



Technical Reference

020-001915-01

Secure Series II LCD Panels

CHRISTIE

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External control–ASCII protocol

In addition to using the display keypad or remote control unit, you can control the display using a serial (RS232) link or Ethernet connection to send commands and receive responses to those commands.

Serial communications

The display uses a simple text-based control protocol to take requests from control devices and to provide responses to such devices. This section describes how to send control messages over a serial link between the display and an automation/control system or a PC running a terminal emulation program.

RS232 communication parameters

The RS232 IN port has several communication parameters.

Parameter	Value
Default baud rate	115200
Parity	None
Data bits	8
Stop bits	1
Flow control	None

The panel support 115200, 38400, 19200, 9600 baud rate. To change the baud rate, on the panel go to Factory menu and change the baud rate.

Setting up the Ethernet

Learn how to configure the Ethernet port.

1. Connect the control computer to the RJ45 connector on the display panel.
2. If using TCP/IP, UDP socket program, complete the following to configure the Ethernet port on the system:
 - a. Set the IP address(check at LAN setting OSD).
 - b. Set the port number (TCP/IP: 5000, UDP: 5001).

Command and response format

Commands sent from an automation/control system or PC to the display must have the following format.

Direct command format (display from the control system)

Format : [HEAD][SET ID][COMMAND][END]

Example (Power on) : K:ALLPON

- [HEAD] indicates the start of the command data (always K:).
- [SET ID] is the display ID (always ALL).
- [COMMAND] is the command data (3 Bytes).
- [END] indicates the end of the command data (always a period (.)).

Value adjust format (display from the control system)

Format : [HEAD][SET ID][COMMAND][VALUE][END]

Example (Volume level 50%) : K:ALLVOL050

- [HEAD] indicates the start of the command data (always K:).
- [SET ID] is the display ID (always ALL).
- [COMMAND] is the command data (3 Bytes).
- [VALUE] is the parameter setting for the command (000 to 100).
- [END] indicates the end of the command data (always a period(.)).

Status check command format (display from the control system)

Format : [HEAD][SET ID][COMMAND][END]

Example (Volume level) : K:ALLVOL?

- [HEAD] indicates the start of the command data (always K:).
- [SET ID] is the display ID (always ALL).
- [COMMAND] is the command data (3 Bytes).
- [END] indicates the end of the command data (always question mark (?)).

Status check response format (control system from the display)

Format : [SET ID][:][COMMAND][=][REPLY]

Example (Volume level 50%) : ALL:VOL=050

- [SET ID] is the display ID (always ALL).
- [:] is always colon (:).
- [COMMAND] is the command data (3 Bytes).
- [=] is always equal sign (=).
- [Reply] is the reply data (3 Bytes).

OK acknowledgement

The Product transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Format : [ALL][:][Command][=][A]

Example : ALL:PON=A

Error acknowledgement

If an error occurs, it returns NG.

Format : [ALL][:][Command][=][N]

Example : ALL:PON=N

Serial command list

Main item	Control item	Command	Value	Reply
Direct Control	Power Key Off	POF		
Direct Control	Power Key On	PON		
Direct Control	Source change to DP1	SH0		
Direct Control	Source change to DP2	SH1		
Direct Control	Source change to HDMI1	SH2		
Direct Control	Source change to HDMI2	SH3		
Direct Control	Source change to HDMI3	SH4		
Direct Control	Source change to HDMI4	SH5		
Direct Control	Source change to OPS/HDMI	SH7		
Direct Control	Source change to OPS/DP	SH8		
Direct Control	Picture Mode Standard	PM0		
Direct Control	Picture Mode Dynamic	PM1		
Direct Control	Picture Mode User	PM2		
Direct Control	Backlight on	BLN		
Direct Control	Backlight off	BLF		
Direct Control	Brightness 1step Up	BLU		
Direct Control	Brightness 1step Down	BLD		
Direct Control	Contrast 1step Up	CTU		
Direct Control	Contrast 1step Down	CTD		
Direct Control	Black Level 1step Up	BRU		
Direct Control	Black Level 1step Down	BRD		
Direct Control	Color 1step Up	STU		
Direct Control	Color 1step Down	STD		
Direct Control	Sharpness 1step Up	SPU		
Direct Control	Sharpness 1step Down	SPD		
Direct Control	Color temperature set to Studio1	CT0		
Direct Control	Color Temperature set to Studio2	CT1		

Main item	Control item	Command	Value	Reply
Direct Control	Color Temperature set to Warm	CT2		
Direct Control	Color temperature set to Normal	CT3		
Direct Control	Color Temperature set to Cool	CT4		
Direct Control	Color Temperature set to User	CT5		
Direct Control	Red Gain 1step Up	RGU		
Direct Control	Red Gain 1step Down	RGD		
Direct Control	Green Gain 1step Up	GGU		
Direct Control	Green Gain 1step Down	GGD		
Direct Control	Blue Gain 1step Up	BGU		
Direct Control	Blue Gain 1step Down	BGD		
Direct Control	HDR10 Off	HDF		
Direct Control	HDR10 On	HDO		
Direct Control	Picture Reset	PIR		
Direct Control	Sound DP1	AI0		
Direct Control	Sound DP2	AI1		
Direct Control	Sound HDMI1	AI2		
Direct Control	Sound HDMI2	AI3		
Direct Control	Sound HDMI3	AI4		
Direct Control	Sound HDMI4	AI5		
Direct Control	Sound OPS/HDMI	AI7		
Direct Control	Sound OPS/DP	AI8		
Direct Control	Volume Up	VLU		
Direct Control	Volume Down	VLD		
Direct Control	Balance 1step Down	BCD		
Direct Control	Balance 1step Up	BCU		
Direct Control	OSD Language German	LGE		
Direct Control	OSD Language English	LES		
Direct Control	OSD Language Spanish	LSP		
Direct Control	OSD Language French	LFR		
Direct Control	OSD Language Italiano	LIT		
Direct Control	OSD Language Korean	LKR		
Direct Control	OSD Language Russian	LRU		
Direct Control	OSD Time Off	OT0		
Direct Control	OSD Time 5Sec	OT1		
Direct Control	OSD Time 10Sec	OT2		
Direct Control	OSD Time 20Sec	OT3		
Direct Control	Power Save Off	PSF		

Main item	Control item	Command	Value	Reply
Direct Control	Power Save On	PSN		
Direct Control	Interface Select Off	UA0		
Direct Control	RS-232	UA1		
Direct Control	OPS/RS-232	UA2		
Direct Control	OPS/HDMI4 EDID - UHD	EDU		
Direct Control	OPS/HDMI4 EDID - FHD	EDF		
Direct Control	Gamma 2.2	GST		
Direct Control	Gamma DICOM	GDC		
Direct Control	Auto Souce Switch Off	AIF		
Direct Control	Auto Souce Switch On	AIO		
Direct Control	Low Latency Mode Off	LLF		
Direct Control	Low Latency Mode On	LLO		
Direct Control	Factory Reset	FTR		
Direct Control	Preset select10	RN0		
Direct Control	Preset select1	RN1		
Direct Control	Preset select2	RN2		
Direct Control	Preset select3	RN3		
Direct Control	Preset select4	RN4		
Direct Control	Preset select5	RN5		
Direct Control	Preset select6	RN6		
Direct Control	Preset select7	RN7		
Direct Control	Preset select8	RN8		
Direct Control	Preset select9	RN9		
Direct Control	Multi-Window Mode Single	WM0		
Direct Control	Multi-Window Mode Dual1	WM1		
Direct Control	Multi-Window Mode Dual2	WM2		
Direct Control	Multi-Window Mode Dual3	WM3		
Direct Control	Multi-Window Mode Dual4	WM4		
Direct Control	Multi-Window Mode Triple1	WM5		
Direct Control	Multi-Window Mode Triple2	WM6		
Direct Control	Multi-Window Mode Triple3	WM7		
Direct Control	Multi-Window Mode Triple4	WM8		
Direct Control	Multi-Window Mode Quad	WM9		
Direct Control	Window1 Input DP1	W10		
Direct Control	Window1 Input DP2	W11		
Direct Control	Window1 Input HDMI1	W12		
Direct Control	Window1 Input HDMI2	W13		
Direct Control	Window1 Input HDMI3	W14		

