S-BOX Installation and Connection

S-BOX Connection (Panel Configuration)

1 S-Box Picture Setting according to model

- The default picture configurations are optimized for LH015IFH in Samsung factory.
- The picture configurations will be configured automatically when you finish the installation.
- For the best picture quality, Please connect S-Box and LED displays via LSM software properly.
- The 1st LED Display(I/G) must be connected to HDBT port #1 in S-Box
- The Picture configuration will be set base on the model of the 1st Master LED display which is connected to HDBT port #1 in S-Box.
- * If the S-Box and LED Displays are not connected properly by LSM, the picture quality might not be correct.



192.168.10.XX

Cable Connection

S-BOX Connection (Redundancy)

① If Redundant Spec should be used, Connect from DATA IN port of Interface Gender to DATA OUT port of the last cabinet by using OCM Cable.



- For HDBT signal stability, use the cable above CAT6
 *STP, *FTP level. (Length 15m~100m)
 - Do not use "comb" or "pinstripe" cable.





Dehumidification

- After installation, LED defects are prevented by dehumidification
- After connecting the S-BOX, the LED display is slowly operated for 24 hours to remove humid from the LED.
- Begin dehumidification after cabinets installation and S-BOX connection.
- ② Download archived file. (Refer the below 'How to download execution file'.)
- ③ After extracting the file to USB, plug USB in S-Box.
- ④ It begins automatically, pattern is changed to the brighter one every two hour.

(After setting current time, brightness of each pattern is shown in the right table.)

- (5) After 24 hours, Dehumidification process completed then, remove USB
- ※ How to download execution file
- (a) Move to <u>https://displaysolutions.samsung.com/</u>
- (b) Select SUPPORT \rightarrow RESOURCES \rightarrow Product Support \rightarrow
- ⓒ SMART LED Signage₄→Indoor₅→Model₆→FIND_⑦
- @ Select 'LED Signage Installation Manual(De-humidification execution)' file and download it.

	Step		condition		Brightness	Time	
	1	Lighting up o	lisplay with 10 g	ray scale	5%	2 hr	
Ī	2	Lighting up o	lisplay with 20 g	ray scale	8%	2 hr	
ĺ	3	Lighting up o	lisplay with 30 g	ray scale	10%	2 hr	
Ī	4	Lighting up o	lisplay with 40 g	ray scale	15%	2 hr	
ĺ	5	Lighting up o	lisplay with 50 g	ray scale	20%	2 hr	
	6	Lighting up o	lisplay with 70 g	ray scale	25%	2 hr	
	7	Lighting up o	lisplay with 90 g	ray scale	35%	2 hr	
ĺ	8	Lighting up d	isplay with 120 g	ıray scale	45%	2 hr	
ĺ	9	Lighting up d	isplay with 150 g	ıray scale	2 hr		
ĺ	10	Lighting up d	isplay with 180 g	ıray scale	70%	2 hr	
ĺ	11	Lighting up d	isplay with 200 g	ıray scale	80%	2 hr	
	12	Lighting up d	isplay with 255 g	ıray scale	100%	2 hr	
PRODUCT	IS SOLUTIONS	SUPPORT ①	SAMSU	NG	PARTNE	RS CONTACT LOGIN C	
SUPPORT RESOURCE Product Magicini TOOLS LED Con Videowa	CENTER S ② Center Support Support Support (3) (3) (2) (4) (5) (4) (5) (5) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7	SHOWCASES Overview Success Stories News & Press Videos Event ABOUT US	FEATURED Product Support		Product Sup Get the latest Manu Firmware and Softw	st, Drewings, are.	
PRODUC	TS SOLUTIONS	Our Vision	SAMSU	NG	PARTNE Resources *	RS CONTACT LOGIN Q	

3

How to configure IP addresses for S-Box

- Five IP addresses must be acquired from IT manager of the installation site.
- Five IP addresses for S-Box and 4 master cabinets.
- IP address can be configured by initial setting or by 'Network IP Setting Tool'
- The below sequence is for initial setting.
 - Connect a monitor to S-Box through service the port of S-Box.
 - Turn on S-Box.
 - Go to 'Wired Connection' menu and set network information by IP Settings like the right pic.
 - After finishing initial setting, go to home and change communication type to RJ45 from RS232C.







