



QLED TV

Project : QRQ85E

Chassis : QWD90

Model : QA55Q80RAK

QA65Q80RAK

QA75Q80RAK

SERVICE Manual

QLED TV



QA**Q80RAK

Contents

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

Contents

1. Precautions.....	1-1
1-1. Safety Precautions	1-1
1-1-1. Warnings.....	1-1
1-1-2. Servicing the LED TV	1-1
1-1-3. Fire and Shock Hazard.....	1-1
1-1-4. Product Safety Notices.....	1-2
1-2. Servicing Precautions	1-3
1-2-1. General Servicing Precautions	1-3
1-3. Static Electricity Precautions	1-4
1-4. Installation Precautions	1-5
2. Product Specifications	2-1
2-1. Product information	2-1
2-2. Product specification.....	2-2
2-3. Accessories.....	2-10
2-4. Viewing the Functions.....	2-11
2-4-1. 2019' Concept.....	2-11
2-4-2. Quick Guides	2-18
2-5. The Samsung Smart Remote.....	2-27
2-6. Using the TV Controller	2-29
3. Disassembly and Reassemble.....	3-1
3-1. TV Disassembly	3-1

4. Troubleshooting	4-1
4-1. Function Control Operation Test.....	4-1
4-2. Power	4-2
4-2-1. TV POWER STANDBY TEST	4-2
4-2-2. TV POWER ON SEQUENCE TEST	4-3
4-2-3. OCB POWER ON SEQUENCE TEST	4-4
4-2-4. OCB Self Power Supply Test	4-4
4-2-5. BACKLIGHT TEST	4-5
4-2-6. TV BACKLIGHT QUICK TEST	4-6
4-3. Video	4-7
4-3-1. ONE CONNECT	4-7
4-3-2. MAIN/T-CON BOARD.....	4-8
4-3-3. PANEL	4-10
4-4. Audio.....	4-11
4-5. Network.....	4-12
4-6. Smart Hub Connection Test	4-13
4-7. Bluetooth / WiFi Module.....	4-15
4-8. Factory Mode	4-16
4-9. Factory Mode Adjustments	4-24
4-9-1. Entering Factory Mode	4-24
4-9-2. Detail Factory Option	4-25
4-9-3. Factory Data.....	4-28
4-10. Replacing Main Board	4-37
4-11. RS-232C	4-39
4-12. AV Control Tab	4-40
4-13. Updating the TV's Software	4-47
5. Wiring Diagram.....	5-1
5-1. Wiring Diagram	5-1
5-2. Connector	5-3
5-2-1. Main Board.....	5-3
5-2-2. SMPS Board.....	5-7
5-2-3. LD Board	5-10

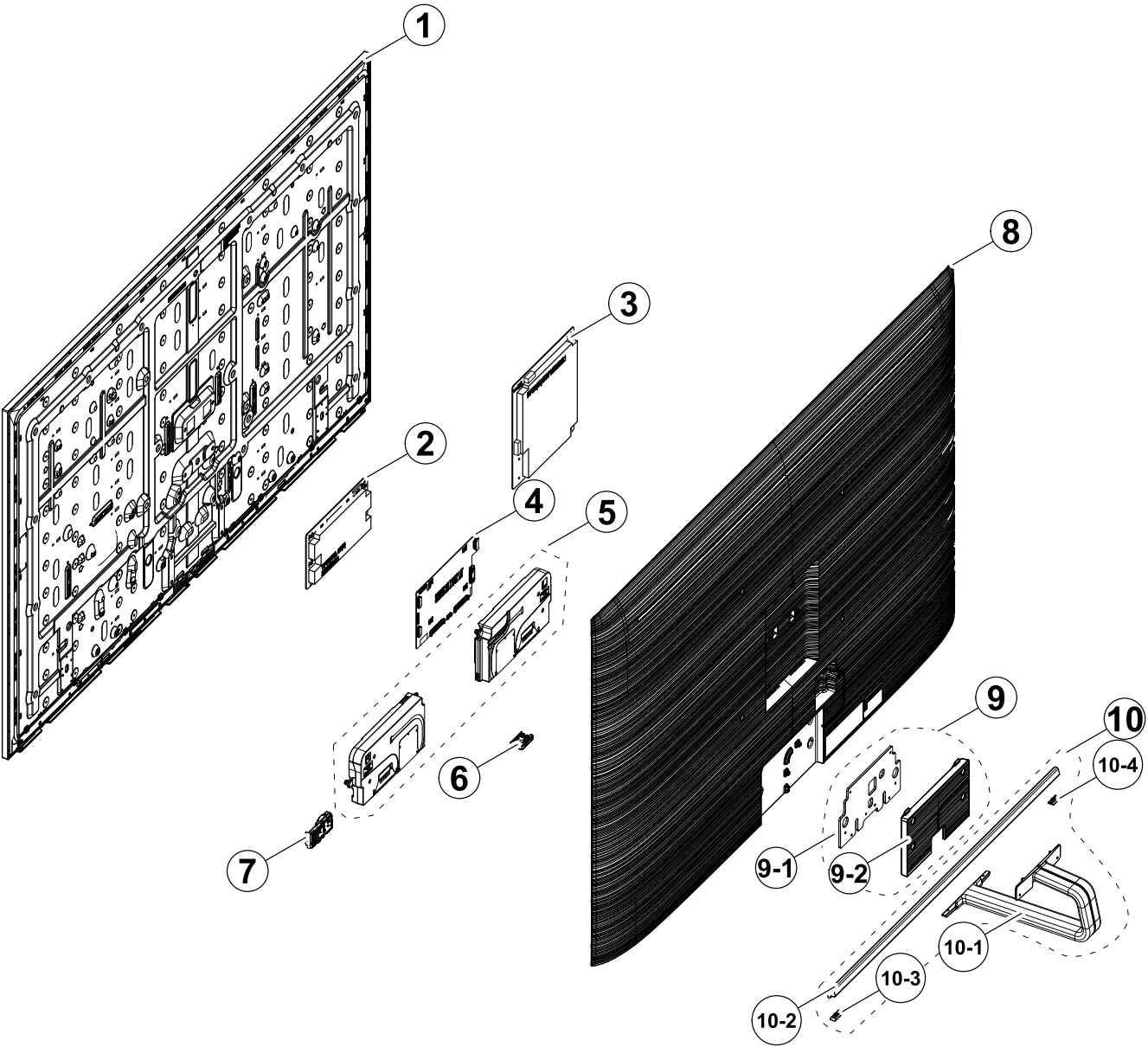


This Service Manual is a property of Samsung Electronics Co.,Ltd.
Any unauthorized use of Manual can be punished under applicable
International and/or domestic law.

© 2019 Samsung Electronics Co.,Ltd.
All rights reserved.
Printed in Korea

1. Exploded View & Part List

Exploded View

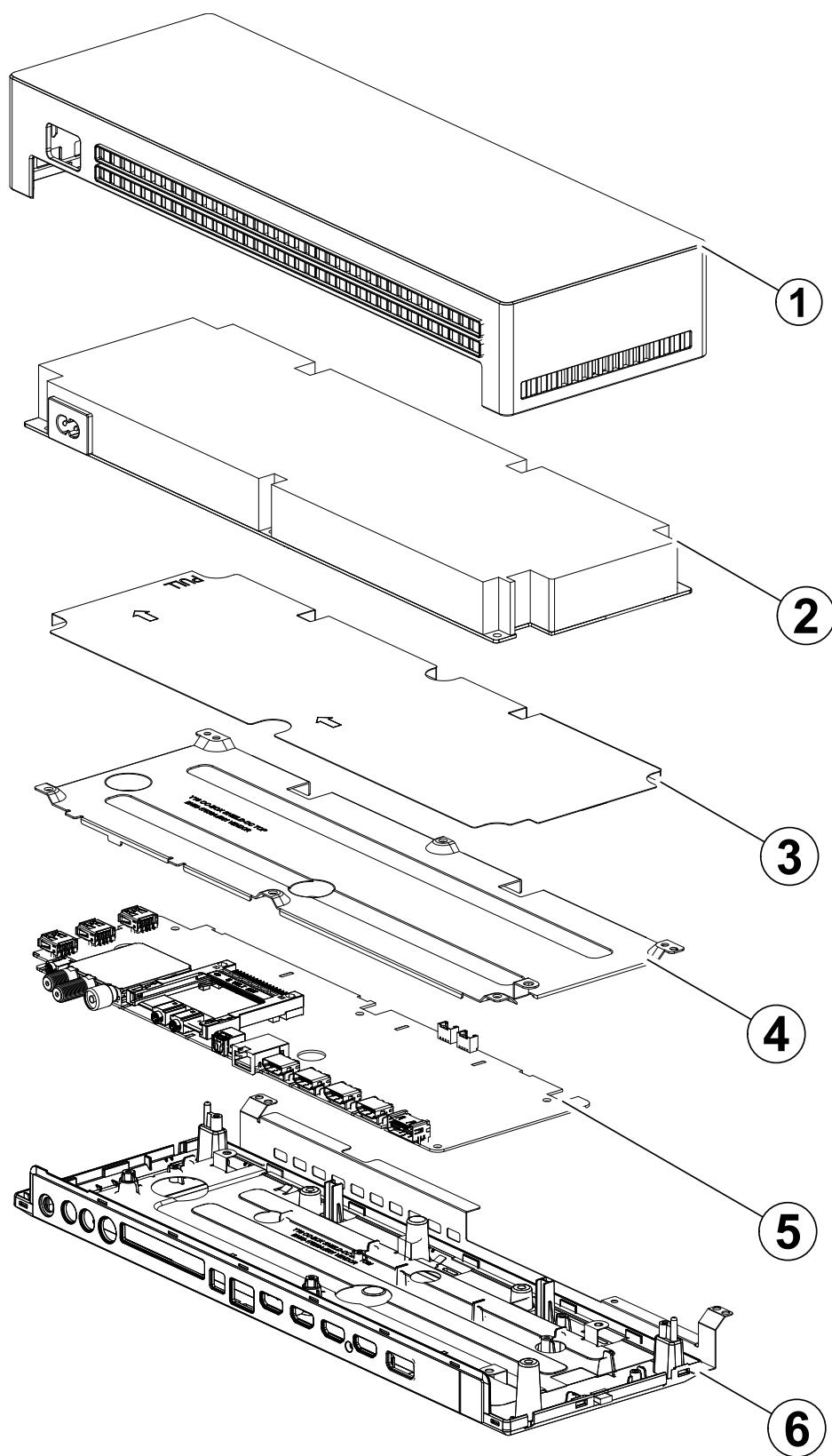


Parts List

No.	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	1	PANEL	BN95-05495D	PRODUCT LCD-AUO; CY-TR055FLAV6V/H,Q80,OC,	SA	1
2	4		BN44-00985A	DC VSS-DRIVER BOARD; L55S8NC_RSM,DC/DC,14	SA	1
3	2		BN44-00986A	DC VSS-DRIVER BOARD; L55S8NB_RSM,DC/DC,24	SA	1
4	2	M0014	BN94-14017L	ASSY PCB MAIN; Q85E	SA	1
5	2		BN96-48260A	ASSY SPEAKER P-FRONT; TV-SPK,Q85,6ohm,10W	SA	1
6	2		BN96-48727A	ASSY BOARD P-FUNCTION TACT; Y19 Q80 Funct	SA	1
7	2		BN61-15579A	HOLDER-WIFI; 65UNU8000F,ABS,BK0007,HB	SNA	1
8	2	R001A	BN96-48392B	ASSY COVER P-REAR; 55QRQ85E,PC+ABS+ED20%,	SA	1
9	2		BN96-48844A	ASSY STAND P-BRACKET NECK; 65QRQ80C,HGI,B	SA	1
9-1	3		BN61-16089A	BRACKET-STAND NECK; 65QRQ80C,HGI,T4,NATUR	SNA	1
9-2	3		BN63-18161A	COVER-STAND NECK; 65QRQ85E,ABS,HB,BK0020	SNA	1
10	2		BN96-48795A	ASSY STAND P-BRACKET BOTTOM; 55QRQ80C,ALD	SA	1
10-1	3		BN61-16086A	BRACKET-STAND BOTTOM; 55QRQ80C,ALDC,BLACK	SNA	1
10-2	3		BN63-18015A	COVER-STAND TOP; 55QRQ80C,CR-SPCC,T2,ECLI	SNA	1
10-3	3		BN63-18018A	COVER-STAND TOP LEFT; 65QRQ80C,ABS,HB,GY0	SNA	1
10-4	3		BN63-18020A	COVER-STAND TOP RIGHT; 65QRQ80C,ABS,HB,GY	SNA	1

2. ONE CONNECT Exploded View & Part List

ONE CONNECT Exploded View



Parts List

No.	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	2		BN96-45940A	ASSY COVER P-OC TOP; 65Q9NQ9FA,PC,V-2,TP00	SA	1
2	2	OC SMPS	BN44-00933A	DC VSS-POWER BOARD; P230NQ_NPN,AC/DC,230W	SA	1
3	2		BN63-17541A	INSULATOR-SMPS; 65Q9NQ9FA,PC,BLACK,L126.9,	SNA	1
4	2		BN63-17538A	SHIELD-OC TOP; 65Q9NQ9FA,EGI-SECC,T0.8	SA	1
5	2		BN94-14012E	ASSY PCB OC; QRQ85E	SA	1
6	2		BN96-48511B	ASSY COVER P-OC BOTTOM; 65QRQ90B,PC+ABS+G	SA	1

