



UHD TV

Chassis : UWP60

Model : UE70KU6000W

SERVICE Manual

UHD TV



UE70KU6000W

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2. Product specifications
3. Disassembly and Reassembly
4. Troubleshooting
5. Wiring Diagram

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3. Disassembly and Reassembly

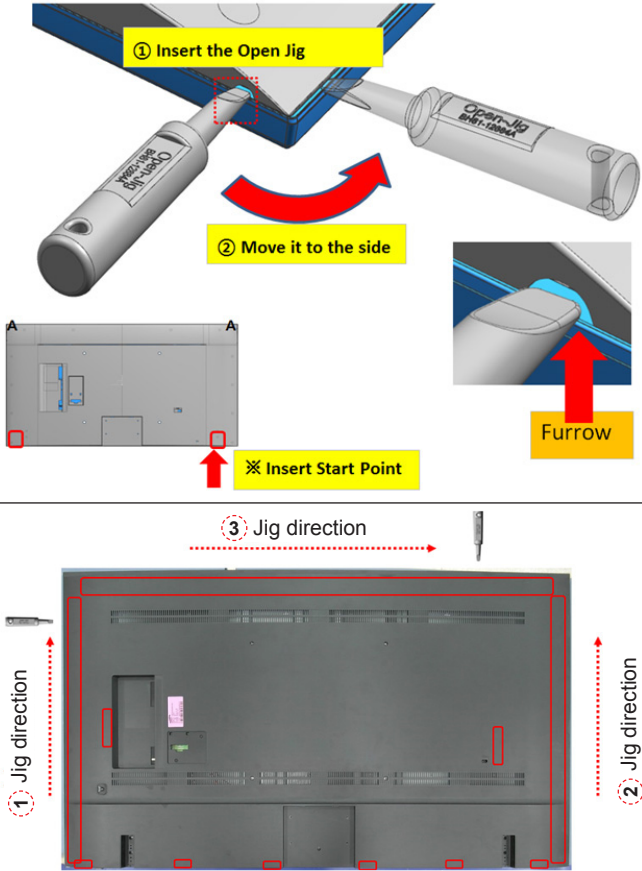
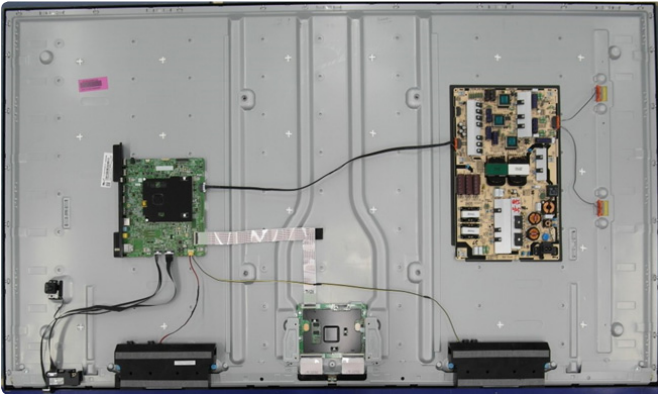


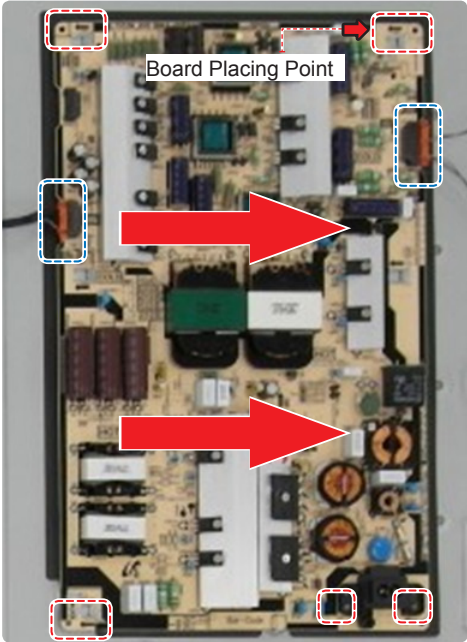
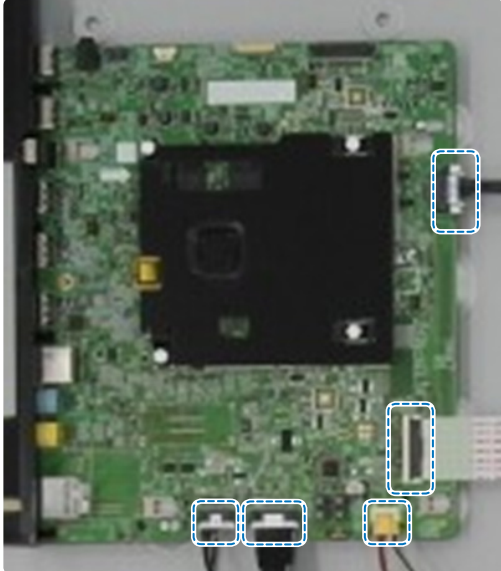
1. Disconnect the LED TV from the power source before disassembly.
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
 - Recommend Torque : 22.0 ~ 26.5lbf
 - A strength of Torque can be changed depending on the situation.

3-1. Disassembly and Reassembly

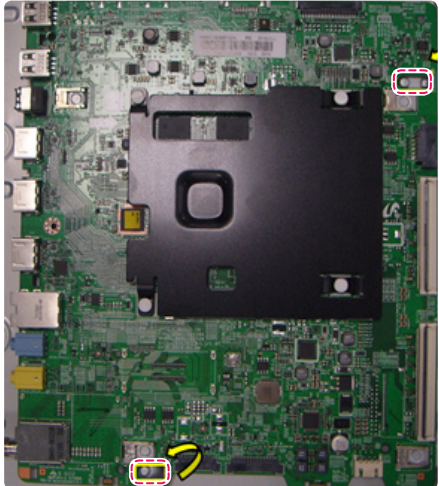
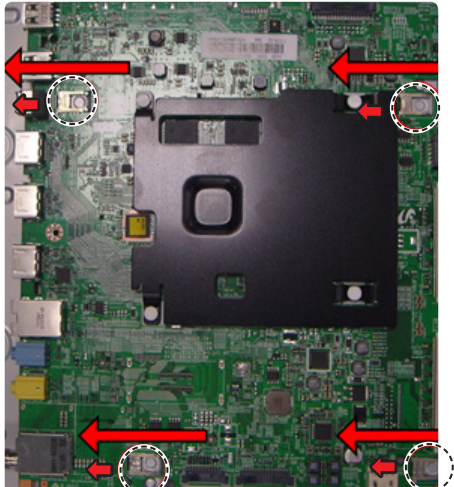
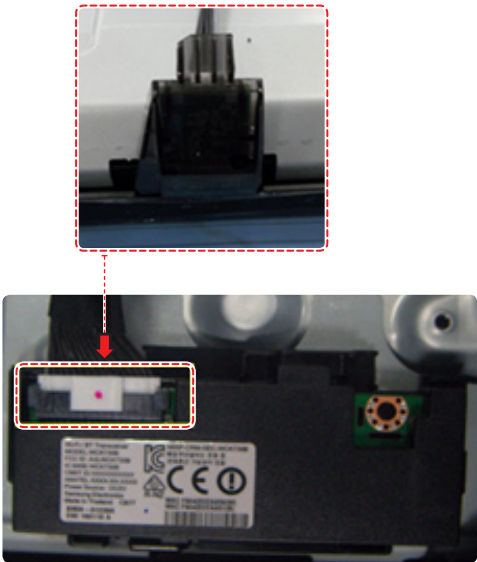
Description	Picture Description
<p>1 Carefully position the TV so that the screen is facing downwards. Make sure to place the TV upon a soft cushion or any material that will prevent damage to the screen.</p>	
<p>2 First, Remove 'Cover-Stand Decoration Rear'. And remove the 4 screws connecting the stand to the TV. Then carefully remove the stand.</p> <p>Screws</p> <p> 6902-002474 x 4EA TORQUE : 22.0 ~ 26.5lbf</p>	

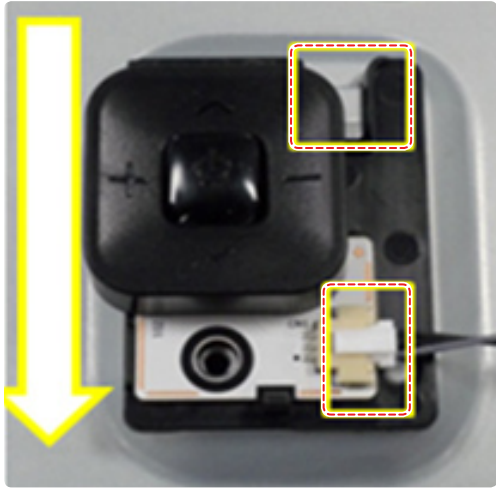


3. Disassembly and Reassemble

Description	Picture Description
<p>3 Remove the ASSY COVER P-REAR.</p> <ul style="list-style-type: none"> Insert Open Jig in a Disassembly furrow to Open the furrow. And Move Open Jig to the side. <ul style="list-style-type: none"> Disassemble all Hooks of Cover Rear along the three side. 	 <p>① Insert the Open Jig</p> <p>② Move it to the side</p> <p>※ Insert Start Point</p> <p>Furrow</p> <p>③ Jig direction</p> <p>① Jig direction</p> <p>② Jig direction</p>
<p>4 Remove the Electric tapes shown on the images.</p> <p>NOTE</p> <p>When assembling the TV, the electric tapes must be applied on the same locations. Please remember to take a picture of where the tapes were first applied.</p>	

Description	Picture Description
<div data-bbox="183 286 215 336">5</div> <div data-bbox="252 286 718 371">Remove the 'Lead Connectors' and screws from the SMPS unit. Then carefully remove the SMPS unit.</div>	<div data-bbox="860 286 1329 925">A photograph of a Switching Mode Power Supply (SMPS) unit. Several components are highlighted with dashed red boxes: two screws at the top, two connectors on the left, and two connectors on the right. A label 'Board Placing Point' with a red arrow points to a specific location on the top right. Two large red arrows point horizontally from the left side of the board towards the right, indicating the removal direction.</div>
<div data-bbox="183 952 215 1001">6</div> <div data-bbox="252 952 681 978">Remove the cables from the 'TV Board'.</div>	<div data-bbox="842 952 1345 1523">A photograph of a TV board. Several connectors and cable ports are highlighted with dashed blue boxes: one on the right edge, one on the bottom right, and two on the bottom left.</div>

3. Disassembly and Reassemble

Description	Picture Description
<p>7 Use both hands to hold the 'Main Board' and gently lift up 2 point marked.</p>	 A photograph of the main board with a large black shield in the center. Two small rectangular areas on the right edge are circled in red, indicating lift points. A yellow arrow points to one of these points.
<p>8 Slide the board to the Left side to release the board. Then carefully remove the 'TV Board'.</p>	 A photograph of the main board with the black shield. Four red arrows point from the right edge towards the left, indicating the direction to slide the board. The four corners where the board meets the frame are circled in red.
<p>9 Remove the BT/WIFI and IR unit.</p>	 Two photographs showing the removal of the BT/WIFI and IR unit. The top photo is a close-up of the unit being lifted. The bottom photo shows the unit being removed from a larger assembly, with a red dashed box highlighting the unit and a red arrow pointing to it from the top photo.

Description	Picture Description
10 Remove the JOG unit.	
11 Lastly, remove the speakers on both side.	
* Panel - Rear Side	



CAUTION

1. Always remember to disconnect the Power Cord before assembling or disassembling the LED TV.
2. Always take precautions and follow the steps properly. Remember to take a picture before disassembling.
3. Recommended screwdriver torque :
 - The torque may need to be adjusted accordingly.

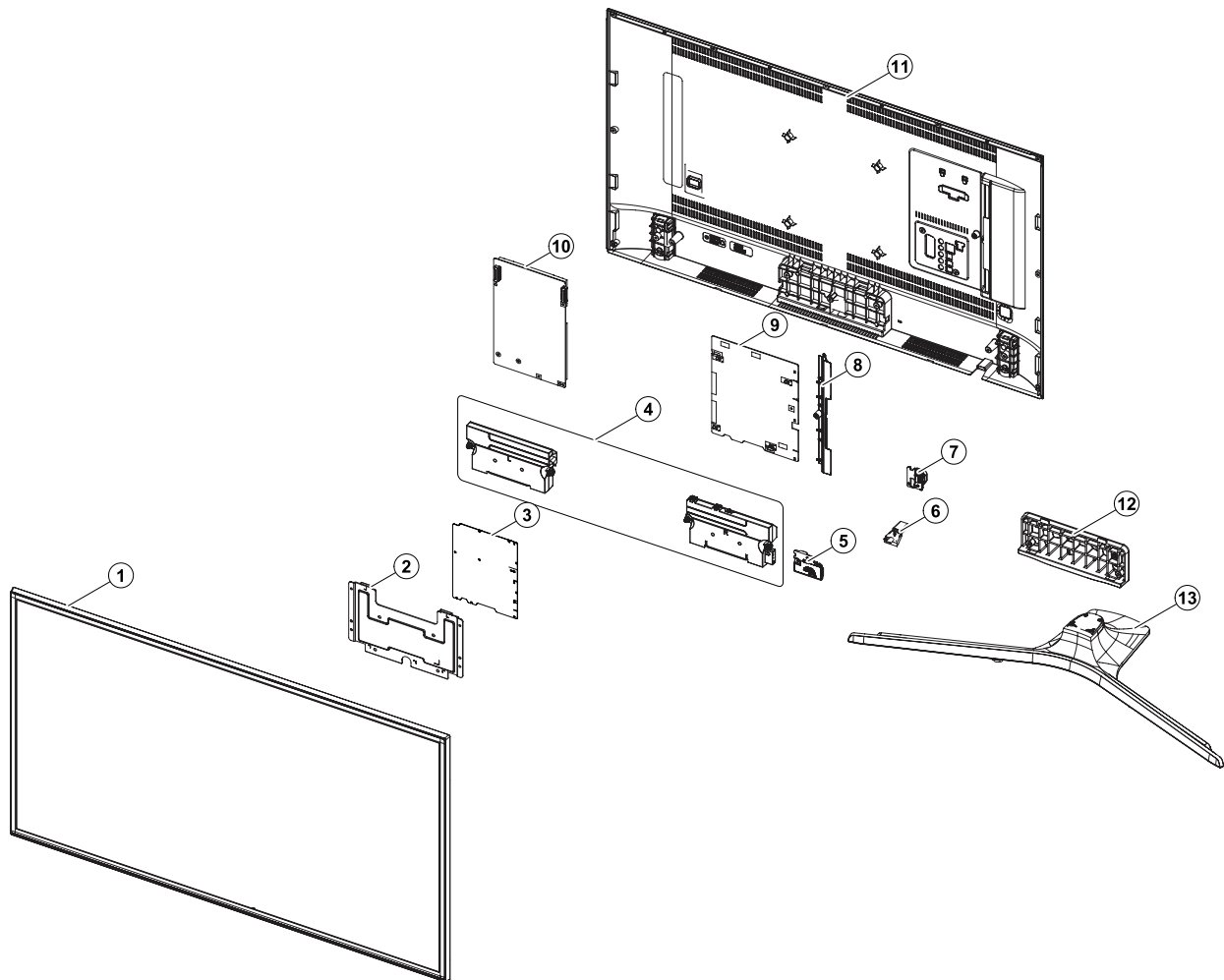


NOTE

Reassembly procedures are in the reverse order of disassembly procedures.

