

webOS

SNMP Command User Guide

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PREPARED BY:		DATE: 2013.11.07	<b>LG ELECTRONICS INC.</b>	
REVIEWED:		DATE:	<b>DESCRIPTION:</b> SPECIFICATION FOR LG COMMERCIAL PRODUCTS TVLINK-COMMERCIAL PROTOCOL	
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		Commercial Display SW Team		

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# 1. The guide to control devices with SNMP Protocol

In this chapter we will explain the procedure of controlling device with SNMP protocol which is thought as industrial standard protocol to configure network devices. You can control device's playing for channel and contents, and you can get or set almost all properties of device.

## 1.1. Command Summary

SNMP command list is based on RS232c command(North America).

Num	Command List	Context
1	Power	Get or set the TV power
2	Input Select	Get or set the Input Select
3	Aspect Ratio	Get or set the Aspect Ratio
4	Screen Mute	Get or set the Screen Mute
5	Volume Mute	Get or set the Volume Mute
6	Volume Control	Get or set the Volume Control
7	Contrast	Get or set the Contrast
8	Brightness	Get or set the Brightness
9	Color	Get or set the Color
10	Tint	Get or set the Tint
11	Sharpness	Get or set the Sharpness
12	Remote Control Lock Mode	Get or set the Remote Control Lock Mode
13	Balance	Get or set the Balance
14	Color Temperature	Get or set the Color Temperature
15	ISM Method	Get or set the ISM Method
16	Energy Saving	Get or set the Energy Saving
17	Auto Configuration	Get or set the Auto Configuration
18	Key	Set the Key
19	CPU Temperature	Get the CPU Temperature
20	Check Signal Status	Get the Signal Status
21	Check TBM Temp	Get Top, Bottom, Main Temperature Status

22	Check Power off Temp	Get Power off Temperature Status
23	Fan Speed	Get the Fan Speed
24	Fan Control	Set the Fan Control
25	Fan Fault Check	Get the Fan Fault Check
26	Luminance	Get the Luminance
27	BLU Maintenance	Get or Set the BLU Maintenance ON/OFF

## 1.2. Transmission / Receiving protocol

### [Transmission]

- When the command is set type, all parameters are string type.
- When the command is get type, there is not a parameter. (SNMP rule)

### [Acknowledgement]

- When the command is get type, all parameters are string type.
- When the command is set type, there is not a return value(only true or false).
- When the command is get type, a parameter is set by "FALSE" if any error is happened.
- When the command is get type, a parameter is set by "NOT SUPPORTED" or *null(no such instance)* if get\_cmd is not supported.

## Command References

### 1.3. TVLINK

#### 1.3.1. Power

<b>Description</b>	To control Power On/Off of the set.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.1
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data 00 : power off (only when TV power is On.)  [Get] string <Data> Data 01 : power on (only when TV power is On.)
<b>Reference</b>	SNMP is working only when network is connected. So SNMP can't turn on TV when TV power is Off.

\* This command or values can be not supported by each model.

#### 1.3.2. Input Select

<b>Description</b>	To select input source for the set.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.2
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data      20: AV 40: COMPONENT 60: RGB 70: DVI/SuperSign (PC) 80: DVI/SuperSign (DTV) 90: HDMI1 (DTV) A0: HDMI1 (PC) 91: HDMI2/OPS (DTV)

	A1: HDMI2/OPS (PC) 92: OPS/HDMI3/DVI (DTV) A2: OPS/HDMI3/DVI (PC) 95: OPS/DVI (DTV) (Signage model only) A5: OPS/DVI (PC) (Signage model only) 97: HDMI3/HDMI2/DVI-D (DTV) (Signage model only) A7: HDMI3/HDMI2/DVI-D (PC) (Signage model only) 98: OPS (DTV) (Signage model only) A8: OPS (PC) (Signage model only) C0: DISPLAYPORT (DTV) (Signage model only) D0: DISPLAYPORT (PC) (Signage model only) E0: SuperSign webOS Player (Signage model only) E1: Others (Signage model only) E2: Multi Screen (Signage model only)
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\* This command or values can be not supported by each model.

### 1.3.3. Aspect Ratio

<b>Description</b>	To adjust the screen format.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.3
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data      01: 4:3 02: 16:9 (full) 04: Zoom 06: Set by program (Original) 09: Just Scan 10 ~ 1F: Cinema Zoom 1 ~ 16 21: 58:9 (Signage model only) 30: Vertical Zoom (Signage model only) 31: All-Direction Zoom (Signage model only)

\* This command or values can be not supported by each model.