3. Electrical Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
			QA55Q80RAKXXV (AA02)		
1	R001A	BN90-10734C	ASSY COVER REAR;QRQ85E	1	SNA
.2	R001A	BN96-48392B	ASSY COVER P-REAR;55QRQ85E,PC+ABS+ED20%,	1	SA
..3	R001	BN63-17988A	COVER-REAR;55QRQ80C,PC+ABS+ED20%,V-1,BLA	1	SNA
...4		0103-010818	RESIN PC ABS;CM20G/BK00749,BLACK,BK0007,	3381	SNA
...4		BN68-05603E	LABEL-RESIN;ART,W8,L50,UL LABEL (COVER R	1	SNA
1	S001A	BN90-10735C	ASSY STAND;QRQ85E	1	SNA
.2		BN96-48795A	ASSY STAND P-BRACKET BOTTOM;55QRQ80C,ALD	1	SA
..3	SCREW	6003-001906	SCREW-TAPTYPE;BH,+,S,M4,L12,ZPC(BLK),SWR	6	SA
..3		6902-002918	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W70,L400	2	SNA
..3		6902-003088	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W250,L50	1	SNA
..3		BN61-16086A	BRACKET-STAND BOTTOM;55QRQ80C,ALDC,BLACK	1	SNA
..3		BN63-18015A	COVER-STAND TOP;55QRQ80C,CR-SPCC,T2,ECLI	1	SNA
..3		BN63-18018A	COVER-STAND TOP LEFT;65QRQ80C,ABS,HB,GY0	1	SNA
..3		BN63-18020A	COVER-STAND TOP RIGHT;65QRQ80C,ABS,HB,GY	1	SNA
..3	RF01	BN67-00538A	FOOT-RUBBER;LED_J4000,Si,GRAY,T3	5	SNA
..3		BN68-05603A	LABEL-E PASS;ART,W/W,90g	2	SNA
..3		BN69-19552A	PAD-EPE;55QRQ80C,EPE,T5,W60,L280,WHITE	1	SNA
.2		BN96-48844A	ASSY STAND P-BRACKET NECK;65QRQ80C,HGI,B	1	SA
..3	SCREW	6003-001904	SCREW-TAPTYPE;FH,+,B,M4,L10,ZPC(WHT),SWR	4	SA
..3		BN61-16089A	BRACKET-STAND NECK;65QRQ80C,HGI,T4,NATUR	1	SNA
..3		BN63-18161A	COVER-STAND NECK;65QRQ85E,ABS,HB,BK0020	1	SNA
...4		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	209	SNA
..3		BN69-08751A	PACKING SHRINKAGE;STAND,PLASTIC,T0.015,W	0	SNA
..3		BN96-49298A	ASSY ACCESSORY-SCREW;65QRQ60T,ALL,W/W,60	2	SNA
...4	SCREW	6003-001907	SCREW-TAPTYPE;BH,+,S,M4,L14,ZPC(BLK),SWR	8	SA
...4		6902-003076	BAG SCREW;LDPE,T0.05,W70,L90,TRP,RECYCLE	2	SNA
1		BN90-10736C	ASSY W/I;QRQ85E	1	SNA
.2		BN81-08159Z	A/S PART SET-ELEC W/I;LED TV ELEC spec-C	1	SNA
.2		BN81-17090S	A/S PART SET-MECH W/I;QRQ85E,Q55RE*	1	SNA
1	M0017	BN91-20692A	ASSY CHASSIS;QRQ85E	1	SNA
.2	M0014	BN94-14017L	ASSY PCB MAIN;QRQ85E	1	SA
..3	M0131	AA63-01071A	GASKET-EMI;EMI Shielding,Conductive Tape	4	SNA
..3	AH020	BN62-00876A	HEAT SINK;QN65Q90RAFXZA,A1050,W200,L110,	1	SNA
..3		BN97-15524J	ASSY SMD;QRQ85E	1	SNA
...4		0202-001830	SOLDER-CREAM;LFM-48W TM-HP,D20~38um,96.5	6	SNA
...4		0403-001779	DIODE-ZENER;MMSZ5234BT1G,5.89~6.51V,500m	1	SA
...4		0403-001797	DIODE-ZENER;NZH3V0B,2.85~3.15V,500mW,SOD	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		0403-002014	DIODE-ZENER;KDZ16B,16.2~18.3V,1000mW,SOD	1	SNA
...4		0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	1	SA
...4		0404-001640	DIODE-SCHOTTKY;SS1060HEWS,60V,1000mA,SOD	2	SA
...4		0404-001881	DIODE-SCHOTTKY;SS3040-HE,40V,3000mA,SOD-	2	SA
...4		0404-001953	DIODE-SCHOTTKY;MBRA340F-HAF,40V,3000mA,S	3	SA
...4		0404-001976	DIODE-SCHOTTKY;SV540,40V,5000mA,TO-277,T	1	SA
...4		0406-001718	DIODE-TVS;SMF36A,40V,44.2V,3.8MAV,1.25VP	2	SA
...4		0406-001786	DIODE-TVS;PJEC5V0V6TM,5V,7V,8V,0.1MAV,9V	1	SA
...4		0504-000126	TR-DIGITAL;KSR1101,NPN,200mW,4.7K/4.7K,S	1	SA
...4		0505-002598	FET-SILICON;AP2317GN,P,20V,-4.2A,0.052oh	3	SA
...4		0505-002660	FET-SILICON;Si2308BDS,N,60V,2.3A,0.156oh	1	SA
...4		0505-002790	FET-SILICON;ZXMP6A17G,P,60V,-4.3A,0.190o	1	SA
...4		0505-003205	FET-SILICON;DMG4435SSS-13,P,30V,-7.3A,1.	1	SA
...4		0505-003397	FET-SILICON;2N7002K,N,60V,0.38A,1.19ohm,	9	SA
...4		0505-003507	FET-SILICON;AO3424,N,30V,3.8A,1.4W,SOT-2	1	SA
...4		0505-003620	FET-SILICON;AOD4286,N,100V,14A,55.5mohm,	1	SA
...4		0505-003752	FET-SILICON;PJL9409,P,30V,50A,0.035ohm,3	3	SNA
...4		1003-003030	IC-LEVEL DRIVER;VLS3RT,QFN,40P,6x6x0.9mm	1	SA
...4		1103-001564	IC-EEPROM;S-24C512CI-J800,512Kbit,64Kx8,	1	SA
...4		1105-002989	IC-DDR4 SDRAM;MT53E384M32D2DS-053 WT:E,L	1	SA
...4		1105-002992	IC-DDR4 SDRAM;MT53E256M32D2DS-053 WT:B,L	1	SA
...4		1201-004170	IC-AUDIO AMP;TAS880021A,TSSOP,48P,12.5x6	2	SA
...4		1203-009063	IC-DC/DC CONVERTER;VPM2SM,QFN,56P,7x7x0.	1	SA
...4		1203-009197	IC-DC/DC CONVERTER;RT6203E,SOP-8,8P,5x4x	1	SA
...4		1203-009198	IC-DC/DC CONVERTER;TPS549A20,VQFN-CLIP,2	1	SA
...4		1204-003775	IC-DECODER;SDP1803,FCBGA,929P,31x31x2.19	1	SA
...4		1205-005749	IC-SWITCH;G2897KD1U,TDFN2X3-14,14P,2x3mm	2	SA
...4	IS01	1209-002183	IC-SENSOR;S-5851AAA-M6T1U,SOT,6Z30,2.9x1	1	SA
...4		1404-001731	THERMISTOR-NTC;33Kohm,4050K,1MWC,TP,1.6x	1	SNA
...4		1405-001185	VARISTOR;500V,24VDC,1608,TP,150V,0.055pF	1	SA
...4		1405-001232	VARISTOR;6.4V,5.6VDC,30A,1608,TP,19V,200	18	SNA
...4		1405-001381	VARISTOR;11V,8VDC,30A,1608,TP,25V,500pF	7	SA
...4		1405-001382	VARISTOR;24.5V,16VDC,120A,2012,TP,42V,40	4	SA
...4		2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-000066	R-CHIP;20Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608,T0.45	10	SA
...4		2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005,T0.35	12	SNA
...4		2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005,T0.35	17	SA
...4		2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005,T0.35	39	SNA
...4		2007-000772	R-CHIP;33Kohm,1%,1/10W,TP,1608	2	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2007-000816	R-CHIP;390Kohm,1%,1/10W,TP,1608	1	SNA
...4		2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005,T0.35	4	SA
...4		2007-000979	R-CHIP;5.6Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-001139	R-CHIP;7.5Kohm,1%,1/10W,TP,1608	2	SA
...4		2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005,T0.35	9	SA
...4		2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005,T0.35	4	SA
...4		2007-002899	R-CHIP;10ohm,1%,1/10W,TP,1608	20	SA
...4		2007-002906	R-CHIP;200Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-007131	R-CHIP;13Kohm,1%,1/16W,TP,1005,T0.35	3	SA
...4		2007-007137	R-CHIP;1.2Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007138	R-CHIP;27Kohm,1%,1/16W,TP,1005,T0.35	4	SA
...4		2007-007139	R-CHIP;47Kohm,1%,1/16W,TP,1005,T0.35	3	SA
...4		2007-007309	R-CHIP;12Kohm,1%,1/16W,TP,1005,T0.35	7	SA
...4		2007-007310	R-CHIP;8.2Kohm,1%,1/16W,TP,1005,T0.35	5	SA
...4		2007-007311	R-CHIP;22Kohm,1%,1/16W,TP,1005,T0.35	3	SA
...4		2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005,T0.35	14	SA
...4		2007-007316	R-CHIP;3.3Kohm,1%,1/16W,TP,1005,T0.35	4	SNA
...4		2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	10	SA
...4		2007-007643	R-CHIP;2Mohm,1%,1/10W,TP,1608	1	SA
...4		2007-007736	R-CHIP;510Kohm,1%,1/10W,TP,1608	2	SA
...4		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005,T0.35	25	SA
...4		2007-007767	R-CHIP;200ohm,1%,1/16W,TP,1005	6	SA
...4		2007-007798	R-CHIP;10ohm,1%,1/16W,TP,1005,T0.35	4	SA
...4		2007-007992	R-CHIP;1ohm,1%,1/10W,TP,1608	6	SA
...4		2007-008294	R-CHIP;33ohm,1%,1/16W,TP,1005,T0.35	5	SA
...4		2007-008298	R-CHIP;49.9ohm,1%,1/16W,TP,1005,T0.35	6	SA
...4		2007-008596	R-CHIP;0.1ohm,1%,1/4W,TP,3216	3	SC
...4		2007-009322	R-CHIP;1.3Kohm,1%,1/16W,TP,1005	1	SA
...4		2011-001264	R-NETWORK;10ohm,5%,1/16W,L,CHIP,8P,TP,2.	14	SNA
...4		2011-001448	R-NETWORK;10ohm,5%,1/16W,L,4P,TP,1.0x1.0	3	SA
...4		2011-001519	R-NETWORK;33OHM,5%,1/16W,L,CHIP,4P,TP,1.	5	SA
...4		2011-001527	R-NETWORK;4.7Kohm,5%,1/16W,L,CHIP,4P,TP,	2	SA
...4		2011-001589	R-NETWORK;0ohm,5%,1/16W,L,CHIP,4P,TP,1.0	3	SNA
...4	AD480	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,C0G,TP,1005	1	SA
...4	AD480	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,TP,1005	5	SA
...4	AD480	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,TP,1005	2	SA
...4	AD480	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,TP,1005	1	SA
...4	AD480	2203-000940	C-CER,CHIP;0.47nF,10%,50V,X7R,TP,1005,T0	7	SNA
...4	AD480	2203-001428	C-CER,CHIP;470nF,10%,50V,X7R,TP,2012	1	SA
...4	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,TP,1005	19	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4	AD480	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	SA
...4	AD480	2203-002711	C-CER,CHIP;100nF,10%,25V,X7R,TP,1608	3	SA
...4	AD480	2203-005057	C-CER,CHIP;0.0082nF,0.25pF,50V,C0G,TP,10	4	SA
...4	AD480	2203-005083	C-CER,CHIP;220nF,10%,50V,X7R,TP,1608,T0.	8	SNA
...4	AD480	2203-006391	C-CER,CHIP;1000nF,10%,10V,X7R,TP,1608	1	SNA
...4	AD480	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,TP,1005,T0	34	SA
...4	AD480	2203-006698	C-CER,CHIP;1000nF,10%,25V,X7R,TP,1608,T0	7	SA
...4	AD480	2203-006838	C-CER,CHIP;2200nF,10%,6.3V,X5R,TP,1005	3	SA
...4	AD480	2203-006844	C-CER,CHIP;470nF,10%,10V,X5R,TP,1005	1	SA
...4	AD480	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012,T	12	SNA
...4	AD480	2203-007230	C-CER,CHIP;47000nF,20%,6.3V,X5R,TP,2012,	12	SA
...4	AD480	2203-007240	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,1608,	75	SA
...4	AD480	2203-007269	C-CER,CHIP;22000nF,20%,10V,X5R,TP,2012(2	25	SA
...4	AD480	2203-007271	C-CER,CHIP;2200nF,10%,10V,X5R,TP,1005,T0	22	SNA
...4	AD480	2203-007306	C-CER,CHIP;10000nF,10%,25V,X5R,TP,2012,T	30	SNA
...4	AD480	2203-007423	C-CER,CHIP;10000nF,10%,35V,X7R,TP,3216	4	SA
...4	AD480	2203-007425	C-CER,CHIP;2200nF,10%,25V,X5R,TP,1608	1	SNA
...4	AD480	2203-008096	C-CER,CHIP;2200nF,10%,50V,X5R,TP,2012,1.	3	SA
...4	AD480	2203-008412	C-CER,CHIP;4700nF,10%,50V,X5R,TP,2012,T1	2	SNA
...4		2409-001240	C-ORGANIC,SMD;33uF,20%,25V,LR,TP,7343(1.	1	SA
...4		2703-003747	INDUCTOR-SMD;22uH,20%,6060,0.135ohm,1300	2	SA
...4		2703-003862	INDUCTOR-SMD;10uH,20%,6060,0.065ohm,1900	4	SA
...4		2703-004724	INDUCTOR-SMD;8.2uH,20%,5050,T4,0.072Ohm,	8	SA
...4		2703-005376	INDUCTOR-SMD;10uH,20%,10.7x10mm,T3.8,0.0	1	SA
...4		2703-005715	INDUCTOR-SMD;820nH,20%,11x10mm,T3.8,0.00	1	SNA
...4		2801-004021	CRYSTAL-SMD;24.576MHz,20ppm,28-AAN,12pF,	1	SA
...4		2801-005372	CRYSTAL-SMD;24.576MHz,20ppm,HCX-3SB,12 p	1	SA
...4		3301-001364	BEAD-SMD;1000ohm,1608,TP,1085ohm/108MHz,	6	SNA
...4		3301-001901	BEAD-SMD;220ohm,1608,TP,220ohm/100MHz	27	SA
...4		3708-003241	CONNECTOR-FPC/FFC/PIC;96P,0.5mm,SMD-A,AU	2	SNA
...4		3710-004374	CONNECTOR-SOCKET;34P,1R,0.8mm,SMD-A,Au,B	1	SA
...4		3711-007975	CONNECTOR-HEADER;BOX,10P,1R,1.25mm,SMD-A	2	SA
...4	EH01	3711-008098	HEADER-BOARD TO CABLE;BOX,20P,1R,1.25mm,	1	SNA
...4	EH01	3711-008488	HEADER-BOARD TO CABLE;BOX,14P,2R,2mm,ANG	1	SA
...4	EH01	3711-008659	HEADER-BOARD TO CABLE;BOX,16P,2R,2mm,ANG	1	SA
...4		6302-001376	GASKET-SMD;SMT Gasket,Sn/Cu plated PI-Fi	15	SNA
...4		BN41-02697A	PCB-MAIN;MUSE-M OC MAIN,FR-4,4L,T1.6,1,2	1	SNA
...4	CB07	BN61-13312B	BRACKET-SCREWLESS PCB;55KS8000,SK5,T0.3,	4	SNA
...4		BN97-15855A	ASSY MICOM;MMMICOM_OC_TV,Q90/Q85,1107-00	1	SNA
....5		1107-002226	IC-NOR FLASH;W25Q40CLSSIP,4Mbit,SOIC,8P,	1	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		BN97-15858A	ASSY MICOM;Muse-M OC TCON FW	1	SNA
....5		1107-002339	IC-NOR FLASH;W25Q80DV,8Mbit,SOP,5.28x5.2	1	SNA
....5		BN46-01005A	S/W MICOM;TCON FW,Muse-M OC	1	SNA
...4		BN97-15895A	ASSY MICOM;T-MSMUABC,ASSY MICOM_MAIN,QRQ	1	SNA
....5		1107-002422	IC-EMMC;8GB,64Gbx1,BGA,153P,11.50 x 13.0	1	SA
..3		BN97-15725A	ASSY DRM;Muse-M built_in,ISDB,NagSam, MA	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		BN46-00962A	KEY CODE;Muse-M built_in,Nagra CSC Data,	1	SNA
..3		BN97-15877A	ASSY MICOM;55L1QU9TR,55inch AUO Q90/Q85	1	SNA
...4		BN46-01004A	S/W MICOM;55L1QU9TR,Muse-M OC,Q90/Q85	1	SNA
..3	M0131	GK63-00069A	GASKET-EMI;EMI Shielding,Al,T1,W5,L28,GR	2	SNA
1		BN91-21048G	ASSY SHIELD;QRQ85E	1	SNA
.2	SCREW	6003-001819	SCREW-TAPTYPE;CH,+,B,M3,L6,ZPC(BLK),SWRC	2	SA
.2		BN39-02309C	LEAD CONNECTOR-DIMMING;Q7F,Q7C,Q8C,UL210	1	SA
.2		BN39-02400A	LEAD CONNECTOR-DIMMING;65Q8F,UL21016,18P	1	SA
.2		BN39-02463A	LEAD CONNECTOR-SUB ASSY;QRQ90B,UL21016,1	1	SA
.2		BN39-02469A	LEAD CONNECTOR-SUB ASSY;Q85,UL21451,10P,	1	SA
.2		BN39-02472A	LEAD CONNECTOR-POWER;Q85 55/65,UL21516,2	1	SA
.2		BN44-00986A	DC VSS-DRIVER BOARD;L55S8NB_RSM,DC/DC,24	1	SA
.2		BN59-01314A	NETWORK-WLAN CLIENT;WCP730M,78.3x29.3x7.	1	SA
.2		BN61-15579A	HOLDER-WIFI;65UNU8000F,ABS,BK0007,HB	1	SNA
..3		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	11	SNA
.2		BN63-12734A	GASKET-EMI;EMI Shielding,Conductive Tape	1	SNA
.2	M0019	BN68-00970A	LABEL-SECURITY;ALL,PET,T0.05,W60,L60,SEA	1	SNA
.2		BN68-09258B	LABEL ETC;ALL MODEL,PET,T0.05,W40,L40,YW	1	SNA
.2		BN96-42166D	FFC CABLE;49LS03,Straight,L120,96P	2	SA
.2		BN96-48260A	ASSY SPEAKER P-FRONT;TV-SPK,Q85,6ohm,10W	1	SA
.2		BN96-48727A	ASSY BOARD P-FUNCTION TACT;Y19 Q80 Funct	1	SA
1		BN91-21091M	ASSY ONE CONNECT;QRQ85E	1	SNA
.2		0203-001598	TAPE-SINGLE FACE;PP,T0.15,W12,N/A,CLEAR	0	SNA
.2	SCREW	6003-000282	SCREW-TAPTYPE;BH,+,B,M3,L8,ZPC(BLK),SW	3	SA
.2	SCREW	6003-000283	SCREW-TAPTYPE;BH,+,B,M3,L8,ZPC(WHT),SW	11	SNA
.2		6902-002905	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W500,L30	1	SNA
.2	M0131	AA63-01071A	GASKET-EMI;EMI Shielding,Conductive Tape	1	SNA
.2	M0909	AA63-01387A	GASKET-EMI;EMI Shielding,Conductive Tape	1	SNA
.2		BN02-00102B	TAPE-SINGLE FACE;OPP,T0.15,W25,L50M,WHIT	1	SNA
.2		BN39-02437A	LEAD CONNECTOR-POWER;QN65Q900R,UL21516,2	1	SA
.2	OC SMPS	BN44-00933A	DC VSS-POWER BOARD;P230NQ_NPN,AC/DC,230W	1	SA
.2		BN62-00883A	PAD GAP-THERMAL;QN65Q90RAFXZA,Si,T12.5,L	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.2	M0131	BN63-02627A	GASKET-EMI;Oxford,Conductive Fabric,T8,W	4	SNA
.2		BN63-17538A	SHIELD-OC TOP;65QNNQ9FA,EGI-SECC,T0.8	1	SA
.2		BN63-17541A	INSULATOR-SMPS;65QNNQ9FA,PC,BLACK,L126.9,	1	SNA
.2		BN68-05458A	LABEL-BARCODE;ALL,ART,W45,L12,BLACK,WHIT	1	SNA
.2		BN68-07104D	LABEL-RATING;Monitor,WW,PP,T0.161,W90,L5	1	SNA
.2		BN68-08730A	LABEL-E PASS;QTV,WW,ART,T0.161,W60,L15,P	4	SNA
.2		BN69-17693C	BOX ACCESSORY;65QRQ85E,CB,SW-E,Non Stand	1	SNA
.2		BN69-18324A	PAD;55QNNQ7FC,EPS,W45,L390,H15,WHITE	1	SNA
.2		BN94-14012E	ASSY PCB OC;QRQ85E	1	SA
...3		BN68-05458A	LABEL-BARCODE;ALL,ART,W45,L12,BLACK,WHIT	2	SNA
...3		BN97-15524D	ASSY SMD;QRQ85E	1	SNA
...4	DS01A	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	SA
...4		0403-000489	DIODE-ZENER;MMSZ5228B,3.705~4.095V,500mW	4	SA
...4		0403-001783	DIODE-ZENER;BZB84-C6V2,5.8~6.6V,300mW,SO	4	SNA
...4		0403-001785	DIODE-ZENER;NZH5V1B,4.94~5.2V,500mW,SOD-	3	SA
...4		0406-001200	DIODE-TVS;RClamp0504F,6V,1MAV,TP	6	SA
...4		0406-001635	DIODE-TVS;SMF5.0A,6.4V,6.7V,7V,200MAV,20	14	SA
...4		0406-001778	DIODE-TVS;PUSB3FR4,6V,9V,0.2MAV,0.7VPA,0	9	SA
...4		0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	7	SA
...4		0501-000462	TR-SMALL SIGNAL;MMBT2907A,PNP,350mW,SOT-	5	SA
...4		0505-002893	FET-SILICON;AO4801AS,P,30V,-5A,2W,SOIC-8	1	SA
...4		0601-003620	LED-IR;SMD Angle Type,1.4mm,200mW,5V,940	2	SA
...4		0903-002242	IC-MICROCONTROLLER;UEI1704,QFN,20P,4x4x0	1	SA
...4		0904-002882	IC-USC;GL852G-OHY38,QFN,28P,5x5mm,12MHz,	2	SA