ANNEX. Exploded View & Part List [UE70KU6000WXXH EA01]

1-1. Exploded View



1-1-1. Parts List

No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
1	BN95-02682A	PRODUCT LCD-SHARP; CY-GK070HGSV1V/H,KU	1	SA	
2	BN61-13606A	BRACKET-STAND LINK; 55KU6400,EGI-SECC,T1.	1	SNA	
3	BN95-02753A	ASSY T CON; KU6000 Sharp 70inch,Hawk-UFT	1	SA	
4	BN96-35006F	ASSY SPEAKER P-FRONT; TV-SPK,KU6000,6ohm,	1	SA	
5	BN59-01174D	NETWORK-WLAN CLIENT; WIDT30Q,58x31.45x8.5	1	SA	
6	BN96-39955A	ASSY BOARD P-IR FUNCTION; KU6000,IR ASSY_	1	SA	
7	BN96-35345B	ASSY BOARD P-FUNCTION JOG; JU7500,CT15	1	SA	
8	BN63-15236A	COVER-TERMINAL SIDE; 55KU6000,HIPS,MOLD,H	1	SA	
9	BN94-10804K	ASSY PCB MAIN; LEDTV 6K	1	SA	
10	BN44-00874A	DC VSS-PD BOARD; L75S5N_KHS,AC/DC,357W,10	1	SA	
11	BN96-40431D	ASSY COVER P-REAR; 70KU6000,PC+ABS+GF1	1	SA	
12	BN96-40158B	ASSY GUIDE P-STAND; 70KU6000,PC+ABS,BK000	1	SA	
13	BN96-40162C	ASSY STAND P-BOTTOM; 70KU6000,PC+ABS,BK	1	SA	

2-1. Electrical Parts List

Service Bom (SA: SERVICE AVAILABLE, SNA: SERVICE NOT AVAILABLE)

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
			UE70KU6000WXXH (EA01)			
1	R001A	BN90-08004E	ASSY COVER REAR;LEDTV 6K	1	SNA	
0.2	R001A	BN96-40431D	ASSY COVER P-REAR;70KU6000,PC+ABS+GF15%,	1	SA	
..3	R001	BN63-15216B	COVER-REAR;70KU6000,PC+ABS+GF15%,MOLD ,V-	1	SNA	
...4		0103-010275	RESIN PC ABS;235GNH15/6919H,Black,BK0007	5700	SNA	
..3		BN64-03529J	INLAY-TERMINAL SIDE;55KU6500,PET,T0.125,	1	SNA	
..3		BN68-03518R	LABEL-WARNING;55KU6000,PET,T0.125,W66.5,	1	SNA	
..3		BN68-05603A	LABEL-E PASS;ART PAPER 90G,W/W	3	SNA	
..3		BN68-07835C	LABEL-WARNING;40K5500,PET,T0.125,W74,L44	1	SNA	
1		BN90-08029G	ASSY W/I;LEDTV 6K	1	SNA	
0.2		BN81-08159Z	A/S PART SET-ELEC W/I;LED TV ELEC spec-C	1	SNA	
0.2		BN81-11259Q	A/S PART SET-MECH W/I;UKU6000P,U70KP*	1	SNA	
1	S001A	BN90-08065F	ASSY STAND;LEDTV 6K	1	SNA	
0.2	SG01A	BN96-40158B	ASSY GUIDE P-STAND;70KU6000,PC+ABS,BK000	1	SA	
..3	SCREW	6003-000133	SCREW-TAPTYPE;BH,+,-,S,M4,L8,ZPC(BLK),SW	9	SA	
..3		6902-002656	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W180,L60	1	SNA	
..3		BN61-11629A	BRACKET-STAND NECK;EGI-SECC,NATURAL,T1.2	1	SNA	
..3		BN61-13603A	BRACKET-STAND NECK;65KU6500,HGI,T3,NATUR	1	SNA	
..3		BN61-13605A	BRACKET-STAND NECK FRONT;70KU6000,HGI,T2	1	SNA	
..3		BN63-11875X	SHEET-PROTECTION COVER;55KS7000,PO,T0.06	1	SNA	
..3		BN63-15465A	COVER-STAND NECK FRONT;65KU6400,PC+ABS,M	1	SNA	
..3		BN63-15469A	COVER-STAND NECK REAR;65KU6400,PC+ABS,MO	1	SNA	
..3		BN63-15471A	COVER-STAND NECK;65KU6400,PC+ABS,MOLD,V-	1	SNA	
..3		BN96-29120M	ASSY ACCESSORY-SCREW;LED_H8000,BN61-0949	1	SNA	
...4	SCREW	BN61-09494B	SCREW-TAPTYPE;BH,+,-,S,M4,L14,ZPC(BLK),SWR	8	SA	
...4		BN69-09241R	BAG SCREW;LDPE,0.05,70,90,HU8500,Vinyl p	1	SNA	
..3		BN96-40548A	ASSY COVER P-STAND DECORATION;70KU6000,P	1	SNA	
...4		BN61-13387A	HOLDER-COVER;55KU6500,TPE,MOLD,BK0007,V2	4	SNA	
...4		BN63-15624A	COVER-STAND DECORATION REAR;70KU6000,PC+	1	SNA	
0.2	SB02A	BN96-40162C	ASSY STAND P-BOTTOM;70KU6000,PC+ABS,BK00	1	SA	
..3	SCREW	6003-001001	SCREW-TAPTYPE;FH,+,-,B,M3,L8,ZPC(BLK),SW	4	SA	
..3	SCREW	6003-001086	SCREW-TAPTYPE;BH,+,-,B,M3,L12,ZPC(BLK),S	4	SA	
..3	SCREW	6003-001208	SCREW-TAPTYPE;BH,+,-,S,M4,L12,ZPC(BLK),SWR	4	SA	
..3		6902-002461	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W100,L60	2	SNA	
..3		6902-002550	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W200,L50	1	SNA	
..3		BN60-00162E	SPACER-FOAM;PE FOAM,L50M,GRAY,T0.5,W20	1	SNA	
..3		BN61-05728A	TAPE-DOUBLE FACE;ACRYL,T0.4,W10,L30M,GRA	1	SNA	
..3		BN61-11533A	BRACKET-STAND NECK;AI,NATURAL	1	SNA	
..3		BN61-11556A	BRACKET-STAND NECK;AI,NATURAL	1	SNA	
..3		BN63-15461A	COVER-STAND TOP;65KU6400,PC+ABS,MOLD,V-0	1	SNA	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
..3		BN63-15490A	COVER-STAND BOTTOM;65KU6400,HIPS,MOLD,V-	1	SNA	
..3	RF01	BN67-00398L	FOOT-RUBBER;UH6K,Si,GRAY,W8,L15.5,T2	8	SNA	
1	M0017	BN91-17281H	ASSY CHASSIS;LEDTV 6K	1	SNA	
0.2	M0014	BN94-10804K	ASSY PCB MAIN;LEDTV 6K	1	SA	
..3		BN62-00817A	HEAT SINK-PS;55KU6000,A1050,T1.5,W115,L1	1	SNA	
..3		BN63-15236A	COVER-TERMINAL SIDE;55KU6000,HIPS,MOLD,H	1	SA	
..3		BN97-10654F	ASSY SMD;LED TV 6K	1	SNA	
...4	DS01A	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	SA	
...4		0403-001783	DIODE-ZENER;BZB84-C6V2,5.8~6.6V,300mW,SO	3	SNA	
...4		0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	4	SA	
...4		0406-001200	DIODE-TVS;RClamp0504F,6V,1MAV,TP	2	SA	
...4		0406-001628	DIODE-TVS;AOZ8804ADI,6V,1MAV,5A,TP	1	SA	
...4		0406-001635	DIODE-TVS;SMF5.0A,6.4V,6.7V,7V,200MAV,20	1	SA	
...4		0501-000002	TR-SMALL SIGNAL;KSA812,PNP,150mW,SOT-23,	1	SNA	
...4		0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	7	SC	
...4		0504-000126	TR-DIGITAL;KSR1101,NPN,200mW,4.7K/4.7K,S	1	SA	
...4		0505-001844	FET-SILICON;SI4435DDY-T1-GE3,P,30V,-11.4	1	SA	
...4		0505-002560	FET-SILICON;AO6415,P,20V,-3.3A,0.15ohm,1	1	SA	
...4		0505-002598	FET-SILICON;AP2317GN,P,20V,-4.2A,0.052oh	1	SA	
...4		0505-002893	FET-SILICON;AO4801AS,P,30V,-5A,2W,SOIC-8	2	SA	
...4		0505-003397	FET-SILICON;2N7002K,N,60V,0.38A,1.19ohm,	1	SA	
...4		0801-003603	IC-CMOS LOGIC;MC74LCX244MN2TWG,Octal buf	1	SA	
...4		1001-001998	IC-ANALOG MULTIPLEX;NX3DV221GM,USB switc	2	SA	
...4		1103-001564	IC-EEPROM;S-24C512CI-J800,512Kbit,64Kx8,	1	SA	
...4		1105-002704	IC-DDR4 SDRAM;K4F8E304HB-MGCH,LPDDR4-SDR	2	SA	
...4		1201-000166	IC-OP AMP;LM358,SOP,ST,8P,150MIL,DUAL,10	1	SA	
...4		1201-003690	IC-AUDIO AMP;TAS5747PHPR,QFP,48P,DUAL,PL	1	SA	
...4		1203-004364	IC-VOL. DETECTOR;RT9818C-42PV,SOT-23,3P,	1	SA	
...4		1203-008102	IC-POSIFIXED REG.;S-13A1D12-E800,HSOP,8	1	SNA	
...4		1203-008104	IC-POSIFIXED REG.;S-13A1D18-E800,HSOP,8	1	SNA	
...4		1203-008105	IC-POSIFIXED REG.;S-13A1D33-E800,HSOP,8	1	SNA	
...4		1203-008392	IC-VOL. DETECTOR;S-6414AAB-L800X,TSOT-23	1	SA	
...4		1203-008454	IC-DC/DC CONVERTER;TPS56528,HSOP8,8,4,89	2	SA	
...4		1203-008522	IC-DC/DC CONVERTER;SN1501019DDCR,SOT-23,	2	SNA	
...4		1203-008732	IC-DC/DC CONVERTER;SYD104ADC,TSOT-23,6,3	1	SA	
...4		1203-008733	IC-DC/DC CONVERTER;AOZ1236QI-02,QFN,23,4	2	SA	
...4		1204-003697	IC-DECODER;SDP1531,FCPBGA,1046P,31x31,GL	1	SA	
...4		1205-004822	IC-SWITCH;TPS22965DSGR,SON,8P,2x2x0.75mm	3	SNA	
...4		1205-005325	IC-REPEATER;PS8409QFN48GTR2-A1,QFN,48P,6	1	SNA	
...4		1205-005519	IC-SWITCH;ET20163,SOT23-5,5P,2.95x3.02mm	3	SA	
...4		1405-001232	VARIOR;6.4V,5.6Vdc,30A,1.6x0.8mm,TP,19	2	SNA	
...4		1405-001271	VARIOR;35V,20VDC,5A,1.0x0.5mm,TP,100V,	15	SA	
...4		2007-000039	R-CHIP;0ohm,1%,1/10W,TP,1608	4	SA	
...4		2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	3	SNA	
...4		2007-000683	R-CHIP;3.3Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	3	SNA	

ANNEX. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...4		2007-001125	R-CHIP;68Kohm,1%,1/10W,TP,1608	2	SA	
...4		2007-001288	R-CHIP;18ohm,5%,1/16W,TP,1005	4	SA	
...4		2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	27	SNA	
...4		2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005	16	SNA	
...4		2007-007131	R-CHIP;13Kohm,1%,1/16W,TP,1005	2	SA	
...4		2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005	2	SA	
...4		2007-007137	R-CHIP;1.2Kohm,1%,1/16W,TP,1005	3	SA	
...4		2007-007138	R-CHIP;27Kohm,1%,1/16W,TP,1005	3	SNA	
...4		2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	37	SNA	
...4		2007-007306	R-CHIP;100ohm,1%,1/16W,TP,1005	35	SNA	
...4		2007-007309	R-CHIP;12Kohm,1%,1/16W,TP,1005,T0.35	4	SA	
...4		2007-007310	R-CHIP;8.2Kohm,1%,1/16W,TP,1005	1	SA	
...4		2007-007313	R-CHIP;6.8Kohm,1%,1/16W,TP,1005	3	SA	
...4		2007-007334	R-CHIP;200Kohm,1%,1/16W,TP,1005	5	SNA	
...4		2007-007528	R-CHIP;1.5Kohm,1%,1/16W,TP,1005	5	SA	
...4		2007-007720	R-CHIP;300Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-007723	R-CHIP;75Kohm,1%,1/10W,TP,1608	2	SA	
...4		2007-007767	R-CHIP;200ohm,1%,1/16W,TP,1005	7	SA	
...4		2007-007798	R-CHIP;10ohm,1%,1/16W,TP,1005	8	SA	
...4		2007-007847	R-CHIP;16Kohm,1%,1/10W,TP,1608	5	SA	
...4		2007-007942	R-CHIP;1Mohm,1%,1/16W,TP,1005	1	SNA	
...4		2007-007981	R-CHIP;180Kohm,1%,1/16W,TP,1005	1	SNA	
...4		2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005	9	SNA	
...4		2007-008263	R-CHIP;3Kohm,1%,1/16W,TP,1005	2	SA	
...4		2007-008269	R-CHIP;51Kohm,1%,1/16W,TP,1005	3	SA	
...4		2007-008298	R-CHIP;49.9ohm,1%,1/16W,TP,1005	4	SA	
...4		2007-008391	R-CHIP;6.34Kohm,1%,1/16W,TP,1005	2	SA	
...4		2007-008779	R-CHIP;0ohm,1%,1/16W,TP,1005	2	SA	
...4		2007-009117	R-CHIP;49.9Kohm,1%,1/16W,TP,1005	1	SA	
...4		2007-009322	R-CHIP;1.3Kohm,1%,1/16W,TP,1005	2	SA	
...4		2011-001261	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,2.	6	SA	
...4		2011-001344	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,2	6	SA	
...4	AD480	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005	4	SA	
...4	AD480	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,C0G,TP,1005	2	SA	
...4	AD480	2203-000359	C-CER,CHIP;0.15nF,5%,50V,C0G,TP,1005,0.5	3	SNA	
...4	AD480	2203-000386	C-CER,CHIP;0.015nF,5%,50V,C0G,TP,1005	3	SA	
...4	AD480	2203-000585	C-CER,CHIP;0.22nF,10%,50V,X7R,TP,1005	3	SA	
...4	AD480	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,TP,1005	5	SA	
...4	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,TP,1005	5	SNA	
...4	AD480	2203-005054	C-CER,CHIP;0.0047nF,0.25pF,50V,NP0,TP,10	2	SA	
...4	AD480	2203-005083	C-CER,CHIP;220nF,10%,50V,X7R,TP,1608,0.8	6	SA	
...4	AD480	2203-005968	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1005,0.5	4	SNA	
...4	AD480	2203-006126	C-CER,CHIP;47nF,10%,16V,X7R,TP,1005	3	SNA	
...4	AD480	2203-006324	C-CER,CHIP;2200nF,10%,10V,X5R,TP,1608	14	SA	
...4	AD480	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,TP,1005	23	SNA	
...4	AD480	2203-006824	C-CER,CHIP;4700nF,10%,10V,X5R,TP,1608	5	SNA	
...4	AD480	2203-006838	C-CER,CHIP;2200nF,10%,6.3V,X5R,TP,1005	9	SA	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...4	AD480	2203-006844	C-CER,CHIP;470nF,10%,10V,X5R,TP,1005	2	SA	
...4		2402-001268	C-AL,SMD;100uF,20%,25V,WT,TP,8x6.3mm	1	SA	
...4		2703-000213	INDUCTOR-SMD;470nH,10%,1.35Ohm,35mA,15,M	1	SA	
...4		2703-001938	INDUCTOR-SMD;56nH,5%,1005,1.5Ohm,200mA,1	3	SA	
...4		2703-003149	INDUCTOR-SMD;2.2uH,20%,0.055Ohm,3000mA,W	1	SA	
...4		2703-003937	INDUCTOR-SMD;1uH,20%,7.0x6.47x3.0mm,0.00	4	SA	
...4		2703-004630	INDUCTOR-SMD;2.2uH,20%,5.0T,0.0025Ohm,66	1	SNA	
...4		2703-004724	INDUCTOR-SMD;8.2uH,20%,4T,0.072Ohm,2300m	4	SA	
...4		2703-005191	INDUCTOR-SMD;1.5uH,20%,4.5,0.02Ohm,5300m	1	SA	
...4		2703-005193	INDUCTOR-SMD;2.2uH,20%,4.5,0.024Ohm,5100	2	SA	
...4		2801-004021	CRYSTAL-SMD;24.576MHz,20ppm,28-AAN,12pF,	1	SA	
...4		3301-001364	BEAD-SMD;1000ohm,1608,TP,1085ohm/108MHz,	6	SNA	
...4		3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,PL	3	SA	
...4		3601-001376	FUSE-SURFACE MOUNT;32V,3A,FAST-ACTING,Hi	3	SNA	
...4		3701-001967	CONNECTOR-HDMI;19PA,FEMALE,AU,0.5mm,BLK	3	SA	
...4		3707-001103	CONNECTOR-OPTICAL;ANGLE,SPDIF,2.5PI	1	SA	
...4		3710-003908	CONNECTOR-SOCKET;64P,2R,0.5mm,SMD-S,AU,B	1	SA	
...4	EH01	3711-007803	HEADER-BOARD TO CABLE;BOX,12P,1R,1.25mm,	1	SA	
...4	EH01	3711-008131	HEADER-BOARD TO CABLE;BOX,4P,1R,2.5mm,AN	1	SA	
...4	EH01	3711-008859	HEADER-BOARD TO CABLE;BOX,12P,2R,2mm,ANG	1	SA	
...4		3711-009090	CONNECTOR-HEADER;BOX,16P,1R,1.25mm,SMD-A	1	SA	
...4		3722-003199	JACK-MODULAR;8P/8C,Y,ANGLE,NONE,AU,1PORT	1	SA	
...4		3722-003457	JACK-USB;4P/1C,NI,BLK,ANGLE,A,2.0,13.1x1	2	SA	
...4		3722-003814	JACK-PHONE;1P/7C,NI/SN,YEL,ANGLE,3.5PI,1	1	SA	
...4	JACK	3722-003873	JACK-PHONE;1P/7C,AU/SN,BLU,ANGLE,3.5PI,1	1	SA	
...4		6302-001376	GASKET-SMD;;;CONDUCTIVE FABRIC,T14,W43,L	7	SNA	
...4		BN40-00322C	TUNER-DTV AIR CABLE;CDT-933T322-93,DVB-T	1	SA	
...4		BN41-02528A	PCB-MAIN;KU6000,FR-4,4L,1.6T,193x241mm,1	1	SNA	
...4	CB07	BN61-13312B	BRACKET-PCB;55KS8000,SK5,T0.3,13.7,11.4,	4	SNA	
...4		BN97-10863B	ASSY MICOM-SUB;JMMICOM_EU_TV,UWP60,W25Q4	1	SNA	
...5		1107-002226	IC-NOR FLASH;W25Q40CLSSIP,4Mbit,SOIC,8P,	1	SA	
...4		BN97-10865A	ASSY MICOM-MAIN;T-JZL6DEUC,UWP60,KLM4G1F	1	SNA	
...5		1107-002374	IC-EMMC;KLM4G1FEPD-B031,4Gbyte,BGA,153P,	1	SNA	
..3		BN97-10916A	ASSY DRM;JAZZ-L,DVB,NagSam, MAC, HDCP, C	1	SNA	
...4		BN46-00109H	KEY CODE-CERTIFICATION;MAC,TV/AV,General	1	SNA	
...4		BN46-00110P	KEY CODE-CERTIFICATION;MIRACAST(HDCP2.2)	1	SNA	
...4		BN46-00500A	KEY CODE-CERTIFICATION;JAZZ-L,Nagra CSC	1	SNA	
...4		BN46-00514A	KEY CODE-CERTIFICATION;CI PLUS,Jazz M, J	1	SNA	
1		BN91-17313B	ASSY SHIELD;LEDTV 6K	1	SNA	
0.2		BN02-00102B	TAPE-FILAMENT;FILAMENT,#8917,T0.15,W25,L	0	SNA	
0.2		BN39-02217F	LEAD CONNECTOR-POWER;70KU6000,UL21016,12	1	SA	
0.2		BN39-02218C	LEAD CONNECTOR-SUB ASSY;65KU6000,UL21016	1	SA	
0.2		BN39-02220D	LEAD CONNECTOR-SUB ASSY;65KU6300,UL21016	1	SA	
0.2		BN39-02245A	LEAD CONNECTOR-BLU;70KU6000,UL21016,16P,	1	SA	
0.2		BN44-00874A	DC VSS-PD BOARD;L75S5N_KHS,AC/DC,357W,10	1	SA	
0.2	WIFI	BN59-01174D	NETWORK-WLAN CLIENT;WIDT30Q,58x31.45x8.5	1	SA	