### 1.3.4. Screen Mute

<b>Description</b>	To select screen mute on/off.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.4
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data 00: Screen mute off (Picture on)  Data 01: Screen mute on (Picture off)
<b>Reference</b>	

\* This command or values can be not supported by each model.

### 1.3.5. Volume Mute

<b>Description</b>	To select screen mute on/off.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.5
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data 00: Volume mute on (Volume off)  Data 01: Volume mute off (Volume on)

\* This command or values can be not supported by each model.

### 1.3.6. Volume Control

<b>Description</b>	To adjust volume.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.6
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data Min: 00 ~ Max: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.7. Contrast

<b>Description</b>	To adjust screen contrast.
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<b>OID</b>	.1.3.6.1.4.1.7824.300.3.7
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Min: 00 ~ Max: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.8. Brightness

<b>Description</b>	To adjust screen brightness.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.8
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Min: 00 ~ Max: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.9. Color

<b>Description</b>	To adjust screen color.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.9
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Min: 00 ~ Max: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.10. Tint

<b>Description</b>	To adjust screen tint.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.10
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Red: 00 ~ Green: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.11. Sharpness

<b>Description</b>	To adjust screen sharpness.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.11
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Min: 00 ~ Max: 32 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.12. Remote Control Lock Mode

<b>Description</b>	To lock the remote control and the front panel controls on the set.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.13
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data 00: Lock off Data 01: Lock on
<b>Reference</b>	If you're not using the remote control and front panel controls on the Monitor set, use this mode. When main power is on/off, remote control lock is released. If Key Lock is on in the standby mode, TV will not turn on by POWER button of remote control and on the TV

\* This command or values can be not supported by each model.

### 1.3.13. Balance

<b>Description</b>	To adjust balance.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.14
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data Min: 00 ~ Max: 64 (*transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.14. Color Temperature

<b>Description</b>	To adjust color temperature.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.16
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data Min: 00 ~ Max: 64 (~WebOS3.0, *transmit Hexadecimal type by string)  Data Min: 70 ~ Max: D2 (WebOS3.2~, 3200K~13000K, *transmit Hexadecimal type by string)

\* This command or values can be not supported by each model.

### 1.3.15. ISM Method

<b>Description</b>	To set the ISM Method function
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.18
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data 01: Inversion  02: Orbiter  04: White Wash  08: Normal  20: Color Wash  80: Washing Bar  90: User Image  91: User Video

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.16. Energy Saving

<b>Description</b>	To control the energy saving function.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.19
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data>  Data 00: off  Data 01: Minimum  Data 02: Medium

	Data 03: Maximum Data 04: Auto Data 05: Screen off
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\* This command or values can be not supported by each model.

### 1.3.17. Auto Configuration

<b>Description</b>	
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.20
<b>Access</b>	Set
<b>Parameters</b>	[Set] string <Data> Data : 01 (set the auto configuration)

\* This command or values can be not supported by each model.

### 1.3.18. Key

<b>Description</b>	To send IR remote key code.
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.23
<b>Access</b>	Set only
<b>Parameters</b>	[Set] string <Data> Data is the following:

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	⏻ (POWER)	Remote control Button (Power On/Off)	0F	TV	Remote control Button
42	Q.MENU/MY APPS	Remote control Button	DC	3D	Remote control Button
43	SETTINGS	Remote control Button	5B	EXIT	Remote control Button
08	INPUT	Remote control Button	7C	HOME	Remote control Button
10 - 19	Number Key 0-9	Remote control Button	7A	⏏ (User-Guide)	Remote control Button
4C	- (Dash)/LIST	Remote control Button	D6	TV	Discrete IR Code (TV Input Selection)
1A	FLASHBK	Remote control Button	C4	POWER ON	Discrete IR Code (Only Power Off)
09	MUTE	Remote control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
02	VOL +	Remote control Button	5A	AV	Discrete IR Code (AV Input Selection)
03	VOL -	Remote control Button	BF	COMPONENT1	Discrete IR Code (Component1 Input Selection)
00	CH ▲	Remote control Button	D4	COMPONENT2	Discrete IR Code (Component2 Input Selection)
01	CH ▼	Remote control Button	D5	RGB-PC	Discrete IR Code (RGB-PC Input Selection)
1E	FAV/MARK	Remote control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
40	▲	Remote control Button	CC	HDMI2	Discrete IR Code (HDMI2 Input Selection)
41	▼	Remote control Button	E9	HDMI3	Discrete IR Code (HDMI3 Input Selection)
07	<	Remote control Button	DA	HDMI4	Discrete IR Code (HDMI4 Input Selection)
06	>	Remote control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
44	OK	Remote control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
28	⏮ (BACK)	Remote control Button	AF	Ratio Cinema Zoom	Discrete IR Code (Only Cinema Zoom Mode)
79	RATIO	Remote control Button			
BA	⏮ (FREEZE)	Remote control Button			
95	ENERGY SAVING	Remote control Button			
7E	SIMPLINK	Remote control Button			
AA	INFO	Remote control Button			
30	AV MODE	Remote control Button			
72	RED	Remote control Button			
71	GREEN	Remote control Button			
63	YELLOW	Remote control Button			
61	BLUE	Remote control Button			
B1	■	Remote control Button			
B0	▶	Remote control Button			
BA	⏮	Remote control Button			
8E	▶▶	Remote control Button			
8F	◀◀	Remote control Button			