...4		1006-001595	IC-DRIVER/RECEIVER;UT3221G-P16-R,TSSOP-1	1	SA
...4		1203-009186	IC-POS1.ADJUST REG.;TLV759P01PDRVR,TP,6P	4	SA
...4		1203-009188	IC-VOL. DETECTOR;G623F11U,TP,8P,4.9x6x1.	2	SA
...4		1203-009193	IC-DC/DC CONVERTER;SYD113IADC,TSOT23-6,6	5	SA
...4		1203-009194	IC-DC/DC CONVERTER;SYD104IADC,TSOT23-6,6	3	SA
...4		1204-003777	IC-DECODER;SDP1805,FCBGA,490P,21x21x1.54	1	SA
...4		1205-005519	IC-SWITCH;ET20163,SOT23-5,5P,2.95x3.02mm	3	SA
...4		1405-001271	VARISTOR;35V,20VDC,5A,1005,TP,100V,10pF	22	SA
...4		1405-001452	VARISTOR;15V,12VDC,8A,1608,TP,46V,18pF	8	SA
...4		2007-000137	R-CHIP;2Kohm,5%,1/16W,TP,1005	12	SA
...4		2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005,T0.35	13	SA
...4		2007-000170	R-CHIP;1Mohm,5%,1/16W,TP,1005,T0.35	1	SNA
...4		2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005,T0.35	3	SA
...4		2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005,T0.35	2	SA
...4		2007-000501	R-CHIP;2.2ohm,1%,1/10W,TP,1608	2	SA
...4		2007-000779	R-CHIP;33ohm,1%,1/10W,TP,1608	8	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2007-001116	R-CHIP;680ohm,1%,1/10W,TP,1608	2	SA
...4		2007-001125	R-CHIP;68Kohm,1%,1/10W,TP,1608	4	SA
...4		2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005,T0.35,-	33	SA
...4		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005,T0.35	78	SA
...4		2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005,T0.35	42	SA
...4		2007-007306	R-CHIP;100ohm,1%,1/16W,TP,1005,T0.35	18	SA
...4		2007-007313	R-CHIP;6.8Kohm,1%,1/16W,TP,1005,T0.35	12	SA
...4		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005,T0.35	17	SNA
...4		2007-007517	R-CHIP;240ohm,1%,1/16W,TP,1005,T0.35	5	SNA
...4		2007-007528	R-CHIP;1.5Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007588	R-CHIP;1.8Kohm,1%,1/16W,TP,1005,T0.3	3	SA
...4		2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005,T0.35	3	SNA
...4		2007-008661	R-CHIP;2.1Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-008779	R-CHIP;0ohm,1%,1/16W,TP,1005	2	SA
...4		2011-001344	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,2	2	SA
...4		2011-001587	R-NETWORK;100ohm,5%,1/16W,L,CHIP,4P,TP,1	4	SA
...4		2011-001590	R-NETWORK;47Kohm,5%,1/16W,L,CHIP,4P,TP,1	4	SNA
...4	AD480	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005,T0.5	10	SNA
...4	AD480	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,TP,1005,T0.5	1	SA
...4	AD480	2203-000359	C-CER,CHIP;0.15nF,5%,50V,C0G,TP,1005,T0.	3	SA
...4	AD480	2203-000425	C-CER,CHIP;0.018nF,5%,50V,C0G,TP,1005	8	SA
...4	AD480	2203-000585	C-CER,CHIP;0.22nF,10%,50V,X7R,TP,1005	1	SA
...4	AD480	2203-000627	C-CER,CHIP;0.022nF,5%,50V,C0G,TP,1005	8	SA
...4	AD480	2203-001412	C-CER,CHIP;0.03nF,5%,50V,C0G,TP,1005	3	SNA
...4	AD480	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005,T0.	35	SNA
...4	AD480	2203-006126	C-CER,CHIP;47nF,10%,16V,X7R,TP,1005,T0.5	9	SNA
...4	AD480	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,TP,1005,T0.	173	SA
...4	AD480	2203-006307	C-CER,CHIP;1000nF,10%,25V,X5R,TP,2012	2	SNA
...4	AD480	2203-006474	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,2012,	1	SA
...4	AD480	2203-006841	C-CER,CHIP;1000nF,10%,16V,X5R,TP,1005,T0	19	SNA
...4	AD480	2203-006890	C-CER,CHIP;10000nF,20%,6.3V,X5R,TP,1608	3	SNA
...4	AD480	2203-007393	C-CER,CHIP;4700nF,10%,10V,X5R,TP,1005,T0	47	SNA
...4	AD480	2203-007544	C-CER,CHIP;100nF,10%,50V,X7R,TP,1005,T0.	42	SA
...4	AD480	2203-007795	C-CER,CHIP;10000nF,20%,10V,X5R,TP,1005,T	55	SA
...4	AD480	2203-008315	C-CER,CHIP;22000nF,20%,25V,X5R,TP,2012,T	21	SA
...4		2703-000158	INDUCTOR-SMD;1uH,10%,0.4Ohm,50mA,45,Mult	2	SA
...4		2703-000213	INDUCTOR-SMD;470nH,10%,1.35Ohm,35mA,15,M	1	SA
...4		2703-002269	INDUCTOR-SMD;56nH,5%,1005,T0.5,1.4Ohm,15	3	SA
...4		2703-005191	INDUCTOR-SMD;1.5uH,20%,6060,T4.5,0.02Ohm	5	SA
...4		2703-005193	INDUCTOR-SMD;2.2uH,20%,6060,T4.5,0.024Oh	2	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2703-005194	INDUCTOR-SMD;3.3uH,20%,6060,T4.5,0.03Ohm	2	SA
...4		2801-000102	CRYSTAL-SMD;12MHz,30ppm,12pF,100ohm,TP	3	SA
...4		3301-002039	BEAD-SMD;26ohm,1608,TP	55	SA
...4		3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,PL	9	SA
...4		3601-001376	FUSE-SURFACE MOUNT;32V,3A,FAST-ACTING,Hi	2	SA
...4		3701-001967	CONNECTOR-HDMI;19P,A,FEMALE,AU,0.5mm,BLK	4	SA
...4		3707-001123	CONNECTOR-OPTICAL;ANGLE,SPDIF,2.5PI	1	SA
...4		3710-004375	CONNECTOR-SOCKET;34P,2R,0.8mm,SMD-A,Au,B	1	SA
...4	EH01	3711-008492	HEADER-BOARD TO CABLE;BOX,26P,2R,2mm,ANG	2	SA
...4		3722-003199	JACK-MODULAR;8P/8C,Y,ANGLE,NONE,AU,1PORT	1	SA
...4		3722-003216	JACK-PHONE;1P/7C,AU,BLK,SMD-A,3.6PI,10.2	1	SA
...4		3722-003457	JACK-USB;4P/1C,NI,BLK,ANGLE,A,2.0,13.1x1	3	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		BN40-00330B	TUNER-DTV AIR CABLE;GTTH-7A11,DVB-TC,38.	1	SA
...4		BN41-02698A	PCB-OC;Q90, Q85_OC, Q80_OC,FR-4,4L,T1.2,	1	SNA
...4		BN97-15857A	ASSY MICOM;MMMICOM_OC_JP,Q90R,EN25QH16B,	1	SNA
....5		1107-002587	IC-NOR FLASH;EN25QH16B,16MBit,SOP,8P,2.7	1	SNA
.2		BN96-45940A	ASSY COVER P-OC TOP;65QNNQ9FA,PC,V-2,TP00	1	SA
..3		BN61-15817A	BRACKET-OC EMI;65QNNQ9FA,STS,T0.3,NATURAL	1	SNA
..3		BN61-15818A	BRACKET-OC EMI CLIP;65QNNQ9FA,STS,T0.3,NA	2	SNA
..3		BN62-00850A	HEAT SINK-PS;65QNNQ9FA,A1050,T1.5,W120,L3	1	SNA
..3		BN63-16151A	SHEET-PROTECTION COVER;40K6200,PO,T0.068	0	SNA
..3		BN63-17487A	COVER-OC TOP;65QNNQ9FA,PC,V-1,TP0116,ONE	1	SNA
...4		0103-011270	RESIN PC;NH3022PN3/3354M,Violet,TP0116,V	345	SNA
..3		BN63-17540A	INSULATOR-SMPS;65QNNQ9FA,PC,BLACK,L136,W3	1	SNA
.2		BN96-48511B	ASSY COVER P-OC BOTTOM;65QRQ90B,PC+ABS+G	1	SA
..3		BN62-00302A	PAD GAP-THERMAL;SILICON,T8,L40,H40,GRAY,	1	SNA
..3		BN62-00884A	PAD GAP-THERMAL;QN65Q90RAFXZA,SI,T8,L40,	1	SNA
..3		BN63-17244A	SHEET-PROTECTION COVER;55LS003,PO,T0.06,	0	SNA
..3		BN63-17488S	COVER-OC BOTTOM;65QRQ900A,PC+ABS+GF15%,T	1	SNA
...4		0103-010275	RESIN PC ABS;235GNH15/6919H,Black,BK0007	50	SNA
..3		BN63-17520A	SHIELD-OC BOTTOM;65QNNQ9FA,EGI-SECC,T0.5,	1	SNA
..3		BN63-17718A	SHIELD-OC TOP FRONT;65QNNQ9FA,EGI-SECC,T0	1	SNA
..3	RF01	BN67-00327J	FOOT-RUBBER;PE400,RUBBER,GRAY,T2.5,,	4	SNA
1		BN92-24814C	ASSY LABEL POP;QRQ85E	1	SNA
.2		BN68-09637C	LABEL POP-BEZEL;55Q80R,PET,T0.188,W133,L	1	SNA
1		BN92-25037L	ASSY LABEL;QRQ85E	1	SNA
.2		BN68-08409B	LABEL-RATING;QTV,WW,PP,T0.161,W150,L48,T	1	SNA
.2		BN68-09402A	LABEL-ENERGY;QA55Q80RAKXXV,VIET NAM,PET,	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.2		BN68-09498A	LEAFLET-QUICK SETUP GUIDE;Q80R,OTHERS,WW	1	SNA
1		BN92-25181J	ASSY BOX;QRQ85E	1	SNA
.2		BN68-07893A	LABEL BOX;ALL,THERMAL PAPER,W60,L110,WHT	1	SNA
.2		BN68-07943A	LABEL BOX;ALL,XXV,ART,W100,L150,150g	1	SNA
.2		BN69-19344H	BOX UNIT;55QRQ85E,CB,DW3,F1,L1495,W190,H	1	SNA
1		BN92-25454C	ASSY P/MATERIAL;QRQ85E	1	SNA
.2		6902-000379	BAG AIR;LDPE,T0.13,W1000,L1800,TRP,Hole	0	SNA
.2		6902-000609	BAG ROLL;LDPE,T0.05,W2400,L1000,TRP,RECY	263	SNA
.2		6902-002678	BAG ROLL;HDPE/HDPE/PE FOAM,T0.015/T0.5,W	2	SNA
.2		6922-000013	BAND;PP,T0.8,W18,L2300 M,TRP	1	SNA
.2		BN02-00319A	TAPE-SINGLE FACE;OPP,T0.05,W60,L800M,CLE	2	SNA
.2		BN02-00319B	TAPE-SINGLE FACE;OPP,T0.05,W75,L800M,CLE	1	SNA
.2		BN69-11504A	WRAP VINYL;LDPE,T0.018,W500,L10000,Trans	7	SNA
.2		BN69-17053E	PACKING ANGLE;ALL,PAPER,T3,W1500,L50,YEL	0	SNA
.2		BN69-18959A	CUSHION-SET;55QRQ80C,EPS,16.7g/l,WHITE,O	1	SNA
..3		BN81-01918A	A/S-RESIN;EPS,SG-302	1	SNA
.2		BN69-18970A	CUSHION-SET FRONT;55QRQ70D,EPS,16.7g/l,W	1	SNA
.2		BN96-45139A	ASSY PACKING P-PAD;55Q7F,PP/EPE,WITH WAR	2	SNA
..3		BN68-08908A	LABEL WARNING;ALL MODEL,ART,W70,L100,90g	2	SNA
..3		BN69-16841A	PAD-EPE;55Q7F,EPE,T1.2/T3,W100,L685,MIXE	2	SNA
1	ACCE1	BN92-25720J	ASSY ACCESSORY;QRQ85E	1	SNA
.2		BN39-02470A	ONECONNECT CABLE;QN65Q90RAFXZA,31P/31P,L	1	SA
.2		BN96-48946C	ASSY ACCESSORY MANUAL CABLE;QRQ85E	1	SNA
..3		3301-001305	CORE-FERRITE;AE,30X15X34(39)MM,1500,2800	1	SA
..3	T0268	3903-001118	POWER CORD-DT;EUR,2P-F,250V,2.5A,BLK,L15	1	SA
..3		4301-000101	BATTERY-ALKALINE;1.5V,1650mAh,LR6,14.5x5	2	SNA
..3	ANT04	AA59-00853A	MODULE RF-SHIELD BOX;SGLBF-6B,PAL-BG,DK,	1	SA
..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		BN59-01312D	REMOCON-SMART CONTROL;2019 TV,SAMSUNG,21	1	SA
..3	T0527	BN68-00513A	LABEL-E PASS;ALL MODEL,WW,YUPO,W50,L15,W	1	SNA
..3		BN68-08112A	LABEL-SECURITY;ALL,PET,T0.05,W55,L52,GLO	1	SNA
..3		BN68-09542F	MANUAL USERS;Q80R,XV,VIETNAM,MOJO,0,1 CO	1	SNA
..3		BN68-09545B	LEAFLET-ACCESSORY KIT;QRQ90B,XY & MR & HC & RQ	1	SNA
..3		BN68-09691A	LEAFLET;Q85R Q80R,ASIA,MOJO,1COLOR,A5	1	SNA
..3		BN69-13935A	BAG ACCESSORY;LDPE,T0.07,L350,W700,Trans	1	SNA
..3	EH03A	BN96-49241A	ASSY HOLDER P-RING;Q70,Q80,Q85,ABS,BK000	1	SA
...4		6902-000683	BAG PE;LDPE,T0.05,W60,L60,TRP,Bio. N,Zip	2	SNA
...4		BN61-16284A	HOLDER-WALL RING;65QRQ70D,ABS,T2,BK0007,	4	SNA
....5		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	3	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...3		BN96-49362A	ASSY HOLDER P-OC CABLE;55QRQ90B,PC,TP000	1	SA
...4	SCREW	6003-001208	SCREW-TAPTYPE;BH,+,S,M4,L12,ZPC(BLK),SWR	1	SA
...4	AH089	BN61-14021A	HOLDER-CABLE;55KS8000,PA66,BK0007,V-2	1	SA
...4		BN61-15791A	HOLDER-OC CABLE;65QNQ8CB,PC,TP0003,V-2	1	SNA
1	PANEL	BN95-05495D	PRODUCT LCD-AUO;CY-TR055FLAV6V/H,Q80,OC,	1	SA
.2	SCREW	6001-003083	SCREW-MACHINE;CH,+,M3,L8,ZPC(BLK),SWRCH1	11	SA
.2		BN02-00043X	TAPE SINGLE FACE;SE590C,PET,T0.05,W10,L1	1	SNA
.2	M0131	BN63-00520A	GASKET-EMI;APPOLO_PAL,Conductive Fabric,	2	SNA
.2		BN63-18092A	COVER-SOURCE PCB;55QRQ80C,EGI-SECC,T0.5,	1	SNA
.2		BN68-05722A	LABEL-E PASS;POLYPROPYLENE,NON-COATING	1	SNA
.2		BN90-10360D	ASSY BACK LIGHT UNIT;QRQ80C,55	1	SNA
...3		BN61-15705A	DIFFUSER PLATE;18Y_Q9F_55INCH_DIFFUSERPL	1	SNA
...3		BN61-16211A	OPTICAL SHEET-COMPLEX;19Y_55inch_Q70_COM	1	SNA
...3		BN61-16212A	OPTICAL SHEET-HIGH COLOR;19Y_55inch_Q70_	1	SNA
...3		BN61-16516A	OPTICAL SHEET-COMPLEX;Y19_55inch_Q80_COM	1	SNA
...3		BN96-48167A	ASSY FRAME P-MIDDLE BOTTOM;55QRQ80C,PC+G	1	SNA
...4		0201-003279	ADHESIVE-AA;UPUV,CLEAR	1	SNA
...4		BN02-00486A	TAPE-DOUBLE FACE;PU FOAM,T0.5,W3.2,L33M,	1	SNA
...4		BN60-01115B	SPACER-CONDUCTIVE;Y15 J4101,CONDUCTIVE F	2	SNA
...4		BN61-16137A	FRAME-MIDDLE BOTTOM;55QRQ80C,PC+GF10%,V-	1	SNA
....5		0103-007368	RESIN PC;LS-3104G,K2495,BK0048,3.0mm V-2	37	SNA
...3		BN96-49349A	ASSY CHASSIS REAR P;55QRQ80C,T0.8,EGI-SE	1	SNA
...4		BN02-00102B	TAPE-SINGLE FACE;OPP,T0.15,W25,L50M,WHIT	2	SNA
...4		BN44-00985A	DC VSS-DRIVER BOARD;L55S8NC_RSM,DC/DC,14	1	SA
....5		BN97-00031J	ASSY MICOM-LD_FW;Y19_S78_AS3824,19Y_Q70_	1	SNA
...4		BN61-16161A	SUPPORT-PLATE;75QRQ80C,PC,V-2,WHITE,OD14	12	SNA
....5		0103-011417	RESIN PC;SA-1220/FW9767,White,WT0135,V-2	72	SNA
...4		BN61-16213A	OPTICAL SHEET-REFLECTOR;19Y_55inch_Q70_R	1	SNA
...4		BN96-48131A	ASSY LED BAR P;Q80_55INCH,ALUMINUM,Q80_D	20	SNA
...4		BN96-48166C	ASSY CHASSIS REAR P;55QRQ80C,EGI-SECC,T0	1	SNA
....5		0203-007064	TAPE-DOUBLE FACE;ACRYL,T0.2,W6,N/A,WHITE	0	SNA
....5		BN02-00102B	TAPE-SINGLE FACE;OPP,T0.15,W25,L50M,WHIT	0	SNA
....5		BN02-00352B	TAPE-SINGLE FACE;PET,T0.05,W30,L50M,BLAC	0	SNA
....5		BN02-00586A	TAPE DOUBLE FACE;UNU7100X,ACRYL,T0.3,W3,	10	SNA
....5		BN60-00920M	SPACER-FOAM;55H8000,PU FOAM,L50M,BLACK,T	4	SNA
....5		BN60-01459A	SPACER-SILICONE;55PMF,Si,L10,WHITE,T1.8,	2	SNA
....5		BN60-01637A	SPACER-FOAM;65QRQ80C,PU FOAM,L26,BLACK,T	3	SNA
....5		BN61-13557P	BRACKET-WIRE;75QNQ8CB,SW-C,T1,SILVER,L66	2	SNA
....5		BN61-13557U	BRACKET-WIRE;65UNU7100X,SW-C,T1,SILVER,L	2	SNA
....5		BN61-13557W	BRACKET-WIRE;65UNU7100X,SW-C,T1,SILVER,L	2	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5		BN61-16027A	HOLDER-SOURCE PCB;75QRQ80C,ABS,BK0007,HB	8	SNA
....6		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	6	SNA
....5		BN61-16139A	FRAME-CHASSIS REAR BOTTOM;55QRQ80C,PC+GF	1	SNA
....5		BN61-16140A	FRAME-CHASSIS REAR TOP;55QRQ80C,PC+GF10%	1	SNA
....6		0103-011284	RESIN PC;LS-3104G/FW9931,White,WT0134,V-	364	SNA
....5		BN61-16229A	BRACKET-LED PCB;65QRQ80C,EGI-SECC,T0.5,N	1	SNA
....5		BN63-18150C	INSULATOR-SMPS;55QRQ80C,PC,BLACK,L265,W2	1	SNA
....5		BN63-18151A	INSULATOR-SMPS;75QRQ80C,PC,BLACK,L260,W1	1	SNA
....5	CC04	BN64-04159C	CHASSIS-REAR;55QRQ80C,EGI-SECC,-,T0.8,NA	1	SNA
....6		BN01-00607A	STEEL;55QRQ80C,EGI-SECC,L755,0.8mm,1280m	1	SNA
....6	CB20	BN61-11982C	BRACKET-WALL;65QNQ7FC,CR-SPCC,BLACK,M8,L	4	SNA
....6	CB20	BN61-13521A	BRACKET-WALL;32K5500,CR-SPCC,T1.2,NATURA	8	SNA
....5	T0527	BN68-00513A	LABEL-E PASS;ALL MODEL,WW,YUPO,W50,L15,W	1	SNA
....5		BN96-48507A	FFC CABLE;Q80 55,Fold,L520,68P,#3	1	SNA
....5		BN96-48508A	FFC CABLE;Q80 55,Fold,L460,68P,#4	1	SNA
....5		BN96-48528A	ASSY PCB P-LED INTERFACE BOARD;Q80 55,FR	1	SNA
....5		BN96-49083A	FFC CABLE;Q80 55,Fold,L460,68P,#1	1	SNA
....5		BN96-49084A	FFC CABLE;Q80 55,Fold,L690,68P,#2	1	SNA
...4		BN96-49322A	ASSY FRAME P-CHASSIS REAR LEFT RIGHT;55Q	2	SNA
....5		BN60-01115B	SPACER-CONDUCTIVE;Y15 J4101,CONDUCTIVE F	4	SNA
....5		BN61-16138A	FRAME-CHASSIS REAR LEFT RIGHT;55QRQ80C,P	2	SNA
.2		BN91-20640A	ASSY OPEN CELL-DECORATION;BN63-17655A,Y1	1	SNA
..3		0201-003164	ADHESIVE-UV;190024,CLEAR,UV, Acrylic	2	SNA
..3	FD01	BN63-17655A	COVER-DECORATION;55QRQ90B,STS430J1L,T0.4	1	SNA
..3		BN96-48080A	ASSY OPEN CELL;AUO,55Inch,Y19 New opence	1	SNA
...4		BN81-15647A	A/S OPEN CELL-ADHESIVE-A.C.F;T500QVN03,4	1	SNA
...4		BN81-16230A	A/S-ADHESIVE-A.C.F;ADHESIVE-A.C.F,47.COF	1	SNA
...4		BN81-16238A	A/S-POLARIZER-TFT;POLARIZER-TFT,66.T4U65	1	SNA
...4		BN81-17415A	A/S-IC DRIVER SOURCE;IC DRIVER SOURCE,46	1	SNA
...4		BN81-17418A	A/S-POLARIZER C/F;POLARIZER C/F,66.C4U84	1	SNA
...4		BN81-17421A	A/S-ASSY PCB-SOURCE R;ASSY PCB-SOURCE R,	1	SNA
...4		BN81-17422A	A/S-ASSY PCB-SOURCE L;ASSY PCB-SOURCE L,	1	SNA
.2		BN96-48191A	ASSY CHASSIS FRONT P;55QRQ80C,AI,Carbon	1	SNA
..3		6001-002912	SCREW-MACHINE;CH,+,M3,L3,ZPC(BLK),SWRCH1	6	SA
..3		BN02-00074E	TAPE SINGLE FACE;U7201,PET,T0.05,W10,L20	4	SNA
..3		BN02-00486A	TAPE-DOUBLE FACE;PU FOAM,T0.5,W3.2,L33M,	3	SNA
..3		BN02-00489A	TAPE SINGLE FACE;55KS7500,PET,T0.22,W3,L	3	SNA
..3		BN60-01539E	SPACER-FOAM;PU FOAM,L13.5,BLACK,T0.5,W3	2	SNA
..3		BN60-01612B	SPACER-CONDUCTIVE;65QNQ7FC,CONDUCTIVE FA	1	SNA
..3		BN61-09308A	ADHESIVE-TP;F8K,GREEN,ACRYL	0	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
..3		BN61-16092A	BRACKET-CORNER TOP;75QRQ90B,PCM,T0.4,BLA	2	SNA
..3		BN61-16093A	BRACKET-CORNER BOTTOM;75QRQ90B,PCM,T0.4,	2	SNA
..3		BN63-17419J	SHEET-PROTECTION COVER;Q9S,PO,T0.04,W15,	3	SNA
..3	AC155	BN64-04158A	CHASSIS-FRONT;55QRQ80C,Al,-,-,CARBON SIL	1	SNA
..3		BN64-04160A	CHASSIS-FRONT BOTTOM;55QRQ80C,PC+GF10%,V	1	SNA
...4		0103-007368	RESIN PC;LS-3104G,K2495,BK0048,3.0mm V-2	51	SNA