How to configure IP addresses for S-Box

- In order to set network information by 'Network IP Setting Tool', you need to download LSM (LED Signage Manager) and follow the below steps.
 - Connect to SLM server (http://www.secslm.com/)
 - Type LED in search window of <Fig.1>.
 - You can find out BM-LMS10NW/FREE of <Fig.2>.
 - You have to fill out form of 'Create Order' to download it.

LED		×Q
BW-LMS10NW/FREE	Smart LED Signage Manager	
	<fig.1></fig.1>	
Search Results Total : 1/1 case		
Preview >		
Unit BW-LMS10NW/FREE Smart LED Signage Manager		
Pre-paid		
Drder Order		
<fig.2></fig.2>		

4

How to configure IP addresses for S-Box

- The below sequence is for software tool.
 - Execute : [Start] Program Samsung –
 LED Signage Manager Network Configuration
 - Connect PC and S-Box with RS232C Cable, select conne "open" button.
 - Default ID of S-Box is 1.
 - Enter IP, Subnet Mask, Gateway, DNS of S-box, and click "Apply" button.
 - Check the result of connection and status of MDC Protocol.
 - When IP address is setup correctly, "Change Type to RJ45" button appears. If LSM and S-Box are connected successfully, click "Change Type to RJ45". changed to RJ45 from RS232.

[★ Cautions!] Recommend to use static IP address for the S-Box. If DHCP is used, IP address is changed automatically and LSM can be disconnected.

The 192.168.10.x band is used for internal communication of the LED Cabinet. Please use IP another IP band (except 192.168.10.x band) Do not assign the temporary IP, assign the S-Box IP (1 EA) through IT manager.





- LSM(LED Signage Manager)
 - Software that adjusts the LED Cabinet Layout in Remote
 - Check the steps to configure LED screen by LSM.
 - PC and S-box should be connected through Ethernet connection.
 - $\cdot~$ S-box is connected to Interface Gender using HDB-T Lan Cable
 - Interface Gender is connected to the first LED Cabinet using OCM cable.
 - LED cabinets are connected in daisy chain method using OCM cable.





- Start Login Page
 - If the LSM gets operated for the first time, the page to set the password will appear.
 - To set the password, users have to input the same password two times and then click the "Start" button.
 - If the user does not want to use a password, then please select "Don't use password" option. Then, password input would no longer be required whenever the LSM gets operated.

us LED Signage Manager		
	LED	
	Welcome to LED Signage Manager There are currently no connected devices. Let's set up your devices. First, set up your password to access LED Signage Manager. Then select Start to begin	
	They should surve begin.	_
	Do not require a password Start	
Copyrgh107025 Sampung Zeotomic Co., star		



- New Connection
 - To add connection information, you can either use Search function or input the IP address by yourself. If you click on the Search button, the IP addresses available on S-BOX in the same network will appear.
 If you know the IP address of the S-BOX, then you can input the address by yourself.-2
 - If you click Add button, the relevant connection information will be added on Setup and Connect. - 3
 - Users can select the Model Type of S-Box.
 There are two Model Types
 (Without Cabinet IP / With Cabinet IP(UHD)).

LED Signage Manager			
Home Cor	inections		\$ ()
	New Cor Enter the information required	nection d to connect to your devices.	
Select Device Select the d IP Addr Setup and Cor	evices to connect search	2 Enter IP to add manuall 0.0.0.0 3 Add	y
		Cancel	

LSM(LED Signage Manager)

- New Connection-Connect
 - Select "With Cabinet IP (UHD)" option. You should designate the IP Address of the LED Cabinet by each port. Set the number of units connected, and then click "Connect".
 - If you have already set the IP on the Cabinet, check "Connect with existing settings" option.
 - For the case of UHD, if you are going to use only some of the four(4) ports, input the IP Address only for that particular Group relevant with your use.

[★ Cautions!] Recommend to use static IP address for the LED devices. If DHCP is used, IP address is changed automatically and LSM can be disconnected.

The 192.168.10.x band is used for internal communication of the LED Cabinet.

Please use IP another IP band (except 192.168.10.x band) Do not assign the temporary IPs, assign the LED IPs (4 EA) through IT manager.