ANNEX. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
0.2		BN61-10073B	HOLDER-WIFI;55KU6000,ABS,MOLD,BK0007,HB	1	SNA	
0.2		BN96-35006F	ASSY SPEAKER P-FRONT;TV-SPK,KU6000,6ohm,	1	SA	
0.2	JOG	BN96-35345B	ASSY BOARD P-FUNCTION JOG;JU7500,CT15SE8	1	SA	
..3	AH240	BN61-11584A	HOLDER-BUTTON;JU7500,ABS,MOLD,BK0007,HB	1	SNA	
..3	AH297	BN63-11231B	HOLDER-KNOB;HU7000,ABS,MOLD,BLACK,HB	1	SNA	
..3	FK04	BN64-02406B	BUTTON-FUNCTION;LED_HU7000,ABS,HB,BLACK,	1	SNA	
...4		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	8	SNA	
0.2		BN96-36274J	FFC CABLE;50J6200,Fold,L500,51P	1	SA	
0.2		BN96-39955A	ASSY BOARD P-IR FUNCTION;KU6000,IR ASSY_	1	SA	
1		BN92-19850L	ASSY BOX;LEDTV 6K	1	SNA	
0.2		BH68-00662A	LABEL BOX;ALL,ART PAPER,W60,L110,WHT,NO	1	SNA	
0.2		BN68-05640A	LABEL BOX;ALL,ART PAPER,W110,L130,EUROPE	1	SNA	
0.2		BN69-13734F	BOX UNIT-OUT;70KU6000,CB,DW4,F3,L1722,W2	1	SNA	
0.2		BN69-13735A	BOX UNIT-IN;70KU6000,CB,DW1,C1,L2146,W55	1	SNA	
1		BN92-19880M	ASSY LABEL;LEDTV 6K	1	SNA	
0.2		BN68-06708G	LABEL-RATING;Monitor,WW,PP,T0.161,W93,L7	1	SNA	
0.2		BN68-07519A	LABEL-ENERGY;ALL JORDAN,WW,PP,T0.135,W60	1	SNA	
0.2		BN68-07874F	LEAFLET-QUICK SETUP GUIDE;KU6000 70",EU,	1	SNA	
1	ACCE1	BN92-19910P	ASSY ACCESSORY;LEDTV 6K	1	SNA	
0.2	ACCE4	BN96-35101J	ASSY ACCESSORY-MANUAL;LED_H6K	1	SNA	
..3		6902-001964	BAG PE;LDPE,BIOBASED,T0.03,W200,L300,TRP	1	SNA	
..3		BN68-03548J	LEAFLET-WARRANTY;comm,Samsung,17Lang,Mid	1	SNA	
..3		BN68-04972E	LEAFLET-REGULATORY GUIDE;ALL,SAMSUNG,W/W	1	SNA	
..3		BN68-07598A	LEAFLET-FICHE;ALL,W/P,0	1	SNA	
..3		BN68-07869T	MANUAL USERS;KU6000,XH,W/P,EURO B5	1	SNA	
0.2	ACCE2	BN96-39490A	ASSY ACCESSORY-CABLE;UK6P	1	SNA	
..3		3709-001791	CONNECTOR-CARD SLOT;64P,0.5mm,SMD-A,AU,P	1	SA	
..3	T0268	3903-001118	CBF-POWER CORD;DT,EU,Angle,2P(C7),250V,2	1	SA	
..3		4301-000121	BATTERY-MN;1.5V,R03,10.5x44.5m,7.5g,AAA	2	SNA	
..3		6902-001965	BAG PE;LDPE,BIOBASED,T0.05,W200,L300,TRP	1	SNA	
..3	EC03	BN39-02189A	GENDER CABLE;DC to RCA Cable,3P,L100,UL2	1	SA	
..3	EC03	BN39-02190A	GENDER CABLE;DC to RCA Cable,2P,L100,UL2	1	SA	
..3		BN59-01247A	REMOCON-TV;2016 TV,Samsung,44KEY,3V,KU60	1	SA	
..3	T0527	BN68-00513A	LABEL-E PASS;ALL MODEL,WW,YUPO,W50,L15,W	2	SNA	
1		BN92-19940A	ASSY P/MATERIAL;LEDTV 6K	1	SNA	
0.2		0203-001598	TAPE-FILAMENT;FILAMENT,#8915,T0.15,W12,L	0	SNA	
0.2		6902-001954	BAG ROLL;HDPE/PE FOAM,HDPE T0.018mm,T0.2	4	SNA	
0.2		6902-002233	BAG AIR;LDPE,-,T0.2,W900,L1850,TRP,-,-,-	1	SNA	
0.2		6922-000003	BAND;PP,T0.8,W18,L1650M,TRP,DA69-90145A	6	SNA	
0.2	T0214	AA61-20285C	HOLDER-BOX;ALL,PP,MOLD,BLACK,HB,HB,17.5g	4	SNA	
0.2		BN02-00319B	TAPE-OPP;OPP,T0.05,W75,L800M,CLEAR,ROLL	3	SNA	
0.2		BN68-02422B	LABEL WARNING;ALL,ART PAPER,T0.05,W240,L	1	SNA	
0.2		BN69-03982L	PACKING ANGLE;ALL,PAPER,-,-,-,-,-,-,-	1	SNA	
0.2		BN69-05418M	WRAP;T0.017,500,2000000,2000000,500	0	SNA	
0.2		BN69-06640E	PAD-PACKING;TRUCK PAD,CB,-,W410,L2500,,	1	SNA	
0.2		BN69-06642A	PAD-DP SHEET;PAD,CB,SW4,,W1300,L1050,,,,	1	SNA	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
0.2		BN69-13176A	CUSHION-SET;KU6000,EPS,16.7g/l,WHT,Y-FEE	1	SNA	
0.2		BN69-13177A	CUSHION-SET SIDE;KU6000,EPS,16.7g/l,WHT,	1	SNA	
..3		0103-005099	RESIN EPS;BASF303,Natural,Natural	1661	SNA	
0.2		BN69-13764A	PAD-SHEET FRONT;70KU6000,CB,DW2,W859,L15	1	SNA	
0.2		BN69-13942Y	PALLET-WOODEN;70" KU6000,WOOD,-,W1200,L1	1	SNA	
1		BN92-19965B	ASSY LABEL POP;LEDTV 6K	1	SNA	
0.2		BN68-07971B	LABEL POP-HIGHLIGHT;KU6000,PET,T0.1,W90,	1	SNA	
1	PANEL	BN95-02682A	PRODUCT LCD-SHARP;CY-GK070HGSV1V/ H,KU600	1	SA	
0.2	SCREW	6001-003016	SCREW-MACHINE;PWH,+,M3,L5.0,ZPC(WHT),SWR	4	SA	
0.2	SCREW	6001-003075	SCREW-MACHINE;BH,+,M3,L4,ZPC(WHT),SWRCH1	8	SA	
0.2	CB18	BN61-13606A	BRACKET-STAND LINK;55KU6400,EGI-SECC,T1.	1	SNA	
0.2	CB18	BN61-13607A	BRACKET-STAND LINK;55KU6400,EGI-SECC,T1.	1	SNA	
..3		BN61-09605A	STUD-PEM;LED TV F6100,SUM24L,L8,PRESS	4	SNA	
0.2		BN68-05722A	LABEL-E PASS;POLYPROPYLENE,NON-COATING	1	SNA	
0.2		BN90-08328H	ASSY MISC-BLU;2016_LCM_BLU	1	SNA	
..3		BN02-00114A	TAPE PET;NNB 56",PET,T0.07,W12,L20,GREEN	16	SNA	
..3		BN61-13369A	FRAME-MIDDLE TOP;70KU6300,TPV,HB,BK0008,	1	SNA	
..3		BN61-13377A	FRAME-MIDDLE BOTTOM;70KU6300,TPV,HB,BK00	1	SNA	
..3		BN61-13385A	FRAME-MIDDLE LEFT RIGHT;70KU6300,TPV,HB,	2	SNA	
..3		BN61-13400A	SUPPORT-PLATE;55KU6300,PC,V-0,WHT*,OD-19	23	SNA	
..3		BN61-14015A	DIFFUSER PLATE;CY-GK070HGSV1V,PS,Y16_KU6	1	SNA	
..3		BN61-14016A	OPTICAL SHEET-COMPLEX;CY- GK070HGSV1V,PET	1	SNA	
..3		BN61-14017A	OPTICAL SHEET-MLS;CY-GK070HGSV1V,PET,KU6	1	SNA	
..3		BN61-14018A	OPTICAL SHEET-REFLECTOR;CY-GK070HGSV1V,P	1	SNA	
..3		BN96-40269A	ASSY CHASSIS REAR P;70KU6000,EGI-SECC	1	SNA	
...4		BN02-00040C	TAPE DOUBLE FACE;F-LED ALL,PET,T0.3,W3,L	6	SNA	
...4		BN02-00102B	TAPE-FILAMENT;FILAMENT,#8917,T0.15,W25,L	1	SNA	
...4		BN02-00383A	TAPE THERMAL;Y15 JU8K,PET,T0.5,W60,L60	8	SNA	
...4		BN02-00383B	TAPE THERMAL;70KU6000,AI,T0.5,W30,L60,CL	2	SNA	
...4		BN61-11508A	SUPPORT-PLATE;Y15 LED,PC,V-2,CLEAR,OD-19	23	SNA	
...4		BN61-11836A	HOLDER-SOURCE PCB;Y15 JU7K INX,ABS,MOLD,	8	SNA	
...4		BN61-13447A	FRAME-CHASSIS REAR TOP;70KU6000,PC+GF10%	1	SNA	
...4		BN61-13448A	FRAME-CHASSIS REAR BOTTOM;70KU6000,PC+GF	1	SNA	
...4		BN61-13449A	FRAME-CHASSIS REAR LEFT RIGHT;70KU6000,P	2	SNA	
...4		BN61-13557A	BRACKET-WIRE;55KS7000,SW-C,T1,60,SILVER	7	SA	
...4		BN63-15008A	GASKET-ESD;GASKET,FABRIC,T8,W20,L20,BLAC	3	SNA	
...4		BN63-15598A	INSULATOR-SMPS;70KU6000,PC,BLACK,L408,W2	1	SNA	
...4	CC04	BN64-03434A	CHASSIS-REAR;70KU6000,EGI-SECC,PRESS,T0.	1	SNA	
...5	CB20	BN61-10207A	BRACKET-WALL;32UD6400,SWRCH10A,T1.2,L15.	4	SNA	
...4		BN96-40780A	ASSY PCB P-LED INTERFACE BOARD;70KU6000_	1	SNA	
...4		BN96-40781A	ASSY PCB P-LED INTERFACE BOARD;70KU6000_	1	SNA	
..3		BN96-40275A	ASSY LED BAR P;70KU6000_L,CEM3,5EA, Topv	9	SNA	
..3		BN96-40276A	ASSY LED BAR P;70KU6000_M,CEM3,5EA, Topv	9	SNA	
..3		BN96-40277A	ASSY LED BAR P;70KU6000_R,CEM3,5EA, Topv	9	SNA	

ANNEX. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
0.2	TCON	BN95-02753A	ASSY T CON;KU6000 Sharp 70inch,Hawk-UFT	1	SA	
..3		BN62-00705A	HEAT SINK-PS;TV Echo-P,A1050,W135,L98.5,	1	SNA	
..3		BN97-10904A	ASSY SMD;KU6000 Sharp 70inch,Hawk-UFT,BN	1	SNA	
...4		0202-001899	SOLDER-CREAM;M705-GRN360-K2-VT,20-38um,S	6	SNA	
...4	DS01A	0401-001192	DIODE-SWITCHING;MMBD7000LT1,100V,200mA,S	3	SA	
...4		0403-001164	DIODE-ZENER;MMSZ5232B,5.32~5.88V,500mW,S	1	SA	
...4		0404-001881	DIODE-SCHOTTKY;SS3040-HE,40V,3000mA,SOD-	2	SA	
...4		0406-001643	DIODE-TVS;1SMA33AT3G,36.7V,38.65V,40.6V,	1	SNA	
...4		0406-001689	DIODE-TVS;SMH14A,15.6V,17.9V,1MAV,40A,TP	1	SA	
...4		0406-001691	DIODE-TVS;SESD8008MUTAG,5.5V,7V,8.5V,0.5	8	SA	
...4		0501-000465	TR-SMALL SIGNAL;MMBT3904,NPN,350mW,SOT-2	1	SA	
...4		0502-001345	TR-POWER;FCX491A,NPN,1000mW,SOT89,TR,900	3	SA	
...4		0502-001346	TR-POWER;FCX591A,PNP,1000mW,SOT89,TR,30/	3	SA	
...4		0505-003507	FET-SILICON;AO3424,N,30V,3.8A,1.4W,SOT-2	10	SA	
...4	EL02	0601-002037	LED;SMD(TOP VIEW),BLUE,1.6x0.8mm,465/470	2	SA	
...4		0801-002345	IC-CMOS LOGIC;7S04,INVERTER,SOT-353,5P,2	1	SA	
...4		0801-003292	IC-CMOS LOGIC;7WB66,Bus Switch,MAB08A,8P	4	SA	
...4		1003-002697	IC-LEVEL DRIVER;BD8125MUV,QFN,48P,7x7x0.	1	SNA	
...4		1105-002772	IC-DDR3 SDRAM;K4B1G1646I-BCMA,DDR3 SDRAM	2	SA	
...4		1203-004363	IC-VOL. DETECTOR;SOT-23,3Z30,2.9x1.6mm,P	1	SA	
...4		1203-006130	IC-POS.FIXED REG.;S-1172B25-U5T1G,SOT-8	1	SA	
...4		1203-008118	IC-DC/DC CONVERTER;AOZ3013PI,SO-8,8,4.96	2	SA	
...4		1203-008391	IC-DC/DC CONVERTER;AOZ1269QI-02,QFN-23L,	2	SA	
...4		1203-008424	IC-DC/DC CONVERTER;BM81004MUV,QFN,48,7x7	1	SNA	
...4		1204-003617	IC-VIDEO PROCESS;SDP1409.3,FCBGA,1023P,3	1	SA	
...4		1405-001381	VARISTOR;11V,8VDC,30A,1.6x0.8mm,TP,25V,5	3	SA	
...4		1405-001382	VARISTOR;24.5V,16VDC,120A,2.0x1.25mm,TP,	2	SA	
...4		2007-000034	R-CHIP;1ohm,5%,1/4W,TP,3216	2	SNA	
...4		2007-000060	R-CHIP;100Kohm,1%,1/10W,TP,1608	2	SNA	
...4		2007-000063	R-CHIP;150Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	4	SA	
...4		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	10	SA	
...4		2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	2	SA	
...4		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	SA	
...4		2007-000109	R-CHIP;1Mohm,5%,1/10W,TP,1608	1	SA	
...4		2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	9	SA	
...4		2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	SNA	
...4		2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	18	SNA	
...4		2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	12	SA	
...4		2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	SNA	
...4		2007-000165	R-CHIP;200Kohm,5%,1/16W,TP,1005	4	SNA	
...4		2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	44	SNA	
...4		2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	2	SNA	
...4		2007-000239	R-CHIP;1.5Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000504	R-CHIP;2.2ohm,5%,1/4W,TP,3216	1	SA	
...4		2007-000606	R-CHIP;240ohm,1%,1/10W,TP,1608	1	SA	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...4		2007-000614	R-CHIP;24Kohm,1%,1/10W,TP,1608	1	SNA	
...4		2007-000651	R-CHIP;27Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000842	R-CHIP;3Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-000929	R-CHIP;470ohm,1%,1/10W,TP,1608	3	SNA	
...4		2007-000979	R-CHIP;5.6Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005	15	SNA	
...4		2007-002437	R-CHIP;2ohm,5%,1/10W,TP,1608	1	SNA	
...4		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005	93	SNA	
...4		2007-007139	R-CHIP;47Kohm,1%,1/16W,TP,1005,T0.35	16	SA	
...4		2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005	13	SA	
...4		2007-007315	R-CHIP;3.9Kohm,1%,1/16W,TP,1005	1	SNA	
...4		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	24	SNA	
...4		2007-007488	R-CHIP;75Kohm,1%,1/16W,TP,1005	6	SNA	
...4		2007-007517	R-CHIP;240ohm,1%,1/16W,TP,1005	13	SNA	
...4		2007-007590	R-CHIP;82Kohm,1%,1/16W,TP,1005	2	SNA	
...4		2007-007627	R-CHIP;16Kohm,1%,1/16W,TP,1005	2	SA	
...4		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005	28	SNA	
...4		2007-008035	R-CHIP;160Kohm,1%,1/10W,TP,1608	1	SA	
...4		2007-008070	R-CHIP;130ohm,1%,1/10W,TP,1608	1	SNA	
...4		2007-008136	R-CHIP;36Kohm,1%,1/16W,TP,1005	1	SA	
...4		2007-008167	R-CHIP;120Kohm,1%,1/16W,TP,1005	1	SC	
...4		2007-008332	R-CHIP;11.5Kohm,1%,1/16W,TP,1005	1	SA	
...4		2007-008596	R-CHIP;0.1ohm,1%,1/4W,TP,3216	2	SC	
...4		2007-009234	R-CHIP;0.47ohm,1%,1/4W,TP,3216	6	SNA	
...4		2007-009777	R-CHIP;4.99Kohm,1%,1/16W,TP,1005	3	SA	
...4		2007-010387	R-CHIP;10Kohm,1%,1/16W,TP,1005	1	SA	
...4		2011-001264	R-NETWORK;10ohm,5%,1/16W,L,CHIP,8P,TP,2.	12	SNA	
...4		2011-001427	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,2.0	3	SA	
...4	AD480	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,TP,1005	6	SA	
...4	AD480	2203-000332	C-CER,CHIP;0.012nF,5%,50V,C0G,TP,1608	2	SA	
...4	AD480	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,TP,1005	12	SA	
...4	AD480	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,TP,1005	4	SA	
...4	AD480	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1608	1	SA	
...4	AD480	2203-000940	C-CER,CHIP;0.47nF,10%,50V,X7R,TP,1005	2	SA	
...4	AD480	2203-002711	C-CER,CHIP;100nF,10%,25V,X7R,TP,1608	5	SA	
...4	AD480	2203-002982	C-CER,CHIP;6.8nF,10%,50V,X7R,TP,1005	1	SA	
...4	AD480	2203-005221	C-CER,CHIP;15nF,10%,50V,X7R,TP,1608	1	SNA	
...4	AD480	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP,1608	8	SNA	
...4	AD480	2203-005344	C-CER,CHIP;22nF,10%,25V,X7R,TP,1005,0.5T	8	SNA	
...4	AD480	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	14	SA	
...4	AD480	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,TP,1005,T0.	224	SNA	
...4	AD480	2203-006348	C-CER,CHIP;1000nF,10%,25V,X5R,TP,1608,0.	2	SA	
...4	AD480	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	7	SC	
...4	AD480	2203-006474	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,2012	8	SA	
...4	AD480	2203-006698	C-CER,CHIP;1000nF,10%,25V,X7R,TP,1608,0.	5	SNA	
...4	AD480	2203-006741	C-CER,CHIP;470nF,10%,25V,X5R,TP,1608,0.8	1	SNA	
...4	AD480	2203-006841	C-CER,CHIP;1000nF,10%,16V,X5R,TP,1005	1	SNA	