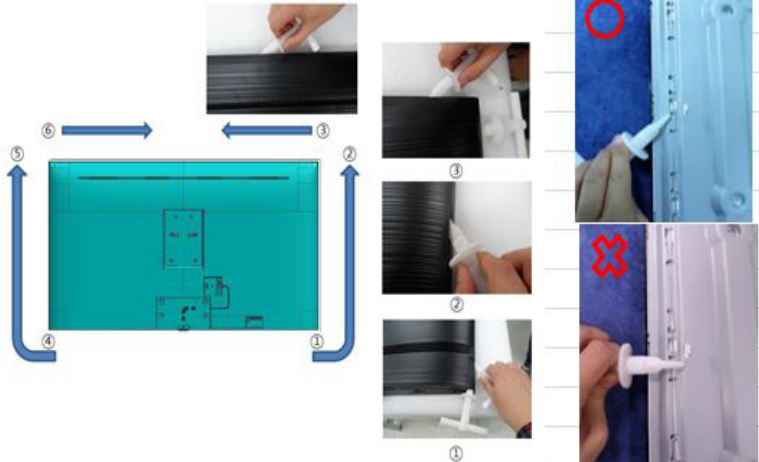

3. Disassembly and Reassemble

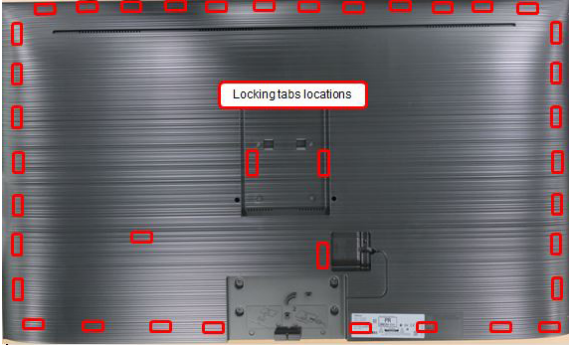
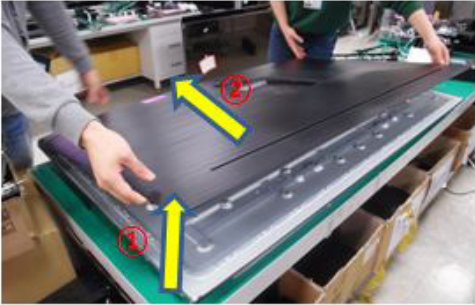


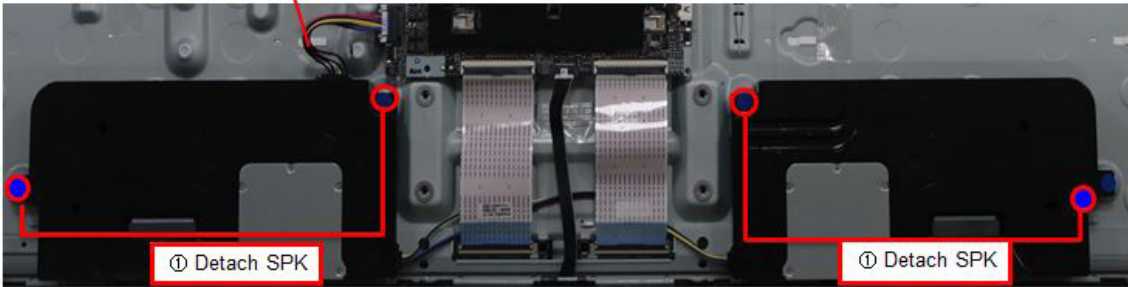
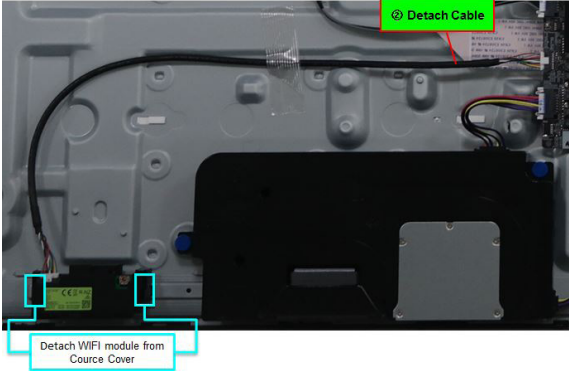
This section of the service manual describes the disassembly and reassembly procedures for the LED TV.

