Technical Reference

020-001766-01

SUHD983-P LCD Panel Serial Commands

CHRISTIE

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h) Image retention on LCD flat panels.

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The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.
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The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

Contents

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.

Connect the control computer to the RJ45 connector on the display panel

If you are using TCP/IP, UDP socket program complete the following to configure the ethernet port on the system.

Set IP address(check at LAN setting OSD), Set 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 (to the 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 (3Bytes).
- [END] indicates the end of the command data (always ".").

Value Adjust Format (to the 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 (3Bytes).
- [VALUE] is the parameter setting for the command (000~100).
- [END] indicates the end of the command data (always ".").

Status Check Command Format (to the 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 (3Bytes).
- [END] indicates the end of the command data (always "?").

Status Check Response Format (to the 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 ":".
- [COMMAND]] is the command data (3Bytes).
- [=] is always "=".
- [Reply] is the reply data (3Bytes).

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 there is error, 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 DVI	SH6		
Direct Control	Source change to OPS/HDMI	SH7		
Direct Control	Source change to OPS/DP	SH8		
Direct Control	Window Mode set to Window1	WN1		
Direct Control	Window Mode set to Window2	WN2		
Direct Control	Window Mode set to Window3	WN3		
Direct Control	Window Mode set to Window4	WN4		
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		

Main Item	Control Item	Command	Value	Reply
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		
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	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 DVI	AI6		
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		

Main Item	Control Item	Command	Value	Reply
Direct Control	Power Save Off	PSF		
Direct Control	Power Save On	PSN		
Direct Control	Movie Mode Off	MM0		
Direct Control	Movie Mode Low	MM1		
Direct Control	Movie Mode Middle	MM2		
Direct Control	Movie Mode High	MM3		
Direct Control	Interface Select Off	UA0		
Direct Control	RS-232	UA1		
Direct Control	OPS/RS-232	UA2		
Direct Control	Picture Reset	PIR		
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 Off	WMF		
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		
Direct Control	Window1 Input HDMI4	W15		

Main Item	Control Item	Command	Value	Reply
Direct Control	Window1 Input DVI	W16		
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 DVI	W26		
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 DVI	W36		
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 DVI	W46		
Direct Control	Window4 Input OPS/HDMI	W47		
Direct Control	Window4 Input OPS/DP	W48		
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		

Main Item	Control Item	Command	Value	Reply
Direct Control	Mute On	MON		
Direct Control	Mute Off	MOF		
Value Adjust	Brightness setting	BLT	0~100	
Value Adjust	Contrast setting	CON	0~100	
Value Adjust	Black Level setting	BRT	0~100	
Value Adjust	Color setting	SAT	0~100	
Value Adjust	Sharpness Value setting	SHA	0~100	
Value Adjust	Red Gain Setting	RGN	0~100	
Value Adjust	Green Gain Setting	GGN	0~100	
Value Adjust	Blue Gain Setting	BGN	0~100	
Value Adjust	Volume	VOL	0~100	
Value Adjust	Balance	BCT	0~100	
Value Adjust	Preset mode	PRS	0~20	
Value Adjust	Power off mode standby	PWM	0~2	
Value Adjust	Power off mode sleep	PWM	0~2	
Value Adjust	Power off mode deep sleep	PWM	0~2	
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		0~100
Status check	Contrast Value Setting	CON		0~100
Status check	Black Level Value Setting	BRT		0~100
Status check	Color Setting	SAT		0~100
Status check	Sharpness Value Setting	SHA		0~100
Status check	Color temperature	CTT		000=Studio1 001=Studio2 002=Warm 003=Normal 004=Cool 005=User
Status check	Red Gain Setting	RGN		0~100
Status check	Green Gain Setting	GGN		0~100
Status check	Blue Gain Setting	BGN		0~100

Main Item	Control Item	Command	Value	Reply
Status check	Audio Input Status	AUT		000=DP1 001=DP2 002=HDMI1 003=HDMI2 004=HDMI3 005=HDMI4 006=DVI 007OPS-HDMI 008OPS-DP
Status check	Volume	VOL		0~100
Status check	Balance	BCT		0~100
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=5Sec 002=10Sec 003=20Sec
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	Preset Mode status	PRS		000=Multi mode off 001=Preset1 002=Preset2 003=Preset3 004=Preset4 005=Preset5 006=Preset6 007=Preset7 008=Preset8 009=Preset9 010=Preset10 011=Preset11 012=Preset12

