001 : Standard		38 30 31 72 B6 30 30 31 0D
				002 : Warm		38 30 31 72 B6 30 30 32 0D
RTC Year	8	g	C8	000 ~ 099	38 30 31 67 C8 30 30 30 0D	38 30 31 72 C8 30 30 30 0D ~ 38 30 31 72 C8 30 39 39 0D
RTC Month	8	g	C9	001 ~ 012	38 30 31 67 C9 30 30 30 0D	38 30 31 72 C9 30 30 31 0D ~ 38 30 31 72 C9 30 31 32 0D
RTC Day	8	g	CA	001 ~ 031	38 30 31 67 CA 30 30 30 0D	38 30 31 72 CA 30 30 31 0D ~ 38 30 31 72 CA 30 33 31 0D
RTC Hour	8	g	CB	000 ~ 023	38 30 31 67 CB 30 30 30 0D	38 30 31 72 CB 30 30 30 0D ~ 38 30 31 72 CB 30 32 33 0D
RTC Minute	8	g	CC	000 ~ 059	38 30 31 67 CC 30 30 30 0D	38 30 31 72 CC 30 30 30 0D ~ 38 30 31 72 CC 30 35 39 0D
Power Save	8	g	D9	000 : Off	38 30 31 67 D9 30 30 30 0D	38 30 31 72 D9 30 30 30 0D
				001 : Low		38 30 31 72 D9 30 30 31 0D
				002 : High		38 30 31 72 D9 30 30 32 0D
Switch on Status	8	g	DA	000 : Power Off	38 30 31 67 DA 30 30 30 0D	38 30 31 72 DA 30 30 30 0D
				001 : Force On		38 30 31 72 DA 30 30 31 0D
				002 : Last Status		38 30 31 72 DA 30 30 32 0D

On/Off Timer	14	g	E0	<p>Input value: Byte1 - Byte2 - Byte3...Byte9</p> <p>(1) Byte1[3:0]: The Number of the On/Off Timer. There are totally 7 On/Off Timers, and this byte is used to select which timer is going to be accessed.</p> <p>(2) Byte1[7:4] is reserved, should be 0.</p> <p>(3) Byte2~9 are reserved, should be 0x00.</p> <p>Return value: Byte1 - Byte2 - Byte3...Byte9</p> <p>(1) Byte1[3:0]: Should return the same value as Byte1 at Input value.</p> <p>Byte1[7]: Reserved, should be 0.</p> <p>Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable.</p> <p>Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable.</p> <p>Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable.</p> <p>(2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everyday.</p> <p>(3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17.</p> <p>(4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B.</p> <p>(5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17.</p> <p>(6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B.</p> <p>(7) Byte7: Select the Video Source.( depends on actual I/O)  0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YpPr, 0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media. 0x0A=Network, 0x0B=USB Display, 0x21=HDMI3, 0x22=HDMI4, 0x23=HDMI5, 0x1F=VGA2, 0x20=VGA3, 0x21=VGA4, 0x29=DP2, 0x2A=DP3, 0x2B=DP3, 0x65=Android, 0x66=OPS,0xFF=Last Channel</p> <p>(8) Byte8~9 are reserved, and should be 0x00.</p>		<p>See the return value examples below:</p> <p>Ex: Byte1=0x01 means the Timer no.1 is selected and disable.</p> <p>Ex: Byte1=0x41 means the Timer no.1 is select and enable, and its both On and Off Timers are disable.</p> <p>Ex: Byte1=0x61 means the Timer no.1 is select and enable, and its On Timer is enable, Off Timer is disable.</p> <p>Ex: Byte1=0x71 means the Timer no.1 is select and enable, and its both On and Off Timers are enable.</p> <p>Ex: Byte1=0x53 means the Timer no.3 is select and enable, and its On Timer is disable, Off Timer is enable.</p> <p>Ex: Byte2=0x02 means the Timer is on Monday.</p> <p>Ex: Byte3=0x08, Byte4=0x1E means the On Timer is at 8:30.</p> <p>Ex: Byte5=0x17, Byte6=0x00 means the Off Timer is at 23:00.</p> <p>Ex: Byte7=0x00 means the selected Video Source is VGA.</p>