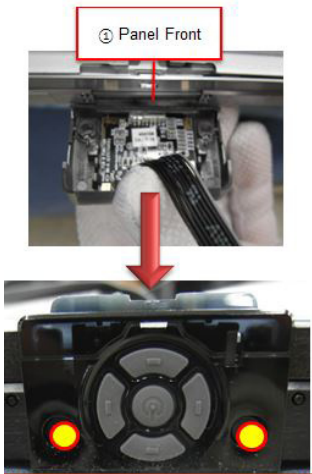
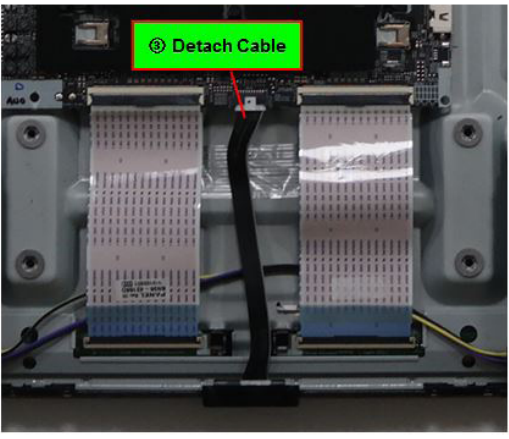
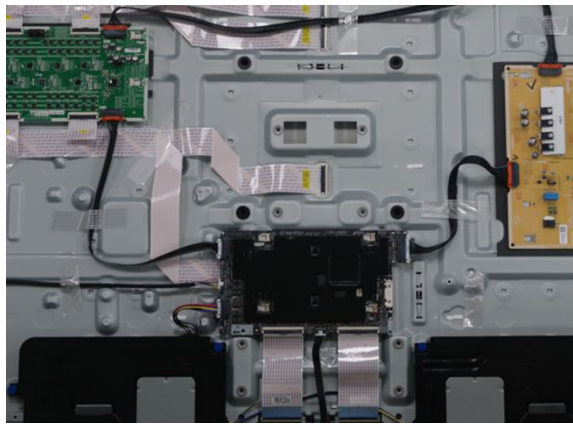
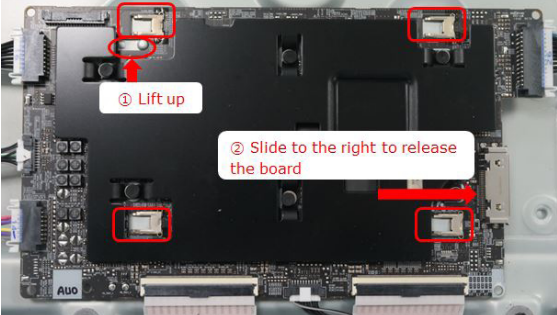


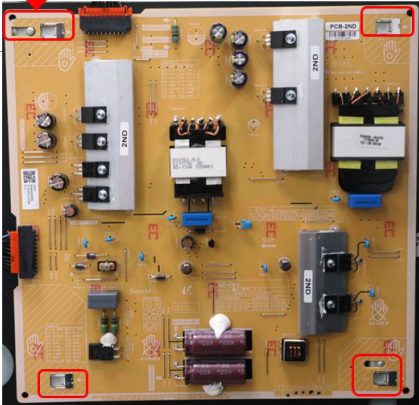
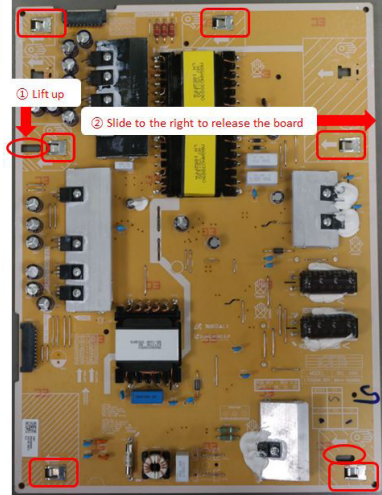
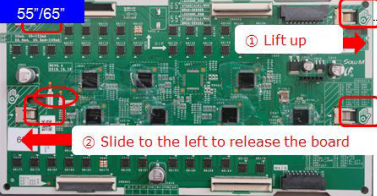
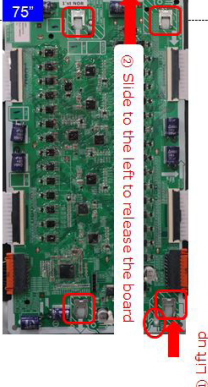
1. Disconnect the LED TV from the power source before disassembly.
2. Follow these directions carefully.
 - Use the Samsung Open Jig and Cushion to remove the Rear Cover.
 - Open Jig Tool, Protection Cushion (curved models Only)
 - Recommended Torque for Cabinet/Stand screws : 10 ~ 12kgf
 - A strength of Torque can be changed depending on the situation.

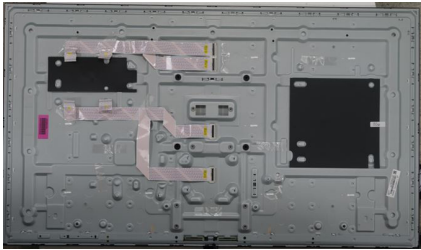
3-1. TV Disassembly

Description & Screws	Picture Description
<p>1 Place the TV on the Protection Cushion.</p>	
<p>2 Insert the Open Jig tool into notch at the bottom left/right side of the rear cover and following directions ① ~ ⑥.</p> 	

Description & Screws	Picture Description
<div data-bbox="183 293 215 342">3</div> <div data-bbox="256 293 1214 356"><p>Now begin lifting off the Rear Cover starting at the top.</p><p>NOTE: Lift up cover while gently rocking side to side until center and bottom tabs release.</p></div> <div data-bbox="560 387 1131 730"><p>Locking tabs locations</p></div> <div data-bbox="316 745 793 1048"></div> <div data-bbox="896 784 1375 1014"></div>	
<div data-bbox="183 1084 215 1133">4</div> <div data-bbox="256 1084 670 1111"><p>Remove the ASSY SPEAKER P-FRONT..</p></div> <div data-bbox="443 1120 660 1180"><p>Detach Cable</p></div> <div data-bbox="279 1193 1412 1478"><p>① Detach SPK</p><p>① Detach SPK</p></div>	
<div data-bbox="183 1512 215 1561">5</div> <div data-bbox="256 1512 612 1538"><p>Remove the NETWORK MODULE.</p></div>	 <p>Detach Cable</p> <p>Detach WIFI module from Source Cover</p>

Description & Screws	Picture Description
<p>6 Remove the ASSY BOARD P-FUNCTION KEY..</p>  <p>① Panel Front</p> <p>② SCREW-MACHINE point : 2 EA LOGO+CH/F ; 6003-001819 CH,+B,M3,L6,ZPC(BLK), TORQUE SPEC : 4 ~ 4.5 Kgf.cm</p>	 <p>③ Detach Cable</p>
<p>7 Remove cables from TV Main, SMPS, LD Board.</p>	
<p>8 Removing Main board</p> <ul style="list-style-type: none"> - Gently lift up (Top Right corner) to release the lock - Use both hands to hold the board and slide to the left to release the board <p>※ When installing the Main board, verify the board is properly positioned in all 4 mounting slots.</p>	 <p>① Lift up</p> <p>② Slide to the right to release the board</p> <p>OK NG</p>

Description & Screws	Picture Description
<div data-bbox="188 293 213 338">9</div> <div data-bbox="256 293 529 315">Remove the SMPS Board.</div>	<div data-bbox="837 360 938 427">55", 65"</div> <div data-bbox="954 309 1374 752"><div data-bbox="975 309 1038 331">① Lift up</div><div data-bbox="1169 315 1398 349">② Slide to the right to release the board</div></div> <div data-bbox="837 763 938 831">75"</div> <div data-bbox="954 763 1337 1256"><div data-bbox="975 846 1038 869">① Lift up</div><div data-bbox="1038 875 1257 898">② Slide to the right to release the board</div></div>
<div data-bbox="177 1301 220 1346">10</div> <div data-bbox="261 1301 502 1323">Remove the LD Board.</div>	<div data-bbox="815 1312 895 1335">55"/65"</div> <div data-bbox="815 1312 1193 1507"><div data-bbox="1054 1346 1118 1368">① Lift up</div><div data-bbox="815 1435 1161 1458">② Slide to the left to release the board</div></div> <div data-bbox="1214 1312 1294 1335">75"</div> <div data-bbox="1214 1312 1422 1697"><div data-bbox="1326 1357 1350 1637">② Slide to the left to release the board</div><div data-bbox="1401 1637 1422 1697">③ Lift up</div></div>

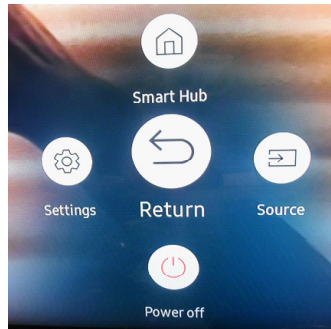
Description & Screws	Picture Description
11 Completely the Disassembly	

**NOTE**

Reassembly procedures are in the reverse order of disassembly procedures.

4. Troubleshooting

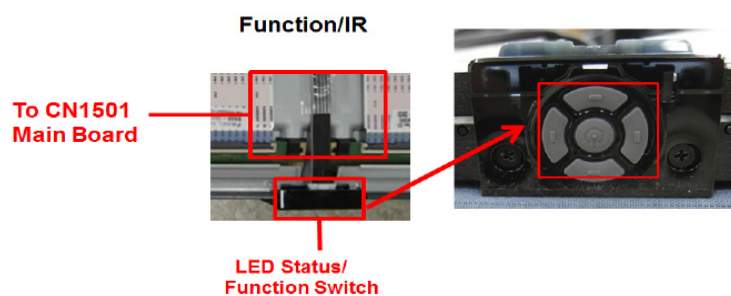
4-1. Function Control Operation Test



[On Screen Selections with Function Control]

■ FUNCTION/IR Control Test

1. Place TV in Power Standby :
2. Check **LED Status**. (Note: Can be turned off in menu)
3. If **LED is OFF (& LED should be on with menu setting)**
 - ✓ LED 1.7Vdc (pin 8) and VCC for 3.3Vdc (pin 3)
 - If missing suspect Function Assy/Cable/Main board.
4. If **LED is ON**
 - ✓ Switch Operation activates on screen display
 - If missing:
 - ✓ Key _Input1(Pin 6) or Key _Input2(Pin 7) change to 0V with a command.
 - If wrong voltage or no change:
 - ✓ Switch for stuck or miss-operation.
5. Check IR operation with Standard Remote command changes. (3.3V to 2.5V effective DC)
6. SDA, SCL for effective 3.3Vdc (after power on)
 - If missing suspect Function Assy/Cable Assy./Main Assy.



CN1501 (FUNCTION/IR)			
1	IR 3.3Vdc to 2.5Vdc (Effective DC)	2	GND
3	A3.3V_PW	4	SENSOR_SCL_I2C 3.3Vdc (Effective DC)
5	SENSOR_SDA_I2C 3.3Vdc (Effective DC)	6	KEY_INPUT1 1.8dc to 0V with command
7	KEY_INPUT2 1.8dc to 0V with command	8	LED_STB_OUT 1.7Vdc STBY
9	IR_OUT_1	10	IR_OUT_2

4-2. Power

4-2-1. TV POWER STANDBY TEST

1. TV in Standby

- ✓ Check **Standby LED Indicator**

2. If Not Lit

- ✓ Check One Connect Box is Powered
 - If OK
- ✓ Check OCB Cable to TV (Miss Connections or damaged cable)

3. If OK

- ✓ Check Resistance on SMPS Fuse after first removing AC power cord. (75" only. 55", 65" doesn't have fuse)

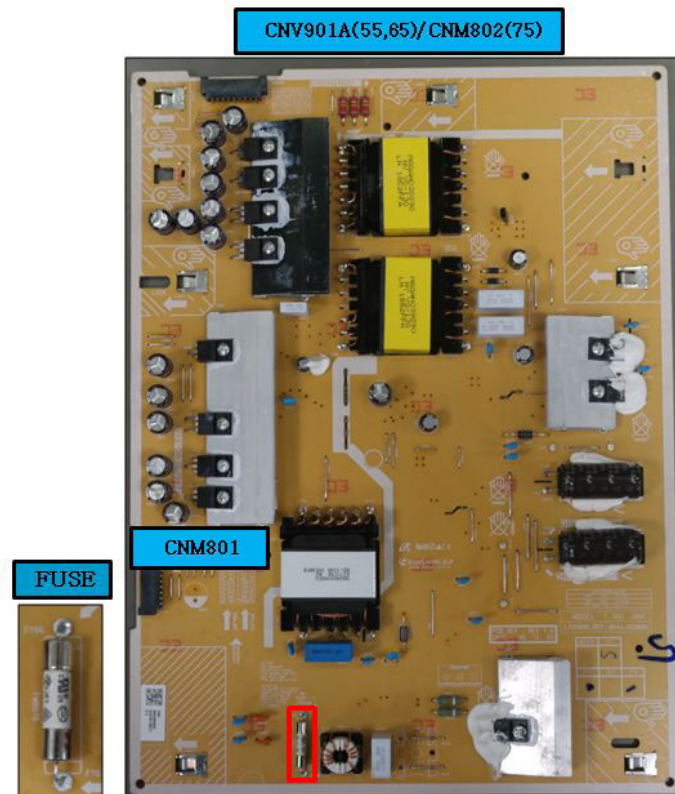
4. If fuse is open replace SMPS.

5. If fuse is OK:

- ✓ Check Standby: **A13V** (Always On) supplies to Main Board.

6. If any missing remove the SMPS connector to Main Board . (Activates Back Light & SMPS Test)

- ✓ Check Standby A13V again
 - If OK replace Main Board
 - If still missing replace SMPS.



CNM801											
1	B_GND	2	b_GND	3	N.C	4	N.C	5	B350V	6	B350V
7	N.C	8	N.C	9	GND	10	GND	11	V AMP	12	B13V
13	V AMP	14	B13V	15	V AMP	16	B13V	17	GND	18	GND
19	PS/ON	20	GND								

CNV901A(55,65)/ CNM802(75)											
1	GND	2	GND	3	Vdrv	4	Vdrv	5	Vdrv	6	Vdrv
7	Vdrv	8	Vdrv	9	Vdrv	10	Vdrv	11	GND	12	GND
13	b13V	14	FAULT	15	FB	16	GND	17	GND	18	GND

4-2-2. TV POWER ON SEQUENCE TEST

1. Power TV On

- ✓ Check **POWER ON** .2Vdc (when off) changes to 3.3Vdc (on)
 - Note: Will stay On for short time when powered off.