Main Item	Control Item	Command	Value	Reply
				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 006=DVI 007=OPS-HDMI 008=OPS-DP
Status check	Window2 Source Status	W2S		000=DP1 001=DP2 002=HDMI1 003=HDMI2 004=HDMI3 005=HDMI4 006=DVI 007=OPS-HDMI 008=OPS-DP
Status check	Window3 Source Status	W3S		000=DP1 001=DP2 002=HDMI1 003=HDMI2 004=HDMI3 005=HDMI4 006=DVI 007=OPS-HDMI 008=OPS-DP
Status check	Window4 Source Status	W4S		000=DP1 001=DP2 002=HDMI1

Main Item	Control Item	Command	Value	Reply
				003=HDMI2 004=HDMI3 005=HDMI4 006=DVI 007=OPS-HDMI 008=OPS-DP
Status check	Current source	SRC		000=DP1 001=DP2 002=HDMI1 003=HDMI2 004=HDMI3 005=HDMI4 006=DVI 007=OPS-HDMI 008=OPS-DP
Status check	Mute Status	MUT		000=Off 001=On

Direct command control

Set Power control

Set the power control.

Commands

Command (ASCII)	Description	Values
K:ALLPOF	Set the power off.	-
K:ALLPFN	Set the power on.	-

Examples

Set the power contorl to off.

```
K:ALLPOF.
```

Result:

```
ALL:POF=A
```

Source change

Change the source.

Commands

Command (ASCII)	Description	Values
K:ALLSH0. K:ALLSH1. K:ALLSH2.	Set the source to DP1. Set the source to DP2. Set the source to HDMI1.	-

K:ALLSH3.	Set the source to HDMI2.	
K:ALLSH4.	Set the source to HDMI3.	
K:ALLSH5.	Set the source to HDMI4.	
K:ALLSH6.	Set the source to DVI.	
K:ALLSH7.	Set the source to OPS HDMI.	
K:ALLSH8.	Set the source to OPS DP.	

Examples

Set the *sourcel* to *DP1*.

```
K:ALLSH1.
```

Result:

```
ALL:SH1=A
```

Set window select

Set the window select: window1~4. Multi window mode should be on.

Commands

Command (ASCII)	Description	Values
K:ALLWN1.	Set the window select to window1.	-
K:ALLWN2.	Set the window select to window2.	
K:ALLWN3.	Set the window select to window3.	
K:ALLWN4.	Set the window select to window4.	

Examples

Set the window select to window1

```
K:ALLWN1.
```

Result:

```
ALL:WN1=A
```

Set Picture mode

Set the picture mode.

Commands

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

Examples

Set the picture mode to standard.

```
K:ALLPM0.
```

Result:

```
ALL:PM0=A
```

Set Backlight on/off

Set the backlight on or off

Commands

Command (ASCII)	Description	Values
K:ALLBLN. K:ALLBLF.	Set the packlight to on. Set the backlight to off.	-

Examples

Set the packlight to on.

```
K:ALLBLN.
```

Result:

```
ALL:BLN=A
```

Increase/Decrease Brightness

Up/down the backlight one step. Picture mode should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLBLU. K:ALLBLD.	Increase brightness one step. Decrease brightness one step.	-

Examples

Increase brightness one step.

```
K:ALLBLU.
```

Result:

```
ALL:BLU=A
```

Increase/Decrease Contrast

Up/down the contrast one step. Picture mode should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLCON. K:ALLCON.	Increase contrast one step. Decrease contrast one step.	-

Examples

Increase contrast one step.

```
K:ALLCON.
```

Result:

```
ALL:CON=A
```

Increase/Decrease Black level

Up/down the black level one step. Picture mode should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLBLU. K:ALLBLD.	Increase black level one step. Decrease black level one step.	-

Examples

Increase black level one step.

```
K:ALLBRU.
```

Result:

```
ALL:BRU=A
```

Increase/Decrease Saturation

Up/down the saturation one step. Picture mode should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLSTU. K:ALLSTD.	Increase saturation one step. Decrease saturation one step.	-

Examples

Increase saturation one step.

```
K:ALLSTU.
```

Result:

```
ALL:STU=A
```

Increase/Decrease Sharpness

Up/down the sharpness 10step. Picture mode should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLSPU. K:ALLSPD.	Increase sharpness ten step. Decrease sharpness ten step.	-

Examples

Increase sharpness ten step.

```
K:ALLSPU.
```

Result:

```
ALL:SPU=A
```

Set Color temperature

Set the color temperature.

