LED TV

Project : HJ470
Chassis : HNW80
Model : HG32NJ470NF
HG40NJ470MF
HG43NJ470MF
HG49NJ470MF

SERVICE Manual

Hospitality Displays

HG40NJ470MF

Contents

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Printed in Korea

3. Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the LED TV.

WARNING

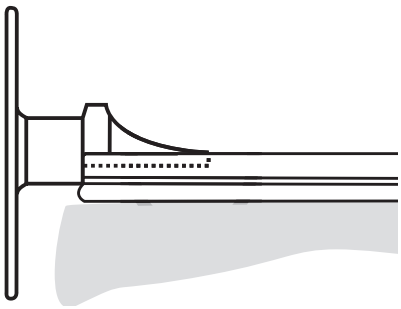
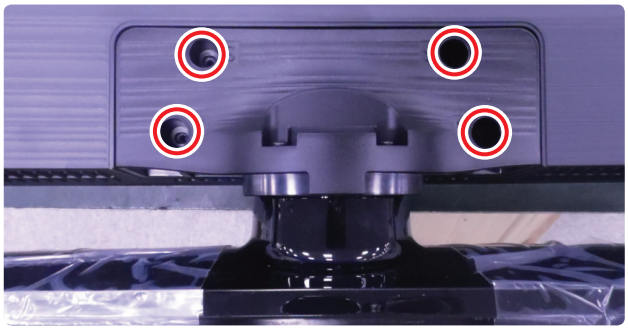
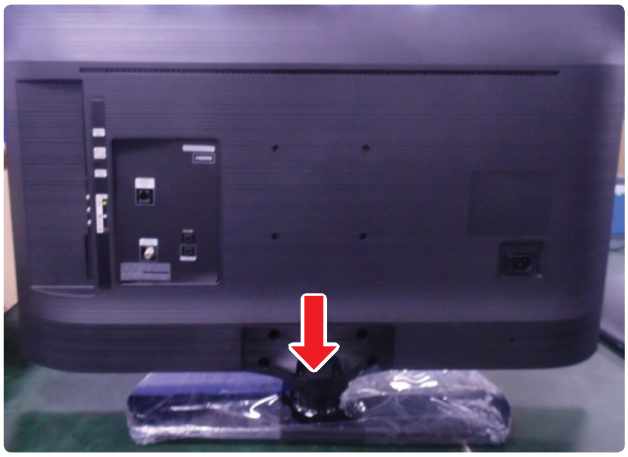
This LED TV contains electrostatically sensitive devices. Use caution when handling these components.

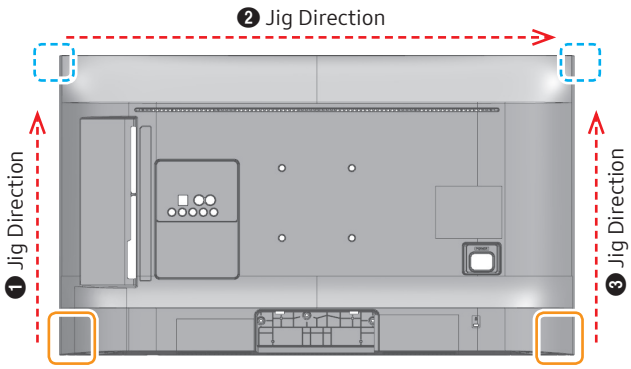
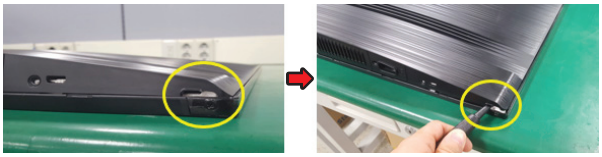
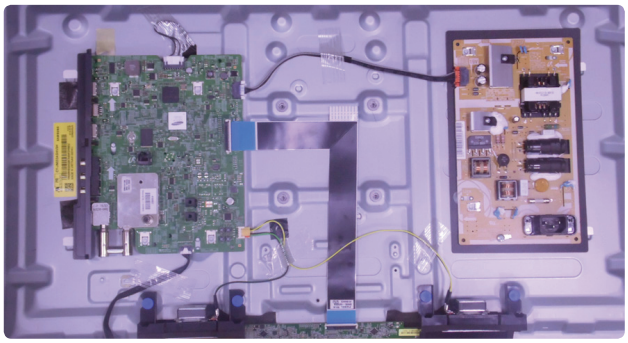
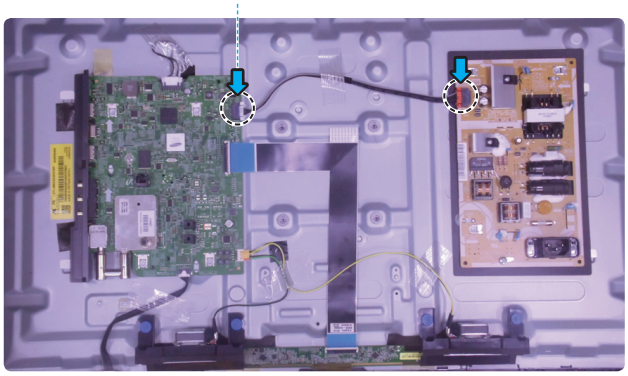
3-1. Disassembly and Reassembly

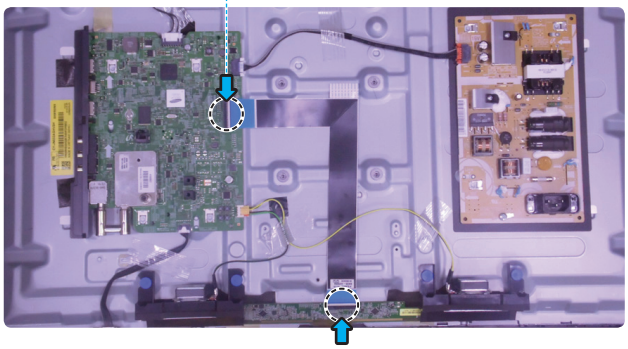
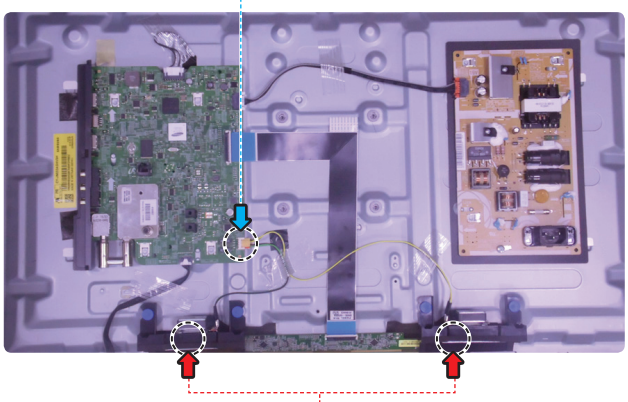
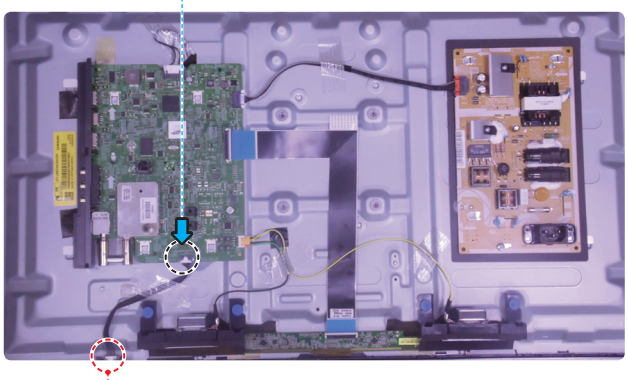
CAUTION

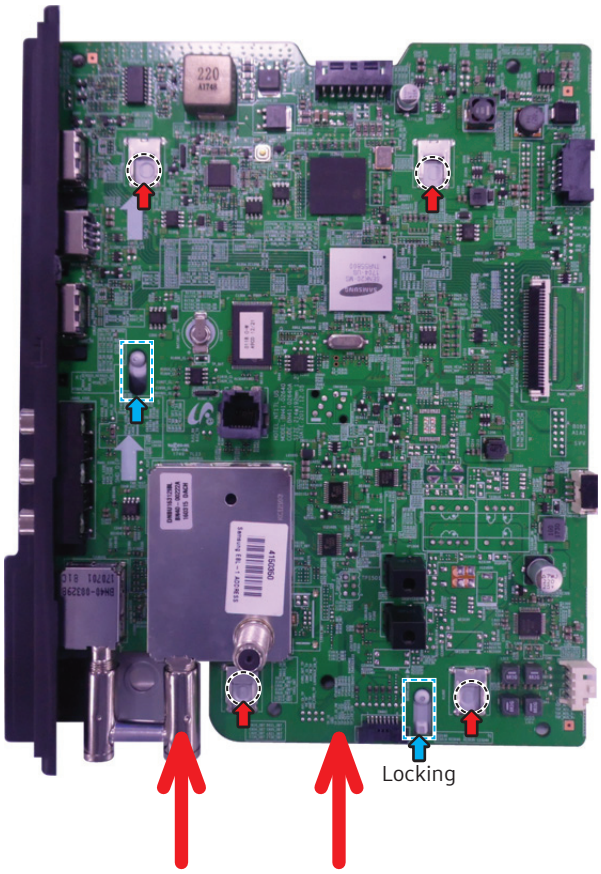
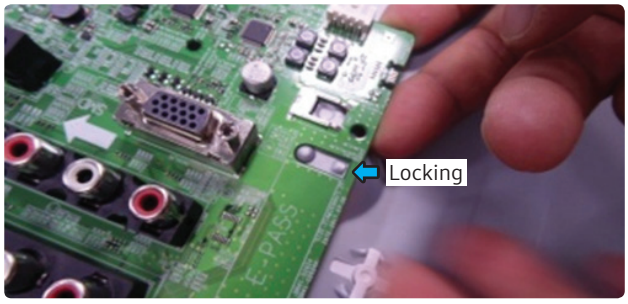
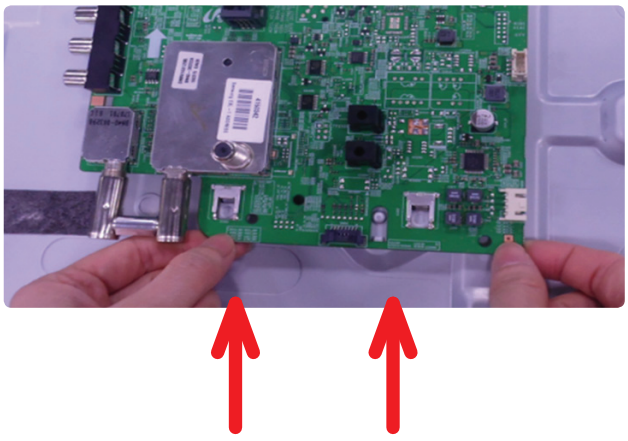
1. Disconnect the LED TV from the power source before disassembly.
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
3. If there is no additional coment, it is same for all incheses.

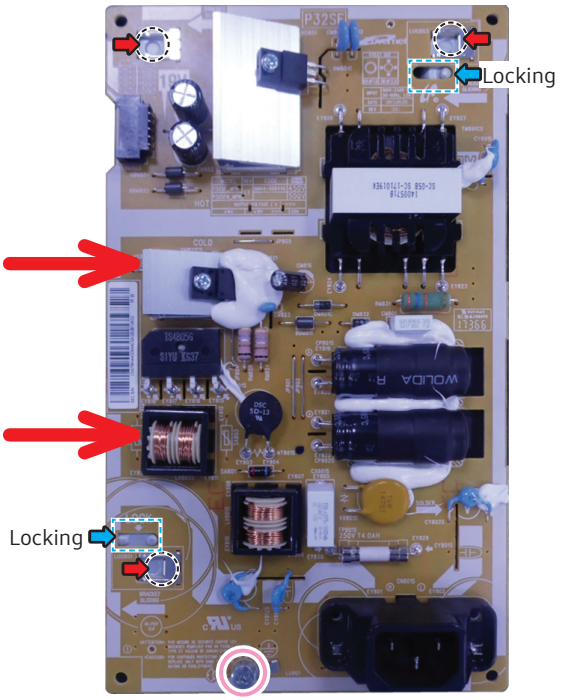
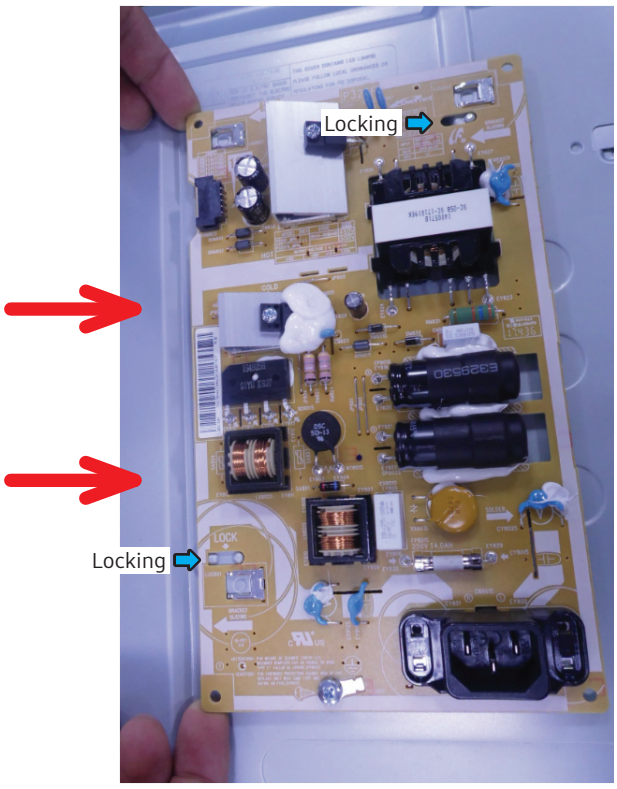
■ 32 inches

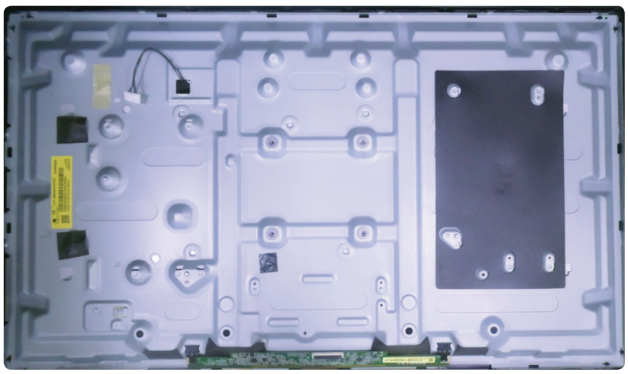
Description & Screws	Picture Description
1 Place TV face down on cushioned table.	
2 Remove the screws from the ASSY STAND P-GUIDE. • 4 EA **Screws**  6003-001782 SCREW-TAPTYPE : M4 x L12, ZPC(BLK) • COMMON	
3 Remove the ASSY STAND P-BOTTOM.	

Description & Screws	Picture Description
4 Remove the ASSY COVER P-REAR. • Remove screws from the Cover and Insert the Opening-Jig at the indicated positions to release bottom left corners of the rear cover. • 3 EA **Screws**  6001-002755 SCREW-MACHINE : M3 x L6, ZPC(BLK) • C/R+CH/R **Open Jigs**  BN81-12884A	   <Bottom Conner> 
5 Remove the Cables. • ➡ LEAD CONNECTOR-POWER Cable	LEAD CONNECTOR-POWER Cable 

Description & Screws	Picture Description
• ➡ FFC CABLE	FFC CABLE 
6 Remove the ASSY SPEAKER P-FRONT(R/L). • ➡ ASSY SPEAKER P-FRONT Cable	ASSY SPEAKER P-FRONT Cable  ASSY SPEAKER P-FRONT(R/L) 
7 Remove the ASSY BOARD P-FUNCTION ONE KEY. • ➡ LEAD CONNECTOR-SUB ASSY (ASSY BOARD P-FUNCTION ONE KEY)	LEAD CONNECTOR-SUB ASSY  ASSY BOARD P-FUNCTION ONE KEY

Description & Screws	Picture Description
8 Remove the ASSY PCB MAIN BOARD. • ➡ Locking • ➡ Bottom chassis Guide Fixing Hole	
• Gently lift up (Bottom Right corner) to release the ➡ Locking.	
• Use both hands to hold the board and slide Up to release the board.	