2. If voltage error or no change:

- ✓ Check Jog Function & IR Control Test

3. If OK replace Main Board:

- ✓ Check All 13V supplies for approx. 12.7VDC

4. If any wrong voltages, remove SMPS connector to Main Board:

- ✓ Check All **A13V** again for 12.7VDC
- ✓ Check All **Vamp** supplies for approx. 18 VDC

5. If checks OK replace Main Board:

6. If still wrong voltage replace SMPS

7. Backlight Operation:

- ✓ Check **BLU_ON/OFF** (on LD Board CN9001A(55/65) or CN9081(75) pin5)
0V Off to 4.4Vdc On with TV Power On Command.

8. If missing or error: Replace Main Board.

- ✓ Check **Vdrv** supplies to LD Board (approx 52Vdc with multi meter)

9. If missing or error: Remove Vdrv (LD Board connector CNV901A(55/65) or CNV9801(75)) and test SMPS again.

10. If SMPS is now OK replace LD Board. If SMPS is still low, Replace SMPS.

55"/65" LD pinmap

① CN9001A (TO MAIN BOARD)			
1	GND	2	SEAMLESS
3	GND	4	SCL_LED
5	BLU_ON/OFF	6	TEST_SD
7	SDA_LED	8	GND
9	TEST_LD	10	VSINCR_IN
11	SERIAL_STT	12	SERIAL_UHR
13	SERIAL_DATA	14	GND
15	GND	16	CONTACT

② CNV901A (TO SMPS)			
1	GND	2	GND
3	FB	4	GND
5	B13V	6	FAULT
7	GND	8	GND
9	Vdrv	10	Vdrv
11	Vdrv	12	Vdrv
13	Vdrv	14	Vdrv
15	Vdrv	16	Vdrv
17	GND	18	GND

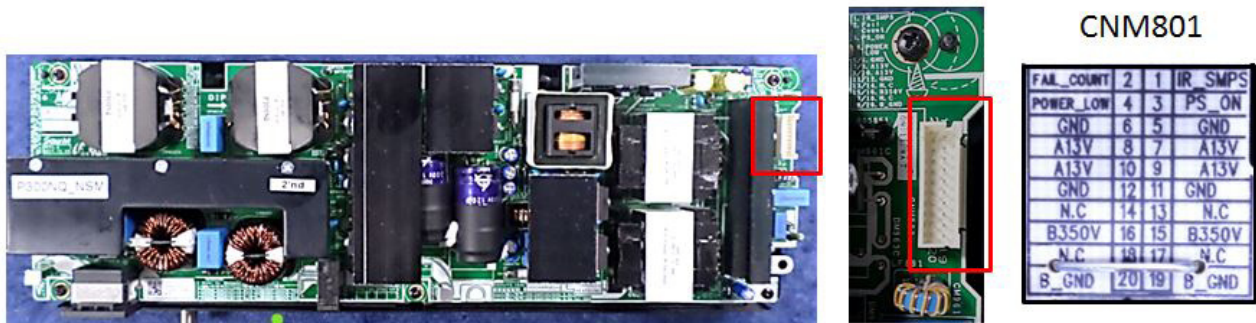
75" LD pinmap

① CN9081 (TO MAIN BOARD)			
1	GND	2	SEAMLESS
3	GND	4	SCL_LED
5	BLU_ON/OFF	6	TEST_SD
7	SDA_LED	8	GND
9	TEST_LD	10	VSINCR_IN
11	SERIAL_STT	12	SERIAL_UHR
13	SERIAL_DATA	14	GND
15	GND	16	CONTACT

② CNV9801 (TO SMPS)			
1	GND	2	GND
3	FB	4	GND
5	B13V	6	FAULT
7	GND	8	GND
9	Vdrv	10	Vdrv
11	Vdrv	12	Vdrv
13	Vdrv	14	Vdrv
15	Vdrv	16	Vdrv
17	GND	18	GND

4-2-3. OCB POWER ON SEQUENCE TEST

1. **Connect OCB to TV & Place in Power Standby**
 - ✓ Check A13V for 12.8Vdc on pins 7,8,9,10
2. **Press TV "Power On" by Remote Control or TV Function Assy.**
 - ✓ Check PS_ON pin 3 .2Vdc (when off) changes to 3.3Vdc (on)
 - Note: Will stay On for short time when powered off.
3. **If PS_ON Error (won't change or missing voltages)**
 - Should hear OCB relay activate with cable connection.
4. **If PS_ON is OK**
 - ✓ Check B350 for approx 346Vdc at pins 15 & 16 is activated. while using important B-GND reference at pins 19 & 20.
 - If missing perform "OCB Self Power Supply Test."

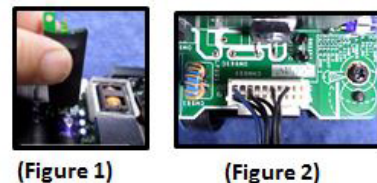
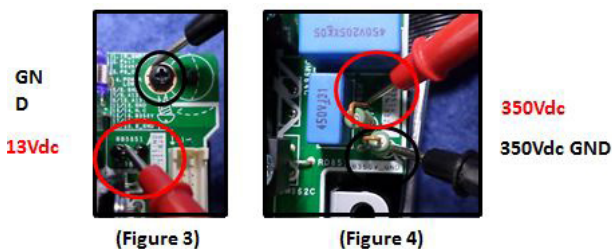


4-2-4. OCB Self Power Supply Test

1. **Remove AC Power to the OCB & Remove Cover (follow Disassembly Procedure)**
2. **Connect Discharge Tool (Figure 1) across leads of each large Capacitors to remove its charge.**
3. **Remove Connector CNM801 (to activate OCB Power Supply when AC line is applied)**
4. **Connect TV Backlight Test Cable (see Figure 2)**
 - ✓ Check **A13V** for **12.8Vdc** on pins 7,8,9,10 at on test cable at OCB connector
 - IMPORTANT: For Safety NEVER Test CNM801 exposed connector pins without test cable connected.
 - ✓ Check **B350** for approx **360Vdc** at pins 15 & 16 is activated. while using important **B-GND** reference at pins 19 & 20.
 - If missing or errors, replace OCB Power Supply

■ IF TEST CABLE IS NOT AVAILABLE

1. **Perform steps 1 through 3**
 - ✓ Check A13V for 12.8Vdc at board locations Labeled A11.8V and GND (see Figure 3)
 - ✓ Check B350 for approx 360Vdc at board test wire locations Labeled B332V and BGND (see Figure 4)



4-2-5. BACKLIGHT TEST

1. Activate Backlights Test : Disconnect Lead Cable from Main to Power supply CNM801

- ✓ TV Screen for active backlight LEDs.

2. If No BACKLIGHTS

- ✓ Check each **Vdrv** supplies to LD Board (approx 52Vdc with multi meter)
 - If missing or error: Remove Vdrv (LD Board connector CNV901A) and test voltages at SMPS CNV901A(55/65") or CNM802(75").
 - If any **Vdrv** is incorrect at SMPS, Replace SMPS Board.
 - If **Vdrv** is OK at SMPS replace defective Cable or LD Board.

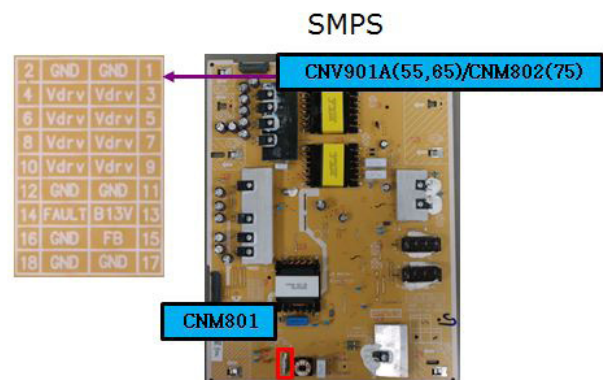
3. If BACKLIGHTS ON BUT PANEL SECTION(S) OFF or other BL ERROR

- ✓ Remove Backlight Control from Main to LD Board (CN9001A(55/65")or CN9801(75"))
- ✓ Check for Backlight Error
 - If Backlight error is restored replace Main Board (also check cable)

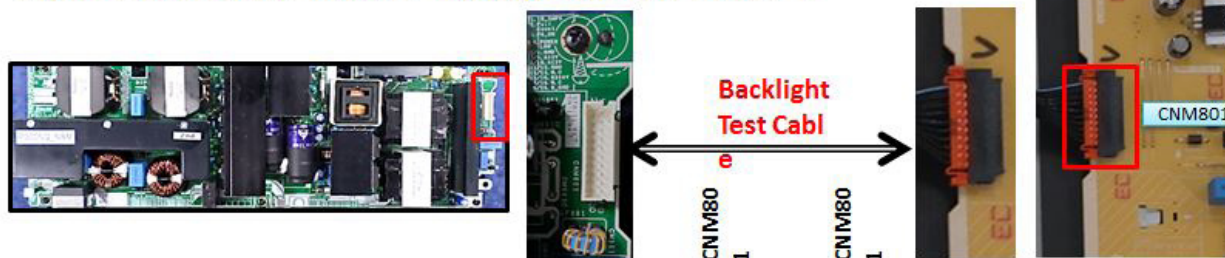
4. If Backlight section or sections still have error:

- Verify Error location
- Disconnect AC Power to the TV
- Carefully Swap Top Panel Connector (Top Half of Screen) with Bottom Panel Connector (Bottom Half or Screen)
- Connect Power & check Backlight error location
- If location error moved from top to bottom or bottom to top of screen. Replace defective LD Board
- If Backlight Error is in same location, replace defective Cable or Panel.

- ✓ Also activate Backlight Test by pressing : MUTE > 4 > 1 > 9 > EXIT (Use a Standard IR Remote or Test Remote with available commands)



One Connect Power Supply to TV SMPS



4-2-6. TV BACKLIGHT QUICK TEST

■ ONE CONNECT BOX:

1. Remove AC Power to the OCB & Remove Cover (follow Disassembly Procedure)
2. Connect Discharge Tool (Figure 1) across leads of each large Capacitors to remove its charge.
3. Remove Connector CNM801
4. Connect Backlight Test Cable (Figure 2) to Supply 350Vdc & 13Vdc directly to the TV Panel

CNM801

	FAIL_COUNT	2	1	IR_SMPS
	POWER_LOW	1	3	PS_ON
A13V	GND	6	5	GND
A13V	A13V	8	7	A13V
A13V	A13V	10	9	A13V
GND	GND	12	11	GND
N.C.	N.C.	14	13	N.C.
B350V	B350V	16	15	B350V
N.C.	N.C.	18	17	N.C.
B_GND	B_GND	20	19	B_GND

■ TV LD/SMPS A & LD/SMPS B:

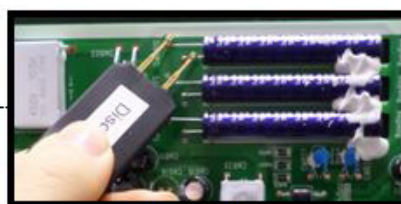
1. Remove TV Back Cover (Follow Repair Preparation Procedure)
2. Connect Discharge Tool (Figure 3) across leads of each large Capacitors to remove its ch.
3. Remove Connector CNM801 on LD/SMPS A Board.
4. Remove CN9003A on LD/SMPS B Board (Backlight Control)
5. Connect TV side Backlight Test Cable to CNM801 (Figure 4)
6. Apply One Connect AC Power and verify Backlight On.



(Figure 1)



(Figure 2)



(Figure 3)

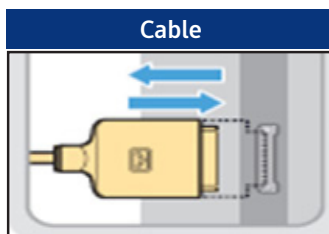


(Figure 4)

4-3. Video

4-3-1. ONE CONNECT

■ Main Section



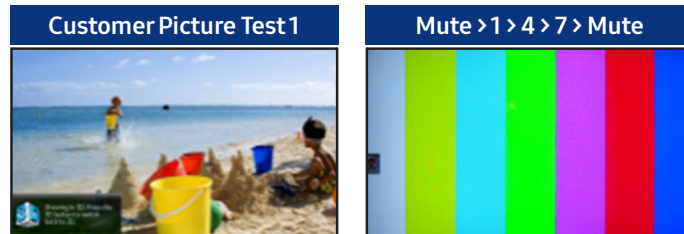
Video Operation

- **If No Video**
 - ✓ Check connection status of One Connect Cable
 - ✓ Reconnect One Connect Cable both side (TV and OCL)
- **If NG:**
 - ✓ Replace One Connect Box / Cable (defective)
 - ✓ TV MAIN (defective)

4-3-2. MAIN/T-CON BOARD

- Scaller & US Post of KANT-M2 Main CPU Section > PRE FRC Main Section > POST FRC Main Section > T-CON Section

■ Scaller & US Post of KANT-M2 Main CPU Section

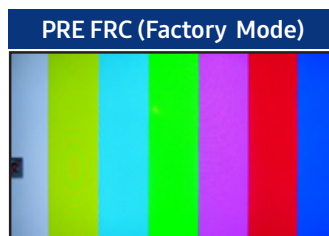


Video Operation

Generated on Main CPU Section.

- **If OK:**
 - ✓ Source & Input Cables
 - ✓ Other inputs
- **If Noisy:**
 - ✓ Pre Scaler Patterns
 - ✓ US Post Patterns
 - ✓ Pre FRC Pattern

■ PRE FRC Main Section

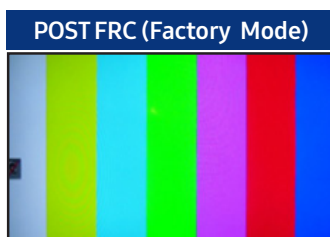


Video Operation

Generated at Pre FRC, in TV Main Board.

- **If OK:**
 - ✓ Check/Replace defective TV Main Board
- **If Noisy:**
 - ✓ Post FRC Pattern

■ POST FRC Main Section



Video Operation

Generated at Post FRC in TV Main Board

- **If OK:**
 - ✓ Check/Replace defective TV Main Board
- **If Noisy:**
 - ✓ Mute > 3 > 6 > 9 > Mute

■ T-CON Section



[May not be available for Larger models over 70 inches.]

Video Operation

Generated at T-CON Section in TV Main/T-CON

1. **If OK:**
 - ✓ Check/Replace defective TV Main/T-CON Board
2. **If Noisy:**
 - ✓ Main/T-CON Board
 - ✓ Panel

4-3-3. PANEL



1. If Noisy Video:

- ✓ Soc T-CON Pattern in Factory Mode
 - Use type of Noise observed (Bars, single lines, video distortion, etc to help.)
 - If noise is only on one half of screen check / swap panel cables.
 - Verify Defective Panel Cables, TV Main/T-CON Board or Panel.

2. If No Video & Back Lights are OK (on):

- ✓ If sound is OK check Panel 13Vdc supplies to Panel
- ✓ If No sound replace TV Main Board

4-4. Audio

- Source > Main Board/T-Con > Speakers

■ Source (One Connect)

- **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 Ca
 - **If Sound Test OK :**
 - ✓ Audio Source & External Cables
 - ✓ With external Audio Generator (device or App)
 - ✓ Other Inputs
- **Optical Digital Out Errors**
 - ✓ Red light from Optical Digital Out.
 - If missing replace Main Board

■ One Connect/TV Main Board

- **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
 - 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.

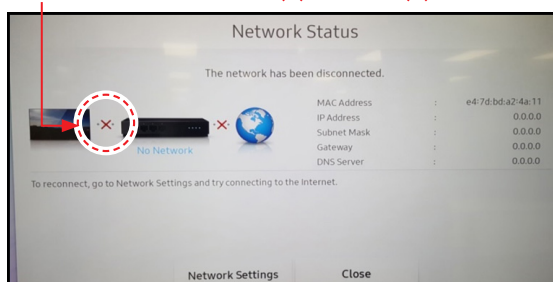
4-5. Network



■ TV to Router "Failure"

- ✓ **Check** Network Status

Check Network Status (TV ~~→~~ Router ~~→~~ Internet)



- ✓ **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"

- ✓ **Check** Network Status

Check Network Status (TV → Router ~~→~~ Internet)



- 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.