ANNEX. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...4	AD480	2203-006890	C-CER,CHIP;10000nF,20%,6.3V,X5R,TP,1608	32	SNA	
...4	AD480	2203-006960	C-CER,CHIP;1000nF,10%,50V,X7R,TP,2012	1	SNA	
...4	AD480	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012,1	52	SNA	
...4	AD480	2203-007240	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,1608(64	SA	
...4	AD480	2203-007269	C-CER,CHIP;22000nF,20%,10V,X5R,TP,2012(2	19	SA	
...4	AD480	2203-007270	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608,0	67	SNA	
...4	AD480	2203-007306	C-CER,CHIP;10000nF,10%,25V,X5R,TP,2012,1	27	SNA	
...4	AD480	2203-007370	C-CER,CHIP;10000nF,10%,10V,X7R,TP,2012	8	SA	
...4	AD480	2203-007513	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608,0	6	SA	
...4	AD480	2203-007544	C-CER,CHIP;100nF,10%,50V,X7R,TP,1005,0.5	61	SA	
...4	AD480	2203-008315	C-CER,CHIP;22000nF,20%,25V,X5R,TP,2012,T	2	SA	
...4		2703-003862	INDUCTOR-SMD;10uH,20%,6060,0.065ohm,1900	3	SA	
...4		2703-004199	INDUCTOR-SMD;10uH,20%,6.6x7.0mm,2.2mm,0.	1	SNA	
...4		2703-004589	INDUCTOR-SMD;2.2uH,20%,5050,2T,0.048Ohm,	2	SA	
...4		2801-005324	CRYSTAL-SMD;27MHz,30ppm,Ceramic SMD(4pin	1	SA	
...4		3301-002039	BEAD-SMD;26ohm,1608,TP	45	SA	
...4		3601-001402	FUSE-SURFACE MOUNT;125V,7A,FAST-ACTING,C	1	SNA	
...4		3708-003073	CONNECTOR-FPC/FFC/PIC;51P,0.5mm,SMD-A,AU	2	SA	
...4		3708-003241	CONNECTOR-FPC/FFC/PIC;96P,0.5mm,SMD-A,AU	2	SNA	
...4		3711-007839	CONNECTOR-HEADER;BOX,15P,1R,1.25mm,SMD-A	1	SA	
...4		6302-001290	GASKET;SMR-TS-4-4.5-3,4.0mm,Ni+Au+SUS+Mg	6	SNA	
...4		BN41-02291B	PCB-TCON;Sharp UHD 120Hz,FR-4,4L,1.6T,16	1	SNA	
...4		BN97-10912A	ASSY MICOM;1107-002223,KU6000 Sharp 70in	1	SNA	
...5	IC	1107-002265	IC-NOR FLASH;W25Q32FVSSIG,32Mbit,SOP,8P,	1	SA	
0.2		BN96-39310A	ASSY OPEN CELL;LQ695R3HB6K,16:9,24	1	SNA	
..3		BN81-13135A	A/S-IC DRIVER SOURCE;IC DRIVER SOURCE,VH	1	SNA	
..3		BN81-13136A	A/S-POLARIZER CF;POLARIZER CF,PFILV1993T	1	SNA	
..3		BN81-13137A	A/S-POLARIZER TFT;POLARIZER TFT,PFILV220	1	SNA	
..3		BN81-13138A	A/S-IC DRIVER GATE;IC DRIVER GATE,VHIRDG	1	SNA	
..3		BN81-13139A	A/S-SOURCE PCB FRONT LEFT;SOURCE PCB FRO	1	SNA	
..3		BN81-13140A	A/S-SOURCE PCB FRONT RIGHT;SOURCE PCB FR	1	SNA	
..3		BN81-13141A	A/S-SOURCE PCB BACK LEFT;SOURCE PCB BACK	1	SNA	
..3		BN81-13142A	A/S-SOURCE PCB BACK RIGHT;SOURCE PCB BAC	1	SNA	
0.2		BN96-39488A	FFC CABLE;KS9500,Straight,L57,96P	2	SNA	
0.2		BN96-40298A	ASSY COVER P-SOURCE PCB LEFT;70KU6000,EG	1	SNA	
..3		BN63-15301A	COVER-SOURCE PCB LEFT;EGI-SECC,T0.6,PRES	1	SNA	
..3		BN63-15644A	INSULATOR-SOURCE PCB COVER LEFT;70KU6000	1	SNA	
0.2		BN96-40299A	ASSY COVER P-SOURCE PCB RIGHT;70KU6000,E	1	SNA	
..3		BN63-15300A	COVER-SOURCE PCB RIGHT;EGI-SECC,T0.6,PRE	1	SNA	
..3		BN63-15644B	INSULATOR-SOURCE PCB COVER RIGHT;70KU600	1	SNA	
0.2		BN96-40397A	ASSY CHASSIS FRONT P;70KU6000,PC+ABS+MF1	1	SA	
..3		BN02-00381Y	TAPE CONDUCTIVE;70KU6000,CONDUCTIVE FABR	2	SNA	
..3		BN02-00381Z	TAPE CONDUCTIVE;70KU6000,CONDUCTIVE FABR	2	SNA	
..3		BN60-00715A	SPACER-CONDUCTIVE;Y13 Slim F-LED,CONDUCT	2	SNA	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
..3		BN60-01115A	SPACER-CONDUCTIVE;Y15 JU8K,CONDUCTIVE FA	3	SNA	
..3		BN63-14373E	SHEET-PROTECTION COVER;LED_JU7000,AL,T0.	4	SNA	
..3		BN63-14373H	SHEET-PROTECTION COVER;LED_JU7000,PO,T0.	2	SNA	
..3	AC155	BN64-03418A	CHASSIS- FRONT;70KU6000,PC+ABS+MF15%,MOLD	1	SNA	

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



For continued safety, do not attempt to modify the circuit board.
Disconnect the AC power and DC power jack before servicing.

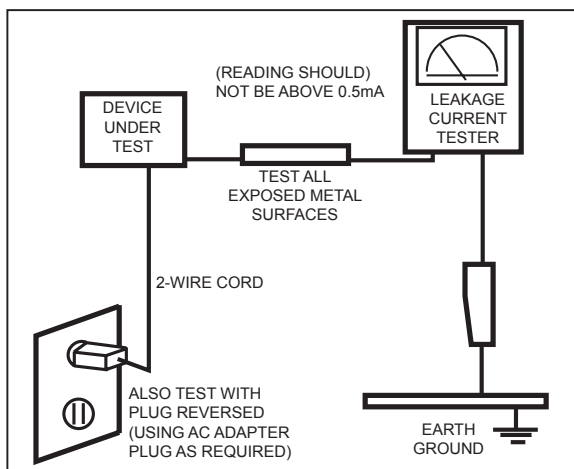
1-1-2. Servicing the LED TV

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 resistor/capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check:




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



An electrolytic capacitor installed with the wrong polarity might explode.



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



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 the blades 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.



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

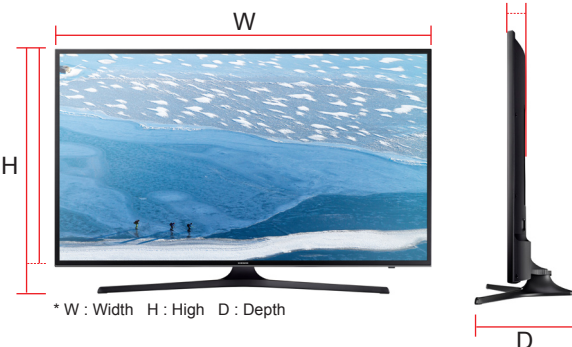

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal 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:



- 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	UE70KU6000W		
Front View	 <p>* W : Width H : High D : Depth</p>		
Detail View			
Front Color	Black		
Stand Type	Y-Shape		
Dimension (WxHxD)	70"	with Stand	1572.3 x 990.3 x 378.3 mm
		without Stand	1572.3 x 908.4 x 63.7 mm
Weight	70"	with Stand	31.1 kg
		without Stand	27.6 kg

2-2. Detail Specification

Item		UE70KU6000WXXH
General Information	Product	LED
	Series	6
	Country	HUNGARY
	Platform(TV)	SoC Jazz-L
Display	Screen Size	70"
	Screen Size (cm)	176 cm
	Resolution	3,840 × 2,160
	Quantum Dot Display	N/A
	Ultra Black	N/A
	Screen Curvature	N/A
	10 bit Support	N/A
Video	Picture Engine	UHD Up-Scaling
	Motion Rate	100
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	Dynamic Contrast Ratio	Mega Contrast
	Micro Dimming	UHD Dimming
	Precision Black (Local Dimming)	N/A
	Quantum Dot Color	N/A
	Active Crystal Color	N/A
	Wide Color Enhancer (Plus)	N/A
	PurColor	Yes
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Peak Illuminator	N/A
Audio	Dolby Digital Plus	Yes
	DTS Codec	Yes
	Sound Output (RMS)	20W
	Speaker Type	2CH(Down Firing w/Bass Reflex)
	Woofer	N/A
	Wallmount Sound Mode	Yes
	Multiroom Link	Yes
	TV SoundConnect	N/A
	BT Headset Support	N/A

Item		UE70KU6000WXXH
Smart TV	Samsung SMART TV	Yes
	Apps	Yes
	Games	Yes
	Cloud Game	Yes
	Billing	Yes
	Automated Content Recognition (ACR)	N/A
	Web Browser	Yes
Smart Interaction	Voice Recognition	N/A
Convergence	TV to Mobile - Mirroring	Yes
	Mobile to TV - Mirroring, DLNA	Yes
	Samsung SMART View	Yes
	Bluetooth Low Energy	N/A
	RVU	N/A
	WiFi Direct	Yes
IoT Service	TV as Hub Support	N/A
	TV as Things Support	N/A
	IoT Client Application	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-TC(T2 Ready)
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.3)
	Data Broadcasting	HbbTV 1.5(FR,ES,EE,HU) / HbbTV1.0(CZ,SK,PT,DE,AT,SZ,PL,BE,NL,LU)
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1(Common Use for Component Y)
	Ethernet (LAN)	Yes
	Headphone	N/A
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	Scart	N/A
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes

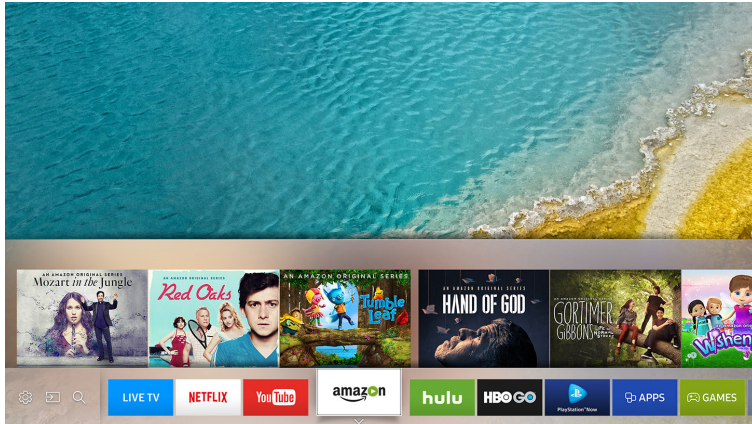
2. Product specifications

Item		UE70KU6000WXXH
Connectivity	Anynet+ (HDMI-CEC)	Yes
Design	Design	Deco Mold
	Bezel Type	VNB
	Slim Type	Slim
	Front Color	Black
	Light Effect (Deco)	N/A
	Stand Type	Y-Shape
	Swivel (Left/Right)	N/A
Additional Feature	Instant On	Yes
	Processor	Quad-Core
	Accessibility	Voice guide(EU 17 countries)/ Enlarge/ High contrast
	Digital Clean View	Yes
	One Connect (Jack)	N/A
	Auto Channel Search	Yes
	Auto Power Off	Yes
	BD Wise Plus	N/A
	Caption (Subtitle)	Yes
	Channel List USB-Clone	Yes
	Connect Share™ (HDD)	Yes
	ConnectShare™ (USB 2.0)	Yes
	Embedded POP	Yes
	EPG	Yes
	Extended PVR	Yes
	Game Mode	Yes
	OSD Language	27 European Languages
	Picture-In-Picture	Yes
	BT HID Built-in	N/A
	USB HID Support	Yes
	Time Shift	Yes
	MBR Support	N/A
	Ultra Clean View	Yes
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	295 W