Setup a	nd Connec	t						
S-Box	192.168.1.1				Enter the n	umber of cabinets. [Ĵ	
	Model Type:	Without Cabinet IP			Connect v	with existing settings		
	Cabinets:	1			Assign IDs and Pos	sitions Automatically		
Setup a	na Connect	r -						
S-Box	192.168.1.1		\wedge	2	Enter the IP Addr	ess of each group. T	Ĩ	
	Model Type:	With Cabinet IP (UHD) $\ \ \lor$	IMPORT	TANT	Connect v	vith existing settings		
	Group 1	IP Address: 0 · 0 · 0 ·	0 Cabinets:	1 0	Assign IDs and Pos	sitions Automatically		
	Group 2	IP Address: 0 · 0 · 0 ·	0 Cabinets:	1 0	Assign IDs and Pos	sitions Automatically		
	Group 3	IP Address: 0 · 0 · 0 ·	0 Cabinets:	1 0	Assign IDs and Pos	sitions Automatically		
	Group 4	IP Address: 0 · 0 · 0 ·	0 Cabinets:	1 0	Assign IDs and Pos	sitions Automatically		
Setup a	and Connec	t X Same S-box X Diffe	IP erent setting	, from	S-box IP & Diffe	erent Setting fro	om each Grou	h
S-Box	192.168.1.1			En	ter the number of cabir	nets of each group. ⊺	Ū	
	Model Type:	With Cabinet IP (FHD) \checkmark			Connect	with existing settings		
	Group 1	IP Address: 0 · 0 · 0 ·	0 Cabinets:	1 🗘	Assign IDs and Po	sitions Automatically		
				S	amsung l	Electroni	ics	9

LSM(LED Signage Manager)

- Main Window-Home Window
 - Home Screen : Information of the connected device, input source, cabinet composition, and error device are shown.

[★ Cautions!]

The network port 1515, 48484, 48485 and 58585 are used for internal communication between S-BOX, LED Cabinet and PC for LSM. It should be include the firewall or network exception if customer used secured network.

msung LED Signage Manager		1 1				
LED	HOME CONNE —	ECTIONS				\$?
	126					
INPUT SOURCE	.20	LAYOUT			() FAULT DEVICE	0
HD	2) Mi		2		ID Fault Type	
1920x1080 RESOLUTION	00:03:53 RUN TIME	1 ALL DEVICES	1 CONNECTED	0 Desconnected		



- Main Window-Home Window
 - Input source: Input source, resolution, connection time of S-BOX are shown.
 - Cabinet Layout : Layout, number of units, number of connections and number of disconnections in all LED cabinets are shown.
 - Faulty device: ID of the LED cabinet in error status and the content of the error are shown.









- Main Window-Edit Connection Layout Window
 - Connection layout: The location and the layout of each LED cabinet are adjusted in the output source area of the S-BOX. - 1
 - Feature View: Edit button to modify the connection information and LED cabinet automatic alignment function, etc. are provided. -(2)
 - Device Information/Setting View: The LED cabinet information is shown for in three different categories below: - 3
 - (i) Resolution: Resolution information of the input source
 - (ii) View Port: Width/Length size, Video wall matrix, x/y coordinate settings
 (iii) LED Signage Cabinet: x, y location of LED cabinet
 - Show ID: IDs of each will be shown in all connected LED cabinets when this option is selected. - ④
 - Save/Apply and Cancel (5)



Pre-installation On-site Checklist Installation Special Install Case

10-1 Control Program for PCs

- Main Window-Connection Window
 - Device connection list view: Check S-BOX composition, modify and delete S-BOX connection, show by each LED Cabinet Group - 1
 - Connection layout (View Port): Check the location and layout of each LED cabinet - 2
 - Category View: Home / Connections tab and settings -3
 - Device Information/Setting View:
 Change S-BOX settings (screen settings, etc.) ④
 - Sub Information View: Displays: Monitoring log, S-BOX and LED cabinet information. - (5)

LED	Home con	NECTIONS						\$ \$
+ NEW CONNECTION	2							
S-BOX 1 10.100.51.96							BASIC	^
S-BOX 2 10.100.51.96	6			11	14	15	Power Input	ON OFF Component ~
	5			12	13	16	PICTURE Picture Mode	^ 1080 ~
	4			19		17	Brightness Contrast Sharpness Color	1920 \$ 1437 \$ 1294 \$ 1080 \$
							Color Temp (K) Gamma	1920 1437 PIP
	JP Address : Ca	 LED Signaç vinet 7 	e Cabinet ∨ MAC Address :	LED Signage Box 10.89.2.219	SET ID Rang	je : 01-12	PICTURE OPTIONS	~
Copyright@2014	All Devices : Co Serial Number :	nnected 000000000000	Connected Devic	es : Wi-Fi direct	Disconnecte	d Devices : 13 / 14 /	5 ADVANCED SETTING	s ~