Commands

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

Examples

Set the picture mode to standard.

```
K:ALLCT0.
```

Result:

```
ALL:CT0=A
```

Increase/Decrease Red gain

Up/down the red gain 1step. Color temperature should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLRGU. K:ALLRGD.	Increase red gain one step. Decrease red gain one step.	-

Examples

Increase red gain one step.

```
K:ALLRGU.
```

Result:

```
ALL:RGU=A
```

Increase/Decrease green gain

Up/down the green gain one step. Color temperature should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLGGU. K:ALLGGD.	Increase green gain one step. Decrease green gain one step.	-

Examples

Increase green gain one step.

```
K:ALLGGU.
```

Result:

```
ALL:GGU=A
```

Increase/Decrease blue gain

Up/down the blue gain one step. Color temperature should be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLBGU. K:ALLBGD.	Increase blue gain one step. Decrease blue gain one step.	-

Examples

Increase blue gain one step.

```
K:ALLBGU.
```

Result:

```
ALL:BGU=A
```

Set sound input

Set the sound input: all input.

Commands

Command (ASCII)	Description	Values
K:ALLAI0. K:ALLAI1. K:ALLAI2. K:ALLAI3. K:ALLAI4. K:ALLAI5. K:ALLAI6. K:ALLAI7. K:ALLAI8.	Set the sound input to DP1. Set the sound input to DP2. Set the sound input to HDMI1. Set the sound input to HDMI2. Set the sound input to HDMI3. Set the sound input to HDMI4. Set the sound input to DVI. Set the sound input to OPS HDMI. Set the sound input to OPS DP.	-

Examples

Set the sound input to DP1.

```
K:ALLAI0.
```

Result:

```
ALL:AI0=A
```

Increase/Decrease volume

Up/down the volume one step.

Commands

Command (ASCII)	Description	Values
K:ALLVLU. K:ALLVLD.	Increase volume one step. Decrease volume one step.	-

Examples

Increase volume one step.

```
K:ALLVLU.
```

Result:

```
ALL:VLU=A
```

Increase/Decrease balance

Up/down the balanace one step.

Commands

Command (ASCII)	Description	Values
K:ALLBCU. K:ALLBCD.	Increase balanace one step. Decrease balanace one step.	-

Examples

Increase balanace one step.

```
K:ALLBCU.
```

Result:

```
ALL:BCU=A
```

Set language

Set the language.

Commands

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

Examples

Set the language to English.

```
K:ALLLES.
```

Result:

```
ALL:LES=A
```

Set OSD time

Set the OSD turn off time.

Commands

Command (ASCII)	Description	Values
K:ALLOT0. K:ALLOT1. K:ALLOT2. K:ALLOT3.	Set the OSD turn off to off. Set the OSD turn off to 5sec. Set the OSD turn off to 10sec. Set the OSD turn off to 20sec.	-

Examples

Set the OSD turn off to off.

```
K:ALLOT0.
```

Result:

```
ALL:OT0=A
```

Set power save

Set the power save on/off.

Commands

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

Examples

Set the power save to off.

```
K:ALLPSF.
```

Result:

```
ALL:PSF=A
```

Set movie mode

Set the power save on/off.

Commands

Command (ASCII)	Description	Values
K:ALLMM0. K:ALLMM1. K:ALLMM2. K:ALLMM3.	Set the movie mode to off. Set the movie mode to low. Set the movie mode to middle. Set the movie mode to high.	-

Examples

Set the power save to off.

```
K:ALLMM0.
```

Result:

```
ALL:MM0=A
```

Set interface select

Set the interface select.

Commands

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

Examples

Set the interface select to off.

```
K:ALLUA0.
```

Result:

```
ALL:UA0=A
```

Run Picture reset

Run the Picture reset.

Commands

Command (ASCII)	Description	Values
K:ALLPIR.	Run the picture reset.	-

Examples

Run the picture reset.

```
K:ALLPIR.
```

Result:

```
ALL:PIR=A
```

Run factory reset

Run 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

Set the preset mode : off, 1~10

Commands

Command (ASCII)	Description	Values
K:ALLRN0.	Set the preset mode to 10.	-
K:ALLRN1.	Set the preset mode to 1.	
K:ALLRN2.	Set the preset mode to 2.	
K:ALLRN3.	Set the preset mode to 3.	
K:ALLRN4.	Set the preset mode to 4.	
K:ALLRN5.	Set the preset mode to 5.	
K:ALLRN6.	Set the preset mode to 6.	
K:ALLRN7.	Set the preset mode to 7.	
K:ALLRN8.	Set the preset mode to 8.	
K:ALLRN9.	Set the preset mode to 9.	

Examples

Set the preset mode to 1.

```
K:ALLRN1.
```

Result:

```
ALL:RN1=A
```

Set multi window mode

Set the multi window mode : off, single, dual1/2/3/4, triple1/2/3/4, quad. Preset mode shoud be selected before send command.