4-6. Smart Hub Connection Test

- [Network Test/Gateway Test](#) > [DNS Test](#) > [ISP Blocking](#) > [Samsung Server Test](#) > [Samsung Apps Test](#)



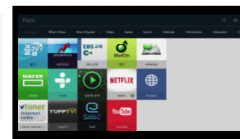
<TV>



<Router>



<Internet>



<Samsung Server>

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

■ Network / Gateway

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

■ 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.

■ ISP Blocking

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

■ Samsung Server Test

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

■ Samsung Apps Test

- 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.

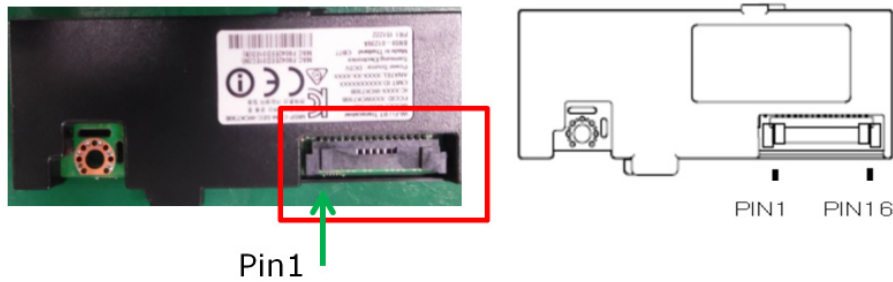
For Netflix Operation/Connection Issues:

- ✓ **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:

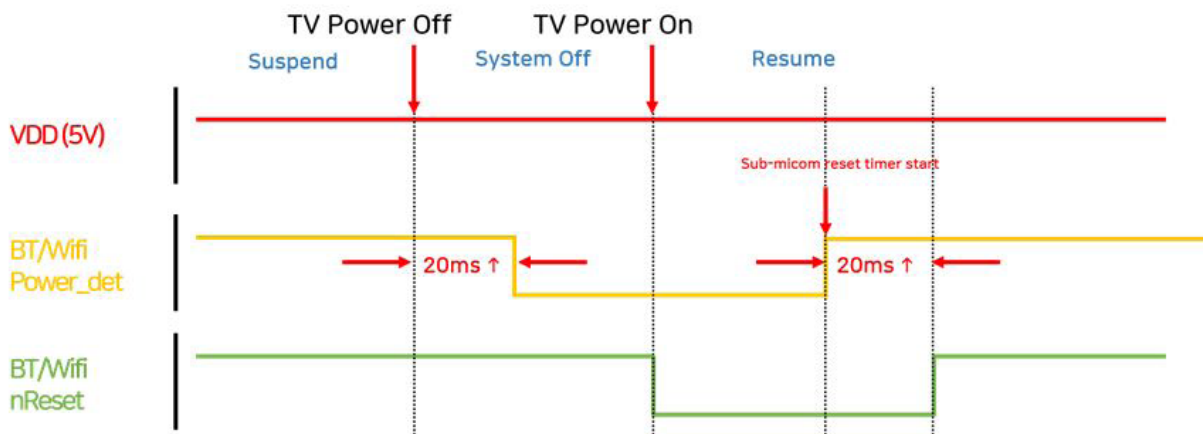
- Go to YouTube - Select a 4K Video
- Go to Menu at bottom / Select More Options
- ✓ **Check "Stats for Nerds"**
- ✓ **Check Speed** for 5 Mbps (minimum HD streaming)
- ✓ **Check Latency** for 25 Mbps (minimum 4K Streaming)

4-7. Bluetooth / WiFi Module

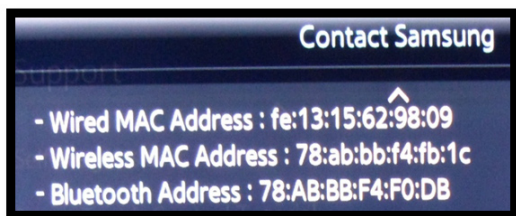


① CN1403(BT/WIFI)			
1	BTWIFI NRESET	2	WIFI WOW
3	WIFI_5V	4	DGND
5	WIFI D-	6	WIFI D+
7	DGND	8	WIFI_PHY_ON
9	BT_UART_TX	10	BT_WAKE

Pins	1	2	3	4	5	6	7	8	9	10
STBY	3.3Vdc	3.3V Vdc	5Vdc VCC	0	0	0	0	0	3.3V Vdc	3.3V Vdc
Pwr On	3.3Vdc	3.3V Vdc	5Vdc VCC	0	BT/Wifi sig (DM) 0.5V P-P	BT/Wifi sig (DP) 0.5V P-P	0	3.3V Vdc	3.3V Vdc	3.3V Vdc



- 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.

4-8. Factory Mode

■ Setting TV into Factory Mode



AA81-00243A

Factory Remote

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

Samsung IR Remote

1. TV Power Standby.
2. Press as follows.

- Remote Button

NTSC **MUTE** → **1** → **8** → **2** → **POWER**

PAL **INFO** → **MENU** → **MUTE** → **POWER**

■ Important Items

- **Option** (must set Option Bytes when replacing Main Board.)
- Option → **Factory Reset** (returns TV to out of box condition. Does not reset Apps.)
 - **Factory Reset** : Select Factory Reset

Factory Reset	
Type	65L1QU8TR
Local Set	ED_VIET
SW Model	QRQ80_OC
Model Code	QA65Q80RAKXXV
TUNER	-
Ch Table	NONE

← Ex. Sample Model

- SVC → **Test Patterns**
- SVC → Info → **ER Count** (Important to check for errors.)
 - Resets to 0 with Factory Reset.

Setting Option Bytes

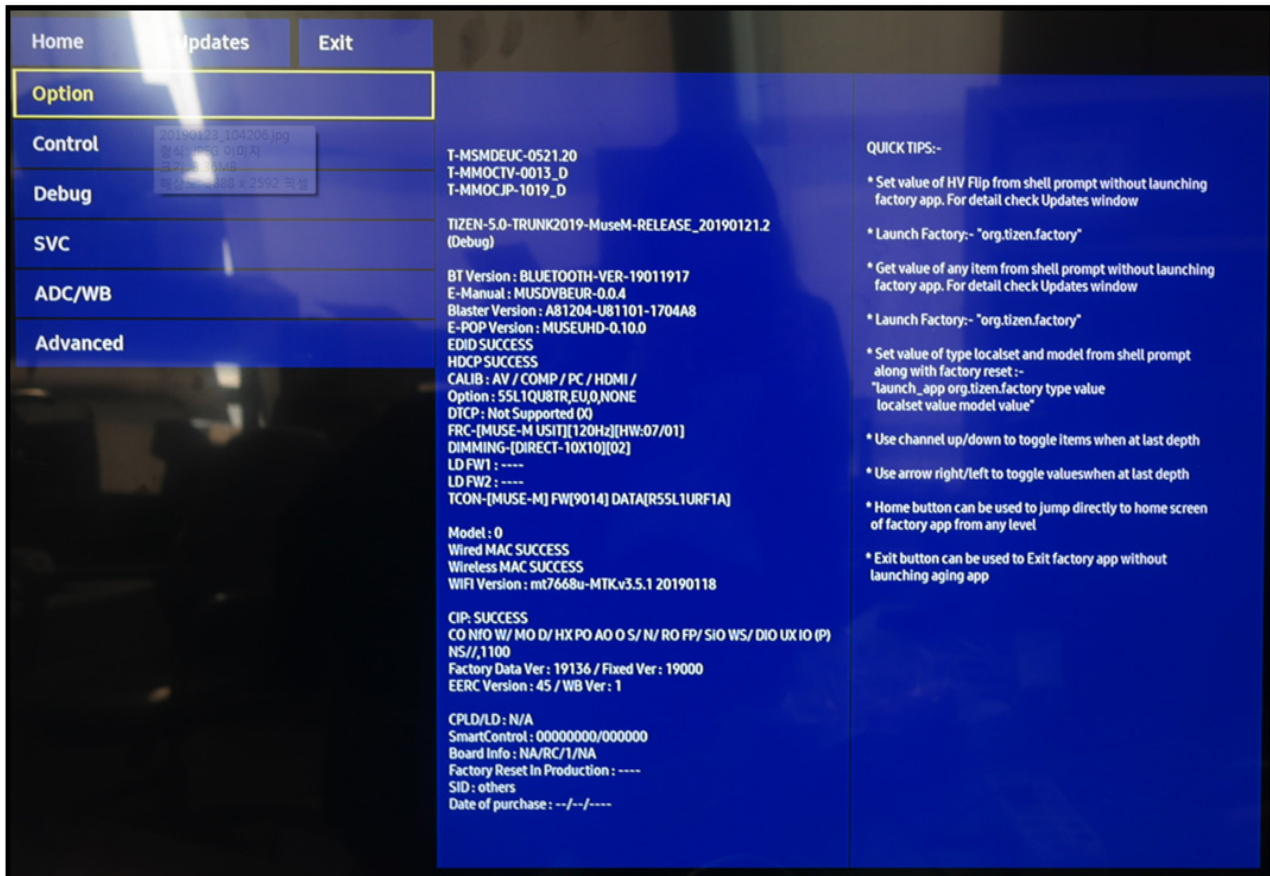
1. Enter Factory Mode with **Service Remote** (only).
2. Check Option Byte Table located on **GSPN** (Fast Track or Tips).
3. Select each item to change.
4. Soft power TV Off to load.

Performing Factory Reset

1. Enter Factory Mode
2. Select Option / Factory Reset
3. TV will power off.
4. Perform ALL TV Settings (New out of box condition)

First Screen Appearing in Factory Mode

- Ex. Sample Model



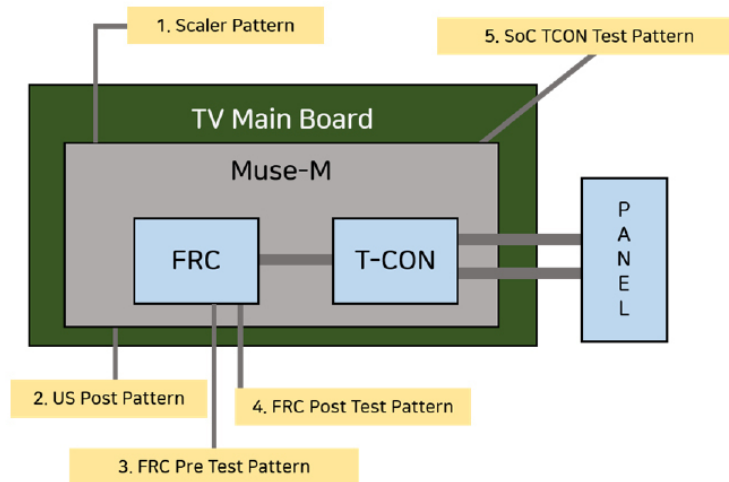
Slide Details

- Sample Model : **QA65Q80RAKXXV**

✓ Testing Items

Home	Updates	Exit		
Option			T-MSMUABC-XXXX.XX	✓ Micom Version
Control			T-MMOCTV-XXXX	✓ Sub Micom_TV
Debug			TIZEN-5.0-MAIN2019-MuseM-RELEASE_XXXXXXXX.X	✓ Tizen
SVC			BT Version : ****	✓ BT Version
ADC/WB			E-M : ****	✓ E-Manual
Advanced			Blaster Version : ****	✓ Blaster Version
			E-POP Version : ****	✓ E-Pop Version
			EDID SUCCESS	✓ EDID Success(sratus)
			HDCP SUCCESS	✓ HDCP Success(sratus)
			CALIB : AV/COMP/PC/HDMI/	
			Option :XXXXXXXX,XX,XXXXXXXXXXXX,NONE	
			DTCP : Not Supported (X)	
			FRC-[MUSE-MUSIT][120Hz][HW:****]	✓ FRC
			DIMMING-[DIRECT-6X8][XX]	✓ Dimming
			LDFW1 : ----	
			LDFW2 : ----	
			TCON-[MUSE-M]FW[9011]DATA[R82A1UQM13]	✓ T-Con
			Model : XXXXXXXXXXXXX	✓ Model
			Wired MAC SUCCESS	✓ Wired MAC Success
			Wireless MAC SUCCESS	✓ Wireless MAC Success
			WiFi Version : ****	✓ WiFi Version
			CO Nf/ W/ MO D/ H2 PO AO O S /N/ RO FP/ SiX WS/ DI/ UX I/ (T)	
			NSOO,0000001c49000001,0000	✓ CO Status("O" Operational)
			Factory Data Ver : ** / Fixde Ver : **	
			EERC Version : ** / WB Ver : **	
			CPLD/LD : N/A	
			SmartControl : ****	
			Board Info : ****/**/**/**/BN41-*****	
			Factory Reset in Production : ----	
			SID : ----	
			Date of purchase : --/--/----	

■ SVC > Test Patterns



1. Verify "Scaler Pattern" and "US Post Pattern".
2. Verify "FRC Pre Test Pattern".
3. Verify "FRC Post Test Pattern".
4. Verify "SoC TCON Test Pattern".

Scaler Pattern	OFF
US Post Pattern	OFF
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
SOC TCON3 Pattern	0
SOC TCON3 Pattern Level	255

■ SVC > Info > ER Count

WD Count	0	FRC3D Emergency Reboot On/Off	ON
AR Count	0	FRC3D ER Count	0
RS Count	0	TCOM PMIC Fault Count	0
RS-FG Count	0	Fan Error Count	0
RS-Launch Count	0	TV2OC Serdes Error Count	0
RS-BG Count	0	OC2TV Serdes Error Count	0
WIFI NO DETECTION COUNT	10	serdes/HDMI diagnosis	
WIFI DETACHMENT COUNT	2	Serdes History	
BT NO DETECTION COUNT	8	Serdes History Reset	
BT DETACHMENT COUNT	0	Serdes WatchDog On/Off	ON
BT MGT OPEN FAIL COUNT	0	Vcc Fail Count	0
BT MGT DISCONNECT COUNT	0	HDMI No Signal	
BT TV AUDIO DROP	0	HDMI Blinking	
BT AUDIO TIMER EXP	0	HDMI Color Space	
Camera ER Count	0	TheWall	

- WD Count Watch Dog(Hardware related issue)
- AR Count: Auto Reset(software (i.e. Apps) related)
 - ✓ important Error Count
 - ✓ Status Screen
- Verify each item listed

■ EDID Write

Factory Mode / Control / EDID (Restoring HDMI Inputs)

1. Remove ALL HDMI connections
2. Factory Mode/Control/EDID (Press Enter)
3. Select EDID/OFF to ON (Right Arrow Key)
4. Select EDID WRITE ALL (Enter)
5. Wait to Success (Right Arrow Key)
6. Confirm EDID WRITE ALL Success (Menu Key)

EDID	
Sub Option	
EDID ON/OFF	ON
EDID WRITE ALL	Success
EDID WRITE ALL	Wait
EDID WRITE ALL	Success

■ Factory Mode > Control > EDID

1. Remove ALL **HDMI** connections.
2. Factory Mode → Control → **EDID**. (→ **Enter** Key)

Option	EDID
Control	Sub Option
Debug	
SVC	
ADC/WB	
Advanced	

3. Select EDID/OFF to ON. (→ **Right Arrow** Key)

EDID ON/OFF	ON
-------------	----

4. Select EDID WRITE ALL. (→ **Enter** Key)

EDID WRITE ALL	Success
----------------	---------

5. Wait to Success. (→ **Right Arrow** Key)

EDID WRITE ALL	Wait
----------------	------

6. Confirm EDID WRITE ALL Success. (→ **Menu** Key)

EDID WRITE ALL	Success
----------------	---------

■ Important New Option Byte “Writing Type” Entry

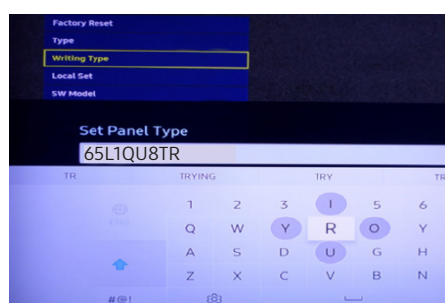
For Quick Entry of Type (Ex. Sample Model)

1. Confirm **Type** from Option Byte Table for your TV.
2. Select **Writing Type**.

Factory Reset	
Type	65L1QU8TR
Writing Type	
Local Set	ED_VIET
SW Model	QRQ80_OC
Model Code	QA65Q80RAKXXV

◀Select Writing Type▶

3. “Set Panel Type” appears.