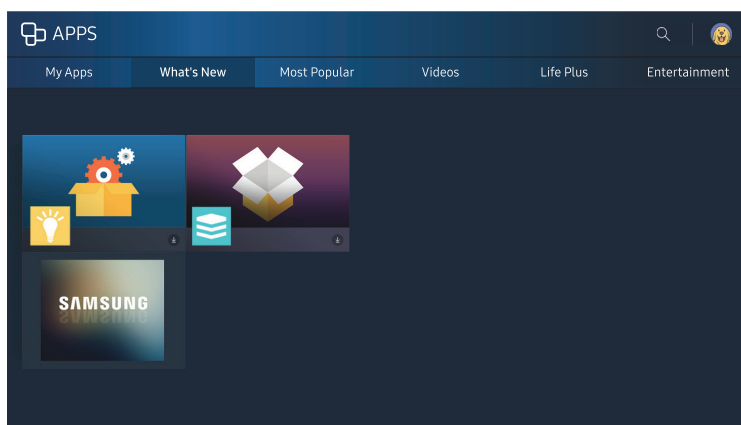
2-3. NEW Key Features

2-3-1. 16" New UI

■ Smart Hub



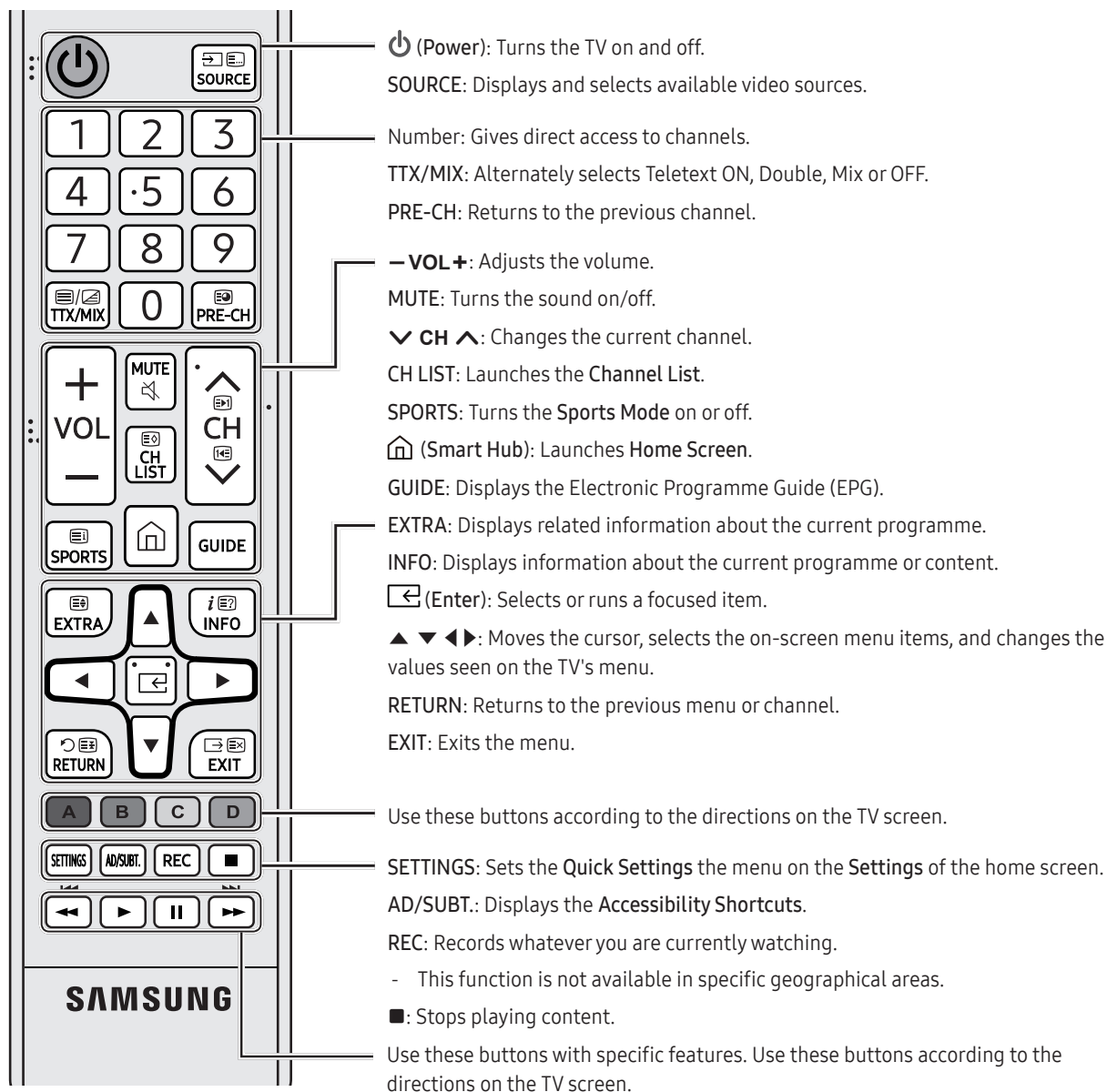
■ APPS Service



2-4. The Remote Control

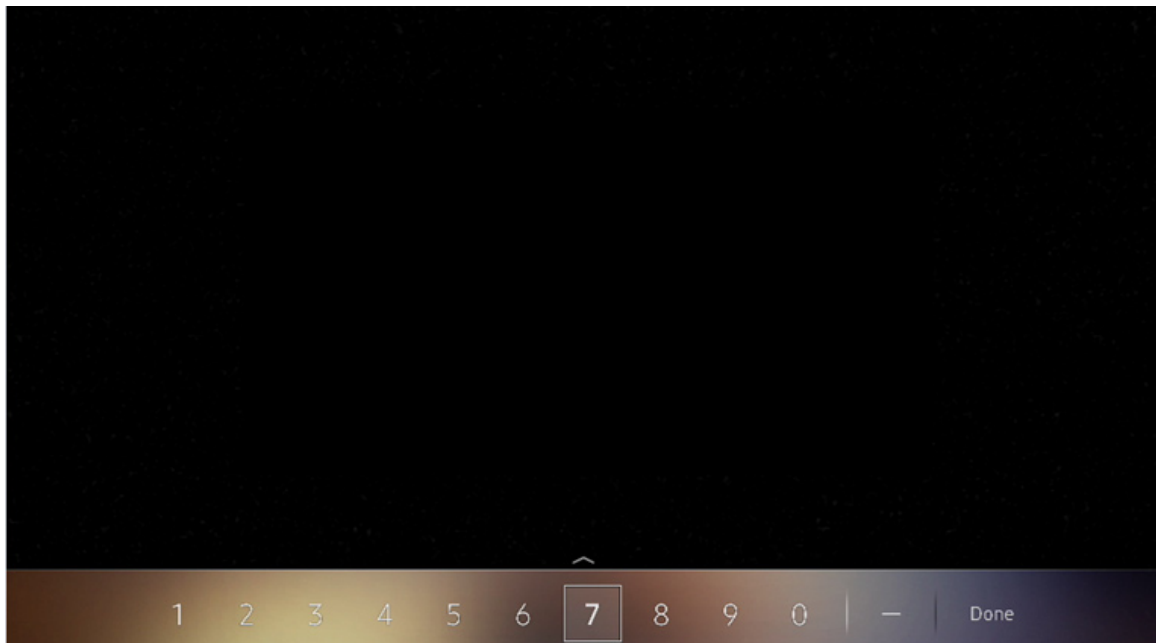
2-4-1. Remote Control

- This remote control has Braille points on the **Power**, **Channel**, **Volume** and **Enter** buttons and can be used by visually impaired persons.

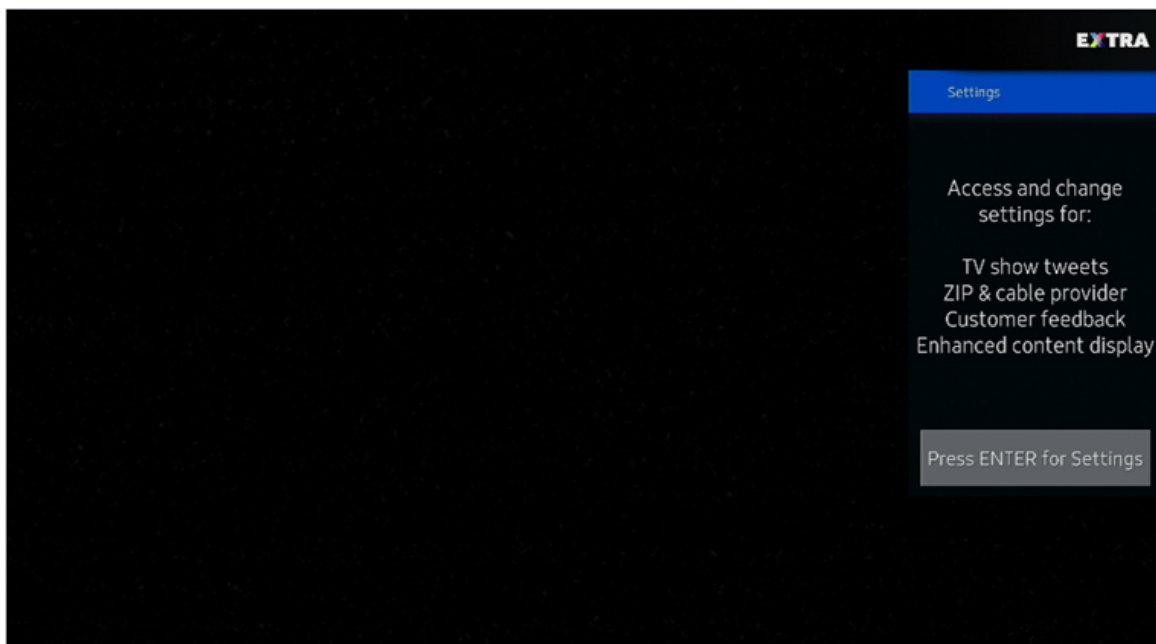


- The button names above may be differ from the actual names.

2-4-2. 123 Key



2-4-3. EXTRA Key



2-5. HDMI Color

2-5-1. HDMI UHD Color

- When you set the HDMI connection to On, the TV turns off and then on automatically.
- The HDMI connection with HDMI UHD Color set to Off supports up to UHD 50P/60P 4:2:0 input signals, while the HDMI connection with HDMI UHD Color set to On supports up to UHD 50P/60P 4:4:4 and 4:2:2 input signals. For more information, refer to "Supported Resolutions for UHD Input Signals."
- Each HDMI connection can be individually optimized for HDMI UHD Color. When you connect the TV to an external device that supports only the UHD 24 or 30 Hz frequency or any FHD frequency, the HDMI UHD Color function may not be available. In this case, set HDMI UHD Color to Off.

2-5-2. HDMI Black Level

- This function is only available when the input signal, connected to the TV via an HDMI connector, is set to RGB444.

2-6. Supported Formats

2-6-1. Supported image formats and resolutions

File Extension	Type	Resolution
*.jpg *.jpeg	JPEG	15360x8640
*.png	PNG	4096x4096
*.bmp	BMP	4096x4096
*.mpo	MPO	15360x8640

2-6-2. Supported music formats and codecs

File Extension	Type	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	-
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Supports up to two channels.
*.ogg	OGG	Vorbis	Supports up to two channels.
*.wma	WMA	WMA	WMA 10 Pro supports up to 5.1 channels. WMA lossless audio is not supported. Supports up to M2 profile.
*.wav	wav	wav	
*.mid *.midi	midi	midi	Supports type 0 and type 1. Seek is not supported. Supports USB device only.
*.ape	ape	ape	
*.aif *.aiff	AIFF	AIFF	
*.m4a	ALAC	ALAC	

2-6-3. Supported video codecs

File Formats	Container	Video Codecs	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec		
*.avi *.mkv *.asf *.wmv *.mp4 *.mov *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.mov *.flv *.vob *.svi *.m2ts *.mts *.divx	AVI MKV ASF MP4 3GP MOV FLV VRO VOB PS TS SVAF	H.264 BP/MP/HP	4096 x 2160	4096 x 2160: 30 3840 x 2160: 60	60	Dolby Digital LPCM ADPCM(IMA, MS) AAC HE-AAC WMA Dolby Digital Plus MPEG(MP3) DTS(Core, LBR) G.711(A-Law, μ-Law)		
		HEVC (H.265 - Main, Main10, Main4:2:2 10)		60	80			
		Motion JPEG	3584 x 2160	30	80		60	20
		MVC	1920x1080					
		DivX 3.11 / 4 / 5 / 6						
		MPEG4 SP/ASP						
		Window Media Video v9 (VC1)						
		MPEG2						
		MPEG1						
		Microsoft MPEG-4 v1, v2, v3						
		Window Media Video v7 (WMV1), v8 (WMV2)						
		H.263 Sorrenson						
		VP6		30				
*.webm	WebM	VP8	1920 x 1080	60	20	Vorbis		
		VP9	4096 x 2160	4096 x 2160: 60	40			

Other Restrictions



NOTE

- Codecs may not function properly if there is a problem with the content data.
- Video content does not play or does not correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is wrong, the Seek(Jump) function does not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the player.
- HEVC codec is only available in MKV / MP4 / TS containers.

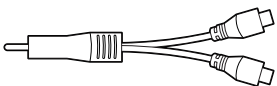
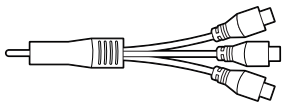

2-7. Accessories



NOTE

- The items' colors and shapes may vary depending on the model.
- Cables not included in the package contents can be purchased separately.
- The part code for some accessories may differ depending on your region.

Product	Code. No	Product	Code. No
• Remote Control	BN59-01247A	• User Manual	BN68-08015T
• Batteries (AAA x 2)	4301-000121	• Regulatory Guide	BN68-04972E
• Power Cord	3903-001118	• Warranty Card	BN68-03548J

Image	Product	Code. No
	• Component In	BN39-02190A
	• AV IN Adapter	BN39-02189A
	• CI Card Adapter	3709-001791

4. Troubleshooting

4-1. Previous Check

■ Check list for initial operation

1. Check the various cable connections first.
 - Check to see if there is a burnt or damaged cable.
 - Check to see if there is a disconnected or loose cable connection.
 - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.
3. How to distinguish if the problem is caused by Main Board or T-CON Board.

- No Video

Symptom	If the problem is No Video but BLU is on and Indication LED is blinking repeatedly and faster than normal booting.
Check Points	<ul style="list-style-type: none">• Replace the T-CON Board.

- Distorted Picture :

Check Points	<ul style="list-style-type: none">• Check the inner patterns.
---------------------	---

4-2. How to Check Fault Symptom

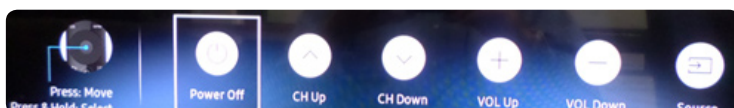
4-2-1. Power

■ TV POWER STANDBY

1. TV in Standby
 - √ **Standby LED Indicator**
2. If Not Lit:
 - √ AC 120Vac Line
3. If missing:
 - √ 120Vac Source and Power Cord
4. If OK:
 - √ Resistance on SMPS **Fuse** after first removing AC power cord.
5. If fuses are open replace SMPS.
6. If fuses are OK:
 - √ **Standby: A13V** (Always On) to Main Board. Should all be approx. 9 **VDC**
7. If any missing remove the SMPS connector to Main Board .
 - √ Standby A13V again for 9VDC.
 - If OK replace **Main Board**.
 - If still missing replace **SMPS**.

■ FUNCTION/IR Control

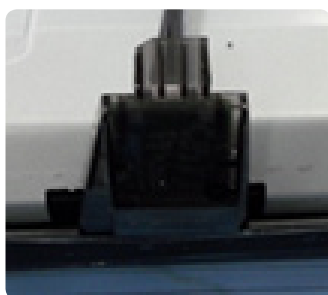
1. TV in Standby
 - ✓ **LED Status**
2. If **LED** is **OFF**
 - ✓ LED 1.7Vdc (pin 8) and VCC for 3.3Vdc
 - If missing suspect Function Assy/Cable/Main board.
3. If **LED** is **ON**
 - ✓ Switch Operation activates on screen display.



<On Screen Selections with Function Control>

If missing:

1. Check the STBY voltage from SMPS to Main Board. If STBY is OK suspect **Main Board**.
2. Check Jog Shuttle SW Operation (**Key 1 & Key 2**) for command changes. If incorrect suspect a **stuck Jog switch** which also holds data to Main preventing operation.
3. Check **SDA, SCL** for effective 3.3Vdc (after power on)
4. Check **IR** with Standard Remote command changes. (3.3V to 2.5V effective DC)



<Function/IR>

CN1101 (FUNCTION/IR)			
1	IR 3.3Vdc to 2.5Vdc (Effective DC)	2	GND
3	A3.3V_PW	4	AMP_SCL_I2C 3.3Vdc (effective DC)
5	AMP_SDA_I2C 3.3 Vdc (effective DC)	6	KEY_INPUT1 1.8dc to 0V with PWR On command
7	KEY_INPUT2 1.8Vdc to command Voltage	8	LED_STB_OUT 1.7Vdc STBY
9	N/C	10	N/C
11	N/C	12	N/C



<Jog Function Switch>

P	CMD	Signal	DC Voltage
1	Center	Key 1	1.8V to 0 Vdc
2	Vol+	Key 2	1.8V to 1.0 Vdc
2	Vol-	Key 2	1.8V to 1.5 Vdc
2	CH+	Key 2	1.8V to 0 Vdc
2	CH-	Key 2	1.8V to 0.6 Vdc
3		GND	

■ SMPS POWER

1. Power TV On.

- ✓ **PS_ON**. 2Vdc (when off) changes to 3.3Vdc (on)
- May already be On if IoT USB is loaded or TV Smart Things Hub mode is active.

2. if voltage error or no change.

- ✓ Jog Function Control Test.

3. If OK replace Main Board.

- ✓ All **A13V** supplies to full voltage level **12.7VDC**.

4. If any wrong voltage, remove the SMPS connector to Main Board.

- ✓ A13V again for 12.7VDC.