Commands

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

Examples

Set the multi-window mode to single.

```
K:ALLWM0.
```

Result:

```
ALL:WM0=A
```

Set input of window1

Set the input of window1. Preset mode shoud be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW10.	Set the window1 input to DP1.	-
K:ALLW11.	Set the window1 input to DP2.	
K:ALLW12.	Set the window1 input to HDMI1.	
K:ALLW13.	Set the window1 input to HDMI2.	
K:ALLW14.	Set the window1 input to HDMI3.	
K:ALLW15.	Set the window1 input to HDMI4.	
K:ALLW16.	Set the window1 input to DVI.	
K:ALLW17.	Set the window1 input to OPS HDMI.	
K:ALLW18.	Set the window1 input to OPS DP.	

Examples

Set the window1 input to DP1.

```
K:ALLW10.
```

Result:

```
ALL:W10=A
```

Set input of window2

Set the input of window2. Preset mode shoud be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW20.	Set the window2 input to DP1.	-
K:ALLW21.	Set the window2 input to DP2.	
K:ALLW22.	Set the window2 input to HDMI1.	
K:ALLW23.	Set the window2 input to HDMI2.	
K:ALLW24.	Set the window2 input to HDMI3.	
K:ALLW25.	Set the window2 input to HDMI4.	
K:ALLW26.	Set the window2 input to DVI.	
K:ALLW27.	Set the window2 input to OPS HDMI.	
K:ALLW28.	Set the window2 input to OPS DP.	

Examples

Set the window2 input to DP1.

```
K:ALLW20.
```

Result:

```
ALL:W20=A
```

Set input of window3

Set the input of window3. Preset mode shoud be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW30.	Set the window3 input to DP1.	-
K:ALLW31.	Set the window3 input to DP2.	
K:ALLW32.	Set the window3 input to HDMI1.	
K:ALLW33.	Set the window3 input to HDMI2.	
K:ALLW34.	Set the window3 input to HDMI3.	
K:ALLW35.	Set the window3 input to HDMI4.	
K:ALLW36.	Set the window3 input to DVI.	
K:ALLW37.	Set the window3 input to OPS HDMI.	
K:ALLW38.	Set the window3 input to OPS DP.	

Examples

Set the window3 input to DP1.

```
K:ALLW30.
```

Result:

```
ALL:W30=A
```

Set input of window4

Set the input of window4. Preset mode shoud be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW40.	Set the window4 input to DP1.	-
K:ALLW41.	Set the window4 input to DP2.	
K:ALLW42.	Set the window4 input to HDMI1.	
K:ALLW43.	Set the window4 input to HDMI2.	
K:ALLW44.	Set the window4 input to HDMI3.	
K:ALLW45.	Set the window4 input to HDMI4.	
K:ALLW46.	Set the window4 input to DVI.	
K:ALLW47.	Set the window4 input to OPS HDMI.	
K:ALLW48.	Set the window4 input to OPS DP.	

Examples

Set the window4 input to DP1.

```
K:ALLW40.
```

Result:

```
ALL:W40=A
```

Remote control key

Remote control key action.

Commands

Command (ASCII)	Description	Values
K:ALLRSO. K:ALLRUP. K:ALLRDN. K:ALLRRT. K:ALRLT4. K:ALLREN. K:ALLRMN. K:ALLRIF.	Act input source key. Act input up key. Act input down key. Act input right key. Act input left key. Act input select key. Act input menu key. Act input info key.	-

Examples

Act input source key.

```
K:ALLRSO.
```

Result:

```
ALL:RSO=A
```

Set sound mute

Set sound mute on/off

Commands

Command (ASCII)	Description	Values
K:ALLMON. K:ALLMOF.	Sound mute on. Sound mute off.	-

Examples

Sound mute on.

```
K:ALLMON.
```

Result:

```
ALL:MON=A
```

Value adjust control

Set brightness

Set brightness to specific value. Picture mode shoud be set to ‘user’.

Commands

Command (ASCII)	Description	Values
K:ALLBLT(value).	Set brightness to ‘value’.	0~100

Examples

Set brightness to ‘80’.

```
K:ALLBLT080.
```

Result:

```
ALL:BLT=A
```

Set contrast

Set contrast to specific value. Picture mode shoud be set to ‘user’.

Commands

Command (ASCII)	Description	Values
K:ALLCON(value).	Set contrast to ‘value’.	0~100

Examples

Set contrast to ‘80’.

```
K:ALLCON080.
```

Result:

```
ALL:CON=A
```

Set black level

Set black level to specific value. Picture mode shoud be set to ‘user’.

Commands

Command (ASCII)	Description	Values
K:ALLBRT(value).	Set black level to ‘value’.	0~100

Examples

Set black level to ‘80’.

```
K:ALLBRT080.
```

Result:

```
ALL:BRT=A
```

Set saturation

Set saturation to specific value. Picture mode shoud be set to ‘user’.