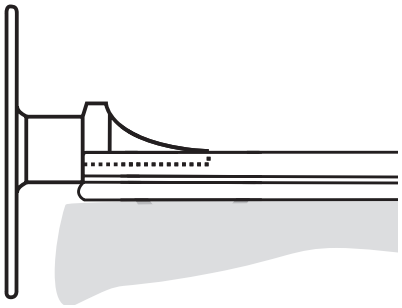
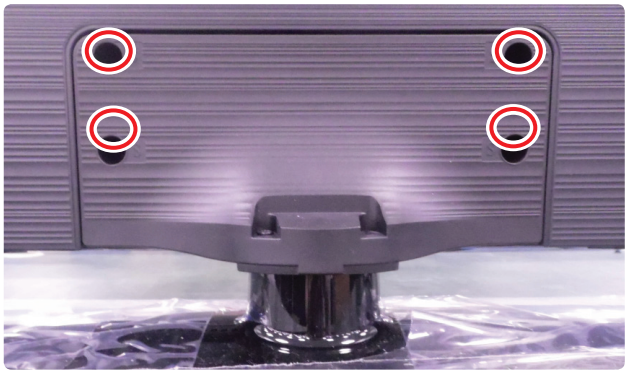
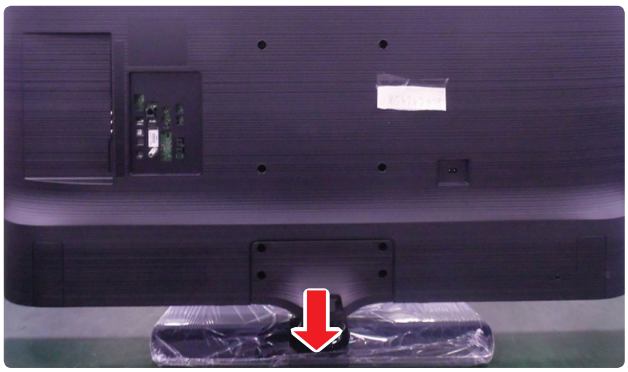
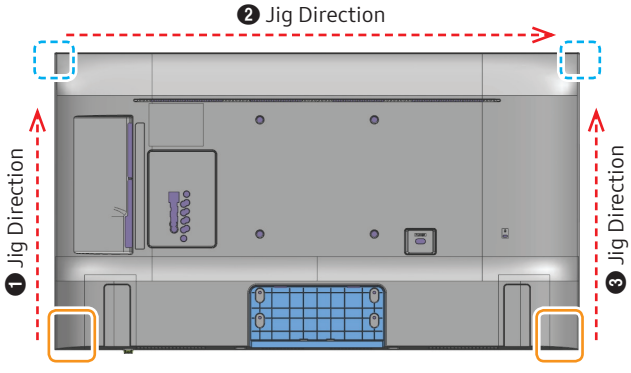
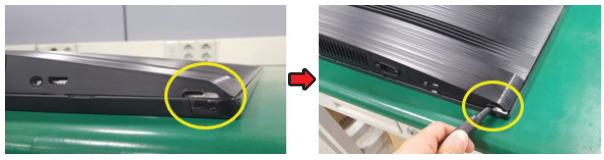
Description & Screws	Picture Description
9 Remove the DC VSS-PD BOARD. • ➡ Locking • ➡ Bottom chassis Guide Fixing Hole Remove the Screws. • 1 EA **Screws**  6003-001439 SCREW-TAPTYPE : M4 x L8, ZPC(WHT) • SMPS+B/C	
• Gently lift up (Bottom Right corner) to release the ➡ Locking. • Use both hands to hold the board and slide Up to release.	

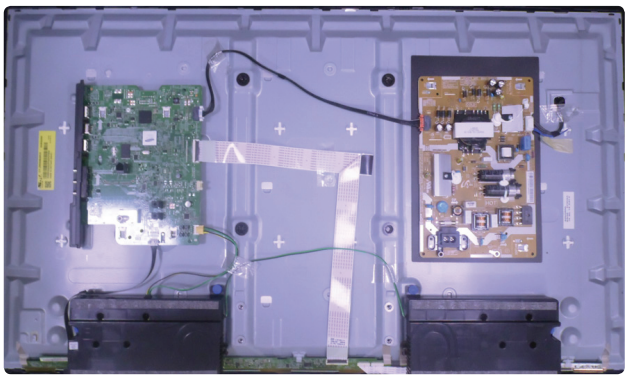
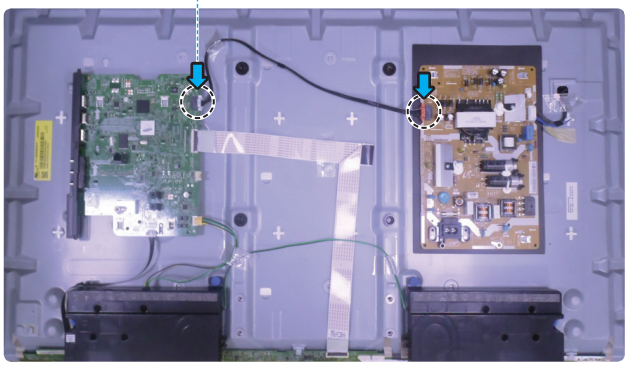
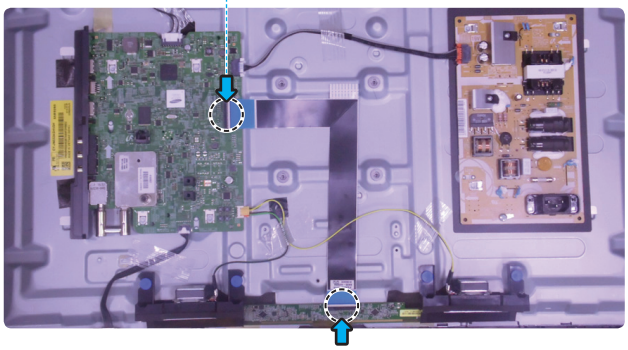
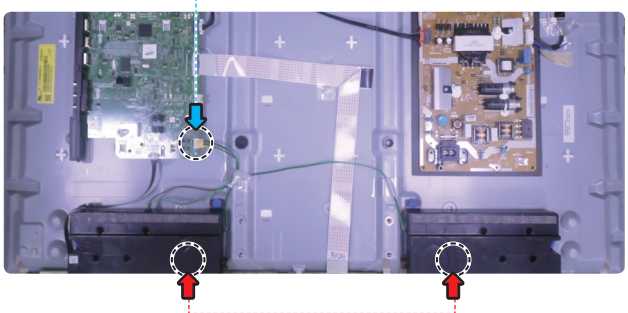
Description & Screws	Picture Description
10 Completed disassembly. • Panel	

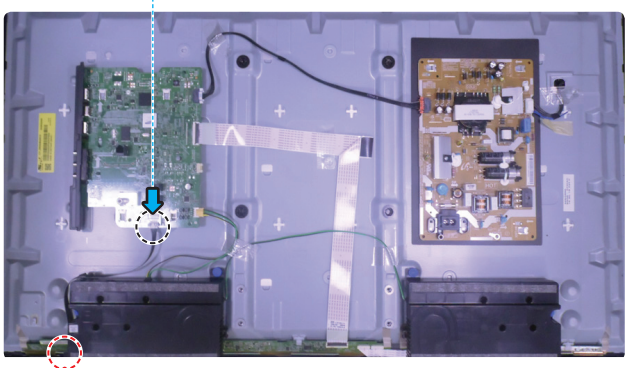
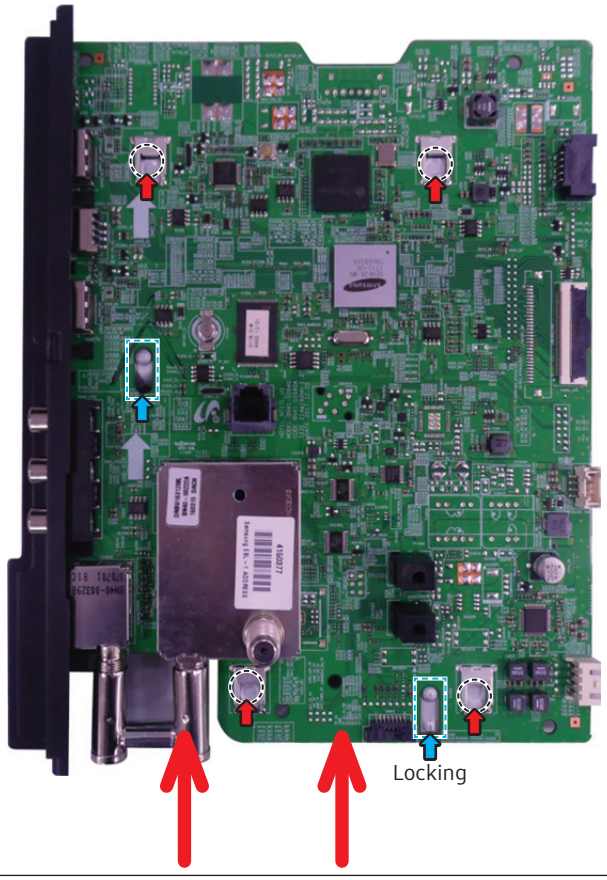
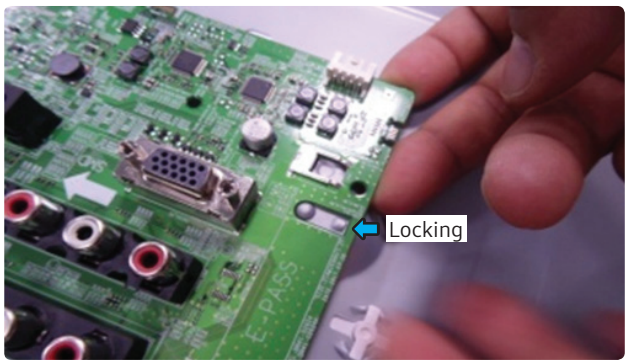
NOTE

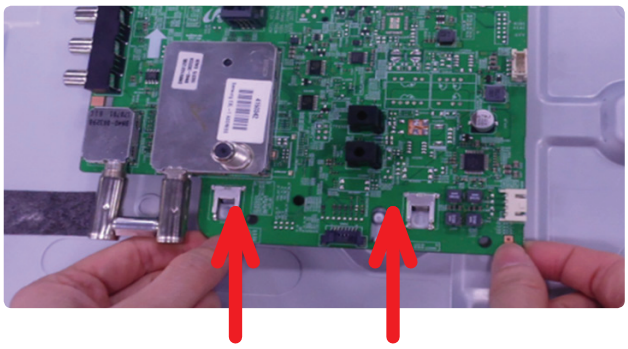
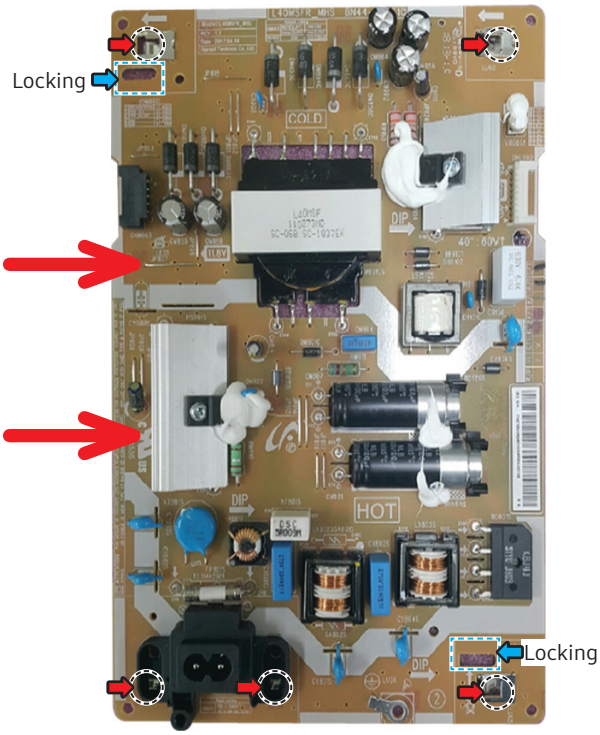
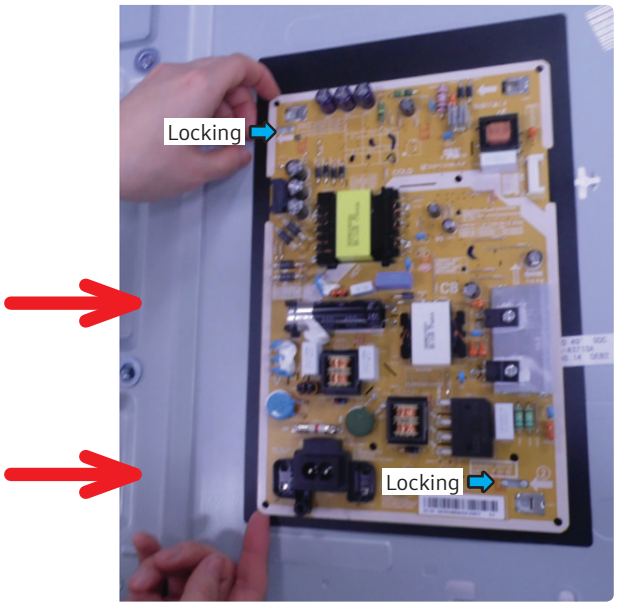
Reassembly procedures are in the reverse order of disassembly procedures.

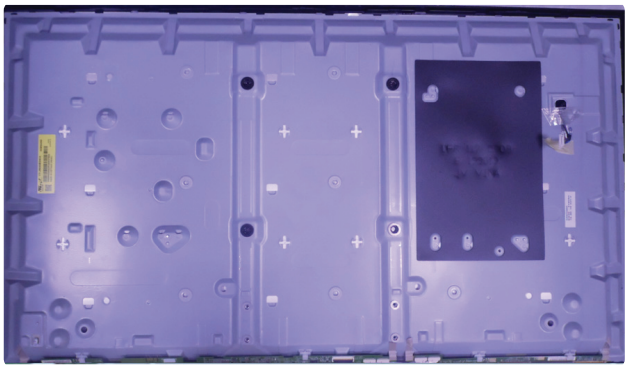
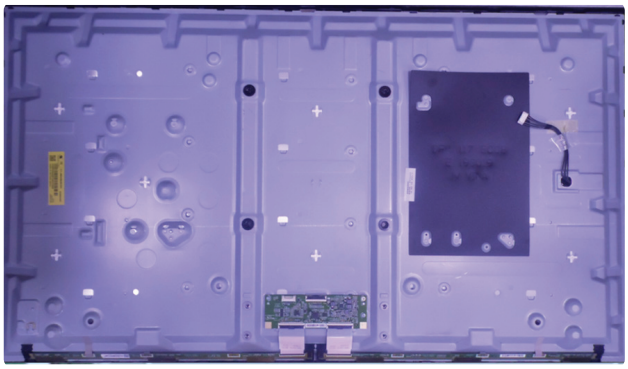
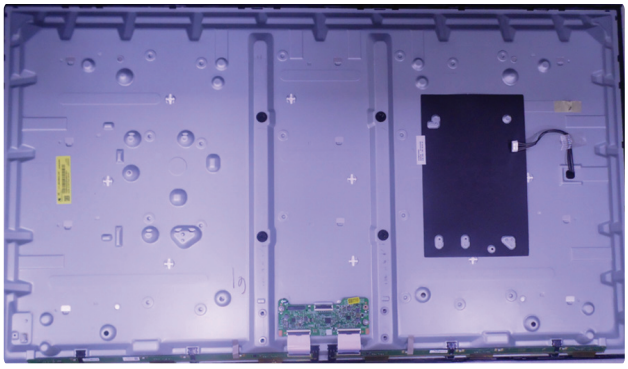
■ 40/43/49 inches

Description & Screws	Picture Description
1 Place TV face down on cushioned table.	
2 Remove the screws from the ASSY STAND P-GUIDE. • 4 EA **Screws** **6003-001899** SCREW-TAPTYPE : M4 x L14, ZPC(BLK) • SET+STAND	
3 Remove the ASSY STAND P-BOTTOM.	
4 Remove the ASSY COVER P-REAR. • Remove screws from the Cover and Insert the Opening-Jig at the indicated positions to release bottom left corners of the rear cover. **Open Jigs**  BN81-12884A	❷ Jig Direction  ❶ Jig Direction ❸ Jig Direction  <Bottom Conner>

Description & Screws	Picture Description
	
5 Remove the Cables. • ➪ LEAD CONNECTOR-POWER Cable	LEAD CONNECTOR-POWER Cable 
• ➪ FFC CABLE	FFC CABLE 
6 Remove the ASSY SPEAKER P-FRONT(R/L). • ➪ ASSY SPEAKER P-FRONT Cable	ASSY SPEAKER P-FRONT Cable  ASSY SPEAKER P-FRONT(R/L) 

Description & Screws	Picture Description
7 Remove the ASSY BOARD P-FUNCTION ONE KEY. • ➡ LEAD CONNECTOR-SUB ASSY (ASSY BOARD P-FUNCTION ONE KEY)	LEAD CONNECTOR-SUB ASSY  ASSY BOARD P-FUNCTION ONE KEY
8 Remove the ASSY PCB MAIN BOARD. • ➡ Locking • ➡ Bottom chassis Guide Fixing Hole	
• Gently lift up (Bottom Right corner) to release the ➡ Locking.	

Description & Screws	Picture Description
• Use both hands to hold the board and slide Up to release the board.	
9 Remove the DC VSS-PD BOARD. • ➡ Locking • ➡ Bottom chassis Guide Fixing Hole	
• Gently lift up (Bottom Right corner) to release the ➡ Locking. • Use both hands to hold the board and slide Up to release.	

Description & Screws	Picture Description
10 Completed disassembly. • 40"	
• 43"	
• 49"	

NOTE

Reassembly procedures are in the reverse order of disassembly procedures.

1. Precautions

1-1. Safety Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1-1. Warnings

WARNING

For continued safety, do not attempt to modify the circuit board.

Disconnect the AC power and DC power jack before servicing.