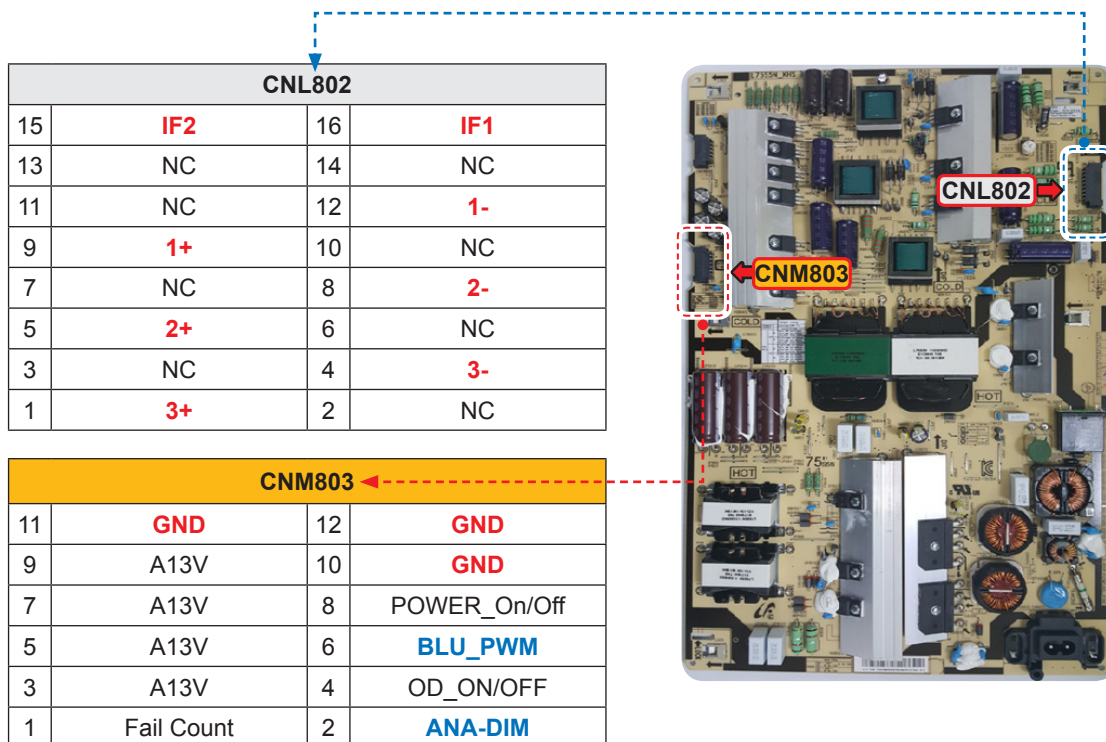
5. If OK replace Main Board.

6. If still wrong voltage replace SMPS.

- ✓ **OD** (Over Voltage Detect) : 3.3Vdc (Operating Normal)


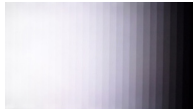
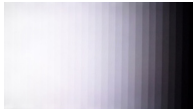
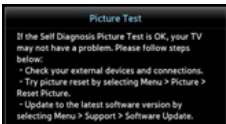

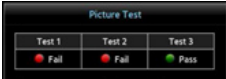

7. If 0V or changing, an SMPS or Panel error exists. Perform Backlight Test.

- ✓ **BLU_PWM** 0V- Off to approx 1 – 3.3 V pending Backlight dim level
- ✓ If missing/error replace **Main Board**.



4-2-2. Video

■ Customer Picture Test

MAIN/TCON BOARD			Test Result	Problem
Main Section	Pre- FRC (T-CON)	Post FRC (T-CON)		
				
Pass	Pass	Pass		Check Signal Source and other inputs to One Connect
Fail	Pass	Pass		Replace Main/T-CON Board
Fail	Fail	Pass		Replace Main/T-CON Board
Fail	Fail	Fail		Replace Main/T-CON Board or Panel

■ MAIN / T-CON Board

1. Main Board Section



Video Operation : **Generated on Main Section.**

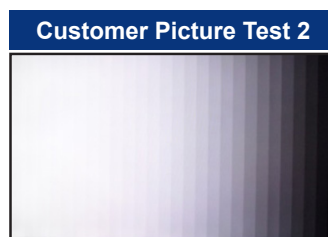
1. If OK:

- ✓ Source & Input Cables.
- ✓ Other inputs.
- ✓ One Connect Cable/Box.

2. If Noisy:

- ✓ T-CON Section Test Patterns.

2. PRE FRC of T-CON Section



Video Operation : **Generated at Pre FRC, of T-CON Section.**

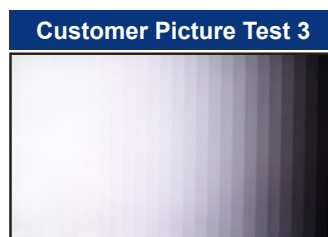
1. If OK:

- ✓ Main Section.

2. If Noisy:

- ✓ Post FRC Pattern.

3. POST FRC of T-CON Section



Video Operation : **Generated at Post FRC of T-CON Section.**

1. If OK:

- ✓ Main / T-CON Board (defective).

2. If Noisy:

- ✓ Mute - 369 - Mute.

4. T-CON Section



NOTE

May not be available for Larger models over 70 inches.

Video Operation : **Generated at T-CON Section.**

1. If OK:

- ✓ Main / T-CON Board (defective).

2. If Noisy:

- ✓ Main / T-CON Board.

■ PANEL

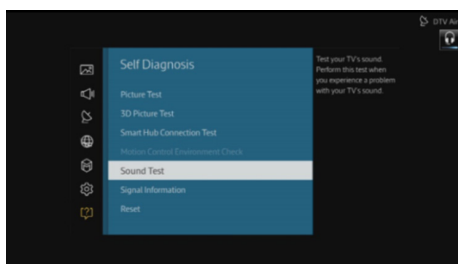


1. If Noisy:

- √ Panel (defective).

4-2-3. Audio

■ AUDIO



Source

- **No TV Sound**
 - ✓ Menu → Audio → Speaker Settings set to **TV Speaker**
- **Noisy / Distorted TV Audio**
 - ✓ Customer Menu → Support → **Sound Test**
- **If **Sound Test** FAILS : (Missing / Noisy Audio)**
 - ✓ Speakers (compare resistance/quality)
 - Compare audio level out to speakers with multi meter.
 - ✓ Replace defective Speakers or Main Board or Cable.
- **IF **Sound Test** OK :**
 - ✓ Audio Source & External Cables.
 - ✓ With external Audio Generator (device or App).
 - ✓ Other Inputs.
 - ✓ One Connect Mini.
- **Optical Digital Out Errors**
 - ✓ Red light from Optical Digital Out.
 - If missing replace One Connect Mini
- **No HDMI Audio**
 - ✓ Source / HDMI Cable & One Connect Mini Connectors.
 - Swap with other HDMI Inputs/Sources.
 - Perform **EDID Write** in Factory Mode (Can restore missing HDMI Audio).
 - ✓ Bulletins and Latest firmware on TV.
 - If not restored replace One Connect Mini/Main.
 - Check Audio Format PCM/Dolby based on external Receiver.
- **ARC Issues**
 - ✓ HDMI Cable is input to the ARC Designated HDMI port.
 - ✓ ARC (HDMI Control) is enabled on the external Receiver.
- **Bluetooth Audio "**Sound Share**" Connection Issues**
 - ✓ Sound Bar is in TV Mode.
 - To Connect, Press & Hold Play Button until Sound Bar pairing mode begins.

4-2-4. Network

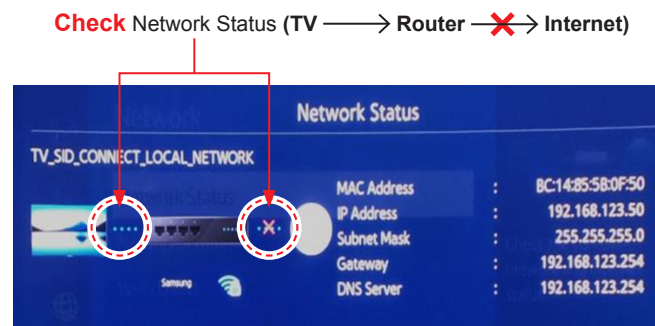


■ TV to Router "Failure"



- **Wired & Wireless MAC Address** in Customer Support Menu.
 - ✓ **No Wired MAC Address:** Replace Main Board.
 - ✓ **No Wireless MAC Address:** Module cabling & voltages from Main Board.
 - ✓ If operating voltages are OK but signal missing.
 - Replace WiFi Module (WiFi/Bluetooth Module).
- Proper **security passcode**
 - ✓ Check Wi-Fi signal strength at TV (use WiFi Analyzer or similar App).
 - Try another source (Hot spot or Test Router).
 - ✓ Check related Bulletins.
 - ✓ Check **Factory Mode** → **SVC** → **Info** → **WiFi Error Count** (replace module for high error counts).

■ Router to Network "Failure"



- Instruct the customer the TV has proper connection to the router and is likely OK.
 - ✓ Check other devices using network are OK. If they test OK this does not mean the TV should be working.
- Try another source (Hotspot) to test/show TV Network operation.

4-2-5. Smart Hub

Go to [Menu > Support > Self Diagnosis > Smart Hub Connection Test](#)



1. Network / Gateway

- **If it Fails:**
 - ✓ TV to Router Connection Test in "[Network Trouble shooting](#)"

2. DNS Test

- **If it Fails:**
 - ✓ DNS setting in "[Network Settings](#)"
- **If DNS is set manually:**
 - ✓ Settings are correct (may be set to 8.8.8.8 to prevent Netflix issues)
- **If it still fails:**
 - ✓ DNS Test with setting to Auto Mode
- If it fails both Manual & Auto problem is ISP or Router.

3. ISP Blocking

- **If it Fails:**
 - ✓ Internet Service Provider is Active.
 - ✓ With DNS setting at 8888.
 - ✓ With Hot Spot.

4. Samsung Server Test

- **If it Fails:**
 - ✓ Network Status.
- **If OK:**
 - ✓ Reset Smart Hub.
 - ✓ Terms of Agreement are accepted.

5. Samsung Apps

- **If it Fails:**
 - ✓ Reset Smart Hub.
 - ✓ Samsung Apps load correctly.
 - ✓ Perform "[Apps Reset](#)" in Factory Mode.
 - ✓ Go to Smart Hub and complete Terms of Agreement and set up information.
 - ✓ Samsung Apps load correctly.
 - ✓ Before selecting an App, allow Apps to load or failure will occur.

For Netflix Operation/Connection Issues:

- Check Certificate & Netflix ESN Status in Factory Mode.
 - If Certificate and ESN exists, "**CO**", "**Nfo**", change the **DNS** to **8.8.8.8**
 - If Certificate is missing, "**C**" replace the TV's Main Board.
 - If ESN number is missing: **NF**/ do not replace the Main Board.
 - Reset TV Clock and check for correct Time & Date. Netflix relies on correct settings.
 - Reset Smart Hub. / Reset Apps In Factory Mode.

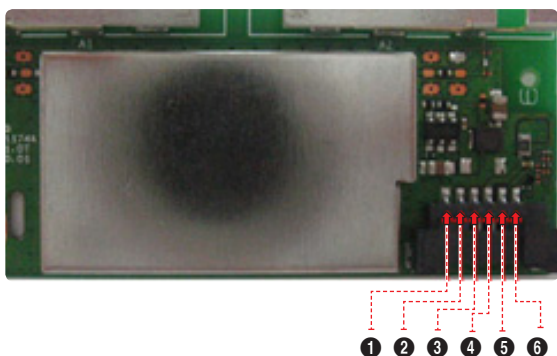
For Streaming Issues:

- Go to TV Web Browser / Go to speedof.me / testmy.net
 - ✓ **Check Speed** for at least 5 Mbps(HD streaming) / 25 Mbps (4K Streaming).
 - ✓ **Check Latency** for less than 50ms.

4-2-6. WiFi Module

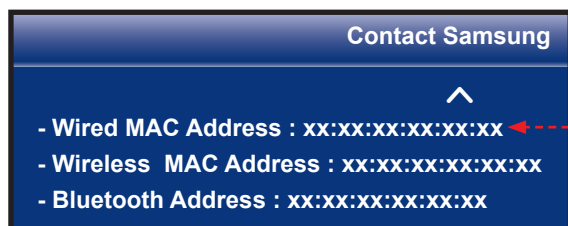


Pins	1	2	3	4	5	6
Standby	0	3Vdc	0	5Vdc VCC	3.3Vdc	N.C
Power ON	0	0.02V eff.dc Wifi Sig. (DP) 0.5Vp-p	0.02V eff.dc Wifi Sig. (DM) 0.5Vp-p	5Vdc VCC	3.3Vdc	



Pins #	Pin Name	Description	Type
①	GND	Ground	G
②	USB_DP	USB Interface	I/O
③	USB_DN	USB Interface	I/O
④	B+_5V	+5V DC power supply for SWL-R55	V
⑤	Wake up	Sleep/OFF to ON	I/O
⑥	NC	-	-

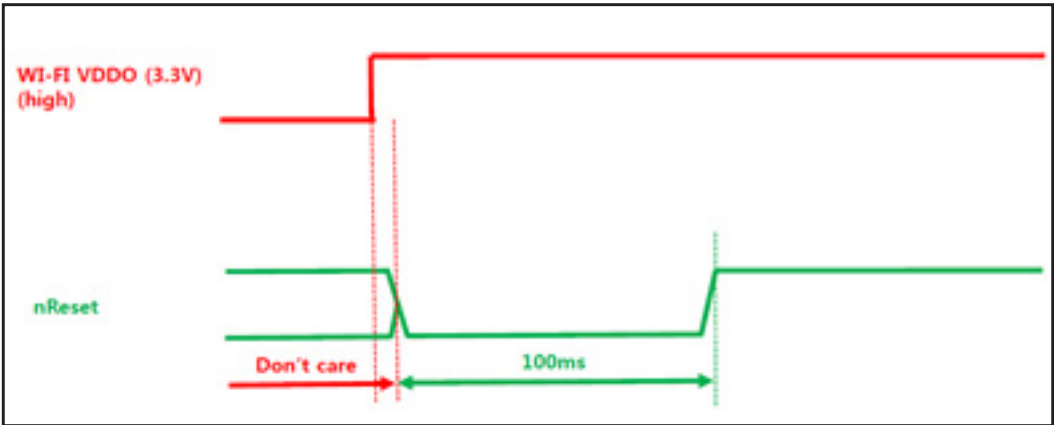
Go to [Menu > Support > Contact Samsung](#)



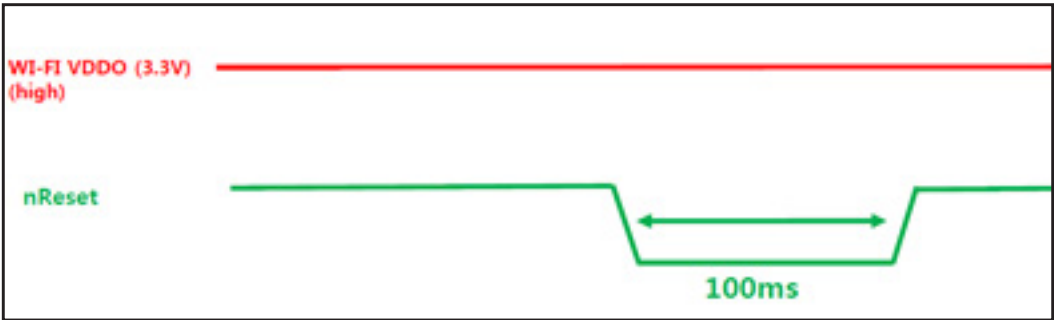
- Wired MAC Address (Missing or Error : Replace **Main Board**).
- **Wireless MAC Address**
- **Bluetooth Address**

- If **Bluetooth Address** or **Wireless MAC Address** are missing or errors exist.
- **BT & Wi-Fi Connector Voltages.**
 - If Voltages are OK but no BT or Wi-Fi Signals voltage(s), replace defective Module.

WI-FI VDDO OFF/ON reset timing



WI-FI VDD33 ON reset timing



4-3. Factory Mode Adjustments

4-3-1. Entering Factory Mode

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

■ Factory Remote

1. Power TV ON.
2. Select TV Source.
3. **Info** → **Factory**.
4. Use **MENU** for return.

■ Samsung IR Remote (Limited Operation)

1. TV Power Standby.
2. Press as follows.
 - Remote Button : **Power OFF** → **INFO** → **MENU** → **MUTE** → **Power ON**
 - **Option** (must set Option Bytes when replacing Main Board.)
 - Option → **Factory Reset** (returns TV to out of box condition. Does not reset Apps.)
 - SVC → **Test Patterns**
 - SVC → Info → **ER Count** (Important to check for errors.)
 - Resets to 0 with Factory Reset.