Main item	Control item	Command	Value	Reply
Direct Control	Window1 Input HDMI4	W15		
Direct Control	Window1 Input OPS/HDMI	W17		
Direct Control	Window1 Input OPS/DP	W18		
Direct Control	Window2 Input DP1	W20		
Direct Control	Window2 Input DP2	W21		
Direct Control	Window2 Input HDMI1	W22		
Direct Control	Window2 Input HDMI2	W23		
Direct Control	Window2 Input HDMI3	W24		
Direct Control	Window2 Input HDMI4	W25		
Direct Control	Window2 Input OPS/HDMI	W27		
Direct Control	Window2 Input OPS/DP	W28		
Direct Control	Window3 Input DP1	W30		
Direct Control	Window3 Input DP2	W31		
Direct Control	Window3 Input HDMI1	W32		
Direct Control	Window3 Input HDMI2	W33		
Direct Control	Window3 Input HDMI3	W34		
Direct Control	Window3 Input HDMI4	W35		
Direct Control	Window3 Input OPS/HDMI	W37		
Direct Control	Window3 Input OPS/DP	W38		
Direct Control	Window4 Input DP1	W40		
Direct Control	Window4 Input DP2	W41		
Direct Control	Window4 Input HDMI1	W42		
Direct Control	Window4 Input HDMI2	W43		
Direct Control	Window4 Input HDMI3	W44		
Direct Control	Window4 Input HDMI4	W45		
Direct Control	Window4 Input OPS/HDMI	W47		
Direct Control	Window4 Input OPS/DP	W48		
Direct Control	Preset Reset	PRT		
Direct Control	Remote control Source key	RSO		
Direct Control	Remote control Up key	RUP		
Direct Control	Remote control Down key	RDN		
Direct Control	Remote control Right key	RRT		
Direct Control	Remote control Left key	RLT		
Direct Control	Remote control Select key	REN		
Direct Control	Remote control Menu key	RMN		
Direct Control	Remote control Info key	RIF		
Direct Control	Mute On	MON		
Direct Control	Mute Off	MOF		

Main item	Control item	Command	Value	Reply
Value Adjust	Brightness setting	BLT	000 to 100	
Value Adjust	Contrast setting	CON	000 to 100	
Value Adjust	Black Level setting	BRT	000 to 100	
Value Adjust	Color setting	SAT	000 to 100	
Value Adjust	Sharpness Value setting	SHA	000 to 100	
Value Adjust	Red Gain Setting	RGN	000 to 100	
Value Adjust	Green Gain Setting	GGN	000 to 100	
Value Adjust	Blue Gain Setting	BGN	000 to 100	
Value Adjust	Volume	VOL	000 to 100	
Value Adjust	Balance	BCT	000 to 100	
Value Adjust	Preset mode	PRS	000 to 020	
Value Adjust	Power off mode standby	PWM	000 to 002	
Value Adjust	Power off mode sleep	PWM	000 to 002	
Value Adjust	Power off mode deep sleep	PWM	000 to 002	
Status check	Power status	PWR		000=on 001=off(power save) 002=off(RS232, remote control)
Status check	Selected Window Status	WIN		001=Window1 002=Window2 003=Window3 004=Window4
Status check	Picture Mode	PMT		000=Standard 001=Dynamic 002=User
Status check	Brightness Setting	BLT		000 to 100
Status check	Contrast Value Setting	CON		000 to 100
Status check	Black Level Value Setting	BRT		000 to 100
Status check	Color Setting	SAT		000 to 100
Status check	Sharpness Value Setting	SHA		000 to 100
Status check	Color temperature	CTT		000 = Studio1 001 = Studio2 002 = Warm 003 = Normal 004 = Cool 005 = User
Status check	Red Gain Setting	RGN		000 to 100
Status check	Green Gain Setting	GGN		000 to 100
Status check	Blue Gain Setting	BGN		000 to 100
Status check	HDR10	HDS		000=Off, 001=On
Status check	Audio Input Status	AUT		000 = DP1 001 = DP2

Main item	Control item	Command	Value	Reply
				002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007OPS-HDMI 008OPS-DP
Status check	Volume	VOL		000 to 100
Status check	Balance	BCT		000 to 100
Status check	OSD Language	LAT		000 = English 001 = German 002 = Spanish 003 = French 004 = Italian 005 = Russian 006 = Korean
Status check	OSD Turn Off	OTT		000 = Off 001 = 5 seconds 002 = 10 seconds 003 = 20 seconds
Status check	Power Save	PST		000=Off, 001=On
Status check	Power Off Mode	PWM		000 = Standby 001 = Sleep 002 = Deep Sleep
Status check	Movie Mode Status	MMT		000 = Off 001 = Low 002 = Middle 003 = High
Status check	UART Status	UAT		000 = Off 001 = RS232 002 = OPS RS232
Status check	OPS/HDMI4 EDID Status	EDI		000 = UHD 001 = FHD
Status check	Gamma Status	GMT		000 = Off 001 = On
Status check	Auto Source Switch Status	AIS		000 = Off 001 = On
Status check	Low Latency Mode	LLS		000 = Off 001 = On
Status check	Preset Mode status	PRS		000 = Multi mode off 001 = Preset1 002 = Preset2 003 = Preset3 004 = Preset4 005 = Preset5 006 = Preset6

Main item	Control item	Command	Value	Reply
				007 = Preset7 008 = Preset8 009 = Preset9 010 = Preset10 011 = Preset11 012 = Preset12 013 = Preset13 014 = Preset14 015 = Preset15 016 = Preset16 017 = Preset17 018 = Preset18 019 = Preset19 020 = Preset20
Status check	Multi-Window Mode Status	WMT		000 = Single 001 = Dual1 002 = Dual2 003 = Dual3 004 = Dual4 005 = Triple1 006 = Triple2 007 = Triple3 008 = Triple4 009 = Quad
Status check	Window1 Source Status	W1S		000 = DP1 001 = DP2 002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007 = OPS-HDMI 008 = OPS-DP
Status check	Window2 Source Status	W2S		000 = DP1 001 = DP2 002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007 = OPS-HDMI 008 = OPS-DP
Status check	Window3 Source Status	W3S		000 = DP1 001 = DP2 002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007 = OPS-HDMI 008 = OPS-DP

Main item	Control item	Command	Value	Reply
Status check	Window4 Source Status	W4S		000 = DP1 001 = DP2 002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007 = OPS-HDMI 008 = OPS-DP
Status check	Current source	SRC		000 = DP1 001 = DP2 002 = HDMI1 003 = HDMI2 004 = HDMI3 005 = HDMI4 007 = OPS-HDMI 008 = OPS-DP
Status check	Mute Status	MUT		000 = Off 001 = On

Direct command control

The following commands provide direct command control.