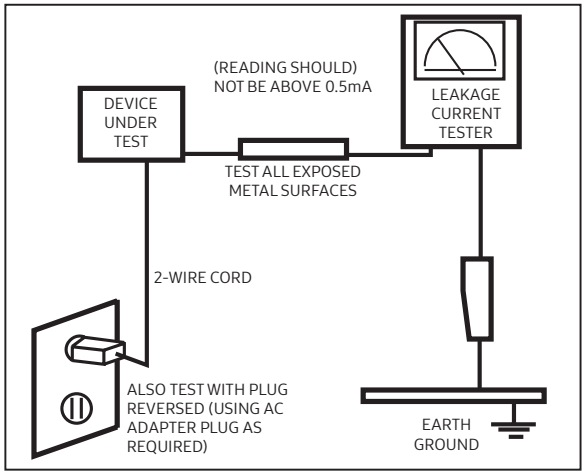
1-1-2. Servicing the LED TV

1. When servicing the LED TV, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3. Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistorcapacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check:



WARNING

Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts.
   The current measured should not exceed 0.5 milliamp.
   Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safetyrelated characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2. Servicing Precautions

WARNING

An electrolytic capacitor installed with the wrong polarity might explode.

CAUTION

Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

NOTE

If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1. General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to theblades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3. Static Electricity Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION

   Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (0.4m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.
8. If an equipment is provided with a replaceable battery, and if replacement by an incorrect type could result in an explosion (for example, with some lithium batteries), the following applies:

CAUTION

- Risk of explosion if battery is replaced by an incorrect type dispose of used batteries according to the instructions.
- Do not dispose of batteries in a fire.
- Do not short circuit, disassemble or overheat the batteries.
- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- Do not be exposed to excessive heat such as sunshine, fire or the like.

2. Product Specifications

2-1. Product information

Model	HG**NJ470*F		
Front View	 * W : Width H : High D : Depth		
Detail View			
Color	Front : CHARCOAL BLACK / Stand : BLACK		
Dimensions (W x H x D)	32"	Body	737.4 x 74.1 x 438.0 mm
		With Stand	737.4 x 192.6 x 484.6 mm
	40"	Body	917.1 x 77.0 x 527.7 mm
		With Stand	917.1 x 226.5 x 578.3 mm
	43"	Body	979.9 x 77.3 x 571.9 mm
		With Stand	979.9 x 226.5 x 623.4 mm
	49"	Body	1112.8 x 78.3 x 646.5 mm
		With Stand	1112.8 x 226.5 x 698.0 mm
Weight	32"	Without Stand	4.0 kg
		With Stand	5.6 kg
	40"	Without Stand	7.0 kg
		With Stand	10.0 kg
	43"	Without Stand	8.0 kg
		With Stand	11.0 kg
	49"	Without Stand	10.3 kg
		With Stand	13.4 kg

2-2. Product specification

NOTE

Design and specifications are subject to change without prior notice.

Last Update Date : 2018.08.12

Item		HG32NJ470NFXZA
General Information	Product	LED
	Country	UNITED STATES
	Platform(TV)	Novatek | NT17L
Display	Backlight	LED
	Screen Size	32
	Resolution	1,366 x 768
Video	Picture Engine	Hyper Real
	Micro Dimming	N/A
	Auto Motion Plus	N/A
	Film Mode	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	10W(L:5W, R:5W)
	Speaker Type	2CH
	Woofer	N/A
Smart TV	Samsung SMART TV	N/A
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	N/A
General Feature	Processor	N/A
	Accessibility	Voice Guide
	Digital Clean View	Yes
	Auto Channel Search	Yes
	Auto Power Off	Yes
	Caption (Subtitle)	Yes
	Connect Share™ (HDD)	N/A
	ConnectShare™ (USB 2.0)	Yes
	EPG	Yes
	Game Mode	Yes
	OSD Language	English, Spanish, French
	Picture-In-Picture	Yes
	BT HID Built-in	N/A
	USB HID Support	N/A
	Teletext (TTX)	N/A

Item		HG32NJ470NFXZA
System	Digital Broadcasting	ATSC/ClearQAM
	Analog Tuner	Yes
	CI (Common Interface)	N/A
	Data Broadcasting	N/A
Hospitality Feature	Samsung LYNK™ HMS Compatibility	No
	H.Browser Compatibility	No
	Samsung LYNK™ REACH (IP)	No
	Samsung LYNK™ REACH (RF)	REACH 4.0
	Hospitality Home Menu	Home Menu 2015
	Bluetooth Music Player (Mobile → TV)	No
	Hospitality Plug&Play (Easy Set-up)	Yes
	Auto Source Mode	Yes
	Power On Mode	Yes
	Hotel Channel List	Yes
	Channel Menu Display	Yes
	Mixed Channel List (ATSC, DVB-T/T2/C/S2, Analog)	Yes
	My Channel	Yes
	Energy Saving Mode (BLU Control)	Yes
	Logo Display with Time Out Setting (BMP/Movie)	Yes
	Welcome Message	Yes
	RJ12/IR Pass Through	Yes
	External Clock Compatibility	No
	Clock Back Up Supply	Yes
	External Clock Dimming Control	No
	Software Clock	Yes
	Multi Code Remote Control	Yes
	Screwed Remote Battery Cover	Yes
	Soundbar Compatibility	Yes
	Music Mode (Input: PC/AV/Component/HDMI)	Yes
	Music Mode Backlight on/off	Yes
	TTX Clock Update (Analogue)	No
	USB Cloning	Yes
	Smoovie Compatibility	Yes
	Soft AP	No
	On/Off Timer (Schedule)	Yes
	Wake-up Timer (Alarm)	Yes
	Samsung LYNK™ DRM	Yes
	Pro:Idiom	No

Item		HG32NJ470NFXZA
Hospitality Feature	bLAN	No
	Security Mode	Yes
	S/W EPG (Solution EPG)	Yes
	IP Over Coax	No
Input & Output	USB (Side/Rear)	1
	Composite In (AV) (Side/Rear)	1/0
	RF In (Terrestrial / Cable input) (Side/Rear)	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	1
	CI Slot (Side/Rear)	N/A
	HDMI A / Return Ch. Support	Yes
	Wireless LAN Built-in	N/A
	Anynet+ (HDMI-CEC)	Yes
	Pillow Speaker Jack (Side/Rear)	No
	Variable Audio Out (Side/Rear)	No
	Variable Audio Out Volume Control (Side/Rear)	No
	Video Out (Side/Rear)	No
	RJ12 (Side/Rear)	0/1
	RJP (Remote Jackpack) (Side/Rear)	0/1
	Headphone ID (Side/Rear)	No
	Door-Eye Control (Side/Rear)	No
	Door-Eye Video In (Side/Rear)	No
	PC In (D-sub) (Side./Rear)	No
	PC/DVI Audio In (Mini Jack) (Side./Rear)	No
	Ethernet Bridge (LAN-Out)	N/A
Design	Front Color	Black Hairline
	Stand Type	Square
	Swivel (Left/Right)	90/90
Eco	ENERGY STAR (Latest effective version)	Yes
	Eco Sensor	N/A
Power	Power Supply (V)	AC110-120V 50/60Hz
	Power Consumption (Max)	60 W
	Power Consumption (Stand-by)	0.50 W
	Power Consumption (Typical)	28.0 W

Last Update Date : 2018.07.20

Item		HG40NJ470MFXZA
General Information	Product	LED
	Country	UNITED STATES
	Platform(TV)	Novatek | NT17L
Display	Backlight	LED
	Screen Size	40
	Resolution	1,920 x 1,080
Video	Picture Engine	Hyper Real
	Micro Dimming	N/A
	Auto Motion Plus	N/A
	Film Mode	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W(L:10W, R:10W)
	Speaker Type	2CH
	Woofer	N/A
Smart TV	Samsung SMART TV	N/A
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	N/A
General Feature	Processor	N/A
	Accessibility	Voice Guide
	Digital Clean View	Yes
	Auto Channel Search	Yes
	Auto Power Off	Yes
	Caption (Subtitle)	Yes
	Connect Share™ (HDD)	N/A
	ConnectShare™ (USB 2.0)	Yes
	EPG	Yes
	Game Mode	Yes
	OSD Language	English, Spanish, French
	Picture-In-Picture	Yes
	BT HID Built-in	N/A
	USB HID Support	N/A
	Teletext (TTX)	N/A
System	Digital Broadcasting	ATSC/ClearQAM
	Analog Tuner	Yes
	CI (Common Interface)	N/A
	Data Broadcasting	N/A
Hospitality Feature	Samsung LYNK™ HMS Compatibility	No

Item		HG40NJ470MFXZA
Hospitality Feature	H.Browser Compatibility	No
	Samsung LYNK™ REACH (IP)	No
	Samsung LYNK™ REACH (RF)	REACH 4.0
	Hospitality Home Menu	Home Menu 2015
	Bluetooth Music Player (Mobile → TV)	No
	Hospitality Plug&Play (Easy Set-up)	Yes
	Auto Source Mode	Yes
	Power On Mode	Yes
	Hotel Channel List	Yes
	Channel Menu Display	Yes
	Mixed Channel List (ATSC, DVB-T/T2/C/S2, Analog)	Yes
	My Channel	Yes
	Energy Saving Mode (BLU Control)	Yes
	Logo Display with Time Out Setting (BMP/Movie)	Yes
	Welcome Message	Yes
	RJ12/IR Pass Through	Yes
	External Clock Compatibility	No
	Clock Back Up Supply	Yes
	External Clock Dimming Control	No
	Software Clock	Yes
	Multi Code Remote Control	Yes
	Screwed Remote Battery Cover	Yes
	Soundbar Compatibility	Yes
	Music Mode (Input: PC/AV/Component/HDMI)	Yes
	Music Mode Backlight on/off	Yes
	TTX Clock Update (Analogue)	No
	USB Cloning	Yes
	Smoovie Compatibility	Yes
	Soft AP	No
	On/Off Timer (Schedule)	Yes
	Wake-up Timer (Alarm)	Yes
	Samsung LYNK™ DRM	Yes
	Pro:Idiom	No
	bLAN	No
	Security Mode	Yes
	S/W EPG (Solution EPG)	Yes
	IP Over Coax	No
Input & Output	USB (Side/Rear)	1

Item		HG40NJ470MFXZA
Input & Output	Composite In (AV) (Side/Rear)	1/0
	RF In (Terrestrial / Cable input) (Side/Rear)	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	1
	CI Slot (Side/Rear)	N/A
	HDMI A / Return Ch. Support	Yes
	Wireless LAN Built-in	N/A
	Anynet+ (HDMI-CEC)	Yes
	Pillow Speaker Jack (Side/Rear)	No
	Variable Audio Out (Side/Rear)	No
	Variable Audio Out Volume Control (Side/Rear)	No
	Video Out (Side/Rear)	No
	RJ12 (Side/Rear)	0/1
	RJP (Remote Jackpack) (Side/Rear)	0/1
	Headphone ID (Side/Rear)	No
	Door-Eye Control (Side/Rear)	No
	Door-Eye Video In (Side/Rear)	No
	PC In (D-sub) (Side./Rear)	No
	PC/DVI Audio In (Mini Jack) (Side./Rear)	No
	Ethernet Bridge (LAN-Out)	N/A
Design	Front Color	Black Hairline
	Stand Type	Square
	Swivel (Left/Right)	90/90
Eco	ENERGY STAR (Latest effective version)	Yes
	Eco Sensor	N/A
Power	Power Supply (V)	AC110-120V 50/60Hz
	Power Consumption (Max)	100 W
	Power Consumption (Stand-by)	0.50 W
	Power Consumption (Typical)	36.0 W

Last Update Date : 2018.07.19

Item		HG43NJ470MFXZA
General Information	Product	LED
	Country	UNITED STATES
	Platform(TV)	Novatek | NT17L
Display	Backlight	LED
	Screen Size	43
	Resolution	1,920 x 1,080
Video	Picture Engine	Hyper Real
	Micro Dimming	N/A
	Auto Motion Plus	N/A
	Film Mode	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W(L:10W, R:10W)
	Speaker Type	2CH
	Woofer	N/A
Smart TV	Samsung SMART TV	N/A
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	N/A
General Feature	Processor	N/A
	Accessibility	Voice Guide
	Digital Clean View	Yes
	Auto Channel Search	Yes
	Auto Power Off	Yes
	Caption (Subtitle)	Yes
	Connect Share™ (HDD)	N/A
	ConnectShare™ (USB 2.0)	Yes
	EPG	Yes
	Game Mode	Yes
	OSD Language	English, Spanish, French
	Picture-In-Picture	Yes
	BT HID Built-in	N/A
	USB HID Support	N/A
	Teletext (TTX)	N/A
System	Digital Broadcasting	ATSC/ClearQAM
	Analog Tuner	Yes
	CI (Common Interface)	N/A
	Data Broadcasting	N/A

Item		HG43NJ470MFXZA
Hospitality Feature	Samsung LYNK™ HMS Compatibility	No
	H.Browser Compatibility	No
	Samsung LYNK™ REACH (IP)	No
	Samsung LYNK™ REACH (RF)	REACH 4.0
	Hospitality Home Menu	Home Menu 2015
	Bluetooth Music Player (Mobile → TV)	No
	Hospitality Plug&Play (Easy Set-up)	Yes
	Auto Source Mode	Yes
	Power On Mode	Yes
	Hotel Channel List	Yes
	Channel Menu Display	Yes
	Mixed Channel List (ATSC, DVB-T/T2/C/S2, Analog)	Yes
	My Channel	Yes
	Energy Saving Mode (BLU Control)	Yes
	Logo Display with Time Out Setting (BMP/Movie)	Yes
	Welcome Message	Yes
	RJ12/IR Pass Through	Yes
	External Clock Compatibility	No
	Clock Back Up Supply	Yes
	External Clock Dimming Control	No
	Software Clock	Yes
	Multi Code Remote Control	Yes
	Screwed Remote Battery Cover	Yes
	Soundbar Compatibility	Yes
	Music Mode (Input: PC/AV/Component/HDMI)	Yes
	Music Mode Backlight on/off	Yes
	TTX Clock Update (Analogue)	No
	USB Cloning	Yes
	Smoovie Compatibility	Yes
	Soft AP	No
	On/Off Timer (Schedule)	Yes
	Wake-up Timer (Alarm)	Yes
	Samsung LYNK™ DRM	Yes
	Pro:Idiom	No
	bLAN	No
	Security Mode	Yes
	S/W EPG (Solution EPG)	Yes
	IP Over Coax	No

Item		HG43NJ470MFXZA
Input & Output	USB (Side/Rear)	1
	Composite In (AV) (Side/Rear)	1/0
	RF In (Terrestrial / Cable input) (Side/Rear)	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	1
	CI Slot (Side/Rear)	N/A
	HDMI A / Return Ch. Support	Yes
	Wireless LAN Built-in	N/A
	Anynet+ (HDMI-CEC)	Yes
	Pillow Speaker Jack (Side/Rear)	No
	Variable Audio Out (Side/Rear)	No
	Variable Audio Out Volume Control (Side/Rear)	No
	Video Out (Side/Rear)	No
	RJ12 (Side/Rear)	0/1
	RJP (Remote Jackpack) (Side/Rear)	0/1
	Headphone ID (Side/Rear)	No
	Door-Eye Control (Side/Rear)	No
	Door-Eye Video In (Side/Rear)	No
	PC In (D-sub) (Side./Rear)	No
	PC/DVI Audio In (Mini Jack) (Side./Rear)	No
	Ethernet Bridge (LAN-Out)	N/A
Design	Front Color	Black Hairline
	Stand Type	Square
	Swivel (Left/Right)	90/90
Eco	ENERGY STAR (Latest effective version)	Yes
	Eco Sensor	N/A
Power	Power Supply (V)	AC110-120V 50/60Hz
	Power Consumption (Max)	105 W
	Power Consumption (Stand-by)	0.50 W
	Power Consumption (Typical)	40.0 W

Last Update Date : 2018.07.20

Item		HG49NJ470MFXZA
General Information	Product	LED
	Country	UNITED STATES
	Platform(TV)	Novatek | NT17L
Display	Backlight	LED
	Screen Size	49
	Resolution	1,920 x 1,080
Video	Picture Engine	Hyper Real
	Micro Dimming	N/A
	Auto Motion Plus	N/A
	Film Mode	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W(L:10W, R:10W)
	Speaker Type	2CH
	Woofer	N/A
Smart TV	Samsung SMART TV	N/A
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	N/A
General Feature	Processor	N/A
	Accessibility	Voice Guide
	Digital Clean View	Yes
	Auto Channel Search	Yes
	Auto Power Off	Yes
	Caption (Subtitle)	Yes
	Connect Share™ (HDD)	N/A
	ConnectShare™ (USB 2.0)	Yes
	EPG	Yes
	Game Mode	Yes
	OSD Language	English, Spanish, French
	Picture-In-Picture	Yes
	BT HID Built-in	N/A
	USB HID Support	N/A
	Teletext (TTX)	N/A
System	Digital Broadcasting	ATSC/ClearQAM
	Analog Tuner	Yes
	CI (Common Interface)	N/A
	Data Broadcasting	N/A