- Main Window-Connection Window Device Information/Setting View
 - Basic :
 - . Power On/Off, Change input source, Screen Mute / Freeze
 - Picture
 - . Change Picture Mode, Brightness / Contrast / Sharpness, Color, Tint(G/R), Color Temp(K), Gamma, White Balance adjustment
 - Picture Options
 - . Color Tone, HDMI Black Level, Film Mode, etc.
 - Advanced Settings
 Adjust Black Tone, Flesh Tone, Color Space, etc.
 - System
 - . Auto Power On/Off, Standby Control Clock, Timer, System Restart Interval Software Update function

Basic		^	Picture Options		\sim	System	
Power	On	Off	Color Tone	Off	~	Auto Power On	Off ~
Input Source	HDMI	~	MPEG Noise Filter	Off	\sim	Auto Power Off	Off ~
Screen Mute	On	Off	HDMI Black Level	Auto	~	Standby Control	On v
Freeze	On	Off	Film Mode	Off	~	Network Standby	Off ~
			Digital Clean View	Off	\sim		Clock Set
							DST
Picture		^					Timer
Picture Mode	Terminal & S	tatio ~	Advanced Settings		^		Holiday Management
Brightness	45	<u>^</u>	Black Tone	Darker	~		System Restart Interval
Contrast	70	~ 	Flesh Tone	0	$\hat{}$		Reset
Sharpness	65	÷	RGB Only Mode	Off	\sim		Software Update
Tint (G/R)	0	0		Color Space			
Color	0						
Color Temp (K)	6500	$\hat{}$					
Gamma	0	~					
White Balance	2 Poir	nt					

LSM(LED Signage Manager)

- Picture LED Picture size
 - You can control the output resolution of Sbox to fit the physical LED screen resolution.

LED Picture Size

 $\blacksquare MENU \rightarrow Picture \rightarrow LED Picture Size \rightarrow \bigcirc$ Set the details of the picture size.

Output Resolution

Provides optimized pictures according to the LED screen resolution.

• UHD / FHD

The Video Wall function is not supported when Picture → LED Picture Size → Output Resolution is set to FHD.

LED Picture Size

Choose size and aspect ratio picture displayed on screen. To manually adjust the LED picture size, select Custom.

- Original: Display images in the original picture quality.
- Custom: Changes the resolution to suit the user's preferences.

Resolution

Set the width and height of the LED picture. (Max : 3840 x 2160)

HDMI UHD Color	Width x Height				
	Max	Min			
Off	1920 x 1080	182 x 182			
On	3840 x 2160	408 x 408			

Available only when LED Picture Size is set to Custom.

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Pre-installation On-site Installation Special Install Checklist

Control Program for PCs

LSM(LED Signage Manager)

- System System Restart Interval (Cont'd)
 - To stabilize the S-box(SBB-SNOWJ3U), execute a reboot automatically at a weekly time.
 - Default setting : 4:00am, Monday. (Reboot will be executed 4:00am.~5:00am actually.)
 - Reboot time can be changed by LSM System restart Interval

System

Syste

Auto Power On

Standby Control

Network Standby

Off

Clock

Software I

• Check whether the clock setting of S-box is correct, or not. If clock is not correct, S-box may reboot at undesired time.

~ ×	System Resta	art Interval	\times
* * *	Repeat Day:	Sun Mon Tue Wed Thu Fri Sat	t
gement	Repeat Time:	4 🗘 00 🗘 AM 🗸	
Interval		OK Cancel	

m		^			
Power On	Off	×	Clock Set		
Power Off	Off	~	CIUCK SEL		
dby Control	On	~			
vork Standby	Off	~	Date		Ē
	Clock Set				
	DST		Time	12 🗘 00 🗘 PM	\sim
	Timer				
	Holiday Manageme	ent			
	System Restart Inte	rval		(ок) (Cancel
	Reset				
	Software Update				



- System System Restart Interval
 - If you don't want to reboot S-Box once a week, you must change the option of factory menu.
 - · Factory Control LFD Option Weekly Reboot : ON → OFF
 - How to access Factory menu : Refer to P. 19



		dichi	avcolution
Source Ident		SHOP'S GAMMA	
Video Wall Settings		Auto Source Switch Duration	10
Always Auto Adj	OFF	Audience Measurement	
B2B Spec Support		No Signal Color	Black
No Signal User Image	0	Internal Speaker	Both
Mediaplay OSD option	0	Config_LFD_Path	
RTL8201 MAC		External IR Support	OFF
9 Axis Pointer Support	ON	KPI Support	OFF
IR SERIAL LOOP OUT	OFF	DVI-I Port Select	AUTO
IWB Support	OFF	Custom Resolution	OFF
Copy ACM Data to USB	Failure	Weekly Reboot	ON
ST Model Support	0		
EMITOUCH	OFF		