Commands

Command (ASCII)	Description	Values
K:ALLSAT(value).	Set saturation to ‘value’.	0~100

Examples

Set saturation to ‘80’.

```
K:ALLSAT080.
```

Result:

```
ALL: SAT=A
```

Set sharpness

Set sharpness to specific value. Picture mode shoud be set to ‘user’.

Commands

Command (ASCII)	Description	Values
K:ALLSHA(value).	Set sharpness to ‘value’.	0~100

Examples

Set sharpness to ‘80’.

```
K:ALLSHA080.
```

Result:

```
ALL: SHA=A
```

Set red gain

Set red gain to specific value. Color temperature shoud be set to ‘user’.

Commands

Command (ASCII)	**Description**	**Values**
K:ALLRGN(value).	Set red gain to ‘value’.	0~100

Examples

Set red gain to ‘80’.

```
K:ALLRGN080.
```

Result:

```
ALL: RGN=A
```

Set green gain

Set green gain to specific value. Color temperature shoud be set to ‘user’.

Commands

Command (ASCII)	**Description**	**Values**
K:ALLGGN(value).	Set green gain to ‘value’.	0~100

Examples

Set green gain to ‘80’.

```
K:ALLGGN080.
```

Result:

```
ALL: GGN=A
```

Set blue gain

Set blue gain to specific value. Color temperature shoud be set to 'user'.

Commands

Command (ASCII)	Description	Values
K:ALLBGN(value).	Set blue gain to 'value'.	0~100

Examples

Set blue gain to '80'.

```
K:ALLBGN080.
```

Result:

```
ALL: BGN=A
```

Set volume

Set volume to specific value.

Commands

Command (ASCII)	Description	Values
K:ALLVOL(value).	Set volume to 'value'.	0~100

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).	Set balance to 'value'.	0~100

Examples

Set balance to '80'.

```
K:ALLBCT080.
```

Result:

```
ALL: BCT=A
```

Set Power Off Mode

Set Power Off Mode: standby, sleep, deep sleep.

Commands

Command (ASCII)	Description	Values
K:ALLPWM(value).	Set Power off mode to standby	0~2

Examples

Set Power off mode to standby

```
K:ALLPWM000.
```

Result:

```
ALL: PWM=A
```

Set Preset Mode

Set Preset Mode select: off, preset 1~20

Commands

Command (ASCII)	Description	Values
K:ALLPRS(value).	Set Preset mode to 1.	0~20

Examples

Set Preset mode to 1.

```
K:ALLPRS001.
```

Result:

```
ALL: PRS=A
```

Status check control

Get power status

Get power status value.

Commands

Command (ASCII)	Description	Values
K:ALLPWR?	Get power status value.	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

Get input source value.

Commands

Command (ASCII)	Description	Values
K:ALLSRC?	Get input source value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get input source value.

```
K:ALLSRC?
```

Result:

```
ALL: SRC=000
```

Get picture mode

Get picture mode value.

Commands

Command (ASCII)	Description	Values
K:ALLPMT?	Get picture mode value.	0=Standard 1=Dynamic 2=User

Examples

Get picture mode value.

```
K:ALLPMT?
```

Result:

```
ALL: PMT=000
```

Get brightness

Get brightness value.

Commands

Command (ASCII)	Description	Values
K:ALLBLT?	Get brightness value.	0 ~ 100

Examples

Get brightness value.

```
K:ALLBLT?
```

Result:

```
ALL: BLT=080
```

Get contrast

Get contrast value.

Commands

Command (ASCII)	Description	Values
K:ALLCON?	Get contrast value.	0 ~ 100

Examples

Get contrast value.

```
K:ALLCON?
```

Result:

```
ALL: CON=080
```

Get saturation

Get saturation value.

Commands

Command (ASCII)	Description	Values
K:ALLSAT?	Get saturation value.	0 ~ 100

Examples

Get saturation value.

```
K:ALLSAT?
```

Result:

```
ALL: SAT=080
```

Get sharpness

Get sharpness value.

Commands

Command (ASCII)	Description	Values
K:ALLSHA?	Get sharpness value.	0 ~ 100

Examples

Get sharpness value.

```
K:ALLSHA?
```

Result:

```
ALL: SHA=080
```

Get color temperature

Get color temperature value.

Commands

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

Examples

Get color temperature value.

```
K:ALLCTT?
```

Result:

```
ALL: CTT=001
```

Get red gain

Get red gain value.

Commands

Command (ASCII)	Description	Values
K:ALLRGN?	Get red gain value.	0 ~ 100

Examples

Get red gain value.

```
K:ALLRGN?
```

Result:

```
ALL: RGN=080
```

Get green gain

Get green gain value.