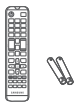
Item		HG49NJ470MFXZA
Hospitality Feature	Samsung LYNK™ HMS Compatibility	No
	H.Browser Compatibility	No
	Samsung LYNK™ REACH (IP)	No
	Samsung LYNK™ REACH (RF)	REACH 4.0
	Hospitality Home Menu	Home Menu 2015
	Bluetooth Music Player (Mobile → TV)	No
	Hospitality Plug&Play (Easy Set-up)	Yes
	Auto Source Mode	Yes
	Power On Mode	Yes
	Hotel Channel List	Yes
	Channel Menu Display	Yes
	Mixed Channel List (ATSC, DVB-T/T2/C/S2, Analog)	Yes
	My Channel	Yes
	Energy Saving Mode (BLU Control)	Yes
	Logo Display with Time Out Setting (BMP/Movie)	Yes
	Welcome Message	Yes
	RJ12/IR Pass Through	Yes
	External Clock Compatibility	No
	Clock Back Up Supply	Yes
	External Clock Dimming Control	No
	Software Clock	Yes
	Multi Code Remote Control	Yes
	Screwed Remote Battery Cover	Yes
	Soundbar Compatibility	Yes
	Music Mode (Input: PC/AV/Component/HDMI)	Yes
	Music Mode Backlight on/off	Yes
	TTX Clock Update (Analogue)	No
	USB Cloning	Yes
	Smoovie Compatibility	Yes
	Soft AP	No
	On/Off Timer (Schedule)	Yes
	Wake-up Timer (Alarm)	Yes
	Samsung LYNK™ DRM	Yes
	Pro:Idiom	No
	bLAN	No
	Security Mode	Yes
	S/W EPG (Solution EPG)	Yes
	IP Over Coax	No

Item		HG49NJ470MFXZA
Input & Output	USB (Side/Rear)	1
	Composite In (AV) (Side/Rear)	1/0
	RF In (Terrestrial / Cable input) (Side/Rear)	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	1
	CI Slot (Side/Rear)	N/A
	HDMI A / Return Ch. Support	Yes
	Wireless LAN Built-in	N/A
	Anynet+ (HDMI-CEC)	Yes
	Pillow Speaker Jack (Side/Rear)	No
	Variable Audio Out (Side/Rear)	No
	Variable Audio Out Volume Control (Side/Rear)	No
	Video Out (Side/Rear)	No
	RJ12 (Side/Rear)	0/1
	RJP (Remote Jackpack) (Side/Rear)	0/1
	Headphone ID (Side/Rear)	No
	Door-Eye Control (Side/Rear)	No
	Door-Eye Video In (Side/Rear)	No
	PC In (D-sub) (Side./Rear)	No
	PC/DVI Audio In (Mini Jack) (Side./Rear)	No
	Ethernet Bridge (LAN-Out)	N/A
Design	Front Color	Black Hairline
	Stand Type	Square
	Swivel (Left/Right)	90/90
Eco	ENERGY STAR (Latest effective version)	Yes
	Eco Sensor	N/A
Power	Power Supply (V)	AC110-120V 50/60Hz
	Power Consumption (Max)	138 W
	Power Consumption (Stand-by)	0.50 W
	Power Consumption (Typical)	48.0 W

2-3. Accessories

NOTE

- Please make sure the following items are included with your LED TV. If any items are missing, contact your dealer.
- The items' color and shape may vary, depending on the model.
- The parts for the stand are listed under Stand Components on the following page.

Image	Product	Code. No
	• Samsung Smart Remote / Batteries (AAA x 2)	AA59-00817A 4301-000121
	• Power Cord	32" : 3903-001086 40"/43"/49" : 3903-001117
	• Data Cable	BN39-00865B
	• Quick Setup Guide	BN68-09107G
	• Safety Guide	AA68-03242L
	• Regulatary Guide	BN68-04972G
	• Cable Guide	BN61-08370A
	• Hotel Mount Kit	BN96-23066A

4. Troubleshooting

4-1. Previous Check

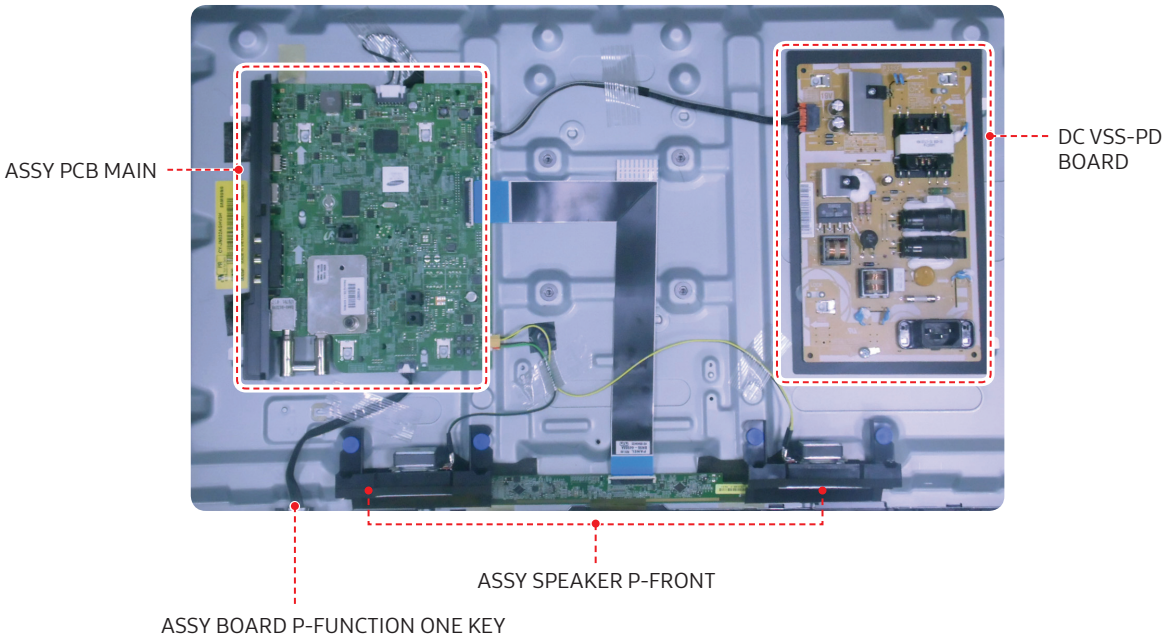
■ Check list for initial operation

- AC Power Cord connected to the TV and the wall receptacle.
- Standby Power/IR Indicator LED is turned On.
- If Power/IR Indicator is not on check 10p power cable is connected and for correct Standby Voltage from SMPS to Main. Also check Jog Function Cable.
- Power turned On with Jog Function or Remote.
- Power on command from main Board to SMPS.
- Power/IR Indicator Flashes.
- Panel Back Lights are turned On.
- If no Backlights, unplug AC Power Cord, unplug 10 pin connector to SMPS, plug in AC Power Cord, Back light should come on. Check Main Board operation for error.
- Power/IR Indicator goes off.
- Picture or banner is displayed.
  - If nothing is displayed, check the LVDS cable.

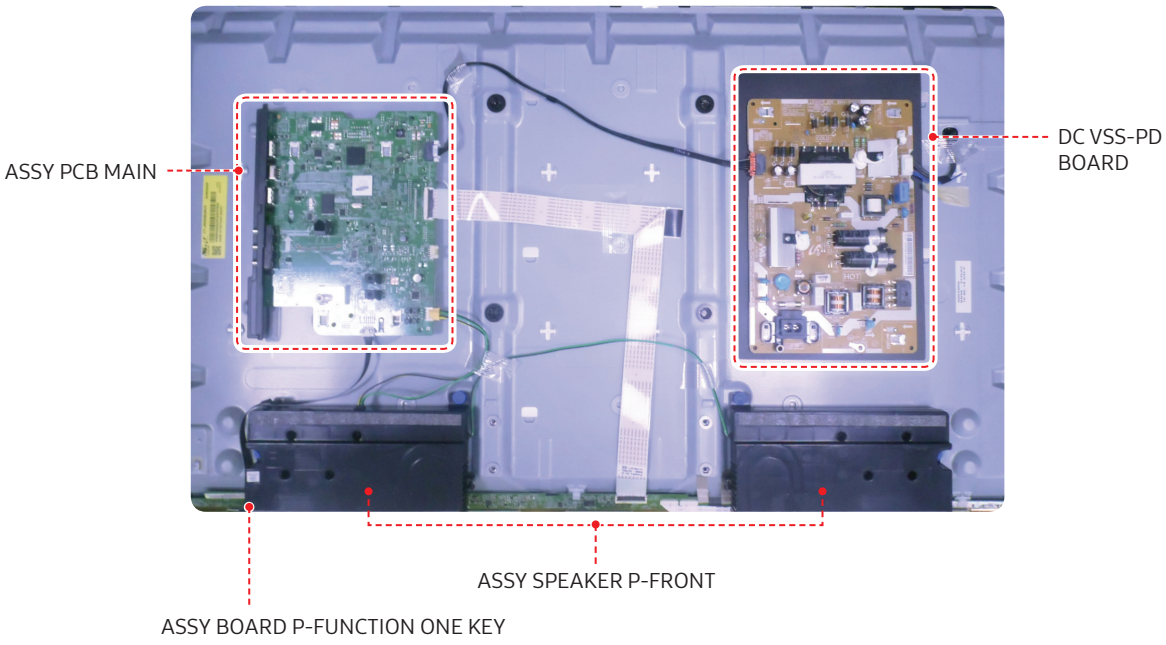
■ Inner View

- **T-CON and Main Board all in one**

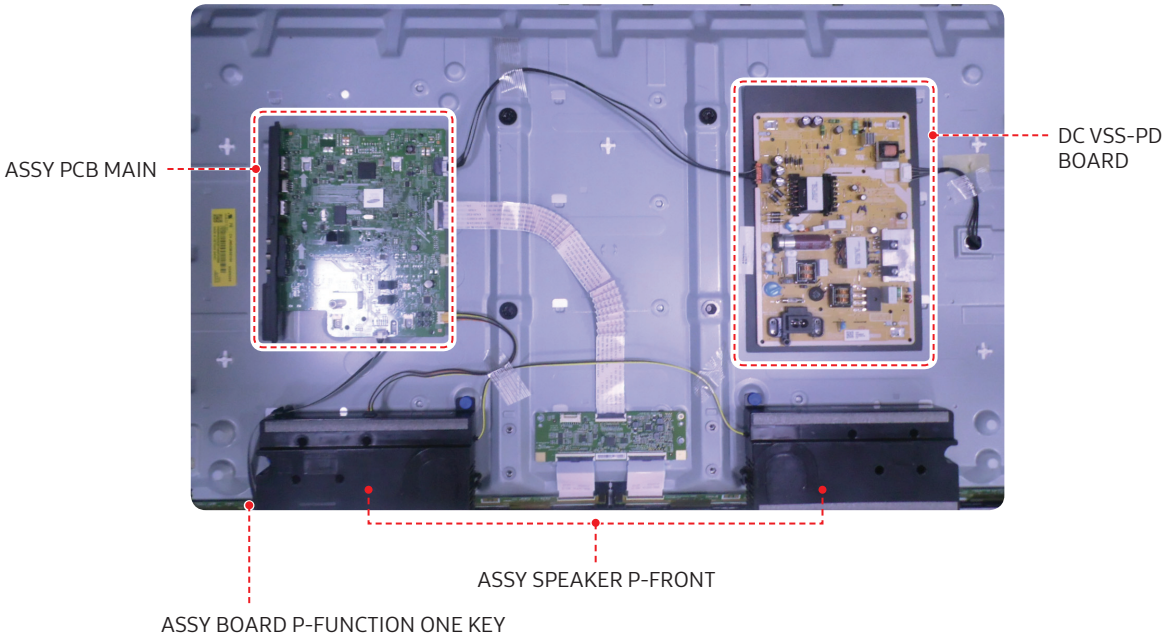
- **32 inches**



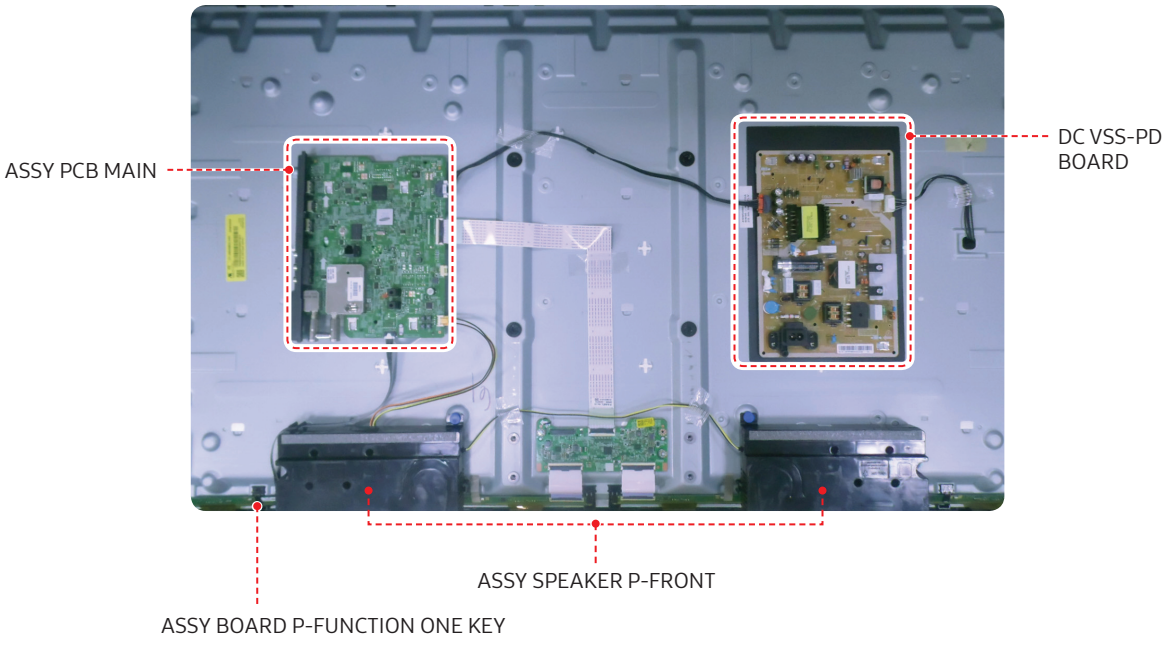
- **40 inches**



- **43 inches**



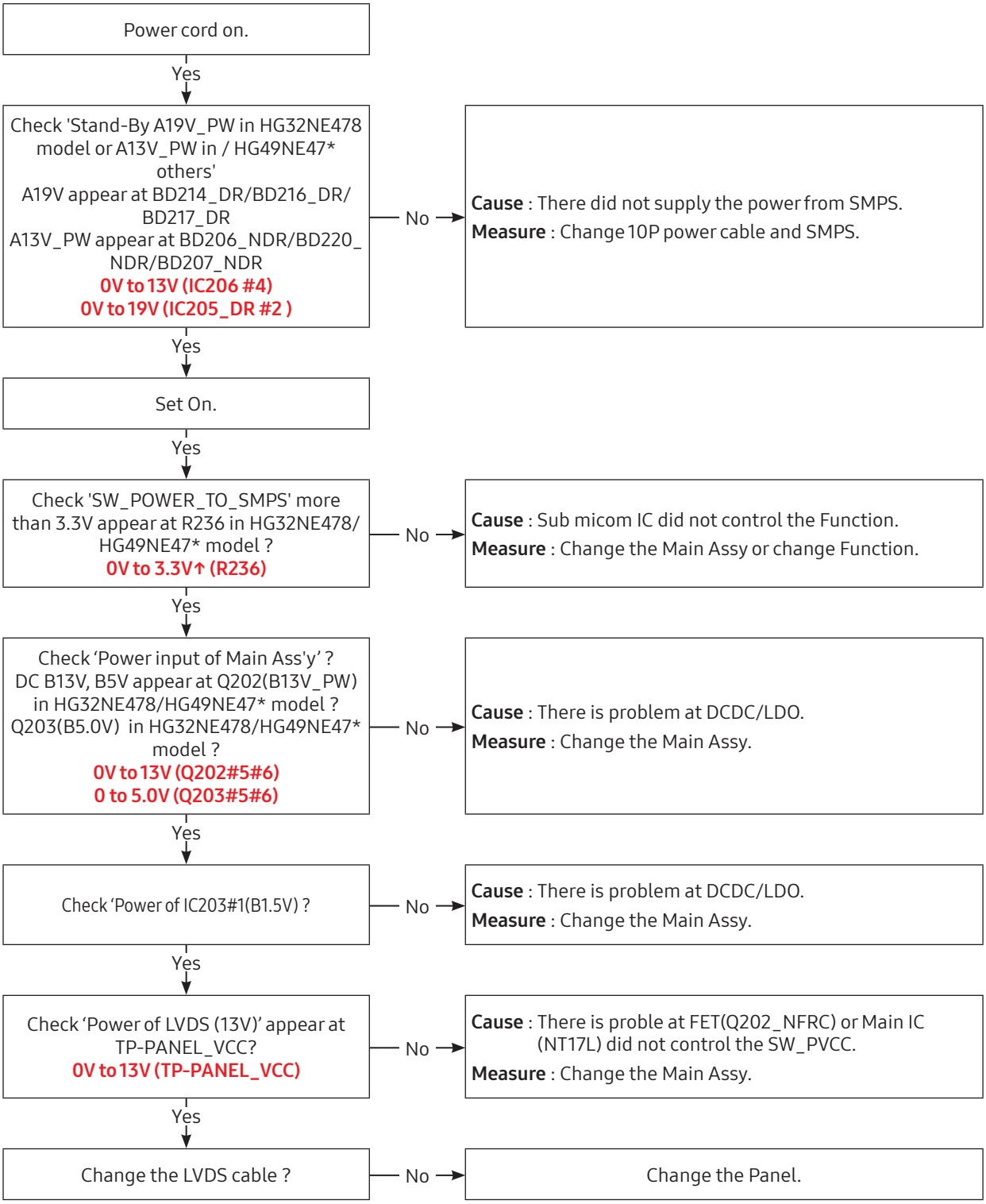
- **49 inches**



CN202 (to Power board)									
1	A19V_PW	2	DGND	3	A19V_PW	4	DGND	5	A19V_PW
7	DGND	8	A19V_PW	9	DGND	10	A19V_PW	11	DGND