Set Power Control

Sets the power control.

Commands

Command (ASCII)	Description	Values
K:ALLPOF.	Turns off the power.	—
K:ALLPON.	Turns on the power.	—

Examples

```
Set the power control to off:
K:ALLPOF.
Result:
ALL:POF=A
```

Source Change

Changes the source.

Commands

Command (ASCII)	Description	Values
K:ALLSH0.	Sets the source to DP1.	—
K:ALLSH1.	Sets the source to DP2.	
K:ALLSH2.	Sets the source to HDMI1.	
K:ALLSH3.	Sets the source to HDMI2.	
K:ALLSH4.	Sets the source to HDMI3.	
K:ALLSH5.	Sets the source to HDMI4.	
K:ALLSH7.	Sets the source to OPS HDMI.	
K:ALLSH8.	Sets the source to OPS DP.	

Examples

```
Set the source to DP1:
K:ALLSH1.
Result:
ALL:SH1=A
```

Set Picture Mode

Sets the picture mode.

Commands

Command (ASCII)	Description	Values
K: ALLPM0.	Sets the picture mode to standard.	—
K: ALLPM1.	Sets the picture mode to dynamic.	
K: ALLPM2.	Sets the picture mode to user.	

Examples

<p>Set the picture mode to standard: <i>K: ALLPM0.</i> Result: <i>ALL: PM0=A</i></p>

Set Backlight On/Off

Enables or disables the backlight.

Commands

Command (ASCII)	Description	Values
K: ALLBLN.	Turns on the backlight.	—
K: ALLBLF.	Turns off the backlight.	

Examples

<p>Enable the backlight: <i>K: ALLBLN.</i> Result: <i>ALL: BLN=A</i></p>

Increase/Decrease Brightness

Increase or decrease the backlight by one step. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K: ALLBLU.	Increases the brightness by one step.	—
K: ALLBLD.	Decreases the brightness by one step.	

Examples

Increase the brightness by one step:
K: ALLBLU.
 Result:
ALL: BLU=A

Increase/Decrease Contrast

Increases or decreases the contrast by one step. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
<i>K: ALLCON.</i>	Increases the contrast by one step.	—
<i>K: ALLCON.</i>	Decreases the contrast by one step.	

Examples

Increase the contrast one step:
K: ALLCON.
 Result:
ALL: CON=A

Increase/Decrease Black level

Increases or decreases the black level by one step. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
<i>K: ALLBLU.</i>	Increases the black level by one step.	—
<i>K: ALLBLD.</i>	Decreases the black level by one step.	

Examples

Increase the black level by one step:
K: ALLBRU.
 Result:
ALL: BRU=A

Increase/Decrease Saturation

Increases or decreases the saturation by one step. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K: ALLSTU.	Increases the saturation by one step.	—
K: ALLSTD.	Decreases the saturation by one step.	

Examples

Increase the saturation by one step:
 K: ALLSTU.
 Result:
 ALL: STU=A

Increase/Decrease Sharpness

Increases or decreases the sharpness by 10 steps. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K: ALLSPU.	Increases the sharpness by ten steps.	—
K: ALLSPD.	Decreases the sharpness by ten steps.	

Examples

Increase by sharpness by ten steps:
 K: ALLSPU.
 Result:
 ALL: SPU=A

Set Color temperature

Set the color temperature.

Commands

Command (ASCII)	Description	Values
K: ALLCT0.	Sets the color temperature to studio1.	—
K: ALLCT1.	Sets the color temperature to studio2.	
K: ALLCT2.	Sets the color temperature to warm.	
K: ALLCT3.	Sets the color temperature to normal .	
K: ALLCT4.	Sets the color temperature to cool.	
K: ALLCT5.	Sets the color temperature to user.	

Examples

Set the picture mode to standard:

K: ALLCTO .
 Result:
ALL: CTO=A

Increase/Decrease Red gain

Increases or decreases the red gain by one step. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K: ALLRGU.	Increases the red gain by one step.	—
K: ALLRGD.	Decreases the red gain by one step.	

Examples

Increase the red gain one step:
K: ALLRGU .
 Result:
ALL: RGU=A

Increase/Decrease green gain

Increases or decreases the green gain by one step. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K: ALLGGU.	Increases the green gain by one step.	—
K: ALLGGD.	Decreases the green gain by one step.	

Examples

Increase by green gain by one step:
K: ALLGGU .
 Result:
ALL: GGU=A

Increase/Decrease blue gain

Increases or decreases the blue gain by one step. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K: ALLBGU.	Increases the blue gain by one step.	—
K: ALLBGD.	Decreases the blue gain one by one step.	

Examples

Increase blue gain one step:
K: ALLBGU.
 Result:
ALL: BGU=A

Set HDR10 on/off

Sets the HDR10 on or off.

Commands

Command (ASCII)	Description	Values
K: ALLHDO.	Sets the HDR10 to on.	—
K: ALLHDF.	Sets the HDR10 to off.	

Examples

Set the HDR10 to on:
K: ALLHDO.
 Result:
ALLHDO: =A

Run Picture reset

Runs the picture reset.

Commands

Command (ASCII)	Description	Values
K: ALLPIR.	Runs the picture reset.	—

Examples

Run the picture reset:
K: ALLPIR.
 Result:
ALL: PIR=A

Set sound input

Sets the sound input.

Commands

Command (ASCII)	Description	Values
K:ALLAI0.	Sets the sound input to DP1.	—
K:ALLAI1.	Sets the sound input to DP2.	
K:ALLAI2.	Sets the sound input to HDMI1.	
K:ALLAI3.	Sets the sound input to HDMI2.	
K:ALLAI4.	Sets the sound input to HDMI3.	
K:ALLAI5.	Sets the sound input to HDMI4.	
K:ALLAI7.	Sets the sound input to OPS HDMI.	
K:ALLAI8.	Sets the sound input to OPS DP.	

Examples

Set the sound input to DP1:
K:ALLAI0.
 Result:
ALL:AI0=A

Increase/Decrease Volume

Increases or decreases the volume by one step.

Commands

Command (ASCII)	Description	Values
K:ALLVLU.	Increases the volume by one step.	—
K:ALLVLD.	Decreases the volume by one step.	

Examples

Increase the volume one step:
K:ALLVLU.
 Result:
ALL:VLU=A

Increase/Decrease Balance

Increases or decreases the balance by one step.

Commands

Command (ASCII)	Description	Values
K:ALLBCU.	Increases the balance by one step.	—
K:ALLBCD.	Decreases the balance by one step.	

Examples

Increase the balance by one step:
K: ALLBCU.
 Result:
ALL: BCU=A

Set Language

Sets the language.

Commands

Command (ASCII)	Description	Values
K: ALLES.	Sets the language to English.	—
K: ALLLGE.	Sets the language to German.	
K: ALLLSP.	Sets the language to Spanish.	
K: ALLLFR.	Sets the language to French.	
K: ALLLIT.	Sets the language to Italiano.	
K: ALLLKR.	Sets the language to Korean.	
K: ALLLRU.	Sets the language to Russian.	

Examples

Set the language to English:
K: ALLES.
 Result:
ALL: LES=A

Set OSD Time

Sets the on-screen display (OSD) turn off time.