- Main Window-Connection Window Device Information/Setting View
- Cabinet Settings
 - . ABL, Gamut, Backlight
 - . Software Update function (FPGA, Calibration data, etc.)
- Cabinet Calibration
 - . RGB CC Calibration of each Module
 - . Edge Correction of each Module
 - . CC On/Off and Edge On/Off
 - . Batch Upload/Download of module calibration data available through Import / Export

			Module Calib	ration						2
Cabinet Settings		^	Cabinet ID: <	2 >	Modu	ile RGB CC 🛛	Ed	ge Corr	ection 🗸	
ABL	On	Off							(Э
Onscreen Display	On	Off	M1	M2		R	G		в	
Auto Source	On	Off			r	15000 🗘	0	$\hat{}$	0	$\hat{}$
Input Source	DP	~	M3	M4	g	0 🗘	15000	$\hat{}$	0	$\hat{}$
Gamut	Natural	~			b	0 🗘	0	$\hat{}$	15000	$\hat{\sim}$
Backlight	0	0	M5	M6			leset		Reset All	
	Software	Update								
	Software	Update			Modu	ule RGB CC	E	lge Cor	rection /	^
Cabinet Calibratio	Software	Update			Modu	ule RGB CC	Ed 16384	dge Cor	rection /	^
Cabinet Calibratio	Software n Module C	Update			Mode	ule RGB CC 💉	16384	dge Cor	rection /	^ 0
Cabinet Calibratio	Module C On	update ^			Mode 16	ule RGB CC 、	Ec 16384 (16384 (dge Cor	rection /	▲
Cabinet Calibratio Pixel RGB CC Module RGB CC	Module C On On	alibration Off Off			Mode 16	ule RGB CC	16384 (16384 (dge Cor	rection /	↓

- Main Window-Connection Window Sub Information View
 - Monitor Window:
 - \checkmark Checking MDC communication log and connected device information available, able to be extracted via file
 - LED Signage Cabinet:
 - $\checkmark\,$ IC information and Power information of LED cabinet
 - LED Signage Box:
 - √ IP address, MAC address, ID range of LED cabinet, number of LED cabinet.
 (all/connected/not connected), serial number, version information



Monitor Window 🗸	LED Signage Cabinet ^	LED Signage Box	\sim		
IC	Power				
FPGA : Available	5W : Available				
STM32 : Not Available	3.3W : Available				1.1
Power Detect IC : Available	1.8W : Available				- 1
	1.2\M · Available				
Monitor Window 🗸 🗸	.ED Signage Cabinet 🗸	LED Signage Box	^		
IP Address : 10.88.44.126	MAC Address	: 90:F1:AA:72:EF:BE		SET ID Range : 2-19	
All Devices ± 1	Connected Dev	ices : 1		Disconnected Devices : 0	
Serial Number :	Version : T-	GFSLDWWC-1025.2	UP	PDATE	

Pre-installation On-site Checklist Installation Special Install Case

Control Program for PCs

- Main Window-Preference
 - · Options
 - √ number of times the command retried interval of checking error status alarm temperature warnings
 - Support
 - ✓ program language
 Log data management
 notify device error through Mail
 Password settings option
 - About Software
 - $\checkmark\,$ the current version of LSM and update function

Preferences	
- Options	
Command Retry Count	1 0
Error Status Interval (min.)	30 🗘 min
✓ Temperature Alert	65 🗘 °C
Auto Brightness	⊙ Off
	O Brightness Sensor Edit
	O Multiple Display ABL Edit
Location	Edit
upport	
Language	English ~
Advance Log Management	✓ Keep log data 1 🗘 days
	Log Backup
	Delete Log
Use Password	Change Password
Fault Device Alert	10 🗘 min Mail Server

About Software				
	004.02			
Current Version A-LEDMGDSP-	004.03			
Auto Update	Check for Updates			
Open Source License	View details			
This program is protected by copy Unauthorized reproduction or distr	ght laws and international treaties. bution of this program, or any portion †	hereof, may result in serious civil and	criminal penalties.	