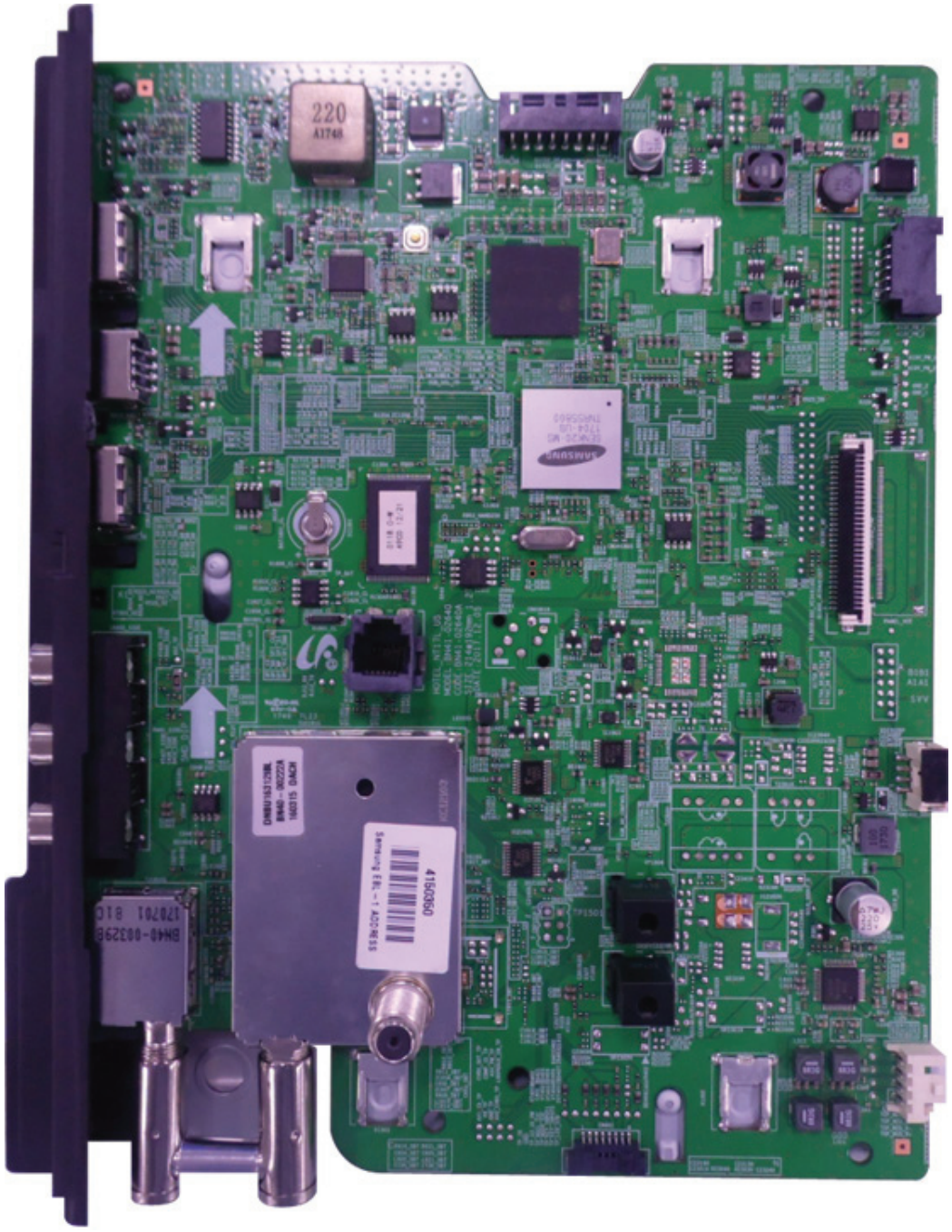
4-2. How to Check Fault Symptom

■ No Power and No Video

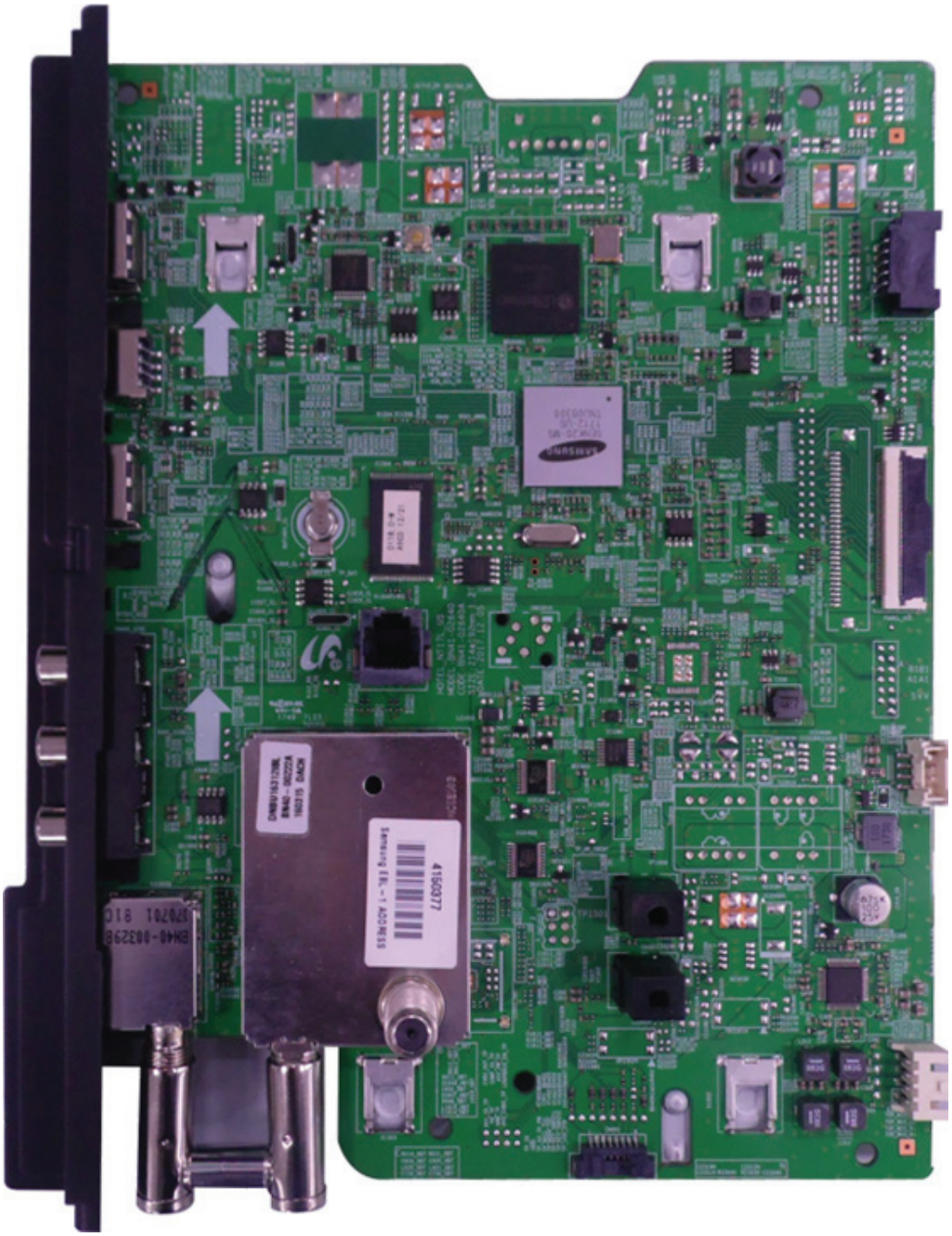


■ Main Board

- 32 inches



- **40/43/49 inches**



4-3. Factory Mode Adjustments

To enter 'Service Mode' Press the remote -control keys in this sequence :

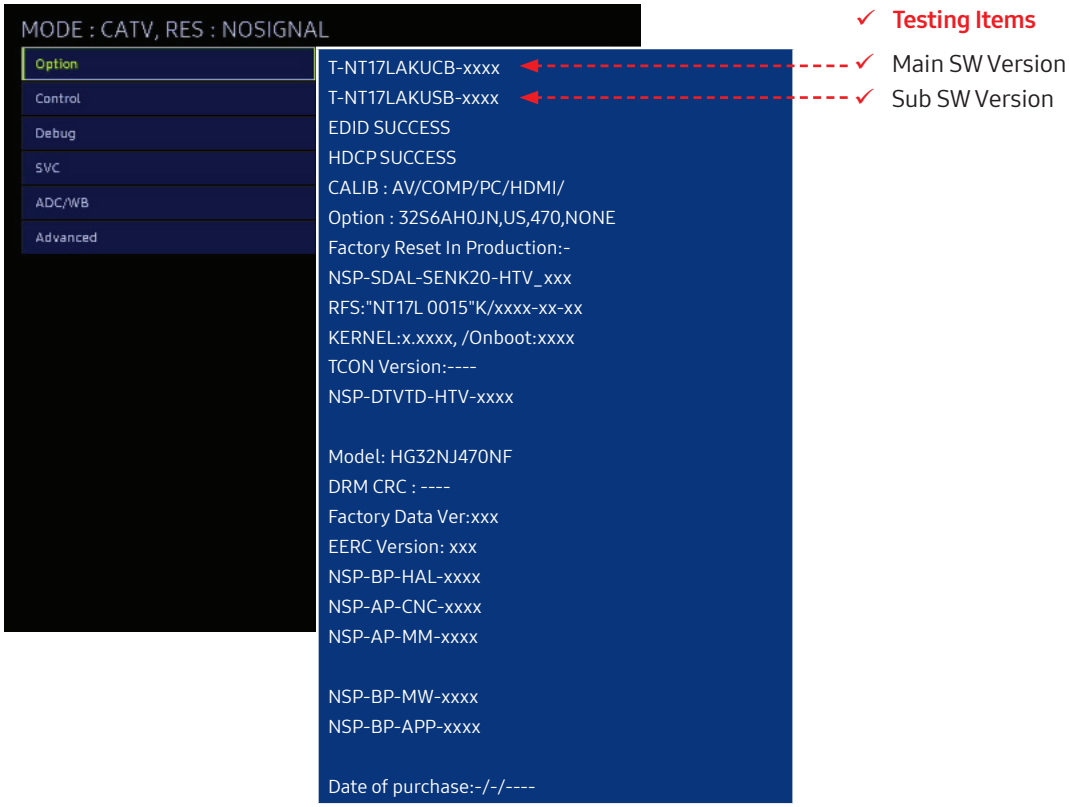
- If you do not have Factory remote control

  Power OFF → INFO → MENU → MUTE → Power On

- If you have Factory remote control

  INFO → Factory

- If you don't have Factory remote control, can't control some menus. (Expert, Advanced menu)



4-3-1. Detail Factory Option

NOTE

If you replace the main board with new one, please change the factory option as well.
The options you must change are "**Type**".

■ HG32NJ470NFXZA

- **PANEL / SMPS / MAIN Information**

Side Version	CA01					
PANEL			SMPS		MAIN	
Vendor	CSOT		Vendor	POWER	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-04930C	CY-JN032AGHV3V/H	32S6AH0JN	BN44-00844D	P32SF_MPN	BN91-20345C	BN94-12919F

- **MAIN Factory Option**

Local Set	BOM Model	Front Color	S/W Model
US	470	N/A	HJ470

■ HG40NJ470MFXZA

- **PANEL / SMPS / MAIN Information**

Side Version	DA01					
PANEL			SMPS		MAIN	
Vendor	INX		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-04925E	CY-JN040BGNV4/H	40D6AF0JN	BN44-00851C	L40MSFR_MHS	BN91-19974U	BN94-12919J

- **MAIN Factory Option**

Local Set	BOM Model	Front Color	S/W Model
US	470	N/A	HJ470

■ HG43NJ470MFXZA

- **PANEL / SMPS / MAIN Information**

Side Version	BA01					
PANEL			SMPS		MAIN	
Vendor	BOE		Vendor	DYREL	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-04928C	CY-JN043BGEV3VH	43B6AF0JN	BN44-00852F	L48MSFR_MDY	BN91-19974X	BN94-13318C

- **MAIN Factory Option**

Local Set	BOM Model	Front Color	S/W Model
US	470	N/A	HJ470

■ HG49NJ470MFXZA

- **PANEL / SMPS / MAIN Information**

Side Version	FA01					
PANEL			SMPS		MAIN	
Vendor	SDC		Vendor	DYREL	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-04926E	CY-JN049BGLV4V/H	49A6AF0JN	BN44-00856C	L50MSFR_MDY	BN91-20345F	BN94-13318F

- **MAIN Factory Option**

Local Set	BOM Model	Front Color	S/W Model
US	470	N/A	HJ470

4-3-2. Factory Data

■ Option

Factory Menu Name		Data	Range
Factory Reset		-	
Type	32"	32S6AH0JN	
	40"	40D6AF0JN	
	43"	43B6AF0JN	
	49"	49A6AF0JN	
Local set		US	
SW Model		HJ470	
BOM Model		470	
TUNER		-	NTSC/ATSC
Ch Table		NONE	
MRT Option			
Front color		N/A	
Lvds Format		JEIDA	
Language_Arabic		US	
Region		USA	
PnP Language		ENG_US	
OTN Support		OFF	
TTX		OFF	
China HD		OFF	
NT Conversion		OFF	
Num of DTV		1	
Num of AV		1	
Num of COMP		0	
Num of HDMI		2	
Num of SCART		0	
Num of USB Port		1	
Num of RVU		0	
Num of Display		2	
Num of IPTV		0	
Num of RUI		0	
TOOLS Support		313	
LNA Support		0	
Data Service Support		OFF	
BD Wise support		OFF	
CI Support		OFF	

Factory Menu Name	Data	Range
OTA Support	OFF	
LEDMotionPlus Support	OFF	
Natural Mode Support	OFF	
Relax Mode Support	OFF	
HDMI/DVI SEL	2	
HV Flip	HV Flip	
e-Pop Default	OFF	
NETWORK Support	Not support	
EcoSensor Support	OFF	
BT SUPPORT	OFF	
BT ADDRESS	Not support	
HP LINE	Lineout	
Capture Recording Support	OFF	
Engineer Option		
Type Of Panel Key	ONE KEY	
5 Way Function Key	R_BOTTOM	
Contents Bar	0	
Cable Modulation	Error	
Standby Led on/off	OFF	
Recognition Support	OFF	
IF AGC	0	
D AGC	0	
PH BW	3	
FQ BW	3	
PH RATE	4	
PD EN	1	
PEQ Inx	214/501	
WF Scale		
Num of Network Stream	0	
DP V Size	1	
Backend Device	ECHO_FS	
BT_AUDIO_ON_OFF	OFF	
Config_AV_PATH		
V_HDMI IDENT TYPE	1234	
V_HDMI PATH TYPE	BACD	
V_EDID TYPE	LCD_HD	
V_ATV	CVBS_PORT_2	
V_AV1	AV_COMP_G1	

Factory Menu Name	Data	Range
V_AV2	None	
V_COMP1	None	
V_COMP2	None	
V_PC	None	
V_SCART1_CVBS	None	
V_SCART1_RGB	None	
V_SCART2_CVBS	None	
V_SCART2_RGB	None	
A_ATV	SIF	
A_DTV	DECODER	
A_AV1	AUIN1	
A_AV2	None	
A_COMP1	None	
A_COMP2	None	
A_PC	None	
A_SCART1	None	
A_SCART2	None	
A_DVI	None	
A_HDMI	None	
A_Media	DECODER	
USING_PSI_UPDATE		
Fast Logo Delay		
Num of PANEL KEY		

■ Control

Factory Menu Name	Data	Range
EDID		
EDID ON/OFF	OFF	
EDID WRITE ALL	...	
EDID WRITE HDMI	...	
EDID WRITE HDMI1	...	
EDID WRITE HDMI2	...	
EDID WRITE HDMI3	...	
EDID WRITE HDMI4	...	
EDID Ver	...	
EDID Port	...	
EDID WRITE DVI	...	