Commands

Command (ASCII)	Description	Values
K: ALLOT0.	Sets the on-screen display turn off to off.	—
K: ALLOT1.	Sets the on-screen display turn off time to 5 seconds.	
K: ALLOT2.	Sets the on-screen display turn off time to 10 seconds.	
K: ALLOT3.	Sets the on-screen display turn off time to 20 seconds.	

Examples

```
Set the on-screen display turn off to off:
K:ALLOT0.
Result:
ALL:OT0=A
```

Set Power Save

Enables or disables the power save.

Commands

Command (ASCII)	Description	Values
K:ALLPSF.	Sets the power save to off.	—
K:ALLPSO.	Sets the power save to on.	

Examples

```
Set the power save to off:
K:ALLPSF.
Result:
ALL:PSF=A
```

Set Interface Select

Sets the interface select.

Commands

Command (ASCII)	Description	Values
K:ALLUA0.	Sets the interface select to off.	—
K:ALLUA1.	Sets the interface select to RS232.	
K:ALLUA2.	Set the interface select to OPS RS232.	

Examples

```
Set the interface select to off:
K:ALLUA0.
Result:
ALL:UA0=A
```

Set OPS/HDMI4 EDID

Sets the OPS/HDMI4 EDID.

Commands

Command (ASCII)	Description	Values
K: ALLEDU.	Sets the OPS/HDMI4 EDID to UHD.	—
K: ALLEDF.	Sets the OPS/HDMI4 EDID to FHD.	

Examples

Set the interface select to off:
K: ALLEDU.
 Result:
ALL: EDU=A

Set Gamma

Sets the gamma.

Commands

Command (ASCII)	Description	Values
K: ALLGST.	Sets the gamma to 2.2.	—
K: ALLGDC.	Sets the gamma to DICOM.	

Examples

Set the gamma to 2.2:
K: ALLGST.
 Result:
ALLGST:=A

Set Auto Source Switch

Enables or disables the auto source switch.

Commands

Command (ASCII)	Description	Values
K: ALLAIF.	Sets the auto source switch to off.	—
K: ALLAIO.	Sets the auto source switch to on.	

Examples

Set the auto source switch to off:
K: ALLAIF.
 Result:
ALLAIF:=A

Set Low Latency Mode

Enables or disables the Low Latency mode.

Commands

Command (ASCII)	Description	Values
K: ALLLFF.	Sets the Low Latency mode to off.	—
K: ALLLLO.	Set the Low Latency mode to on.	

Examples

Set the Low Latency mode to off:
K: ALLLFF.
 Result:
ALLLFF: =A

Run Factory Reset

Runs the factory reset.

Commands

Command (ASCII)	Description	Values
K: ALLFTR.	Run the factory reset.	—

Examples

Run the factory reset:
K: ALLFTR.
 Result:
ALL: FTR=A

Set Preset Mode

Sets the preset mode.

Commands

Command (ASCII)	Description	Values
K: ALLRN0.	Sets the preset mode to 10.	—
K: ALLRN1.	Sets the preset mode to 1.	
K: ALLRN2.	Sets the preset mode to 2.	
K: ALLRN3.	Sets the preset mode to 3.	
K: ALLRN4.	Sets the preset mode to 4.	
K: ALLRN5.	Sets the preset mode to 5.	

K: ALLRN6.	Sets the preset mode to 6.	
K: ALLRN7.	Sets the preset mode to 7.	
K: ALLRN8.	Sets the preset mode to 8.	
K: ALLRN9.	Sets the preset mode to 9.	

Examples

Set the preset mode to 1:
K: ALLRN1.
 Result:
ALL: RN1=A

Set Multi-window Mode

Sets the Multi-window mode. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Values
K: ALLWM0.	Sets the Multi-window mode to single.	—
K: ALLWM1.	Sets the Multi-window mode to dual1.	
K: ALLWM2.	Sets the Multi-window mode to dual2.	
K: ALLWM3.	Sets the Multi-window mode to dual3.	
K: ALLWM4.	Sets the Multi-window mode to dual4.	
K: ALLWM5.	Sets the Multi-window mode to triple1.	
K: ALLWM6.	Sets the Multi-window mode to triple2.	
K: ALLWM7.	Sets the Multi-window mode to triple3.	
K: ALLWM8.	Sets the Multi-window mode to triple4.	
K: ALLWM9.	Sets the Multi-window mode to quad.	

Examples

Set the multi-window mode to single:
K: ALLWM0.
 Result:
ALL: WM0=A

Set Input of window1

Sets the input of window1. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Values
K: ALLW10.	Sets the window1 input to DP1.	—

K: ALLW11.	Sets the window1 input to DP2.	
K: ALLW12.	Sets the window1 input to HDMI1.	
K: ALLW13.	Sets the window1 input to HDMI2.	
K: ALLW14.	Sets the window1 input to HDMI3.	
K: ALLW15.	Sets the window1 input to HDMI4.	
K: ALLW17.	Sets the window1 input to OPS HDMI.	
K: ALLW18.	Sets the window1 input to OPS DP.	

Examples

```
Set the window1 input to DP1:
K: ALLW10.
Result:
ALL:W10=A
```

Set Input of window2

Sets the input of window2. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Values
K: ALLW20.	Sets the window2 input to DP1.	—
K: ALLW21.	Sets the window2 input to DP2.	
K: ALLW22.	Sets the window2 input to HDMI1.	
K: ALLW23.	Sets the window2 input to HDMI2.	
K: ALLW24.	Sets the window2 input to HDMI3.	
K: ALLW25.	Sets the window2 input to HDMI4.	
K: ALLW27.	Sets the window2 input to OPS HDMI.	
K: ALLW28.	Sets the window2 input to OPS DP.	

Examples

```
Set the window2 input to DP1:
K: ALLW20.
Result:
ALL:W20=A
```

Set Input of window3

Sets the input of window3. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Values
K:ALLW30.	Sets the window3 input to DP1.	—
K:ALLW31.	Sets the window3 input to DP2.	
K:ALLW32.	Sets the window3 input to HDMI1.	
K:ALLW33.	Sets the window3 input to HDMI2.	
K:ALLW34.	Sets the window3 input to HDMI3.	
K:ALLW35.	Sets the window3 input to HDMI4.	
K:ALLW37.	Sets the window3 input to OPS HDMI.	
K:ALLW38.	Sets the window3 input to OPS DP.	

Examples

Set the window3 input to DP1:
K:ALLW30.
 Result:
ALL:W30=A

Set Input of window4

Sets the input of window4. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Values
K:ALLW40.	Sets the window4 input to DP1.	—
K:ALLW41.	Sets the window4 input to DP2.	
K:ALLW42.	Sets the window4 input to HDMI1.	
K:ALLW43.	Sets the window4 input to HDMI2.	
K:ALLW44.	Sets the window4 input to HDMI3.	
K:ALLW45.	Sets the window4 input to HDMI4.	
K:ALLW47.	Sets the window4 input to OPS HDMI.	
K:ALLW48.	Sets the window4 input to OPS DP.	

Examples

Set the window4 input to DP1:
K:ALLW40.
 Result:
ALL:W40=A

Run Preset Reset

Runs the preset recall.

Commands

Command (ASCII)	Description	Values
K: ALLPRT.	Runs the preset reset.	—

Examples

Run the preset recall:

K: ALLPRT.

Result:

ALL: PRT=A

Remote Control Key

Sets the remote control key action.