Network Setting	14	g	E1	<p>Input Value: Byte1 - Byte2 - Byte3...Byte9</p> <p>(1) Byte1=0x00: IP Setup Mode</p> <p>Byte1=0x01: IP Address</p> <p>Byte1=0x02: Get Subnet Mask</p> <p>Byte1=0x03: Default Gateway</p> <p>Byte1=0x04: Primary</p>	<p>IP Setup Mode : 3E 30 31 67 E1 00 00 00 00 00 00 00 00 00 0D</p> <p>IP Address : 3E 30 31 67 E1 01 00 00 00 00 00 00 00 0D</p>	<p>Manual : 3E 30 31 72 E1 00 00 00 00 00 00 00 00 0D</p> <p>DHCP : 3E 30 31 72 E1 00 01 00 00 00 00 00 00 0D</p> <p>Ex. IP address : 192.168.11.113 -&gt; to HEX -&gt; C0 A8 0B 71 so system reply as 3E 30 31 72 E1 01 C0 A8 0B 71 00 00 00 0D</p>

				<p>DNS</p> <p>Byte1=0x05: Secondary</p> <p>DNS</p> <p>Byte1=0x06: current</p> <p>using interface MAC Address</p> <p>Byte1=0x07: Ethernet</p> <p>(RJ45) MAC Address</p> <p>(2) Byte2~9 are reserved, should be 0x00.</p> <p>Return value: Byte1 - Byte2 - Byte3...Byte9</p> <p>The Byte1 at the return value should be the same as the value of Byte1 at Input value. Byte2~Byte15 should be hex value format</p> <p>(1) If Byte1=0x00(IP Setup Mode) at Input value, the return value should be</p> <p>Byte1=0x00</p> <p>Byte2=0x00: Manual</p> <p>0x01: DHCP</p> <p>Byte3~9 are reserved, should be 0x00.</p> <p>(2) If Byte1=0x01(IP Address) at Input value, the return value should be</p> <p>Ex: IP address=169.254.81.38</p> <p>Byte1=0x01 (same as Byte1 at Input value)</p> <p>Byte2=0xA9 (=169),</p> <p>Byte3=0xFE (=254),</p> <p>Byte4=0x51(=81), Byte5=0x26 (=38)</p> <p>Byte6~9 are reserved, should be 0x00.</p> <p>(3) If Byte1=0x02~0x05 at Input value, refer to (2)</p> <p>(4) If Byte1=0x06(MAC Address)</p>	<p>Get Subnet Mask : 3E 30 31 67 E1 02 00 00 00 00 00 00 00 00 0D</p> <p>Default Gateway : 3E 30 31 67 E1 03 00 00 00 00 00 00 00 0D</p> <p>Primary DNS : 3E 30 31 67 E1 04 00 00 00 00 00 00 00 0D</p> <p>Secondary DNS : 3E 30 31 67 E1 05 00 00 00 00 00 00 0D</p> <p>Current using MAC Address : 3E 30 31 67 E1 06 00 00 00 00 00 00 00 0D</p> <p>RJ45 LAN MAC Address : 3E 30 31 67 E1 07 00 00 00 00 00 00 00 0D</p>	<p>Ex. Subnet Mask is 255.255.255.0 - &gt; convert to HEX -&gt; FF FF FF 00 so system reply</p> <p>3E 30 31 72 E1 02 FF FF FF 00 00 00 00 0D</p> <p>Ex. default gateway : 192.168.11.254 -&gt; convert to HEX -&gt; C0 A8 0B FE so system reply</p> <p>3E 30 31 72 E1 03 C0 A8 0B FE 00 00 00 00 0D</p> <p>Ex. DNS 168.95.1.1 -&gt; convert to HEX -&gt; A8 5F 01 01 so system reply</p> <p>3E 30 31 72 E1 04 A8 5F 01 01 00 00 00 00 0D</p> <p>Ex. Second DNS 168.95.192.1 -&gt; convert to HEX -&gt; A8 5F C0 01 so system reply</p> <p>3E 30 31 72 E1 05 A8 5F C0 01 00 00 00 00 0D</p> <p>Ex. MAC address is 02 00 01 00 14 00 , so system reply</p> <p>3E 30 31 72 E1 06 02 00 01 00 14 00 00 00 0D</p> <p>(return current using interface MAC Address)</p> <p>Ex. LAN MAC address is 02 00 01 00 14 00 so system reply</p> <p>3E 30 31 72 E1 07 02 00 01 00 14 00 00 00 0D</p> <p>(always return LAN MAC Address)</p>
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				<p>at Input value, the return value should be</p> <p>Ex: MAC address=00:22:64:7E:2C:82</p> <p>Byte1=0x06 (same as Byte1 at Input value)</p> <p>Byte2=0x00,</p> <p>Byte3=0x22, Byte4=0x64,</p> <p>Byte5=0x7E, Byte6=0x2C,</p> <p>Byte7=0x82</p> <p>Byte8~9 are reserved, should be 0x00.</p>		
WOL	8	g	F0	000: Off	38 30 31 67 F0 30 30 30 0D	38 30 31 72 F0 30 30 30 0D
				001: On		38 30 31 72 F0 30 30 31 0D
Image Noise Reduction	8	g	F1	000 : Off	38 30 31 67 F1 30 30 30 0D	38 30 31 72 F1 30 30 30 0D
				001 : Low		38 30 31 72 F1 30 30 31 0D
				002 : Middle		38 30 31 72 F1 30 30 32 0D
				003 : Highest		38 30 31 72 F1 30 30 33 0D
EDID	8	g	F2	000 : EDID 1.4	38 30 31 67 F2 30 30 30 0D	38 30 31 72 F2 30 30 30 0D
				001 : EDID 2.0		38 30 31 72 F2 30 30 31 0D