Factory Menu Name	Data	Range
Sub Option		
RS-232 Jack	UART	
Serial Log On/Off	ON	
Watchdog	OFF	
Checksum	0x0000	
Fast Boot in Production	OFF	
USB Serial	OFF	
Eeprom Reset		
ECO IC TYPE	MC8121	
Info Link Server Type	operating	
Info Link Country	None	
TTX Group	...	
Visual Test	...	
MediaPlay DB	...	
OPTION_SWU		
OTN Server Type	operating	
OTN Test Server	OFF	
SWU Reset		
SWU Duration	OFF	
SWU Fail Test	OFF	
SWU_Diag_Code		
OPTION_NUM		
Num of ATV	1	
Num of SVIDEO	0	
Num of PC	0	
Num of DVI	0	
Num of OPTICAL Link	0	
Num of MEDIA	1	
Num of Tuner	1	
Num of PVR RECORD	0	
RF Remocon Support	OFF	
CDD mode	...	
DPMS Support	OFF	
Num of IPTV CIP	0	
Num of CI	0	
Num of DECODER	0	
T-CON Device		

Factory Menu Name	Data	Range
BOARD CONTROL	OFF	
RM		
PSA		
LMK threshold	0	
Low threshold	0	
High threshold	0	
CSB	ON	
CLB	ON	
EEPG Enable	OFF	
Fanet Thread	5	
UNIQUE TRIPLET	ON	
HOTEL Option		
Hospitality Mode	Standalone	
SI Vendor	OFF	
Power On	...	
Channel	...	
Menu OSD		
Clock		
Music Mode	...	
Remote Jack Pack		
External Source		
Eco Solution	...	
Logo/Message	...	
Cloning	...	
Security		
DRM		
System	...	
Shop Option		
Shop Mode	...	
Exhibition Mode	OFF	
3D Cube	OFF	
Asia Option		
Sepco 120Hz	OFF	
Unbalance	OFF	
FMTransmitter Support	OFF	
FMTransmitter Carrier	OFF	
AF Level adjust	3	

Factory Menu Name	Data	Range
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	OFF	
SOUND		
High Devi	OFF	
Carrier Mute	ON	
Speaker Delay Normal	0	
Wiselink Delay Menu	0	
Pilot Level High Thld	0x0Fh	
Pilot Level Low Thld	0x08h	
Pilot_Phase_diff_on_THR	OFF	
FM Prescale	0X17h	
AM Prescale	0x1Ah	
NICAM Prescale	0x1Dh	
Amp Model	TAS5747	
Amp Volume	0XC9	
Amp Scale	0X25	
Amp Check Sum	0x00321A73/0x00D2ACAD	
SubWoofer Support	0	
Woofer Type	0	
Woofer Volume	0xcbh	
Woofer Scale	0x8ah	
Woofer Check Sum	NONE	
Woofer Local Check Sum	NONE	
Amp Local Check Sum	NONE	
Speaker EQ	ON	
PEQ Test	Ready	
Speaker cut-off Freq	5	
SPDIF PCM Gain	-9dB	
FM M Prescale	0	
BTSC Mono Prescale	15	
BTSC stereo Prescale	29	
SAP Prescale	29	
A2 Ident High Thid	11	
A2 Ident Low Thid	5	
Carrier2 Amp High Thld	4	
Carrier2 Amp Low Thld	2	

Factory Menu Name	Data	Range
Carrier2 SNR High THR	32	
Carrier2 SNR Low THR	15	
Audio-IP Test	Ready	
SRS Tuning Param	4	
TruBass CheckSum	0	
Mic Scale	0	
India Sound	OFF	
Wall Fillter Type	0	
SAP High T'hld	9	
SAP Low T'hld	7	
Bottom CheckSum	0	
Bottom Local CheckSum	0	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		
LVDS Amplitude	2	
DDR Margin		
ND SDJ Support	0	
MICOM POWER OFF	0	
RF Mute Time	6ms	
CI+1.3	0	
FRC		
Tuner Margin	0	
MPEG Margin	1000	
H.264 Margin	8	
CAM Wait Time	0	
TS Clock delay	0	
TCON_TEMP READ	0.00	
TEMPP LAST	60.00	
DCC VERSION	0x0	
DCC CHK SEL	0	
DCC CHECK LOCAL	0x0	
DCC CHECK TOTEL	0x0	
MultiACC Checksum	0	
IIC Bus Stop	OFF	

Factory Menu Name	Data	Range
Tuner Status		

■ SVC

Factory Menu Name	Data	Range
Test Pattern		• the Output of test pattern from each IC
Panel Display Time	1Hr	
SVC Info	0	
Delete S/N	Failure	
Upgrade		
Smart Hub Reset	0	
ER Count		
LOG		
Self Diagnosis		
IPERF	Stopped	
OPTION_HDMI		
DVB CI		
CAL Data Backup_Copy		
CAL Data Restore_Copy	0	
Expert		
ATV IF AGC SPEED	0	
Reset		
Auto Power	MEMORY	

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibration	/	
Comp Calibration	/	
PC Calibration	/	
HDMI Calibration	/	
ADC Result		
1st_Y_GH	128	
1st_y_GL	128	
1st_Cb_BH	...	
1st_Cb_BL	...	

Factory Menu Name	Data	Range
1st_Cr_RH	...	
1st_Cr_RL	...	
2nd_R_L	133	
2nd_G_L	133	
2nd_B_L	133	
2nd_R_H	70	
2nd_G_H	70	
2nd_B_H	70	
White Balance		
R-Offset	128	
G-Offset	128	
B-Offset	128	
R-Gain	128	
G-Gain	128	
B-Gain	128	
WB_W2_R_Offset	128	
WB_W2_B_Offset	128	
WB_W2_R_Gain	158	
WB_W2_B_Gain	68	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	146	
WB_N_B_Gain	107	
MGA		
MGA On/Off	OFF	
R1_Gain	512	
G1_Gain	512	
B1_Gain	512	
R2_Gain	512	
G2_Gain	512	
B2_Gain	512	
R3_Gain	512	
G3_Gain	512	
B3_Gain	512	
R4_Gain	512	
G4_Gain	512	
B4_Gain	512	

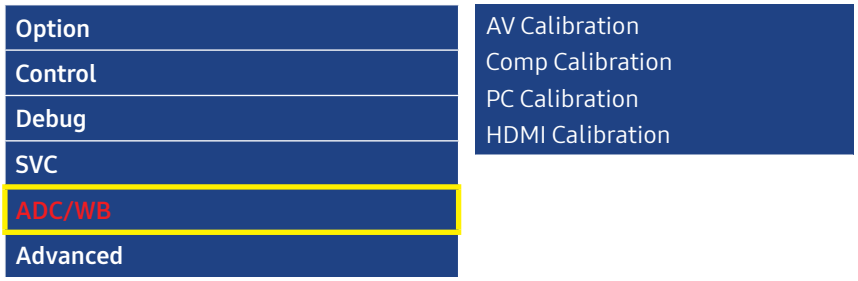
Factory Menu Name	Data	Range
R5_Gain	512	
G5_Gain	512	
B5_Gain	512	
R6_Gain	512	
G6_Gain	512	
B6_Gain	512	
R7_Gain	512	
G7_Gain	512	
B7_Gain	512	
R8_Gain	512	
G8_Gain	512	
B8_Gain	512	
R9_Gain	512	
G9_Gain	512	
B9_Gain	512	
R10_Gain	512	
R10_Gain	512	
R10_Gain	512	

■ Advanced

4-4. White Balance

4-4-1. Calibration

1. Into the Factory Mode.
2. Select ADC/WB menu.
3. Select ADC menu.



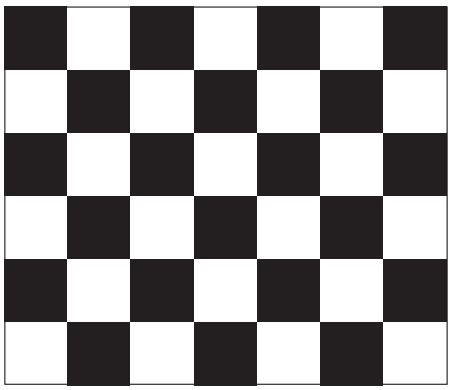
4-4-2. Service Adjustment

You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

- Adjust Specification

Source	Setting Mode	Pattern	Use Equipment
HDMI	1280 x 720@60 Hz	Pattern #24 (Chess Pattern)	CA210 & Master MSPG925 Generator



(Chess Pattern)

- Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#1)	Perform in NTSC B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024x768) B&W Pattern #24	Lattice
HDMI IN	Perform in 720p B&W Pattern #24	Lattice

Method of Color Calibration (AV)

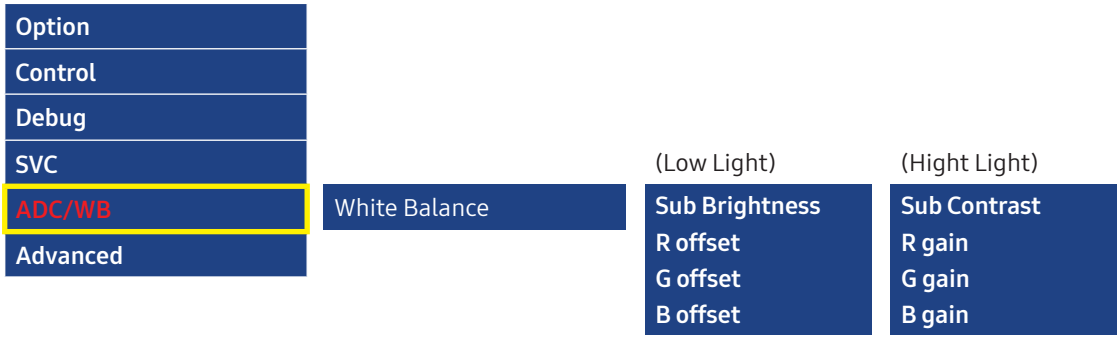
1. Apply the NTSC Lattice (N0. 3) pattern signal to the AV IN 1 port.
2. Press the Source key to switch to “AV1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “AV Calibration” menu.
6. In “AV Calibration Off” status, press the “ ►” key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the “AV Calibration” status from Failure to Success.

Method of Color Calibration (HDMI)

1. Apply the 720p Lattice (N0. 6) pattern signal to the HDMI1/DVI IN port.
2. Press the Source key to switch to “HDMI1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “HDMI Calibration” menu.
6. In “HDMI Calibration Off” status, press the “ ►” key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the “HDMI Calibration” status from Failure to Success.

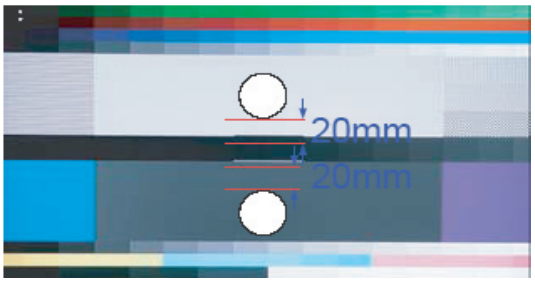
4-4-3. Adjustment

1. Into the Factory Mode.
2. Select ADC/WB menu.
3. Select White Balance menu.



4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).
2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.
3. The optimal values for each mode are configured by default. (Refer to Table 1, 2) It varies with Panel's size and Specification.
   - Equipment : CS-210
   - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
   - Use other Equipment only after comparing the result with that of the Master equipment.
   - Set Aging time : 60min
   - Calibration and Manual setting for WB adjustment.



HDMI : Calibration at #24 Chessboard Pattern Manual adjustment #92 pattern (720p)

COMP : Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (720p)

CVBS : Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (NTSC)

NOTE

- If finishing in HDMI mode, adjustment coordinate is almost same in AV mode.
- White Balance Manual adjustment.

4-6. Updating the TV’s Software

DO NOT turn off the TV’s power until the update is complete. The TV will turn off and on automatically after completing the software update. Video and audio settings will be reset to their defaults after a software update. We recommend you clone the TV's settings so that you can easily reset them after the upgrade.

- For more information about the USB cloning function, refer to page 40.

■ Updating through a USB device

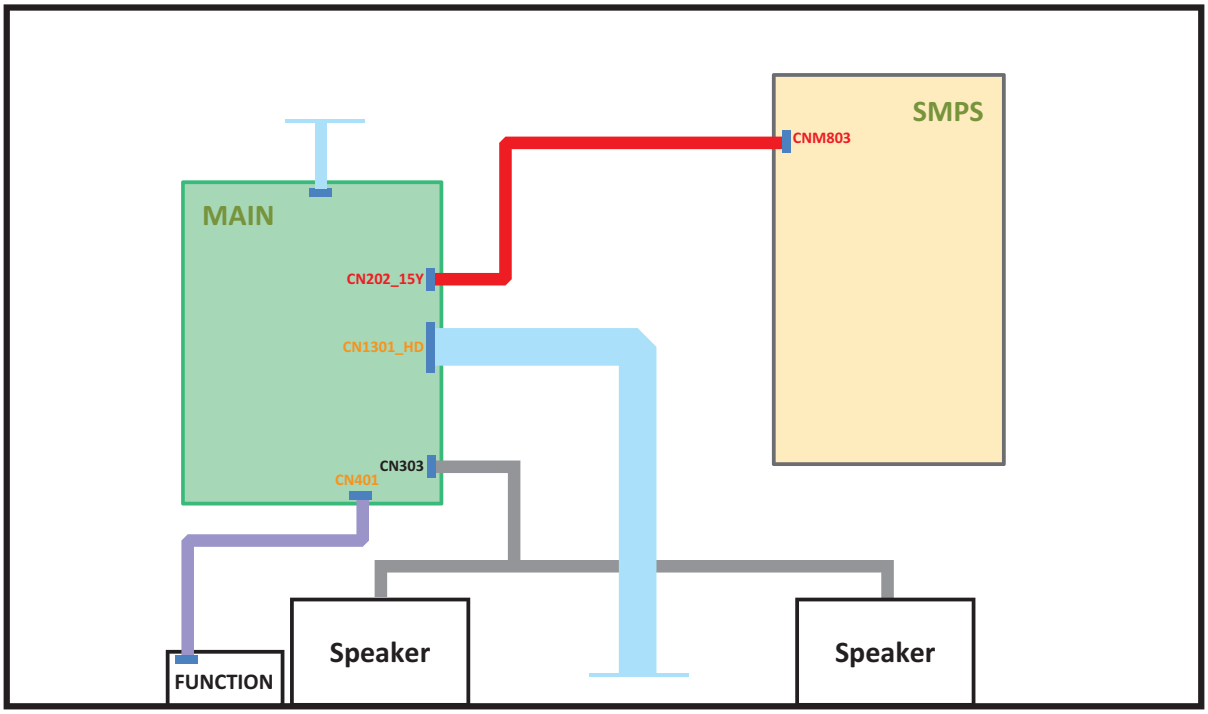
To update the TV's software, follow these steps:

1. Insert a USB flash dirve containing the software update file into the USB port of the TV.
2. Run **Update Now**. (MENU > Support > Software Update > Update Now)
3. The TV displays a pop-up message that checks for the updated version.
4. Move the focus to **OK**, and then press the **Select** button on the remote control.
   - Please be careful to not disconnect the power or remove the USB flash dirve while upgrades are being applied. The TV will turn off and turn on automatically after completing the SW upgrade. Please check the SW version after the upgrades are complete.