First Screen Appearing in Factory Mode (SAMPLE)

MODE : CATV, RES : NOSIGNAL

Option

Control

Debug

SVC

ADC/WB

Advanced

T-JZL6AKUC-XXXX.XX

T-JZMAKUS-XXXX

tztv-X.X.-main2016-jazz-m_XXXXXXXX.X

BT Version : BLUETOOTH-VER-XXXX

E-Manual:----

CAMERA:****

Blaster Version : Not support

E-POP Version : JAZZLUHD-XXXX.X

EDID SUCCESS

HDCP SUCCESS

CALIB : AV/COMP/PC/HDMI/

Option : NONE_16,NONE,6000,NONE

DTCP Not Support

FRC-[JAZZ-L?][NON FRC][HW:0x00]

TCON Version:----

Model : NNN0O6000

Wired MAC SUCCESS

Wireless MAC SUCCESS

WIFI Version : BCM43569_16210_WLC_E_STATUS_ABORT

CO NfO WO MO D/ HX P/ AO O S/ N/ RO SC/ SiO(P)

NS//

Factory Data Ver : XXX / Fixed Ver : XX

EERC Version : 75 / WB Ver : 8

CPLD/LD : N/A

SmartControl : 0

Board Info : 2015/12/29/PV/12/BN41-02528A

Factory Reset In Production : ----

SID : ----

Date of purchase : --/------

✓ Testing Items

✓ Main SW Version

✓ Sub SW Version

✓ Wired MAC (Status)

✓ Wireless MAC (Wi-Fi Module)

✓ CO NFO WO. etc.

- Certificate
- Netflix
- Wide Vine
- etc. Status

4-3-2. 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**".

■ UE70KU6000WXXH

Inches		70"
		EA01
PANEL	Vendor	SHARP
	Code	BN95-02682A
	Spec.	CY-GK070HGSV1V/H
SMPS BOARD	Vendor	HANSOE
	Code	BN44-00874A
	Spec.	L75S5N_KHS,AC/DC,357W
MAIN BOARD	Chassis Ass'y	BN91-17281H
	PBA Ass'y	BN94-10804K
Byte	Item	
0	Factory Reset	-
1	Type	70H6AU0VK
2	Local set	EU
3	SW Model	UKU6000
4	BOM Model	6000
5	Tuner	-
6	Ch table	NONE
7	Front Color	U-F-KU60

4-3-3. Factory Data

■ Option

Factory Menu Name		Data	Range
Factory Reset		-	
Type	70"	70H6AU0VK	
Local Set		EU	
SW Model		UKU6000	
BOM Model		6000	
TUNER		-	S_T2C
Ch Table		NONE	
MRT Option			

■ Control

Factory Menu Name		Data	Range
EDID			
EDID ON/OFF		OFF	
EDID WRITE ALL		...	
EDID WRITE HDMI		...	
EDID WRITE PC		...	
HDMI EDID Ver		...	
HDMI EDID Port		...	
Sub Option			
RS-232 Jack		UART	
EXT Link Support		ON	
Serial Log On/Off		OFF	
Watchdog		ON	
FRC Monitoring		OFF	
Checksum		0x0000	
Fast Boot In Production		ON	
USB Serial		OFF	
ECO IC TYPE		MC8121	
Info Link Server Type		development	
Info Link Country		None	
TTX Group		UserOSD	
Visual Test		Diabie	
OPTION_SWU			
RF Remocon Support		OFF	

Factory Menu Name	Data	Range
CDD mode	...	
DPMS Support	OFF	
T-CON Device	JazzFT	
RM Server Type	Operating	
LMF LEAVE THRESHOLD	160	
LMF TRIM THRESHOLD	120	
LMF TERM THRESHOLD	80	
EOS Click	OFF	
BP PMS Reset	1	
FAnet Thread	2	
CI CPLD Version	1	
ACM_MC	ON	
UNIQUE TRIPLET	ON	
FS_FAV	OFF	
Private Range USE	ON	
SCSA Support	OFF	
OCM Reboot	ON	
SPI Protection		
FKP Server Type	Default	
OCM Support	ON	
Preloading Support	ON	
Multitasking Support	ON	
Browser preloading Support	FULL	
EXT IR Boot Support	OFF	
APP BOOTING SUPPORT	ON	
NagSam Support	OFF	
EWBS Support	OFF	
MVPD MBR Provider	COMCAST	
cloudscan Always Upload	OFF	
FirstScreen Cach Size	300	
Hotel Option		
Hospitality Mode	OFF	
Power On		
Menu OSD		
Operation		
Music Mode		
External Source		

4. Troubleshooting

Factory Menu Name	Data	Range
Eco Solution		
Cloning		
Shop Option		
Exhibition Mode	OFF	
Peak Mode	ON	
Metadata	ON	
Shopmode Picture Reset	ON	
Asia Option		
Unbalance	OFF	
AF Level adjust	0	
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	0	
SOUND		
High Devi	OFF	*If the broadcast signal is not good, TV will complement the characteristics of the signal (most use when weak signal comes from the growing area countries)
Carrier_Mute	ON	*If the noise comes from weakness-electromagnetic field, TV will be set Mute automatically(Only default on in North America)
Pilot Level High Thld	0x20h	* The High threshold value of stereo signal(If Pilot level is greater than High threshold value, recognize Stereo signal)
Pilot Level Low THLD	0x10h	* The Low threshold value of stereo signal(If Pilot level is less than Low threshold value, recognize Mono signal)
Carrier2 Amp High ThLD	9	
Carrier2 Amp Low THLD	6	
Amp Volume	0xc4h	
Amp Scale	0x3ch	
Amp EQ Check Sum	0x000057B5	
Subwoofer Support	3	
Woofer Type	0	
Woofer Volume	0xc7h	
Woofer Scale	0x3fh	
Woofer Check sum	0x0000A273	
PEQ Inx	76	
PEQ Test	Ready	
Speaker EQ	ON	
Bottom Checksum	NONE	

Factory Menu Name	Data	Range
Wall Filter Type	3	
SRS Tuning Parm	0	
SPDIF PCM Gain	-9	
AudioDock BT Delay	90	
3D_Glass BT delay	50	
Mic Scale	OFF	
India Sound	0	
Speaker Delay Normal	0	
NTV CU Delay	NORMAL	
Lipsync Inx	1	
Lipsync Checksum	0x4972	
Lipsync USB Test	Ready	
Lipsync BT Checksum	0x0000	
TP volume	0xc4h	
TP Scale	0x6ch	
TP EQ CheckSum	NONE	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		
LVDS Spread	0	
DDR Spread	0	
Period	0	
Amplitude	0	
HD DDR SSC ON OFF	OFF	
HD DDR SSC Value	0	
FHD DDR SSC ON OFF	OFF	
FHD DDR SSC Value	4	
UHD DDR SSC ON OFF	ON	
UHD DDR SSC Value	0	
P eBus SSC ON/OFF	OFF	
P eBus Value	0	
LVDS SSC ON/OFF	OFF	
LVDS SSC Value	0	
AP Vx1 SSC ON/OFF	ON	
AP Vx1 Value	12	
N Vx1 SSC ON/OFF	ON	

4. Troubleshooting

Factory Menu Name	Data	Range
N Vx1 Value	0	
FRC Vx1 SSC ON/OFF	OFF	
FRC Vx1 SSC Period	0	
FRC Vx1 SSC Modulation	0	
FRC LVDS ON/OFF	ON	
FRC LVDS SSC MFR	3	
FRC LVDS SSC MRR	2	
FRC DDR SSC ON/OFF	ON	
FRC DDR SSC Period	1	
FRC DDR SSC Modulation	2	
ADV7619 Data strength	1	
ADV7619 Clock strength	1	
ADV7619 H_V_DE strength	1	
AP DDR SSC ON/OFF	OFF	
AP DDR SSC Value	0	
AP USIT SSC ON/OFF	ON	
AP USIT SSC Value	13	
OCM Vx1 SSC ON/OFF	OFF	
OCM Vx1 SSC Value	0	
TCON USIT SSC ON/OFF	BYPASS	
DDR Margin		
A CTRL_OFFSET_0_3	0	
A CTRL_OFFSET_D	0	
B CTRL_OFFSET_0_3	0	
B CTRL_OFFSET_D	0	
BT_ON_OFF	ON	
RF Mute Time	600ms	
Tuner Margin	3	European specifications
FRC		
FRC FDISPLAY ON/OFF	OFF	
3D FDISPLAY ON/OFF	OFF	
PC Mode ON/OFF	OFF	
FRC VX1 RX EQ SETTING	OFF	
FRC VX1 TX Pre_emphasis setting	0	
Netflix OSD Threshold	179	
TCON		
TCON_TEMP READ	34	

Factory Menu Name	Data	Range
TEMP LAST	6000	
DCC VERSION	0x0	
TCON Demura Bypass	OFF	
TCON FDisplay	OFF	
Panel Code 1		
Panel Code 2		
Panel Revision		
Panel Menu Week		
Panel S/N 1		
Panel S/N 2		
Panel S/N 3		
Panel S/N 4		
MPEG Margin	20	
H.264 Margin	15	
CAM Wait Time	15	
Voice Debug	OFF	
Power Management		
Cert Option	Waiting	
RM_BIST_DTV	0	
RM_BIST_ATV	0	
RM_BIST_CABLE	0	
SerDES Check		
SerDES Tuner	Failure	
HDMI SW	Failure	
HDMI Rx	Failure	
MP	Failure	
Main SerDES	Failure	
Jack SerDES	Failure	
Stress Mode	OFF	
Log Analyzer	ON	
Error Popup On/Off	OFF	
DeadLock KILL	OFF	
CES Option	OFF	
CES Convergence Option	OFF	
CES ATSC 3_0	OFF	
CES OOB MVDP SUPPORT	OFF	
BT DUT	OFF	

4. Troubleshooting

Factory Menu Name	Data	Range
BT Throughput	Failure	
Reproduce Module	ON	
21_9		
L-DETECT STABLE TIME	7	
L-DETECT UNSTABLE TIME	3	
L-DETECT CAPTION THRESHOLD	720	
L-DETECT RAGION THRESHOLD	720	
L-DETECT B-LEVEL THRESHOLD	32	
L-DETECT USB SUPPORT	0	
DB Download		
MRT Option Dump	Failure	
Picture Data Dump	Failure	
VCONF Dump	Failure	
Read Eco Sensor Data	0	
No Signal Power OFF	ON	
Alert Option	ON	
Default HDMI1 Booting	OFF	

■ SVC

Factory Menu Name	Data	Range
Self Test(for HW)		* the Output of test pattern from each IC
Info		
Reset		
Apps Reset		
SVC Reset		
SPI Flash Reset		
Data Sync Reset		
Factory Data Reset		
OPTION_HDMI		
DVI/HDMI SOUND	Auto	
HDMI HOT PLUG	Disable	
HOTPLUG SWITCHING	Auto	
HOT PLUG DURATION	800ms	
CLK TERM DURATION	300ms	
HDMI FLT CNT SIG	0ms	
HDMI FLT CND SIG2		
HDMI FLT CNT LOS	0ms	

Factory Menu Name	Data	Range
UNSTABLE BAN CNT	1250ms	
HDMI ROBIN	0	
HDMI Callback	ON	
HDMI CTS Thld	0	
HDMI CTS Cnt1	0	
HDMI EQ	0	
HDMI Write Type	0	
HDMI Switch	0	
DVI SET TIME	0	
H Write	0	
HDMI Sync	0	
HDMI 3D DET	1	
HOT PLUG OFF HOLD TIME	600ms	
HDMI MUTE TIME	0ms	
HDMI NFST UNMUTE TIME	800ms	
HDMI FST UNMUTE TIME	0ms	
REPEAAUDIO PKT	OFF	
HDMI Stable Count	3	
HDMI HDCP EN	OFF	
HDMI HDCP EN FLAG	85	
POWER ON FLT CNT LOS		
HDCP UPDATE SPI	READY	
SPI VERSION	0	
HdmiRx EQ	0	
HDMI TMDS ERR DET	1	
DVB CI		
TS Clock delay TC	0	
TS Clock delay S	0	
CI Control Buf ON	ON	
TS Clock delay CPU	1	
TS Clock delay TC2	0	
TS Clock delay S2	0	
CI Control Buf ON2	1	
TS Clock delay CPU2	0	
Test Pattern		
Scaler Pattern	OFF	
US Post Pattern	OFF	

4. Troubleshooting

Factory Menu Name	Data	Range
FRC Pre Pattern	0	
FRC Post Pattern	0	
SOC TCON Pattern	0	
SOC TCON Pattern Level	255	
FRC OSD Pre Pattern	0	
FRC OSD Post Pattern	0	
FRC2 Pre Pattern	0	
FRC2 Post Pattern	0	
SOC TCON2 Pattern	0	
SOC TCON2 Pattern Level	255	
Upgrade		
T-CON DATA UPGRADE		
T-CON FW UPGRADE		
T-CON CheckSum		
T-CON2 Usb Download		
T-CON2 CheckSum		
PANEL EEPROM UPGRADE		
PANEL FLASH UPGRADE		
Logic Usb D/L		
SUBMICOM UPGRADE		* Upgrade Sub-Micom Program
SUBMICOM JP USB UPGRADE		
BT UPGRADE		* Upgarde BT(There is upgrade program in Main-Image)
BT FREEPAIRING		
Function Upgrade		
FRC3D FW UPGRADE		
FRC3D SRP UPGRADE		
FRC3D LD UPGRADE		
FRC2 3D FW UPGRADE		
Camera Upgrade		* Upgarde Camera module(There is upgrade program in Main-Image)
Mic Upgrade		* Upgarde MIC in Camera module(There is upgrade program in Main-Image)
Jump UPGRADE		
IR Blaster Upgrade		
IR Blaster delay time		
NTV CU UPDATE		
UD LDC PROFILE UPGRADE		
Pic Data USB Update		

Factory Menu Name	Data	Range
Audio Data USB Update		
Eco Data USB Update		
CI CPLD Upgrade		
SC ADK Upgrade		
Other Setting		
Delete S/N		
IPERF	Stopped	
Expert		
CAL Data Backup	...	
CAL Data Restore		
MICOM POWER OFF	ON	
NTV CU FW VER	0	
ATV IF AGC SPEED	0	
Upgrade UHD OSD Test	0	
Main USB Path		
JackP USB Path		
Source Direct On/Off	OFF	
Apps Update		
Auto Power	LAST POWER	
SMCE Control		
Motor Test		
Cube Test		
V APP	OFF	
Picture Direct On/Off	OFF	
SVC Panel	ORIGINAL	
S/N		
Serial number		
Writing S/N		

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibration		
Comp Calibration		
PC Calibration		
HDMI Calibration		
ADC Result		

4. Troubleshooting

Factory Menu Name	Data	Range
1st_Y_GH	0	
1st_Y_GL	0	
1st_Cb_BH	0	
1st_Cb_BL	0	
1st_Cr_RH	0	
1st_Cr_RL	0	
2nd_R_L	128	
2nd_G_L	128	
2nd_B_L	128	
2nd_R_H	69	
2nd_G_H	69	
2nd_B_H	69	
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	136	
WB_W2_B_Gain	76	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	131	
WB_N_B_Gain	119	
MGA		
MGA On/Off	OFF	
R1_Gain		
G1_Gain		
B1_Gain		
R2_Gain		
G2_Gain		
B2_Gain		
R3_Gain		
G3_Gain		

Factory Menu Name	Data	Range
B3_Gain		
R4_Gain		
G4_Gain		
B4_Gain		
R5_Gain		
G5_Gain		
B5_Gain		
R6_Gain		
G6_Gain		
B6_Gain		
R7_Gain		
G7_Gain		
B7_Gain		
R8_Gain		
G8_Gain		
B8_Gain		
R9_Gain		
G9_Gain		
B9_Gain		
R10_Gain		
G10_Gain		
B10_Gain		
SPI White Balance		
SPI White Balance On/Off		
SPI R-Offset		
SPI G-Offset		
SPI B-Offset		
SPI R-Gain		
SPI G-Gain		
SPI B-Gain		
SPI N Rgain		
SPI N Bgain		
SPI N Roffset		
SPI N Boffset		
SPI W2 Rgain		
SPI W2 Bgain		
SPI W2 Roffset		

4. Troubleshooting

Factory Menu Name	Data	Range
SPI W2 Boffset		
SPI MGA		
WB Data to SPI		

■ **Advanced**

4-4. White Balance

4-4-1. Calibration

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

Option	AV Calibration
Control	Comp Calibration
Debug	PC Calibration
SVC	HDMI Calibration
ADC/WB	
Advanced	

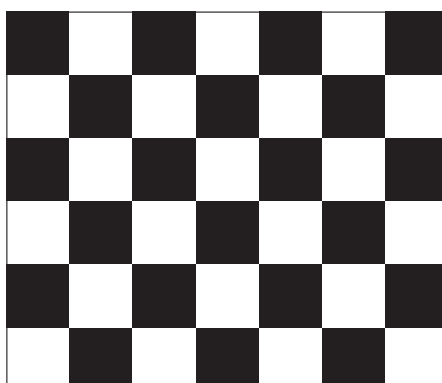
4-4-2. Service Adjustment

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 (Component)

1. Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port.
2. Press the Source key to switch to “Component1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “Comp Calibration” menu.
6. In “Comp 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 “Comp Calibration” status from Failure to Success.

Method of Color Calibration (PC)

1. Apply the VESA XGA Lattice (N0. 21) pattern signal to the PC IN port.
2. Press the Source key to switch to “PC” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “PC Calibration” menu.
6. In “PC 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 “PC 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.

Option			
Control			
Debug			
SVC		(Low Light)	(Hight Light)
ADC/WB	White Balance	Sub Brightness	Sub Contrast
Advanced		R offset	R gain
		G offset	G gain
		B offset	B gain

4-5. Updating the TV's Software

View your TV's software version and update it if necessary.