Commands

Command (ASCII)	Description	Values
K:ALLGGN?	Get green gain value.	0 ~ 100

Examples

Get green gain value.

```
K:ALLGGN?
```

Result:

```
ALL: GGN=080
```

Get blue gain

Get blue gain value.

Commands

Command (ASCII)	Description	Values
K:ALLBGN?	Get blue gain value.	0 ~ 100

Examples

Get blue gain value.

```
K:ALLBGN?
```

Result:

```
ALL: BGN=080
```

Get audio input

Get audio input value.

Commands

Command (ASCII)	Description	Values
K:ALLAUT?	Get audio input value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get audio input value.

```
K:ALLAUT?
```

Result:

```
ALL: AUT=001
```

Get volume

Get volume value.

Commands

Command (ASCII)	Description	Values
K:ALLVOL?	Get volume value.	0 ~ 100

Examples

Get volume value.

```
K:ALLVOL?
```

Result:

```
ALL: VOL=080
```

Get balance

Get balance value.

Commands

Command (ASCII)	Description	Values
K:ALLBCT?	Get balance value.	0 ~ 100

Examples

Get balance value.

```
K:ALLBCT?
```

Result:

```
ALL: BCT=080
```

Get language

Get OSD language value.

Commands

Command (ASCII)	Description	Values
K:ALLBCT?	Get OSD language value.	0=English 1=German 2=Spanish 3=French 4=Italian 5=Russian 6=Korean

Examples

Get OSD language value.

```
K:ALLLAT?
```

Result:

```
ALL: LAT=001
```

Get OSD turn off

Get OSD turn off time value.

Commands

Command (ASCII)	Description	Values
K:ALLOTT?	Get OSD turn off time value.	0=Off 1=5 sec. 2=10 sec. 3=20 sec.

Examples

Get OSD turn off time value.

```
K:ALLOTT?
```

Result:

```
ALL: OTT=001
```

Get power save

Get power save value.

Commands

Command (ASCII)	Description	Values
K:ALLOTT?	Get power save value.	0=Off 1=On

Examples

Get power save value.

```
K:ALLPST?
```

Result:

```
ALL: PST=001
```

Get preset mode

Get preset mode value.

Commands

Command (ASCII)	Description	Values
K:ALLPRS?	Get 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 preset mode value.

```
K:ALLPRS?
```

Result:

```
ALL: PRS=001
```

Get power off mode

Get power power off mode value.

Commands

Command (ASCII)	Description	Values
K:ALLPWM?	Get power off mode value.	0=Standby 1=Sleep 2=Deep Sleep

Examples

Get power off mode value.

```
K:ALLPWM?
```

Result:

```
ALL: PWM=001
```

Get movie mode

Get movie mode value.

Commands

Command (ASCII)	Description	Values
K:ALLMMT?	Get movie mode value.	0=Off 1=low 2=middle 3=high

Examples

Get power save value.

```
K:ALLMMT?
```

Result:

```
ALL: MMT=001
```

Get Interface select

Get uart status value.

Commands

Command (ASCII)	Description	Values
K:ALLUAT?	Get uart status value.	0=Off 1=RS232 2=OPS RS232

Examples

Get uart status value.

```
K:ALLUAT?
```

Result:

```
ALL: UAT=001
```

Get multi window mode

Get current multi window mode value. Preset mode should be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLWMT?	Get multi window mode value.	0=single 1=dual1 2=dual2 3=dual3 4=dual4 5=triple1 6=triple2 7=triple3 8=triple4 9=quad

Examples

Get uart status value.

```
K:ALLWMT?
```

Result:

```
ALL: WMT=001
```

Get window1 input

Get window1 input value. Preset mode should be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW1S?	Get window1 input value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get window1 input value.

```
K:ALLW1S?
```

Result:

```
ALL: W1S=001
```

Get window2 input

Get window2 input value. Preset mode should be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW2S?	Get window2 input value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get window2 input value.

```
K:ALLW2S?
```

Result:

```
ALL: W2S=001
```

Get window3 input

Get window3 input value. Preset mode should be selected before send command.

Commands

Command (ASCII)	Description	Values
K:ALLW3S?	Get window3 input value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get window3 input value.

```
K:ALLW3S?
```

Result:

```
ALL: W3S=001
```

Get window4 input

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

Commands

Command (ASCII)	Description	Values
K:ALLW4S?	Get window4 input value.	0=DP1 1=DP2 2=HDMI1 3=HDMI2 4=HDMI3 5=HDMI4 6=DVI 7=OPS HDMI 8=OPS DP

Examples

Get window4 input value.

```
K:ALLW4S?
```

Result:

```
ALL: W4S=001
```

Get sound mute

Get mute status value.