- Steps to upgrade FW
 - Download file from SLM. (URL)
 - Extract file that include 'info.txt' and image file.
 - Run LSM and connect it to S-Box and LED cabinets.
 - LSM can update S-Box SW and Cabinet SW,
- S-Box SW
 - Go to S-Box Settings > System > Software Update menu in LSM.
 - Select correct file such as bem(Hawk M), bin(FPGA) or zip(VALENS) file.
 - · Select update button.
 - · Wait for the complete of update.
- Cabinet SW
 - Go to Cabinet Settings > Software Update in LSM.
 - Select correct file such as .img, bin or txt(except for info.txt).
 - · Select update button.
 - Wait for the complete of update.

LSB Firmware	Update	×
Add the update file	e and start the update.	
Target Device [P Current Version	10.8843.107 TB-H MSBHDWWC-0404.20 TB-H KMLBFWWS-1002	
Browse		
S-Box Update		
	Update Close	

Update	×
File:	Browse
	0%
	Update Cancel
Cabinet Update	J



Use Multiple S-BOX for a Screen

S-BOX Connection (Grouping)

(1) Enable S-Box Grouping

• Home \rightarrow Video Wall : OFF \rightarrow On



[Cautions!!]

- 1) Setup supported resolution for grouping before the grouping function of multi s-box is run by LSM.
- It can cause the noise of picture or blackout, if resolution is not supported.
 Please change the Video Wall is to OFF, and setup the resolution to supported timing.
 Refer to the next page for supported resolution.
- **※** From '17.06, LSM support S-Box Grouping. Check the latest LSM version.

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Use Multiple S-BOX for a Screen

2 Setup the resolution of input PC

• PC: Click the right button of mouse \rightarrow Click Screen resolution \rightarrow Click Advanced settings

۵	새 폴더(N) View Sort by Refresh	>	Change the appearance of your displays
•	Paste Paste shortcut NVIDIA Control Panel		Display: 1. S27C590 Resolution: 1920 × 1080 (recommended)
S	공유 폴더 동기화 New	>	Orientation: Landscape Multiple displays: Extend these displays This is currently your main display. Advanced settings
	Screen resolution		Make text and other items larger or smaller
₽	Gadgets Personalize		What display settings should I choose? OK Cancel Apply

■ Click "Monitor" tap → Monitor Settings → Setup "Screen refresh rate" to 60Hz

lapter Monitor Troubleshoot Color Management Monitor Type 일반 PnP 모니터 @Properties
Monitor Type 일반 PnP 모니터
일반PhP 모니터
Properties
Monitor Settings
Screen refresh rate:
60 Hertz
50 Hertz
59 Hertz
60 Hertz
monitor cannot display correctly. This may lead to an unusable display and/or damaged hardware.
Colors:
True Color (32 bit)
OK Cancel Apply

Samsung Electronics

Use Multiple S-BOX for a Screen

3 Supported resolution for S-box grouping

SNOW-1703U / SNOW-1703ULD: Normal mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)	S-Box Grouping Supported
VESA, 1024 x 768	48.363	60.004	65.000	N / N	0
VESA, 1280 x 720	45.000	60.000	74.250	P/P	0
VESA, 1280 x 1024	63.981	60.020	108.000	P / P	0
VESA, 1600 x 900	60.000	60.000	108.000	P/P	0
VESA, 1920 x 1080	67.500	60.000	148.500	P/P	0
CTA-861 VIC 4, 1280 x 720	45.000	60.000	74.250	P / P	0
CTA-861 VIC 16, 1920 x 1080	67.500	60.000	148.500	P / P	0
CTA-861 VIC 18, 720 x 576	31.250	50.000	27.000	N / N	0
CTA-861 VIC 19, 1280 x 720	37.500	50.000	74.250	P / P	0
CTA-861 VIC 31, 1920 x 1080	56.250	50.000	148.500	P/P	0
CTA-861 VIC 96, 3840 x 2160	112.500	50.000	594.000	P/P	0
CTA-861 VIC 97, 3840 x 2160	135.000	60.000	594.000	P/P	0
SNOW-1703ULD: Live Mode					
VESA, 1920 x 1080	67.500	60.000	148.500	P/P	0
VESA CVT, 1920 x 1080	66.587	59.934	138.500	P/N	0
VESA CVT, 3840 x 2160	133.313	59.997	533.250	P/N	0
CTA-861 VIC 16, 1920 x 1080	67.500	60.000	148.500	P / P	0
CTA-861 VIC 97, 3840 x 2160	135.000	60.000	594.000	P/P	0

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