\* Use the feature depending on your model.

**\* This key table is example case. Please refer to key table of each model manual.**

\* This command or values can be not supported by each model.

### 1.3.19. CPU temperature

<b>Description</b>	To get the CPU temperature
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<b>OID</b>	.1.3.6.1.4.1.7824.300.3.24
<b>Access</b>	Get
<b>Parameters</b>	

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.20. Check Signal Status

<b>Description</b>	To get the signal status
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.25
<b>Access</b>	Get
<b>Parameters</b>	

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.21. Check TBM Temp

<b>Description</b>	To get the Top, Bottom, Main Temperature Status
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.26
<b>Access</b>	Get
<b>Parameters</b>	Data 1    00: All sensor NG 01: Top OK. Bottom NG, Main NG 02: Top NG. Bottom OK, Main NG 03: Top OK. Bottom OK, Main NG 04: Top NG. Bottom NG, Main OK 05: Top OK. Bottom NG, Main OK 06: Top NG. Bottom OK, Main OK 07: All sensor OK

\* This command or values can be not supported by each model. (Signage model only)

(In case 75XE3C, Top OK means that both Top(Panel) and Top(PSU) is OK.)

### 1.3.22. Fan Speed

<b>Description</b>	To get the fan speed
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<b>OID</b>	.1.3.6.1.4.1.7824.300.3.28
<b>Access</b>	Get
<b>Parameters</b>	

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.23. Fan Control

<b>Description</b>	To control the fan
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.29
<b>Access</b>	set
<b>Parameters</b>	[Set] string <Data>  Data 00: AUTO  Data 01: ON  Data 02: MANUAL  Data 03: OFF

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.24. Fan Fault Check

<b>Description</b>	To check the fan fault
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.30
<b>Access</b>	Get
<b>Parameters</b>	Data 1    00: Fan NG 01: Fan OK 02: No Fan  Data 2    00: 0 Fan NG (Fan OK) 01: 1 Fan NG 02: 2 Fan NG 03: 3 Fan NG 04: 4 Fan NG 05: 5 Fan NG 06: 6 Fan NG 07: 7 Fan NG



	08: 8 Fan NG 09: 9 Fan NG 10: 10 Fan NG
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\* This command or values can be not supported by each model. (Signage model only)

### 1.3.25. Luminance

<b>Description</b>	To get the Luminance
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.31
<b>Access</b>	Get
<b>Parameters</b>	Data 1 00~64: Backlight PWM value 0~100 Data 2 00~ff: CA210 value top 1 Byte Data 3 00~ff: CA210 value bottom 1 Byte

\* This command or values can be not supported by each model. (Signage model only)

### 1.3.26. BLU Maintenance

<b>Description</b>	To set or get the BLU Maintenance on/off
<b>OID</b>	.1.3.6.1.4.1.7824.300.3.32
<b>Access</b>	Get / Set
<b>Parameters</b>	[Set] string <Data> Data 00: BLU Maintenance OFF Data 01: BLU Maintenance ON

\* This command or values can be not supported by each model. (Signage model only)

## 2. Porting information

### 2.1. Net-snmp

- Ported Net –snmp version is **5.6.1**
- snmpd is compiled with Simple Network Management Protocol **version 2**

### 2.2. snmpd.conf

- Access Control Setup

access	community	source	oid
rwcommunity	lgecommer	default	.1
rocommunity	lgecommer	default	.1