Commands

Command (ASCII)	Description	Values

K:ALLMUT?	Get mute status value.	0=mute off 1=mute on

Examples

Get mute status value.

```
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 you are 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 that it matches the RS232 port on the display panel.

Configuring the Ethernet port

Learn how to configure the Ethernet port.

1. Connect the control computer to the RJ45 connector on the display panel
2. If you are using TCP/IP, UDP socket program complete the following to configure the ethernet port on the system.

    Set IP address(check at LAN setting OSD), Set 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 the display panel	Response received from the 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 02 50 4F 57 01 08
Request the display panel status	07 01 01 50 4F 57 08	07 01 02 50 4F 57 XX 08 (XX = 00 when off, 01 when on)
Set the display panel contrast to 30 (1E 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
Request 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	1	1	DVI	4D 49 4E
			9	9	HDMI1	
			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	0~100	0~100	Backlight	42 52 49
	CON	R/W	0~100	0~100	Contrast	43 4F 4E
	BRL	R/W	0~100	0~100	Brightness	42 52 4C
	SAT	R/W	0~100	0~100	Saturation	53 41 54
	SHA	R/W	R/W	0~100	Sharpness	53 48 41
	BLC	R/W	0	0	Backlight Off	42 4C 43
			1	1	Backlight On	
	CCT	R/W	0~12	0	Studio1	43 43 54
			13~31	24	Studio2	
			32~53	29	Warm	
			54~75	68	Normal	
			76~90	83	Cool	
			91~100	100	User	
	USR	R/W	0~100	0~100	Red Gain	55 53 52
	USG	R/W	0~100	0~100	Green Gain	55 53 47
	USB	R/W	0~100	0~100	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

Set / get power control.

Commands

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

Examples

Set power off.

```
07 01 02 50 4F 57 00 08
```

Result:

```
07 01 00 50 4F 57 00 08
```

Input source

Set / get input source.

Commands

Command (hex)	Description	Values
07 01 02 4D 49 4E 01 08 07 01 02 4D 49 4E 09 08 07 01 02 4D 49 4E 0A 08 07 01 02 4D 49 4E 0B 08 07 01 02 4D 49 4E 0C 08 07 01 02 4D 49 4E 0D 08 07 01 02 4D 49 4E 0E 08 07 01 02 4D 49 4E 0F 08 07 01 02 4D 49 4E 10 08 07 01 01 4D 49 4E 08	Set input to DVI. Set input to HDMI1. Set input to HDMI2. Set input to HDMI3. Set input to HDMI4. Set input to DP1. Set input to DP2. Set input to OPS HDMI. Set input to OPS DP. Get input source value.	1=DVI 9=HDMI1 10=HDMI2 11=HDMI3 12=HDMI4 13=DP1 14=DP2 15=OPS HDMI 16=OPS DP

Examples

Set input source to DVI

```
07 01 02 4D 49 4E 01 08
```

Result:

```
07 01 00 4D 49 4E 01 08
```

Backlight

Set / get backlight (at OSD – brightness)

Commands

Command (hex)	Description	Values
07 01 02 42 52 49 50 08	Set backlight to 'value'.	0 ~ 100 (0 ~ 0x64)

07 01 01 42 52 49 08	Get backlight.	

Examples

Set backlight to 80 (0x50)

```
07 01 02 42 52 49 50 08
```

Result:

```
07 01 00 42 52 49 50 08
```

Contrast

Set / get contrast.

Commands

Command (hex)	Description	Values
07 01 02 43 4F 42 50 08 07 01 01 43 4F 42 08	Set contrast to 'value'. Get contrast.	0 ~ 100 (0 ~ 0x64)

Examples

Set brightness to 80 (0x50)

```
07 01 02 43 4F 42 50 08
```

Result:

```
07 01 00 43 4F 42 50 08
```

Brightness

Set / get brightness (at OSD – black level)

Commands

Command (hex)	Description	Values
07 01 02 42 52 4C 50 08 07 01 01 42 52 4C 08	Set brightness to 'value'. Get brightness.	0 ~ 100 (0 ~ 0x64)

Examples

Set brightness to 80 (0x50)

```
07 01 02 42 52 4C 50 08
```

Result:

```
07 01 00 42 52 4C 50 08
```

Saturation

Set / get saturation

Commands

Command (hex)	Description	Values
07 01 02 53 41 54 50 08	Set saturation to 'value'.	0 ~ 100 (0 ~ 0x64)

07 01 01 53 41 54 08	Get saturation.	

Examples

Set brightness to 80 (0x50)

```
07 01 02 53 41 54 50 08
```

Result:

```
07 01 00 53 41 54 50 08
```

Sharpness

Set / get sharpness

Commands

Command (hex)	Description	Values
07 01 02 53 48 41 50 08 07 01 01 53 48 41 08	Set sharpness to 'value'. Get sharpness.	0 ~ 100 (0 ~ 0x64)

Examples

Set sharpness to 80 (0x50)