Commands

Command (ASCII)	Description	Values
K: ALLRSO.	Sets the remote key action to the Source key.	—
K: ALLRUP.	Sets the remote key action to the Up key.	
K: ALLRDN.	Sets the remote key action to the Down key.	
K: ALLRRT.	Sets the remote key action to the Right key.	
K: ALLRLT.	Sets the remote key action to the Left key.	
K: ALLREN.	Sets the remote key action to the Select key.	
K: ALLRMN.	Sets the remote key action to the Menu key.	
K: ALLRIF.	Sets the remote key action to the Info key.	

Examples

Set the remote key to the Source key:

K: ALLRSO.

Result:

ALL: RSO=A

Set Sound Mute

Enables or disables the mute functionality (for sound).

Commands

Command (ASCII)	Description	Values
K: ALLMON.	Enables the mute functionality.	—
K: ALLMOF.	Disables the mute functionality.	

Examples

Enable mute:

K : ALLMON .

Result:

ALL : MON=A

Value adjust control

The following commands adjust values.

Set Brightness

Sets the brightness. Set the Picture mode to user.

Commands

Command (ASCII)	Description	Values
K:ALLBLT<value>.	Sets the brightness to the specified value.	value = 0 to 100

Examples

```
Set brightness to 80:
K:ALLBLT080.
Result:
ALL:BLT=A
```

Set Contrast

Sets the contrast. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K:ALLCON<value>.	Sets the contrast to the specified value.	value = 0 to 100

Examples

```
Set contrast to 80:
K:ALLCON080.
Result:
ALL:CON=A
```

Set Black Level

Sets the black level. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K:ALLBRT<value>.	Sets the black level to the specified value.	value = 0 to 100

Examples

Set black level to 80:
K: ALLBRT080.
 Result:
ALL: BRT=A

Set Saturation

Sets the saturation. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K:ALLSAT<value>.	Sets the saturation to the specified value.	value = 0 to 100

Examples

Set saturation to 80:
K: ALLSAT080.
 Result:
ALL: SAT=A

Set Sharpness

Sets the sharpness. Set Picture mode to user.

Commands

Command (ASCII)	Description	Values
K:ALLSHA<value>.	Sets the sharpness to the specified value.	value = 0 to 100

Examples

Set sharpness to 80:
K: ALLSHA080.
 Result:
ALL: SHA=A

Set Red Gain

Sets red gain. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K:ALLRGN<value>.	Sets the red gain.	value = 0 to 100

Examples

```
Set red gain to 80:
K: ALLRGN080.
Result:
ALL: RGN=A
```

Set Green Gain

Sets green gain. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K: ALLGGN<value>.	Sets the green gain to the specified value.	value = 0 to 100

Examples

```
Set green gain to 80:
K: ALLGGN080.
Result:
ALL: GGN=A
```

Set Blue Gain

Sets the blue gain. Set Color temperature to user.

Commands

Command (ASCII)	Description	Values
K: ALLBGN<value>.	Sets the blue gain to the specified value.	value = 0 to 100

Examples

```
Set blue gain to 80:
K: ALLBGN080.
Result:
ALL: BGN=A
```

Set Volume

Sets the volume.

Commands

Command (ASCII)	Description	Values
K: ALLVOL<value>.	Sets the volume to the specified value.	value = 0 to 100

Examples

Set volume to 80:
K: ALLVOL080.
 Result:
ALL: VOL=A

Set Balance

Set balance to specific value.

Commands

Command (ASCII)	Description	Values
K: ALLBCT<value>.	Sets the balance to the specified value.	value = 0 to 100

Examples

Set balance to 80:
K: ALLBCT080.
 Result:
ALL: BCT=A

Set Power Off Mode

Sets Power Off mode.

Commands

Command (ASCII)	Description	Values
K: ALLPWM<value>.	Sets the Power Off mode.	0 = Standby 1 = Sleep 2 = Deep sleep

Examples

Set Power Off mode to Standby:
K: ALLPWM000.
 Result:
ALL: PWM=A

Set Preset Mode

Select the Preset mode.

Commands

Command (ASCII)	Description	Values
K: ALLPRS<value>.	Select the Preset mode.	0 = Off

		1 = Preset 1 2 = Preset 2 ... 20 = Preset 20
--	--	---

Examples

Set Preset mode to 1:

K:ALLPRS001.

Result:

ALL: PRS=A

Status check control

The following commands provide status.

Get Power Status

Returns the power status.

Commands

Command (ASCII)	Description	Values
K:ALLPWR?	Returns the value of the power status.	0 = On 1 = Off (power save off) 2 = Off (RS232, remote control off)

Examples

```
Get power status value:  
K:ALLPWR?  
Result:  
ALL: PWR=000
```

Get Input Source

Returns the value of the input source.

Commands

Command (ASCII)	Description	Values
K:ALLSRC?	Returns value of the input source.	0 = DP1 1 = DP2 2 = HDMI 1 3 = HDMI 2 4 = HDMI 3 5 = HDMI 4 7 = OPS HDMI 8 = OPS DP

Examples

```
Get the input source value:  
K:ALLSRC?  
Result:  
ALL: SRC=000
```

Get Picture Mode

Returns the value of the Picture mode.

Commands

Command (ASCII)	Description	Returned values
K:ALLPMT?	Returns value of the Picture mode.	0 = Standard 1 = Dynamic 2 = User

Examples

```
Get the Picture mode value:
K:ALLPMT?
Result:
ALL: PMT=000
```

Get Brightness

Returns the brightness value.

Commands

Command (ASCII)	Description	Returned values
K:ALLBLT?	Returns the brightness value.	0 to 100

Examples

```
Get the brightness value:
K:ALLBLT?
Result:
ALL: BLT=080
```

Get Contrast

Returns the contrast value.

Commands

Command (ASCII)	Description	Returned values
K:ALLCON?	Returns the contrast value.	0 to 100

Examples

```
Get the contrast value:
K:ALLCON?
Result:
```

ALL: CON=080

Get Saturation

Returns the saturation value.

Commands

Command (ASCII)	Description	Returned values
K:ALLSAT?	Returns the saturation value.	0 to 100

Examples

Get the saturation value:
K:ALLSAT?
 Result:
ALL: SAT=080

Get Sharpness

Returns the sharpness value.

Commands

Command (ASCII)	Description	Returned values
K:ALLSHA?	Returns the sharpness value.	0 to 100

Examples

Get the sharpness value:
K:ALLSHA?
 Result:
ALL: SHA=080

Get Color Temperature

Returns the color temperature value.

Commands

Command (ASCII)	Description	Returned values
K:ALLCTT?	Returns the color temperature value.	0 = studio1 1 = studio2 2 = warm 3 = normal 4 = cool 5 = user

Examples

```
Get the color temperature value:
K: ALLCTT?
Result:
ALL: CTT=001
```

Get Red Gain

Returns the red gain value.

Commands

Command (ASCII)	Description	Returned values
K: ALLRGN?	Returns the red gain value.	0 to 100

Examples

```
Get the red gain value:
K: ALLRGN?
Result:
ALL: RGN=080
```

Get Green Gain

Returns the green gain value.

Commands

Command (ASCII)	Description	Returned values
K: ALLGGN?	Returns the green gain value.	0 to 100

Examples

```
Get the green gain value:
K: ALLGGN?
Result:
ALL: GGN=080
```

Get Blue Gain

Returns the blue gain value.

Commands

Command (ASCII)	Description	Returned values
K: ALLBGN?	Returns the blue gain value.	0 to 100

Examples

```
Get the blue gain value:
K: ALLBGN?
Result:
ALL: BGN=080
```

Get HDR10

Returns the HDR10 value.