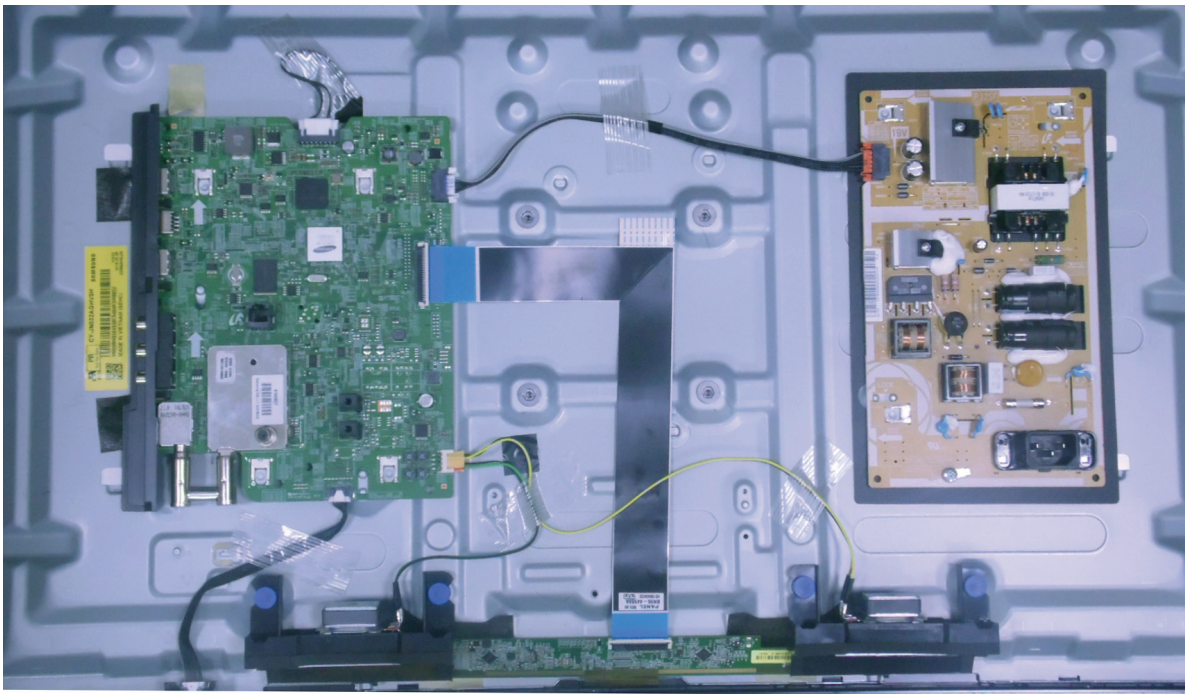
5. Wiring Diagram

5-1. Wiring Diagram

- 32 inches

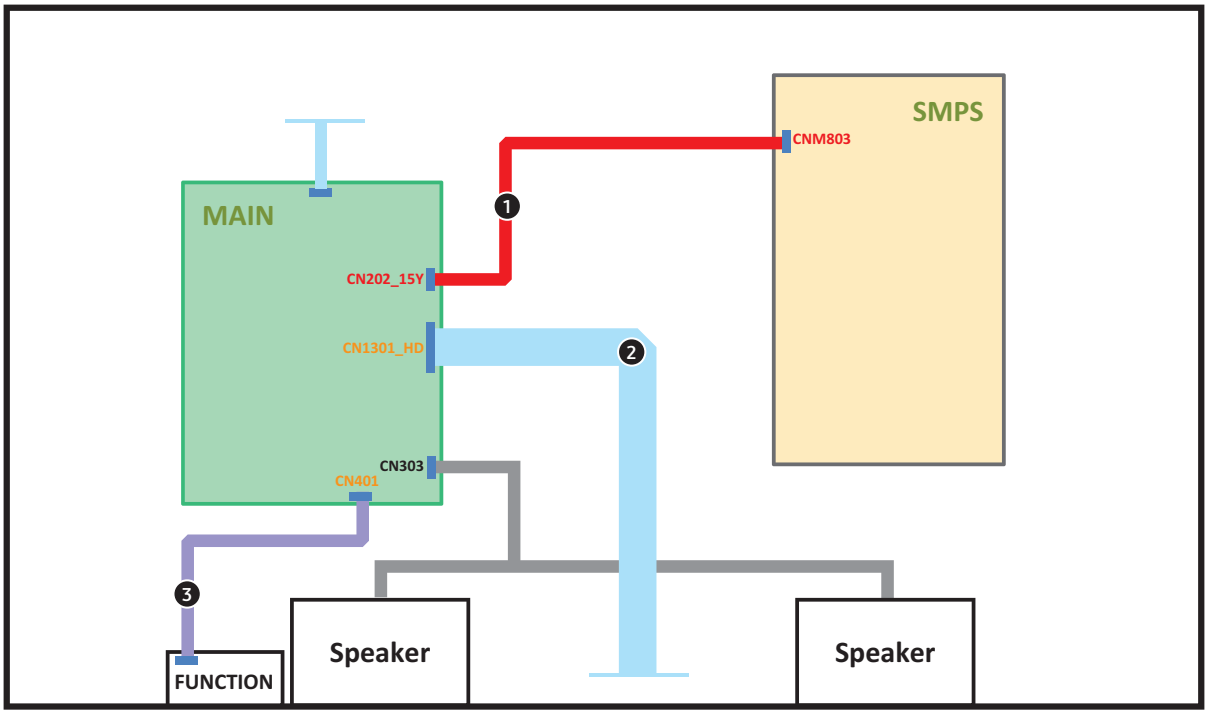


- 32 inches



■ Cables

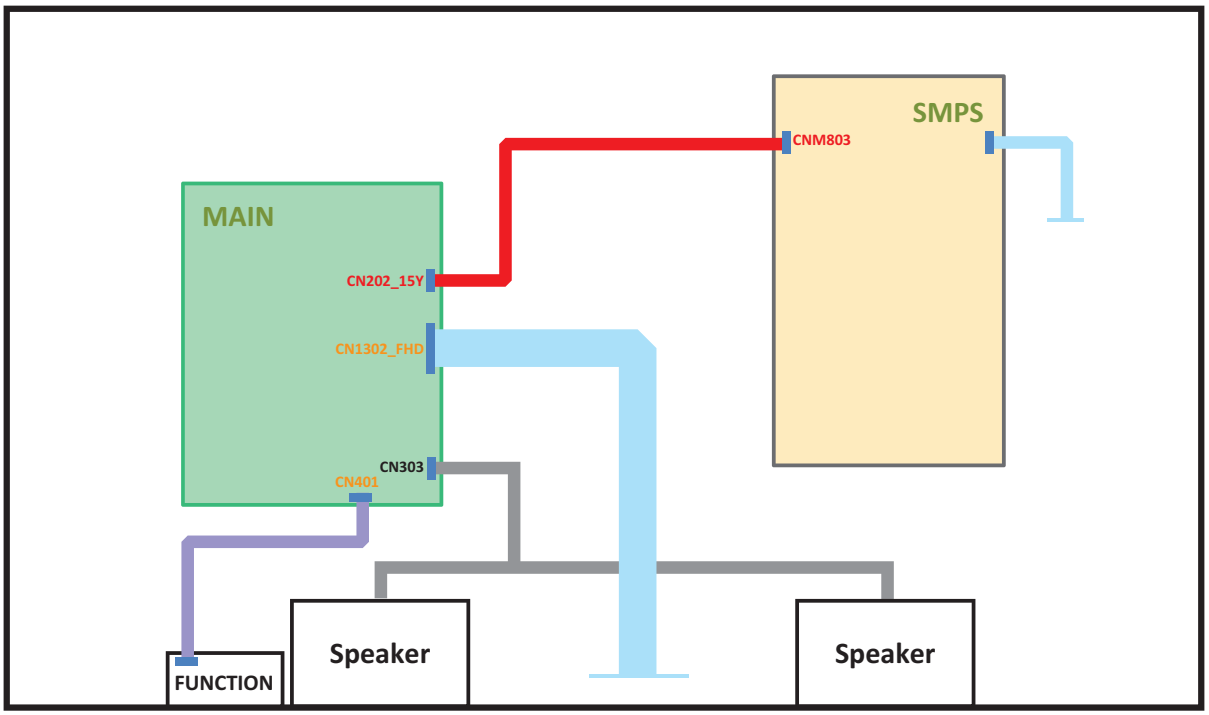
- 32 inches



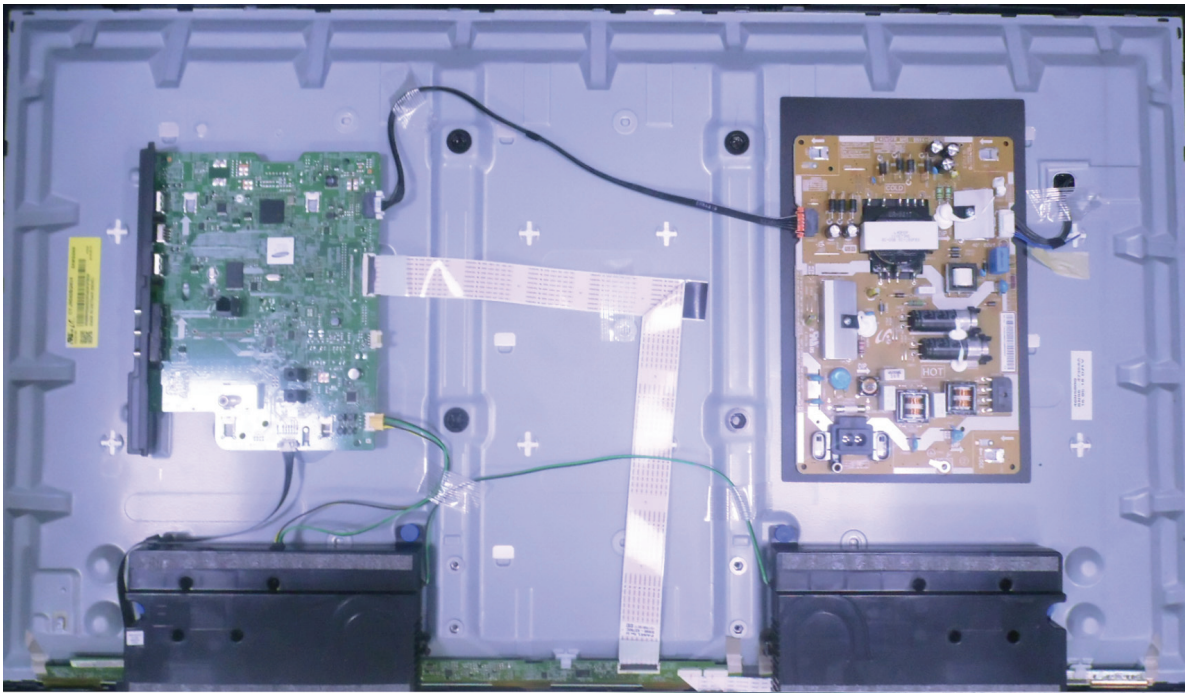
■ Cable Infomation

Part Name & Connection		Part Spec		Code No.	
❶	**LEAD CONNECTOR-POWER** SMPS - MAIN		10P/250mm	32"	BN39-02275F
❷	**FFC CABLE** Main - Source		30P/L400	32"	BN96-44988A
❸	**LEAD CONNECTOR-SUB ASSY** MAIN - FUNCTION		8P/150mm	32"	BN39-02223D