```
07 01 02 53 48 41 50 08
```

Result:

```
07 01 00 53 48 41 50 08
```

Backlight on/off

Set / get backlight on/off

Commands

Command (hex)	Description	Values
07 01 02 42 4C 43 00 08 07 01 02 42 4C 43 01 08 07 01 01 42 4C 43 08	Set backlight off. Set backlight on. Get backlight status	0=off 1=on

Examples

Set backlight off

```
07 01 02 42 4C 43 00 08
```

Result:

```
07 01 00 42 4C 43 00 08
```

Color temperature

Set / get color temperature

Commands

Command (hex)	Description	Values

07 01 02 43 43 54 00 08	Set color temperature to studio1.	0~12=studio1
07 01 02 43 43 54 0D 08	Set color temperature to studio2.	13~31=studio2
07 01 02 43 43 54 20 08	Set color temperature to warm.	32~53=warm
07 01 02 43 43 54 36 08	Set color temperature to normal.	54~75=normal
07 01 02 43 43 54 4C 08	Set color temperature to cool.	76~90=cool
07 01 02 43 43 54 5B 08	Set color temperature to user.	91~100=user
07 01 01 43 43 54 08	Get color temperature.	

Examples

Set color temperature to studio1.

```
07 01 02 43 43 54 00 08
```

Result:

```
07 01 00 43 43 54 00 08
```

Red gain

Set / get red gain

Commands

Command (hex)	Description	Values
07 01 02 55 53 52 50 08	Set red gain to 'value'.	0~100
07 01 01 55 53 52 08	Get red gain	

Examples

Set red gain to 80 (0x50).

```
07 01 02 55 53 52 50 08
```

Result:

```
07 01 00 55 53 52 50 08
```

Green gain

Set / get green gain

Commands

Command (hex)	Description	Values
07 01 02 55 53 47 50 08	Set green gain to 'value'.	0~100
07 01 01 55 53 47 08	Get green gain	

Examples

Set green gain to 80 (0x50).

```
07 01 02 55 53 47 50 08
```

Result:

```
07 01 00 55 53 47 50 08
```

Blue gain

Set / get blue gain

Commands

Command (hex)	Description	Values
07 01 02 55 53 42 50 08 07 01 01 55 53 42 08	Set red gain to 'value'. Get red gain	0~100

Examples

Set red gain to 80 (0x50).

```
07 01 02 55 53 42 50 08
```

Result:

```
07 01 00 55 53 42 50 08
```

Baudrate adjustment

Set / get baudrate

Commands

Command (hex)	Description	Values
07 01 02 42 52 41 00 08	Set baudrate 115200.	0=115200
07 01 02 42 52 41 01 08	Set baudrate 38400.	1=38400
07 01 02 42 52 41 02 08	Set baudrate 19200.	2=19200
07 01 02 42 52 41 03 08	Set baudrate 9600.	3=9600
07 01 01 42 52 41 08	Get red gain.	

Examples

Set baudrate 115200.

```
07 01 02 42 52 41 00 08
```

Result:

```
07 01 00 42 52 41 00 08
```

Remote control

Act remote control key.

Commands

Command (hex)	Description	Values
07 01 02 52 43 55 00 08	Act Menu key.	0=menu
07 01 02 52 43 55 01 08	Act Info key.	1=info
07 01 02 52 43 55 02 08	Act Up key.	2=up
07 01 02 52 43 55 03 08	Act Down key.	3=down
07 01 02 52 43 55 04 08	Act Left key.	4=left
07 01 02 52 43 55 05 08	Act Right key.	5=right
07 01 02 52 43 55 06 08	Act Enter key.	6=enter

Examples

Act menu key.

```
07 01 02 52 43 55 00 08
```

Result:

```
07 01 00 52 43 55 00 08
```

Reset all

Run the factory reset

Commands

Command (hex)	Description	Values
07 01 02 41 4C 4C 00 08	Run 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

Read the serial number.

Commands

Command (hex)	Description	Values
07 01 01 53 45 52 08	Read serial number (13Bytes)	-

Examples

Read 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

Read the model name.

Commands

Command (hex)	Description	Values
07 01 01 4D 4E 41 08	Read model name (13Bytes)	-

Examples

Read 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

Read the scaler and Ethernet F/W version.

Commands

Command (hex)	Description	Values
07 01 01 47 56 45 08	Read Scaler and Ethernet F/W version (6 Bytes).	-

Examples

Read Scaler and Ethernet F/W 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

Set / get Scheme selection (at OSD – picture mode)

Commands

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

Examples

Set 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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