Commands

Command (ASCII)	Description	Returned values
K: ALLHDS?	Returns the HDR10 value.	0 or 1

Examples

```
Get the HDR10 value:
K: ALLHDS?
Result:
ALLHDS: =000
```

Get Audio Input

Returns audio input value.

Commands

Command (ASCII)	Description	Values
K: ALLAUT?	Returns the audio input value.	0 = DP1 1 = DP2 2 = HDMI 1 3 = HDMI 2 4 = HDMI 3 5 = HDMI 4 7 = OPS HDMI 8 = OPS DP

Examples

```
Get the audio input value:
K: ALLAUT?
Result:
ALL: AUT=001
```

Get Volume

Returns the volume value.

Commands

Command (ASCII)	Description	Returned values
K: ALLVOL?	Returns the volume value.	0 to 100

Examples

Get the volume value:
K: ALLVOL?
 Result:
ALL: VOL=080

Get Balance

Returns the balance value.

Commands

Command (ASCII)	Description	Returned values
K: ALLBCT?	Returns the balance value.	0 to 100

Examples

Get the balance value:
K: ALLBCT?
 Result:
ALL: BCT=080

Get Language

Returns the on-screen display (OSD) language value.

Commands

Command (ASCII)	Description	Returned values
K: ALLLAT?	Returns the on-screen display (OSD) language value.	0 = English 1 = German 2 = Spanish 3 = French 4 = Italizn 5 = Russian 6 = Korean

Examples

Get the on-screen display language value:
K: ALLLAT?
 Result:
ALL: LAT=001

Get OSD Turn Off

Returns the on-screen display (OSD) turn-off time value.

Commands

Command (ASCII)	Description	Returned values
K:ALLOTT?	Returns the on-screen display (OSD) turn-off time value.	0 = Off 1 = 5 seconds 2 = 10 seconds 3 = 20 seconds

Examples

```
Get the on-screen display turn-off time value:
K:ALLOTT?
Result:
ALL: OTT=001
```

Get Power Save

Returns the Power Save value.

Commands

Command (ASCII)	Description	Returned values
K:ALLOTT?	Returns the Power Save value.	0 = Off 1 = On

Examples

```
Get the Power Save value:
K:ALLPST?
Result:
ALL: PST=001
```

Get OPS/HDMI4 EDID

Return the OPS/HDMI4 EDID value.

Commands

Command (ASCII)	Description	Returned values
K:ALLEDI?	Return the OPS/HDMI4 EDID value.	0 = UHD 1 = FHD

Examples

```
Get the Power Save value:
K: ALLEDI?
Result:
ALL: EDI=001
```

Get Preset Mode

Returns the Rreset mode value.

Commands

Command (ASCII)	Description	Returns values
K: ALLPRS?	Returns the Preset mode value.	0 = Off 1 = Preset1 2 = Preset2 3 = Preset3 4 = Preset4 5 = Preset5 6 = Preset6 7 = Preset7 8 = Preset8 9 = Preset9 10 = Preset10 11 = Preset11 12 = Preset12 13 = Preset13 14 = Preset14 15 = Preset15 16 = Preset16 17 = Preset17 18 = Preset18 19 = Preset19 20 = Preset20

Examples

```
Get the Preset mode value:
K: ALLPRS?
Result:
ALL: PRS=001
```

Get Power Off Mode

Returns the Power Off mode value.

Commands

Command (ASCII)	Description	Returned values
K:ALLPWM?	Returns the Power Off mode value.	0 = Standby 1 = Sleep 2 = Deep Sleep

Examples

```
Get the Power Off mode value:
K:ALLPWM?
Result:
ALL: PWM=001
```

Get Interface Select

Returns the interface (uart) status.

Commands

Command (ASCII)	Description	Returned values
K:ALLUAT?	Returns the interface (uart) status.	0 = Off 1 = RS232 2 = OPS RS232

Examples

```
Get the interface (uart) status value:
K:ALLUAT?
Result:
ALL: UAT=001
```

Get Gamma

Returns the gamma value.

Commands

Command (ASCII)	Description	Returned values
K:ALLGMT?	Returns the gamma status.	0 = Off 1 = On

Examples

```
Get gamma status value:
K:ALLGMT?
Result:
ALLGMT: =001
```

Get Auto Source Switch

Returns the Auto Source Switch value.

Commands

Command (ASCII)	Description	Returned values
K:ALLAIS?	Returns the Auto Source Switch value.	0 = Off 1 = On

Examples

```
Get the Auto source Switch value:
K:ALLAIS?
Result:
ALLAIS: =001
```

Get Low Latency Mode

Returns the Low Latency mode value.

Commands

Command (ASCII)	Description	Returned values
K:ALLLS?	Returns the Low Latency mode value.	0 = Off 1 = On

Examples

```
Get the Low Latency mode value:
K:ALLLS?
Result:
ALLLS: =001
```

Get Multi-window Mode

Returns the current Multi-window mode status. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Returned values
K:ALLWMT?	Returns the current Multi window mode status.	0 = single 1 = dual1 2 = dual2 3 = dual3 4 = dual4 5 = triple1 6 = triple2

		7 = triple3 8 = triple4 9 = quad
--	--	--

Examples

```
Get current Multi Window mode status:
K:ALLWMT?
Result:
ALL: WMT=001
```

Get window1 Input

Returns the window1 input value. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Returned values
K:ALLW1S?	Returns the window1 input value.	0 = DP1 1 = DP2 2 = HDMI1 3 = HDMI2 4 = HDMI3 5 = HDMI4 7 = OPS HDMI 8 = OPS DP

Examples

```
Get the window1 input value:
K:ALLW1S?
Result:
ALL: W1S=001
```

Get window2 Input

Returns the window2 input value. Select Preset mode before sending this command.

Commands

Command (ASCII)	Description	Returned values
K:ALLW2S?	Returns the window2 input value.	0 = DP1 1 = DP2 2 = HDMI1 3 = HDMI2 4 = HDMI3 5 = HDMI4

		7 = OPS HDMI 8 = OPS DP
--	--	----------------------------

Examples

```
Get the window2 input value:
K: ALLW2S?
Result:
ALL: W2S=001
```

Get window3 Input

Returns the window3 input value. Select Preset mode before sending command.

Commands

Command (ASCII)	Description	Returned values
K: ALLW3S?	Returns the window3 input value.	0 = DP1 1 = DP2 2 = HDMI 1 3 = HDMI 2 4 = HDMI 3 5 = HDMI 4 7 = OPS HDMI 8 = OPS DP

Examples

```
Get the window3 input value:
K: ALLW3S?
Result:
ALL: W3S=001
```

Get window4 Input

Returns the window4 input value. Preset mode should be selected before send command.

Commands

Command (ASCII)	Description	Returned values
K: ALLW4S?	Returns the window4 input value.	0 = DP1 1 = DP2 2 = HDMI 1 3 = HDMI 2 4 = HDMI 3 5 = HDMI 4 7 = OPS HDMI 8 = OPS DP

Examples

Get the window4 input value:

K: ALLW4S?

Result:

ALL: W4S=001

Get Sound Mute

Return the mute status.

Commands

Command (ASCII)	Description	Returned values
K:ALLMUT?	Returns the mute status.	0 = Mute off 1 = Mute on

Examples

Get the mute status:

K: ALLMUT?