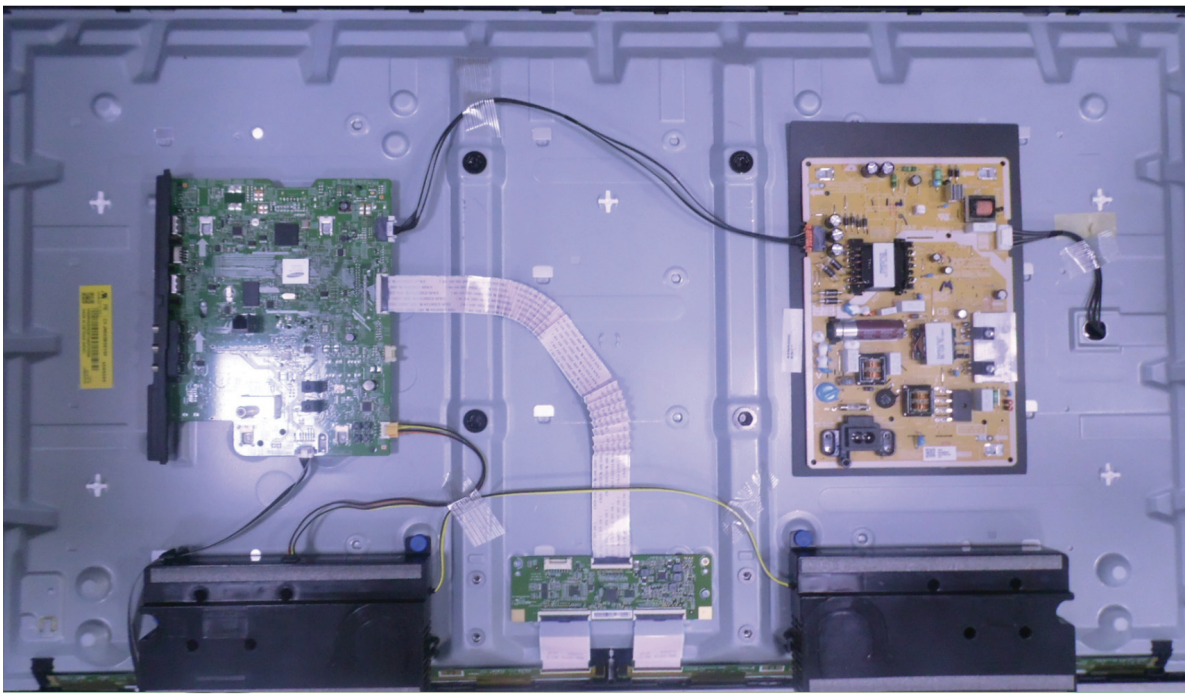
- 40/43/49 inches



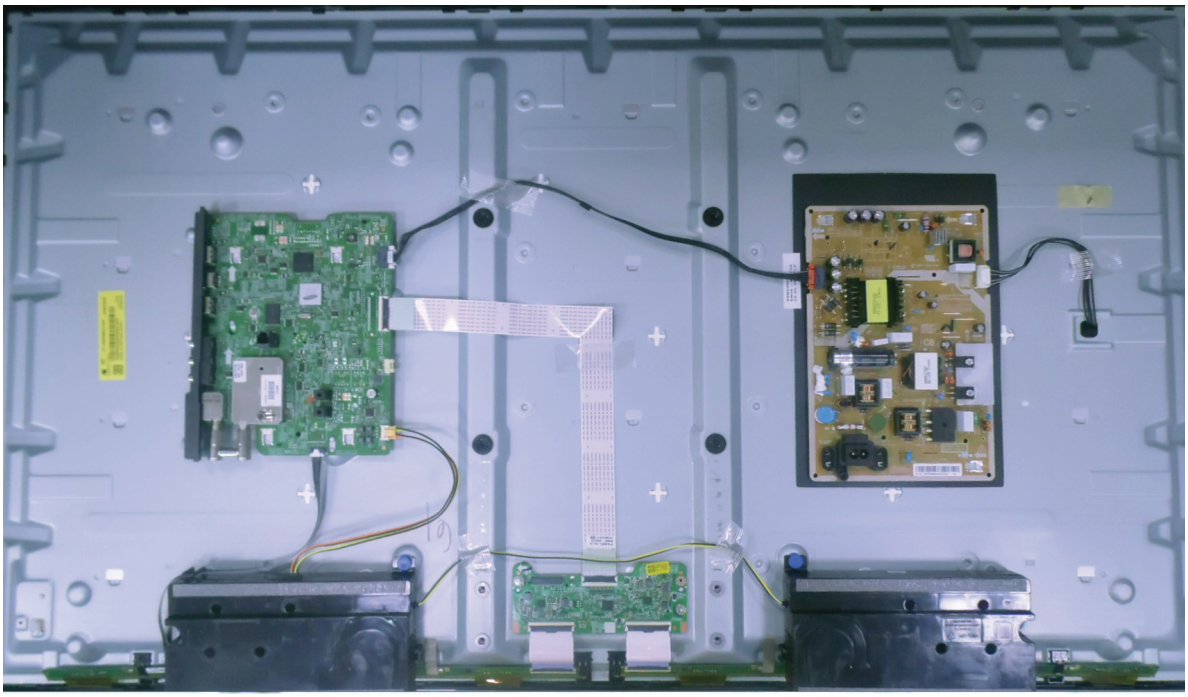
- 40 inches



- **43 inches**

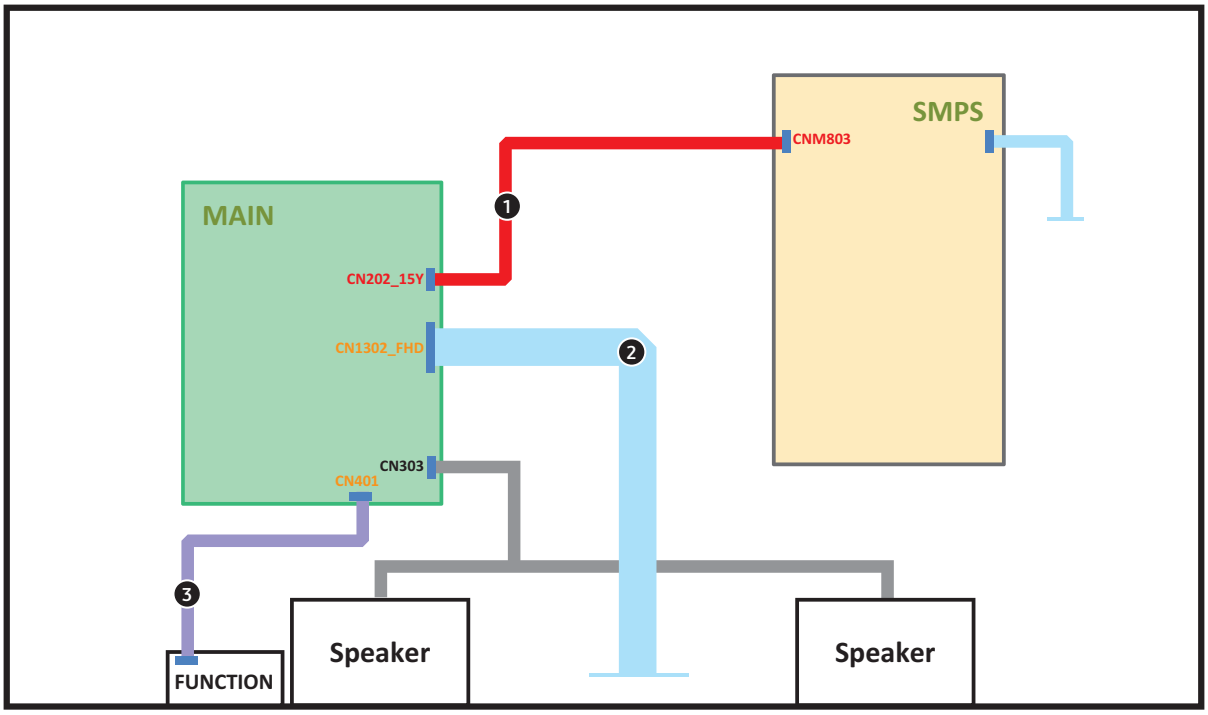


- **49 inches**



■ Cables

- 40/43/49 inches



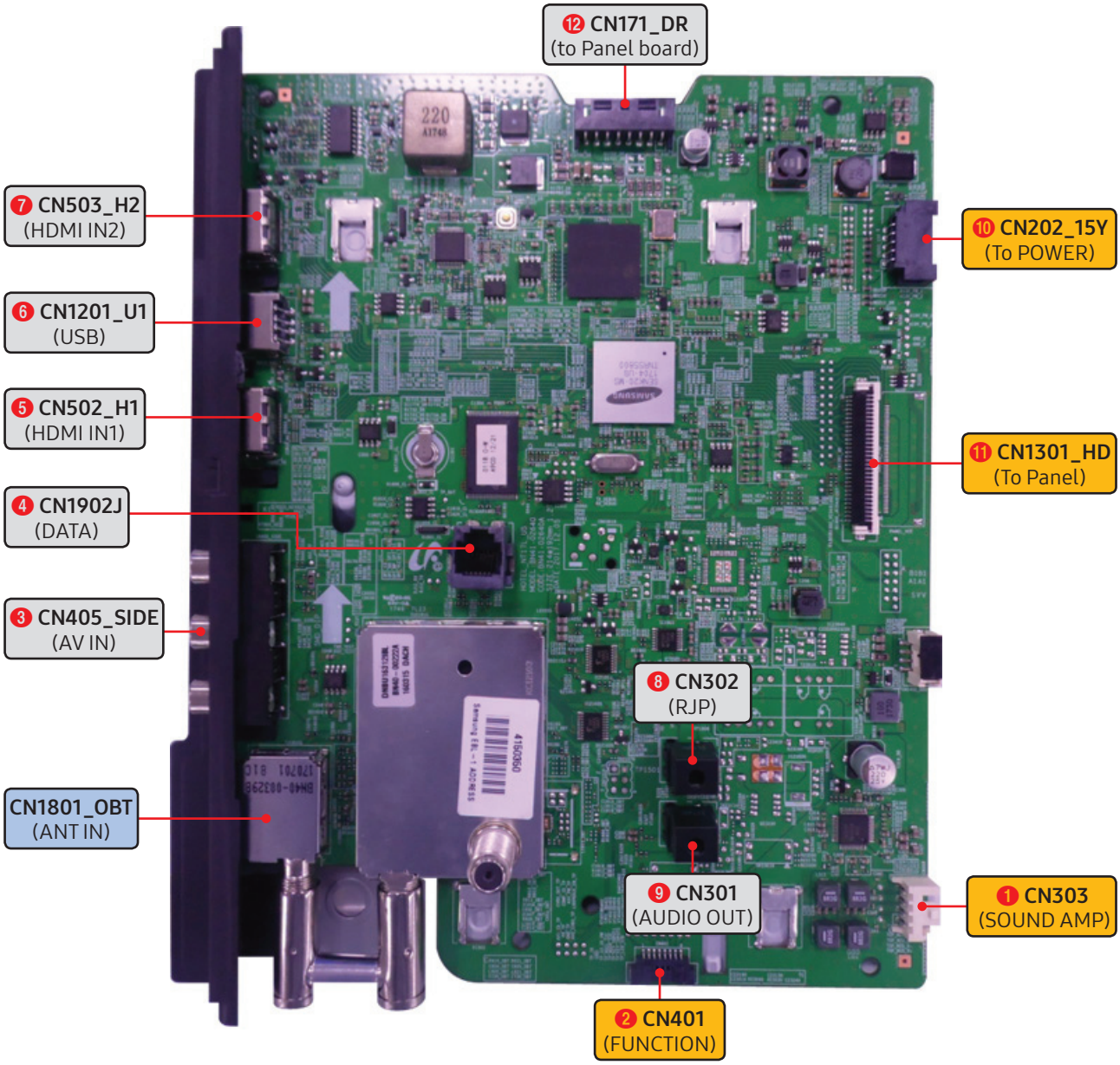
■ Cable Infomation

Part Name & Connection		Part Spec		Code No.	
❶	**LEAD CONNECTOR-POWER** SMPS - MAIN		10P/L400	40"	BN39-02275B
				43"	BN39-02275B
				49"	BN39-02275B
❷	**FFC CABLE** Main - Source		51P/L550	40"	BN96-43790C
			51P/L400	43"	BN96-40209C
			51P/L450	49"	BN96-44987A
❸	**LEAD CONNECTOR-SUB ASSY** MAIN - FUNCTION		8P/250mm	40"	BN39-02223A
				43"	BN39-02223A
			8P/300mm	49"	BN39-02223C

5-2. Connector

■ Main Board

- **32 inches**



■ Main Board Pin Map

1 CN303 (SOUND AMP)			
1	R+	2	R-
3	L+	4	L-

2 CN401 (FUNCTION)			
1	IR	2	GND
3	A3.3V_PW	4	MSCL_I2C
5	MSDA_I2C	6	KEY_INPUT1
7	KEY_INPUT2	8	LED_STB

3 CN405_SIDE (AV IN)			
1	DGND	2	IDENT_AV2
3	AV2_CVBS	4	DGND
5	TEST_SL	6	AV2_SL_IN
7	DGND	8	TEST_SR
9	AV2_SR_IN		

4 CN1902J (DATA)			
1	DGND	2	RJ12_IR
3	PIL_A12V_PW	4	RJ12_TX
5	RJ12_CLK	6	RJ12_RX

5 CN502_H1 (HDMI IN1)			
1	HDMI1_RX2+_HDMI	2	GND
3	HDMI1_RX2-_HDMI	4	HDMI1_RX1+_HDMI
5	GND	6	HDMI1_RX1-_HDMI
7	HDMI1_RX0+_HDMI	8	GND
9	HDMI1_RX0-_HDMI	10	HDMI1_RXCLK+_HDMI
11	GND	12	HDMI1_RXCLK-_HDMI
13	CEC	14	GND
15	HDMI1_SCL_DDC	16	HDMI1_SDA_DDC
17	IDENT_HDMI1	18	HDMI1_5V_PW
19	HDMI1_HOT_PLUG		

6 CN1201_U1 (USB)			
1	B5V_USB1_PW	2	USB0_DM-_USB
3	USB0_DP+_USB	4	DGND

7 CN503_H2 (HDMI IN2)			
1	HDMI2_RX2+_HDMI	2	GND
3	HDMI2_RX2-_HDMI	4	HDMI2_RX1+_HDMI
5	GND	6	HDMI2_RX1-_HDMI
7	HDMI2_RX0+_HDMI	8	GND
9	HDMI2_RX0-_HDMI	10	HDMI2_RXCLK+_HDMI
11	GND	12	HDMI2_RXCLK-_HDMI
13	CEC	14	GND
15	HDMI2_SCL_DDC	16	HDMI2_SDA_DDC
17	IDENT_HDMI2	18	HDMI2_5V_PW
19	HDMI2_HOT_PLUG		

8 CN302 (RJP)			
1	GND	2	TP_FANET_TX
3	TP_FANET_RX	4	NC
5	NC	6	NC
7	NC		

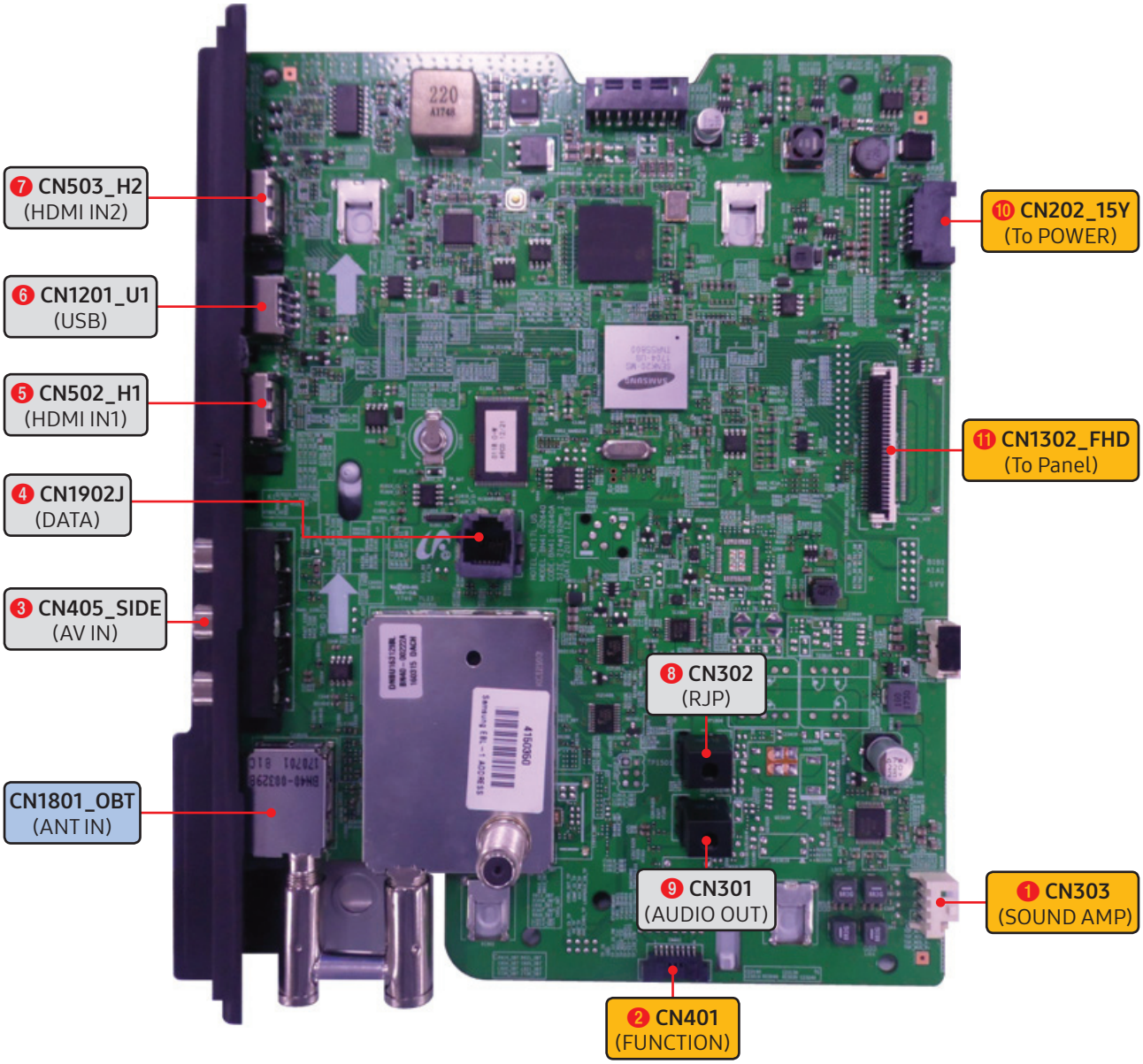
9 CN301 (AUDIO OUT)			
1	DGND	2	MO_SL_OUT
3	MO_SR_OUT	4	TEST_SL
5	TEST_SR	6	IDENT_HP_MO
7	DGND	8	

10 CN202_15Y (to Power)			
1	A19V_PW	2	DGND
3	A19V_PW	4	DGND
5	A19V_PW	6	DGND
7	A19V_PW	8	DGND
9	A19V_PW	10	DGND

11 CN1403_NMOB (BT/WIFI)			
1	NC	2	GND
3	FRC_SDA_I2C	4	PWM_DIM1_FRC
5	FRC_SCL_I2C	6	FRC_RESET
7	LVDS_FORMAT	8	TCON_SDA_I2C
9	TCON_WP	10	NC
11	UPDATE_CHECK	12	TCON_SCL_I2C
13	GND	14	EVEN_TX4+_LVDS
15	EVEN_TX4-_LVDS	16	EVEN_TX3+_LVDS
17	EVEN_TX3-_LVDS	18	GND
19	EVEN_TXCLK+_LVDS	20	EVEN_TXCLK-_LVDS
21	GND	22	EVEN_TX2+_LVDS
23	EVEN_TX2-_LVDS	24	EVEN_TX1+_LVDS
25	EVEN_TX1-_LVDS	26	EVEN_TX0+_LVDS
27	EVEN_TX0-_LVDS	28	GND
29	ODD_TX4+_LVDS	30	ODD_TX4-_LVDS
31	ODD_TX3+_LVDS	32	ODD_TX3-_LVDS
33	GND	34	ODD_TXCLK+_LVDS
35	ODD_TXCLK-_LVDS	36	GND
37	ODD_TX2+_LVDS	38	ODD_TX2-_LVDS
39	ODD_TX1+_LVDS	40	ODD_TX1-_LVDS
41	ODD_TX0+_LVDS	42	ODD_TX0-_LVDS
43	GND	44	GND
45	GND	46	NC
47	PANEL_13V_PW	48	PANEL_13V_PW
49	PANEL_13V_PW	50	PANEL_13V_PW
51	PANEL_13V_PW		

12 CN171_DR (To Panel)			
1	NC	2	LED-
3	NC	4	NC
5	NC	6	NC
7	LED+	8	NC

- **41/43/49 inches**



■ Main Board Pin Map

1 CN303 (SOUND AMP)			
1	R+	2	R-
3	L+	4	L-

2 CN401 (FUNCTION)			
1	IR	2	GND
3	A3.3V_PW	4	MSCL_I2C
5	MSDA_I2C	6	KEY_INPUT1
7	KEY_INPUT2	8	LED_STB

3 CN405_SIDE (AV IN)			
1	DGND	2	IDENT_AV2
3	AV2_CVBS	4	DGND
5	TEST_SL	6	AV2_SL_IN
7	DGND	8	TEST_SR
9	AV2_SR_IN		

4 CN1902J (DATA)			
1	DGND	2	RJ12_IR
3	PIL_A12V_PW	4	RJ12_TX
5	RJ12_CLK	6	RJ12_RX

5 CN502_H1 (HDMI IN1)			
1	HDMI1_RX2+_HDMI	2	GND
3	HDMI1_RX2-_HDMI	4	HDMI1_RX1+_HDMI
5	GND	6	HDMI1_RX1-_HDMI
7	HDMI1_RX0+_HDMI	8	GND
9	HDMI1_RX0-_HDMI	10	HDMI1_RXCLK+_HDMI
11	GND	12	HDMI1_RXCLK-_HDMI
13	CEC	14	GND
15	HDMI1_SCL_DDC	16	HDMI1_SDA_DDC
17	IDENT_HDMI1	18	HDMI1_5V_PW
19	HDMI1_HOT_PLUG		

6 CN1201_U1 (USB)			
1	B5V_USB1_PW	2	USB0_DM-_USB
3	USB0_DP+_USB	4	DGND

7 CN503_H2 (HDMI IN2)			
1	HDMI2_RX2+_HDMI	2	GND
3	HDMI2_RX2-_HDMI	4	HDMI2_RX1+_HDMI
5	GND	6	HDMI2_RX1-_HDMI
7	HDMI2_RX0+_HDMI	8	GND
9	HDMI2_RX0-_HDMI	10	HDMI2_RXCLK+_HDMI
11	GND	12	HDMI2_RXCLK-_HDMI
13	CEC	14	GND
15	HDMI2_SCL_DDC	16	HDMI2_SDA_DDC
17	IDENT_HDMI2	18	HDMI2_5V_PW
19	HDMI2_HOT_PLUG		

8 CN302 (RJP)			
1	GND	2	TP_FANET_TX
3	TP_FANET_RX	4	NC
5	NC	6	NC
7	NC		

9 CN301 (AUDIO OUT)			
1	DGND	2	MO_SL_OUT
3	MO_SR_OUT	4	TEST_SL
5	TEST_SR	6	IDENT_HP_MO
7	DGND	8	

10 CN202_15Y (to Power)			
1	A19V_PW	2	DGND
3	A19V_PW	4	DGND
5	A19V_PW	6	DGND
7	A19V_PW	8	DGND
9	A19V_PW	10	DGND

11 CN1403_NMOB (BT/WIFI)			
1	NC	2	GND
3	FRC_SDA_I2C	4	PWM_DIM1_FRC
5	FRC_SCL_I2C	6	FRC_RESET
7	LVDS_FORMAT	8	TCON_SDA_I2C
9	TCON_WP	10	NC
11	UPDATE_CHECK	12	TCON_SCL_I2C
13	GND	14	EVEN_TX4+_LVDS
15	EVEN_TX4-_LVDS	16	EVEN_TX3+_LVDS
17	EVEN_TX3-_LVDS	18	GND
19	EVEN_TXCLK+_LVDS	20	EVEN_TXCLK-_LVDS
21	GND	22	EVEN_TX2+_LVDS
23	EVEN_TX2-_LVDS	24	EVEN_TX1+_LVDS
25	EVEN_TX1-_LVDS	26	EVEN_TX0+_LVDS
27	EVEN_TX0-_LVDS	28	GND
29	ODD_TX4+_LVDS	30	ODD_TX4-_LVDS
31	ODD_TX3+_LVDS	32	ODD_TX3-_LVDS
33	GND	34	ODD_TXCLK+_LVDS
35	ODD_TXCLK-_LVDS	36	GND
37	ODD_TX2+_LVDS	38	ODD_TX2-_LVDS
39	ODD_TX1+_LVDS	40	ODD_TX1-_LVDS
41	ODD_TX0+_LVDS	42	ODD_TX0-_LVDS
43	GND	44	GND
45	GND	46	NC
47	PANEL_13V_PW	48	PANEL_13V_PW
49	PANEL_13V_PW	50	PANEL_13V_PW
51	PANEL_13V_PW		

5-3. Connector Functions

Connector	Function
• CN202_15Y → CNM803	Supply main power and dimming signal from IP board to Main Board.
• CN1301_HD → T-CON (32) • CN1302_FHD → T-CON (40/43/49)	The LVDS signal transfered from Main Board to Panel.