- [Settings](#) → [Support](#) → [Software Update](#)

■ Updating the TV's software to the latest version

- [Settings](#) → [Support](#) → [Software Update](#) → [Update now](#)

You can update your TV's software by downloading the update from the Internet directly to your TV or copying the update from a USB device that contains it to your TV.

- Updating from the Internet requires an active Internet connection.
- To update using a USB flash drive, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.



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. All video and audio settings return to their default settings after a software update.

■ Updating the TV automatically

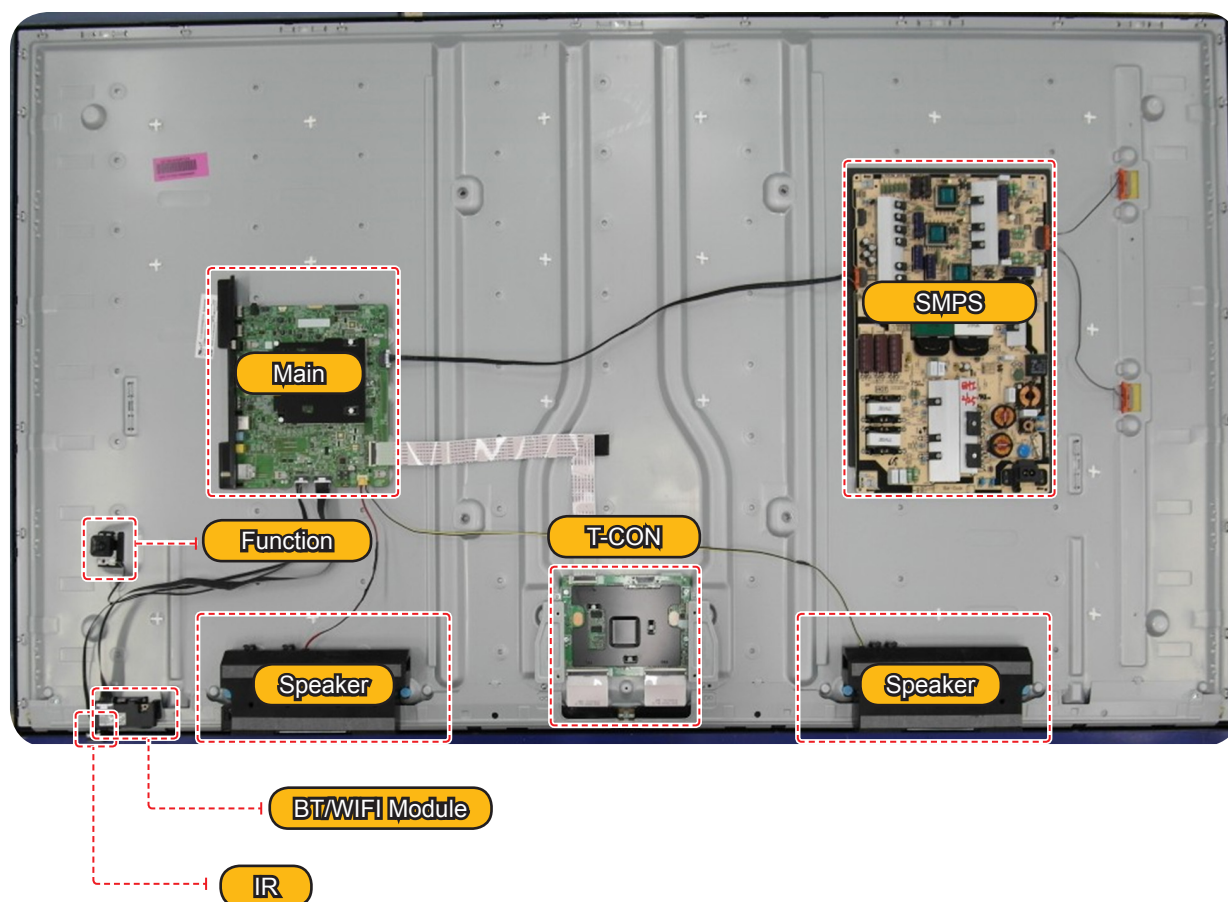
- [Settings](#) → [Support](#) → [Software Update](#) → [Auto Update](#)

If the TV is connected to the Internet, you can have the TV's software update itself automatically while you are watching the TV. When the background update is completed, it is applied the next time the TV is turned on.

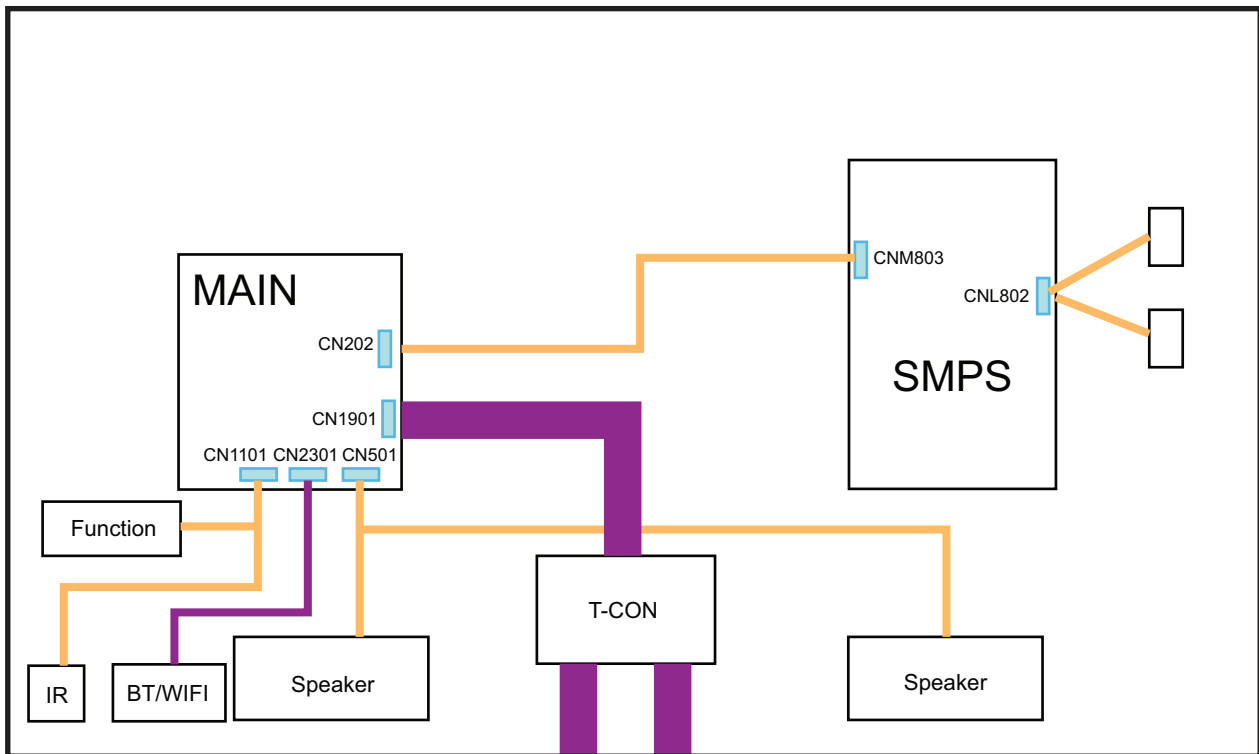
- This function may take a longer time if another network function is running concurrently.
- This function requires an Internet connection.
- If you agree to the Smart Hub terms and conditions, [Auto Update](#) is set to **On** automatically. If you do not want the TV's software to update itself automatically, set [Auto Update](#) to **Off**.

5. Wiring Diagram

5-1. Layout

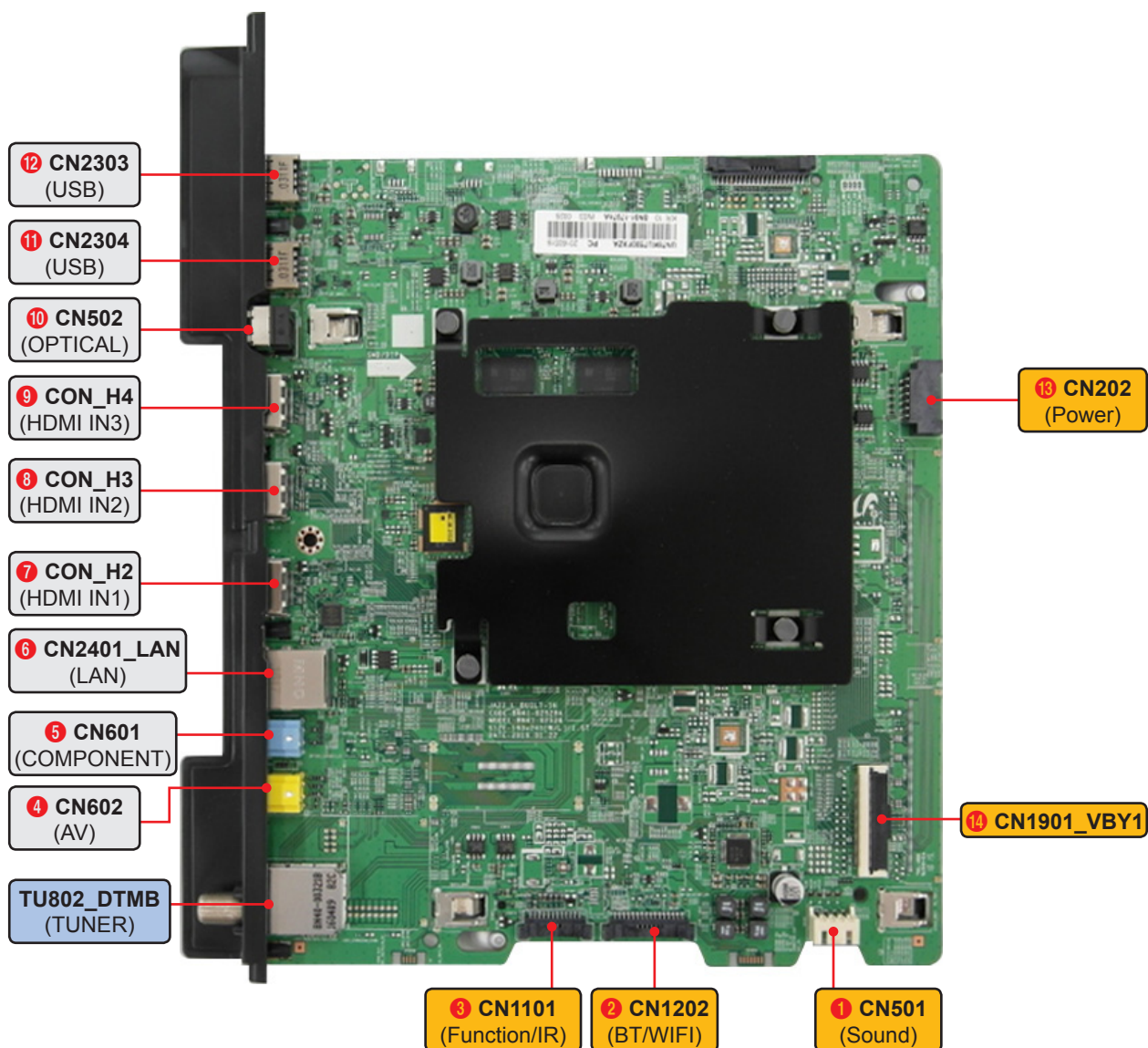


5-2. Wiring Diagram



5-3. Connector

■ Main Board



■ Main Board Pin Map

1 CN501 (SOUND)				2 CN1202 (BT/WIFI)			
1	OUT_C	3	OUT_D	1	BT_NRESET	9	WIFI_PHY_ON
2	OUT_A	4	OUT_B	2	BT_MODULE_WAKE	10	GND
				3	BT_WAKE	11	WIFI_D+_USB
				4	GND	12	WIFI_D-_USB
				5	BT_D-_USB	13	GND
				6	BT_D+_USB	14	A5V_PW
				7	GND	15	WIFI_WOL
				8	BT_WELCOME	16	WIFI_NRESET

5. Wiring Diagram

3 CN1101 (FUNCTION/IR)			
1	IR	7	KEY_INPUT2
2	GND	8	LED_STB_OUT
3	A3.3V_PW	9	NC
4	AMP_SCL_I2C	10	NC
5	AMP_SDA_I2C	11	NC
6	KEY_INPUT1	12	NC

4 CN602 (AV)			
1	GND	5	TEST_SR
2	AV1_CVBS_IN	6	TEST_SL
3	COMP_AV1_SR_IN	7	COMP_AV1_SL_IN
4	IDENT_VIDEO	8	

5 CN601 (COMPONENT)			
1	GND	5	TEST_PR
2	COMP_PB	6	GND
3	COMP_PR	7	GND
4	IDENT_COMP		

6 CN2401_LAN (LAN)			
1	LAN_TXD+_LAN	5	GND
2	GND	6	LAN_RXD-_LAN
3	LAN_TXD-_LAN	7	NC
4	LAN_RXD+_LAN	8	GND

7 CON_H2 (HDMI)			
1	HDMI2_RX2+_HDMI	11	GND
2	GND	12	HDMI2_RXC-_HDMI
3	HDMI2_RX2-_HDMI	13	CEC
4	HDMI2_RX1+_HDMI	14	GND
5	GND	15	HDMI2_SCL_DDC_BUFFER
6	HDMI2_RX1-_HDMI	16	HDMI2_SDA_DDC_BUFFER
7	HDMI2_RX0+_HDMI	17	GND
8	GND	18	HDMI2_IDENT
9	HDMI2_RX0-_HDMI	19	HDMI2_HPD
10	HDMI2_RXC+_HDMI	20	

8 CON_H3 (HDMI)			
1	HDMI3_RX2+_HDMI	11	GND
2	GND	12	HDMI3_RXC-_HDMI
3	HDMI3_RX2-_HDMI	13	CEC
4	HDMI3_RX1+_HDMI	14	GND
5	GND	15	HDMI3_SCL_DDC_BUFFER
6	HDMI3_RX1-_HDMI	16	HDMI3_SDA_DDC_BUFFER
7	HDMI3_RX0+_HDMI	17	GND
8	GND	18	HDMI3_IDENT
9	HDMI3_RX0-_HDMI	19	HDMI3_HPD
10	HDMI3_RXC+_HDMI	20	

9 CON_H4 (HDMI)			
1	HDMI4_RX2+_HDMI	11	GND
2	GND	12	HDMI4_RXC-_HDMI
3	HDMI4_RX2-_HDMI	13	CEC
4	HDMI4_RX1+_HDMI	14	GND
5	GND	15	HDMI4_SCL_DDC_BUFFER
6	HDMI4_RX1-_HDMI	16	HDMI4_SDA_DDC_BUFFER
7	HDMI4_RX0+_HDMI	17	GND
8	GND	18	HDMI4_IDENT
9	HDMI4_RX0-_HDMI	19	HDMI4_HPD
10	HDMI4_RXC+_HDMI	20	

10 CN502 (OPTICAL)			
1	SPDIF_OUT	3	GND
2	B5V_PW		

11 CN2304 (USB)			
1	B5V_USB1_PW	3	JACK_D+_USB1
2	JACK_D-_USB1	4	GND

12 CN2303 (USB)			
1	B5V_USB2_PW	3	JACK_D+_USB2
2	JACK_D-_USB2	4	GND

13 CN202 (POWER)			
1	GND	7	A13V_PW
2	GND	8	PWM_DIMMING_OUT1
3	A13V_PW	9	A13V_PW
4	GND	10	OVD_ON_OFF
5	A13V_PW	11	SMPS_FET_FAIL_DEFECT
6	SW_Power	12	ANA_DIMMING

14 CN1901_VBY1							
1	GND	2	FRC_SDA_I2C	3	AGING_EN	4	FRC_SCL_I2C
5	PWM_UFT	6	EXT_TCON_SDA_I2C	7	TCON_I2C_EN	8	EXT_TCON_SCL_I2C
9	GND	10	GND	11	JAZZ_L_TX7+_VBY1	12	JAZZ_L_TX7-_VBY1
13	GND	14	JAZZ_L_TX6+_VBY1	15	JAZZ_L_TX6-_VBY1	16	GND
17	JAZZ_L_TX5+_VBY1	18	JAZZ_L_TX5-_VBY1	19	GND	20	JAZZ_L_TX4+_VBY1
21	JAZZ_L_TX4-_VBY1	22	GND	23	JAZZ_L_TX3+_VBY1	24	JAZZ_L_TX3-_VBY1
25	GND	26	JAZZ_L_TX2+_VBY1	27	JAZZ_L_TX2-_VBY1	28	GND
29	JAZZ_L_TX1+_VBY1	30	JAZZ_L_TX1-_VBY1	31	GND	32	JAZZ_L_TX0+_VBY1
33	JAZZ_L_TX0-_VBY1	34	GND	35	JAZZ_L_VBY1_LOCKN	36	V_CON_NDETECT
37	GND	38	GND	39	GND	40	GND
41	NC	42	PANEL_13V_PW	43	PANEL_13V_PW	44	PANEL_13V_PW
45	PANEL_13V_PW	46	PANEL_13V_PW	47	PANEL_13V_PW	48	PANEL_13V_PW
49	PANEL_13V_PW	50	PANEL_13V_PW	51	PANEL_13V_PW	-	-