Result:

ALL: MUT=001

External control–HEX protocol

In addition to using the display keypad or remote control unit, you can control the display using a serial (RS232) link or Ethernet connection to send commands and receive responses to those commands.

Serial communications

The display uses a simple text-based control protocol to take requests from control devices and to provide responses to such devices. This section describes how to send control messages over a serial link between the display and an automation/control system or a PC running a terminal emulation program.

Configuring the RS232 port

Learn how to configure the RS232 port.

1. Connect the control computer to the RS232 input on the display panel.
2. If using an audio/video control system, complete the following to configure the RS232 port on the system.
 - a. Select **no parity, 8 data bits, 1 stop bit, and no flow control**.
 - b. Set the baud rate to 115200 so it matches the RS232 port on the display panel.

Configuring the Ethernet port

Learn how to configure the Ethernet port.

3. Connect the control computer to the RJ45 connector on the display panel.
4. If you are using TCP/IP, UDP socket program complete the following to configure the ethernet port on the system.
 - a. Set the IP address (check the LAN setting on-screen display).
 - b. Set the port number (TCP/IP: 5000, UDP: 5001)

[STX] [IDT] [TYPE] [CMD] ([VALUE] or [REPLY]) [ETX] [CR]

Where:

- [STX] indicates the start of the data command (always 07).
- [IDT] is the display ID. Use hexadecimal values 01 to 19 inclusive to address a single display panel.
- [TYPE] is the command type:
 - 00 = return to host (response from the LCD panel)
 - 01 = read/action
 - 02 = write
- [VALUE] is the parameter setting for the command.
- [REPLY] is the parameter setting for the command, acknowledged by the display panel in its response to a command.

- [ETX] indicates the end of the command data (always 08).
- [CR] is the ASCII carriage return key (0x0D).

Examples: Serial commands and responses

The following are some examples of serial commands and their responses.

Description	Command sent to display panel	Response received from display panel
Turn off the display panel	07 01 02 50 4F 57 00 08	07 01 00 50 4F 57 00 08
Turn on the display panel	07 01 02 50 4F 57 01 08	07 01 00 50 4F 57 01 08
Request the display panel status	07 01 01 50 4F 57 08	07 01 00 50 4F 57 XX 08 (XX = 0 when off, 1 when on)
Set the display panel contrast to 30 (IE hex)	07 01 02 43 4F 4E 1E 08	07 01 00 43 4F 4E 1E 08
Request the display panel use large PIP	07 01 02 50 53 43 03 08	07 01 00 50 53 43 03 08
Reset the display settings on the display panel	07 01 02 41 4C 4C 00 08	07 01 00 41 4C 4C 00 08
Request the serial number of the display panel	07 01 01 53 45 52 08	07 01 00 53 45 52 S(0)...S(12)08
Request the firmware version of the display panel	07 01 01 47 56 45 08	07 01 00 47 56 45 S(0)...S(5)08 (S(0)...S(5) = firmware version in ASCII)

Serial command list

Learn the serial commands that work with a display panel.

Control item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)
Power control	POW	R/W	0	0	Off	50 4F 57
			1	1	On	
Input source	MIN	R/W	9	9	HDMI1	4D 49 4E
			10	10	HDMI2	
			11	11	HDMI3	
			12	12	HDMI4	
			13	13	DP1	
			14	14	DP2	
			15	15	OPS HDMI	
			16	16	OPS DP	
Display adjustment	BRI	R/W	0 to 100	0 to 100	Backlight	42 52 49
	CON	R/W	0 to 100	0 to 100	Contrast	43 4F 4E
	BRL	R/W	0 to 100	0 to 100	Brightness	42 52 4C
	SAT	R/W	0 to 100	0 to 100	Saturation	53 41 54

	SHA	R/W	R/W	0 to 100	Sharpness	53 48 41
	BLC	R/W	0	0	Backlight Off	42 4C 43
			1	1	Backlight On	
	CCT	R/W	0 to 12	0	Studio1	43 43 54
			13 to 31	24	Studio2	
			32 to 53	29	Warm	
			54 to 75	68	Normal	
			76 to 90	83	Cool	
			91 to 100	100	User	
USR	R/W	0 to 100	0 to 100	Red Gain	55 53 52	
USG	R/W	0 to 100	0 to 100	Green Gain	55 53 47	
USB	R/W	0 to 100	0 to 100	Blue Gain	55 53 42	
Baud rate adjustment	BRA	R/W	0	0	115200	42 52 41
			1	1	38400	
			2	2	19200	
			3	3	9600	
Other control	RCU	W	0	0	MENU key	52 43 55
		W	1	1	INFO key	
		W	2	2	UP key	
		W	3	3	DOWN key	
		W	4	4	LEFT key	
		W	5	5	RIGHT key	
		W	6	6	ENTER key	
	ALL	W	0	0	Reset all	41 4C 4C
	SER	R		13 Bytes	Read serial number	53 45 52
	MNA	R		13 Bytes	Read model name	4D 4E 41
GVE	R		6 Bytes	Read firmware version	47 56 45	
Scheme selection	SCM	R/W	0	0	User	53 43 4D
		R/W	1	1	Standard	
		R/W	4	4	Dynamic	

Power control

Sets or gets the power control.

Commands

Command (hex)	Description	Values
07 01 02 50 4F 57 00 08	Set power off.	0 = Off
07 01 02 50 4F 57 01 08	Set power on.	1 = On
07 01 01 50 4F 57 08	Get power status.	

Examples

Turn the power off: 07 01 02 50 4F 57 00 08 Result: 07 01 00 50 4F 57 00 08
--

Input Source

Sets or returns the input source.

Commands

Command (hex)	Description	Values
07 01 02 4D 49 4E 09 08	Sets input source to HDMI1.	9 = HDMI1
07 01 02 4D 49 4E 0A 08	Sets input source to HDMI2.	10 = HDMI2
07 01 02 4D 49 4E 0B 08	Sets input source to HDMI3.	11 = HDMI3
07 01 02 4D 49 4E 0C 08	Sets input source to HDMI4.	12 = HDMI4
07 01 02 4D 49 4E 0D 08	Sets input source to DP1.	13 = DP1
07 01 02 4D 49 4E 0E 08	Sets input source to DP2.	14 = DP2
07 01 02 4D 49 4E 0F 08	Sets input source to OPS HDMI.	15 = OPS HDMI
07 01 02 4D 49 4E 10 08	Sets input source to OPS DP.	16 = OPS DP
07 01 01 4D 49 4E 08	Returns the input source value.	—

Examples

Set the input source to HDMI1: 07 01 02 4D 49 4E 09 08 Result: 07 01 00 4D 49 4E 09 08

Backlight

Sets or returns the value of the backlight (on-screen display—brightness)

Commands

Command (hex)	Description	Values
07 01 02 42 52 49 50 08	Sets the backlight to the specified value.	0 to 100 (0 to 0x64)

07 01 01 42 52 49 08	Returns the backlight value.	—
----------------------	------------------------------	---

Examples

```
Set backlight to 80 (0x50):
07 01 02 42 52 49 50 08
Result:
07 01 00 42 52 49 50 08
```

Contrast

Sets or returns the contrast.

Commands

Command (hex)	Description	Values
07 01 02 43 4F 42 50 08	Sets the contrast to the specified value.	0 to 100 (0 to 0x64)
07 01 01 43 4F 42 08	Returns the contrast.	—

Examples

```
Set the brightness to 80 (0x50):
07 01 02 43 4F 42 50 08
Result:
07 01 00 43 4F 42 50 08
```

Brightness

Sets or returns the brightness (on-screen display—black level)

Commands

Command (hex)	Description	Values
07 01 02 42 52 4C 50 08	Sets the brightness to the specified value.	0 to 100 (0 to 0x64)
07 01 01 42 52 4C 08	Returns the brightness.	—

Examples

```
Set the brightness to 80 (0x50):
07 01 02 42 52 4C 50 08
Result:
07 01 00 42 52 4C 50 08
```

Saturation

Sets or returns the saturation.

Commands

Command (hex)	Description	Values
07 01 02 53 41 54 50 08	Sets the saturation to the specified value.	0 to 100 (0 to 0x64)
07 01 01 53 41 54 08	Returns the saturation.	—

Examples

Set the brightness to 80 (0x50): 07 01 02 53 41 54 50 08 Result: 07 01 00 53 41 54 50 08

Sharpness

Sets or returns the sharpness.

Commands

Command (hex)	Description	Values
07 01 02 53 48 41 50 08	Sets the sharpness to the specified value.	0 to 100 (0 to 0x64)
07 01 01 53 48 41 08	Returns the sharpness.	—

Examples

Set the sharpness to 80 (0x50): 07 01 02 53 48 41 50 08 Result: 07 01 00 53 48 41 50 08
--

Backlight On/Off

Sets or returns the backlight on or off.

Commands

Command (hex)	Description	Values
07 01 02 42 4C 43 00 08	Turns off the backlight.	0 = Off
07 01 02 42 4C 43 01 08	Turns on the backlight.	1 = On
07 01 01 42 4C 43 08	Returns the backlight status	—

Examples

Turn off the backlight: 07 01 02 42 4C 43 00 08 Result: 07 01 00 42 4C 43 00 08
--

Color Temperature

Sets or returns the color temperature.

Commands

Command (hex)	Description	Values
07 01 02 43 43 54 00 08	Sets the color temperature to studio1.	0 to 12 = Studio1
07 01 02 43 43 54 0D 08	Sets the color temperature to studio2.	13 to 31 = Studio2
07 01 02 43 43 54 20 08	Sets the color temperature to warm.	32 to 53 = Warm
07 01 02 43 43 54 36 08	Sets the color temperature to normal.	54 to 75 = Normal
07 01 02 43 43 54 4C 08	Sets the color temperature to cool.	76 to 90 = Cool
07 01 02 43 43 54 5B 08	Sets the color temperature to user.	91 to 100 = User
07 01 01 43 43 54 08	Returns the color temperature.	—

Examples

```

Sets the color temperature to studio1:
07 01 02 43 43 54 00 08
Result:
07 01 00 43 43 54 00 08
    
```

Red Gain

Sets or returns the red gain.

Commands

Command (hex)	Description	Values
07 01 02 55 53 52 50 08	Sets the red gain to the specified value.	0 to 100
07 01 01 55 53 52 08	Returns the red gain.	—

Examples

```

Sets the red gain to 80 (0x50):
07 01 02 55 53 52 50 08
Result:
07 01 00 55 53 52 50 08
    
```

Green Gain

Sets or returns the green gain.

Commands

Command (hex)	Description	Values
07 01 02 55 53 47 50 08	Sets the green gain to the specified value.	0 to 100
07 01 01 55 53 47 08	Returns the green gain.	—

Examples

```
Set the green gain to 80 (0x50):
07 01 02 55 53 47 50 08
Result:
07 01 00 55 53 47 50 08
```

Blue Gain

Sets or returns the blue gain.

Commands

Command (hex)	Description	Values
07 01 02 55 53 42 50 08	Sets the red gain to the specified value.	0 to 100
07 01 01 55 53 42 08	Returns the red gain.	—

Examples

```
Set the red gain to 80 (0x50):
07 01 02 55 53 42 50 08
Result:
07 01 00 55 53 42 50 08
```

Baudrate Adjustment

Sets or returns the baudrate.

Commands

Command (hex)	Description	Values
07 01 02 42 52 41 00 08	Sets the baudrate to 115200.	0 = 115200
07 01 02 42 52 41 01 08	Sets the baudrate to 38400.	1 = 38400
07 01 02 42 52 41 02 08	Sets the baudrate to 19200.	2 = 19200
07 01 02 42 52 41 03 08	Sets the baudrate to 9600.	3 = 9600
07 01 01 42 52 41 08	Returns the baudrate.	—

Examples

```
Set the baudrate 115200:
07 01 02 42 52 41 00 08
```

Result:
07 01 00 42 52 41 00 08

Remote Control

Determines the remote control key.

Commands

Command (hex)	Description	Values
07 01 02 52 43 55 00 08	Sets the Menu key.	0 = Menu
07 01 02 52 43 55 01 08	Sets the Info key.	1 = Info
07 01 02 52 43 55 02 08	Sets the Up key.	2 = Up
07 01 02 52 43 55 03 08	Sets the Down key.	3 = Down
07 01 02 52 43 55 04 08	Sets the Left key.	4 = Left
07 01 02 52 43 55 05 08	Sets the Right key.	5 = Right
07 01 02 52 43 55 06 08	Sets the Enter key.	6 = Enter

Examples

Set the Menu key:
07 01 02 52 43 55 00 08
Result:
07 01 00 52 43 55 00 08

Reset All

Runs the factory reset.

Commands

Command (hex)	Description	Values
07 01 02 41 4C 4C 00 08	Runs the factory reset.	–

Examples

Run the factory reset:
07 01 02 41 4C 4C 00 08
Result:
07 01 00 41 4C 4C 00 08

Serial Number Read

Reads the serial number.

Commands

Command (hex)	Description	Values
07 01 01 53 45 52 08	Reads the serial number (13 Bytes)	—

Examples

```

Read the serial number:
07 01 01 53 45 52 08
Result:
07 01 00 53 45 52 53 55 48 44 39 38 56 34 35 30 30 30 33 08
          S U H D 9 8 V 4 5 0 0 0 3
    
```

Model Name Read

Reads the model name.

Commands

Command (hex)	Description	Values
07 01 01 4D 4E 41 08	Reads the model name (13 Bytes)	—

Examples

```

Read the serial number:
07 01 01 4D 4E 41 08
Result:
07 01 00 4D 4E 41 53 55 48 44 39 38 33 2D 50 00 00 00 08
          S U H D 9 8 3 - P
    
```

Firmware Version Read

Reads the scaler and Ethernet firmware version.

Commands

Command (hex)	Description	Values
07 01 01 47 56 45 08	Reads the Scaler and Ethernet firmware version(6 Bytes).	—

Examples

```

Read the Scaler and Ethernet firmware version:
07 01 01 47 56 45 08
Result:
07 01 00 47 56 45 30 30 30 39 00 32 08
          0 . 0 . 0 . 9 - 0 2
    
```

Scheme Selection

Sets or returns the Scheme selection (on-screen display—Picture mode).

Commands

Command (hex)	Description	Values
07 01 02 53 43 4D 00 08	Sets the picture mode to user.	0 = User
07 01 02 53 43 4D 01 08	Sets the picture mode to standard.	1 = Standard
07 01 02 53 43 4D 04 08	Sets the picture mode to dynamic.	4 = Dynamic
07 01 01 53 43 4D 08	Returns the picture mode.	—

Examples

```

Set the Picture mode to user:
07 01 02 53 43 4D 00 08
Result:
07 01 00 53 43 4D 00 08
    
```

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