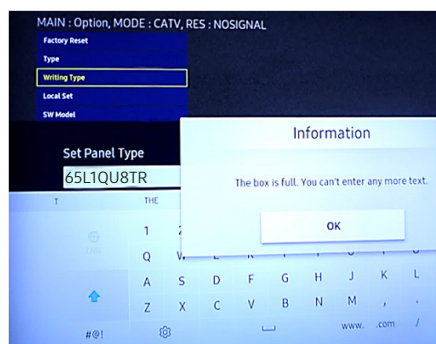


◀Set Writing Type▶

4. Enter exact Model Type using cursors.
5. Select **OK**.
6. Writing **Type Success** appears in the Option Table.
If the model Type you entered doesn't exist it will not load.
If you entered over 10 digits an Information screen box is full appears.

Factory Reset	
Type	65L1QU8TR
Writing Type	Success
Local Set	ED_VIET
SW Model	QRQ80_OC
Model Code	QA65Q80RAKXXV

◀Writing Type Success▶



◀Writing Type digits exceeded▶

7. Complete rest of Option Byte Table info.
8. Press soft power off with remote to enter settings.



NOTE

When installing the ASSY PCB MAIN BOARD, verify the board is properly positioned in all 4 mounting slots.

■ Important New Option Byte “Model Code” Entry

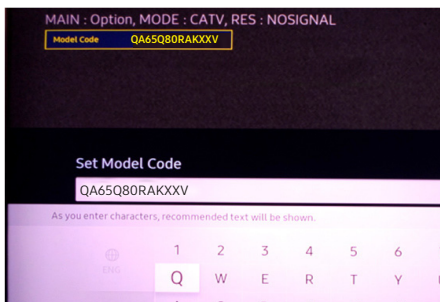
For Quick Entry of Model Code (Ex. Sample Model)

1. Confirm **Model Code** from Option Byte Table for your TV.
2. Select **Model Code**.

Factory Reset	
Type	65L1QU8TR
Writing Type	Success
Local Set	ED_VIET
SW Model	QRQ80_OC
Model Code	QA65Q80RAKXXV

◀Select Model Code▶

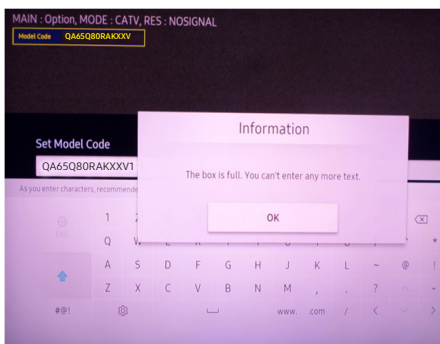
3. "Set Model Code" appears.
4. Enter exact Model Type using cursors.



◀Set Model Code▶

5. If you entered over 19 digits an **Information** screen **box is full** appears.

IMPORTANT: It will accept wrong model code, be sure to enter correct code



<Model Code digits exceeded>

Factory Reset	
Type	65L1QU8TR
Writing Type	Success
Local Set	ED_VIET
SW Model	QRQ80_OC
Model Code	QA65Q80RAKXXV1

<Wrong Model Code Entry>

6. Complete rest of Option Byte Table info.
7. Press soft power off with remote to enter settings.

4-9. Factory Mode Adjustments

4-9-1. Entering Factory Mode

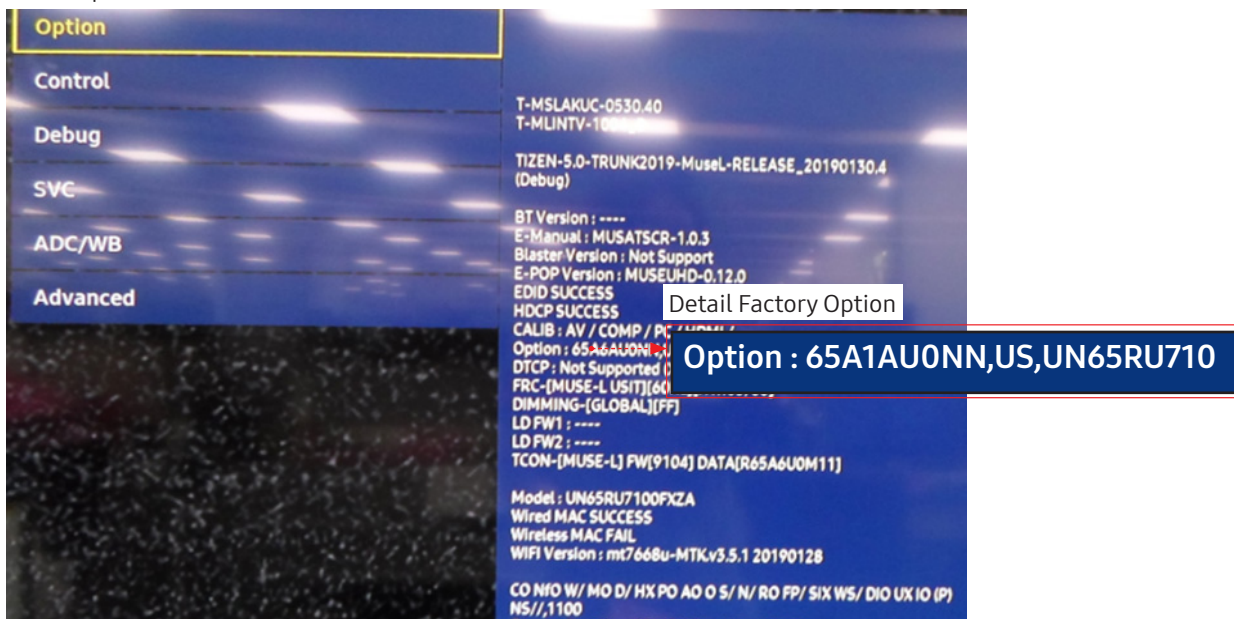
1. To enter [Service Mode] press the remote-control keys in this sequence :
 - **With Consumer Remote (IR Remote)**

PAL POWER OFF → INFO → MENU → MUTE → POWER ON

- **With Factory Remote**

INFO → FACTORY

2. The following screen appears.
 - Please refer to "**Detail Factory Option** page" for details.
 - Sample Model :



4-9-2. 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".

■ QA55Q80RAKXXV

- PANEL / SMPS / MAIN Information

Side Version	AA02					
PANEL			SMPS		MAIN	
Vendor	AUO		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-05495D	CY-TR055FLAV6V/H	55L1QU8TR	BN44-00986A	L55S8NB_RSM	BN91-20692A	BN94-14017L

Side Version	FA01					
PANEL			SMPS		MAIN	
Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-05494D	CY-TR055FLLV6V/H	55A1QU8TR	BN44-00986A	L55S8NB_RSM	BN91-20773E	BN94-14066B

- MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
ED_VIET	80RA	Q-F-RQ80-OC-55	QRQ80_OC

- PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
55L1QU8TR	AD_AU2	QRQ85_OC	Follow S/W Model

■ QA65Q80RAKXXV

- PANEL / SMPS / MAIN Information

Side Version	AA02					
PANEL			SMPS		MAIN	
Vendor	AUO		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-05493D	CY-TR065FLAV6V/H	65L1QU8TR	BN44-00986B	L65S8NB_RSM	BN91-21047G	BN94-14174L

Side Version	FA01					
PANEL			SMPS		MAIN	
Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
BN95-05492D	CY-TR065FLLV6V/H	65A1QU8TR	BN44-00986B	L65S8NB_RSM	BN91-20944J	BN94-14271H

- MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
ED_VIET	80RA	Q-F-RQ80-OC-65	QRQ80_OC

- PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
65L1QU8TR	AD_AU2	QRQ85_OC	Follow S/W Model

■ QA75Q80RAKXXV

- PANEL / SMPS / MAIN Information

Side Version	TBD					
PANEL			SMPS		MAIN	
Vendor	TBD		Vendor	TBD	ASSY CHASSIS	ASSY PCB MAIN
Code	Spec	Type	Code	Spec		
TBD	TBD	TBD	TBD	TBD	TBD	TBD

- MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
ED_VIET	80RA	Q-F-RQ80-OC-75	QRQ80_OC

- PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
75L1QU8TR	AD_AU2	QRQ85_OC	Follow S/W Model

4-9-3. Factory Data

■ Option

Factory Menu Name	Data	Range
Factory Reset	-	
Type	55L1QU8TR/65L1QU8TR/TBD	55L1QU8TR/65L1QU8TR/TBD/...
Writing Type		
Local set	ED_VIET	
SW Model	QRQ80_OC	
Model Code	QA**Q80RASXXV	55/65/75
TUNER	-	DVB-T2 (*VN: DVB-T2C)
Ch table	NONE	
MRT Option		
Engineer 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	RS-232 mode setting
EXT Link Support	ON	
Serial Log On/Off	OFF	
Watchdog	ON	
FRC Monitoring	OFF	
Checksum	0x0000	
Fast Boot In Production	OFF	
USB Serial	OFF	
ECO IC TYPE	NOT_DETECT	
COLOR IC TYPE	VEML3329	
Info Link Server Type	development	
TTX Group	UserOSD	
OPTION_SWU		
LMF LEAVE THRESHOLD	160	
LMF TRIM THRESHOLD	120	

Factory Menu Name	Data	Range
LMF TERM THRESHOLD	80	
FAnet Thread	2	
CI CPLD Version	1	
ACM_MC	ON	
UNIQUE TRIPLET	ON	
T-CON Device	MUSE-M	
SPI Protection		
FKP Server Type	Default	
Preloading Support	ON	
Multitasking Support	ON	
Browser preloading Support	FULL	
EXT IR Boot Support	ON	
APP BOOTING SUPPORT	ON	
Cloudscan Always Upload	OFF	
STB Power Sync Support	ON	
OOM Panic Burst Interval	60	
OOM Panic Burst Number	8	
Power off interval Reset	60	
APP Boot Support after Reset	1	
Perf Mode	0	
Frame Loc Support	ON	
Type of Frame Lock	0	
Hotel Option		
Hospitality Mode	OFF	
Power On		
Menu OSD		
Operation		
Music Mode		
External Source		
Eco Solution		
Cloning		
Shop Option		
Exhibition Mode	OFF	
Peak Mode	ON	
Metadata	ON	
Game Motion Demo	OFF	

4. Troubleshooting

Factory Menu Name	Data	Range
Asia Option		
Mono Last Memory	OFF	
SOUND		
Speaker EQ	ON	
Speaker output	0	
PEQ Test	Ready	
PEQ Inx	33	
Amp Recovery	ON	
Subwoofer Support	3	
Amp_1 Volume	0xc9h	
Amp_1 Scale	0x3dh	
Amp_1 CheckSum	0x000044BB	
Amp_2 Volume	0xc9h	
Amp_2 Scale	0x35h	
Amp_2 CheckSum	0x0000C0BE5	
Amp_3 Volume	0xc9h	
Amp_3 Scale	0x35h	
Amp_3 CheckSum	NONE	
Amp_4 Volume	0xc4h	
Amp_4 Scale	0x9ah	
Amp_4 CheckSum	NONE	
High Devi	OFF	<ul style="list-style-type: none"> 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	OFF	<ul style="list-style-type: none"> If the noise comes from weakness-electromagnetic field, TV will be set Mute automatically (Only default on in North America)
Pilot Level High Thld	0x70h	<ul style="list-style-type: none"> The High threshold value of stereo signal(If Pilot level is greater than High threshold value, recognize Stereo signal)
Pilot Level Low Thld	0x20h	<ul style="list-style-type: none"> The Low threshold value of stereo signal(If Pilot level is less than Low threshold value, recognize Mono signal)
SPDIF PCM Gain	-9	
SPDIF BYPASS	NORMAL	
Lipsync Inx	2	
Lipsync Checksum	0x1445	
Lipsync USB Test	Ready	
Lipsync BT Checksum	0X00D2	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		
MAIN DDR SSC ON OFF	ON	
MAIN DDR SSC Value	0	
MAIN Vx1 SSC ON/OFF	OFF	
MAIN Vx1 SSC Value	1	
TCON-B DDR SSC ON/OFF	ON	
TCON-B DDR SSC Period	0	
TCON-B DDR SSC Modulation	0	
MAIN USIT SSC ON/OFF	BYPASS	
MAIN USIT SSC MF	0	
MAIN USIT SSC MR	0	
OCL Serdes SSC ON OFF		
8K Vx1 SSC value	5	
8K DDR SSC value	1	
8K EBUS SSC value	1	
8K SSC ON/OFF	ON	
MAIN DP SSC ON/OFF	OFF	
MAIN DP SSC Value	0	
Muse-M EBUS SSC ON/OFF	OFF	
Muse-M EBUS SSC Value	0	
RF Mute Time	600ms	
Tuner Margin	3	
FRC		
FRC 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	39	
TEMP LAST	6000	
DCC VERSION	0	
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	[Invalid UTF-8]	
Panel S/N 4	[Invalid UTF-8]	
MPEG Margin	20	

4. Troubleshooting

Factory Menu Name	Data	Range
H.264 Margin	15	
Voice Debug	OFF	
Power Management		
DVFS	ON	
Cert Option	Waiting	
RM_BIST_DTV	5	
RM_BIST_ATV	0	
RM_BIST_CABLE	29	
Stress Mode	OFF	
Error Popup On/Off	OFF	
CES Option	OFF	
BT DUT	OFF	
BTEU DUT		
BT Throughput	Failure	
Read Eco Sensor Data	0	
No Signal Power OFF	ON	
Default HDMI1 Booting	OFF	
Run EW	720h	

■ SVC

Factory Menu Name	Data	Range
Self Test(for HW)		<ul style="list-style-type: none"> the Output of test pattern from each IC
Info		
Reset		
Apps Reset		
SVC Reset		
SPI Flash Reset		
Data Sync Reset		
Factory Data Reset		
ER Count Reset		
OPTION_HDMI		
HOT PLUG DURATION	800ms	
HDMI FLT CNT SIG	0ms	
HDMI FLT CNT LOS	0ms	
HDMI MUTE TIME	0ms	
HDMI NFST UNMUTE TIME	600ms	
HdmiRx EQ	0	
HDMI TMDS ERR DET	1	
Auto EQ sweep	READY	
VMD OPT	0	
HdmiRx PLL_BW	0	
PREDEFINED HDMI VALUE	ON	
ADAPTIVE HPD	ON	
DVB CI		

Factory Menu Name	Data	Range
TS Clock delay TC	0	
TS Clock delay S	0	
CI Control Buf ON	ON	
TS Clock delay CPU	2	
Test Pattern		
Scaler Pattern	OFF	
US Post Pattern	OFF	
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	
SOC TCON3 Pattern	0	
SOC TCON3 Pattern Level	255	
Upgrade		
T-CON DATA UPGRADE		
T-CON FW UPGRADE		
T-CON CheckSum		
T-CON2 DATA UPGRADE		
T-CON2 FW UPGRADE		
T-CON2 CheckSum		
PANEL EEPROM UPGRADE		
PANEL FLASH UPGRADE		
Logic Usb D/L		
SUBMICOM UPGRADE		<ul style="list-style-type: none"> Upgrade Sub-Micom Program
SUBMICOM JP USB UPGRADE		
BT UPGRADE		
BT FREEPAIRING		
Function Upgrade		
FRC3D FW UPGRADE		
FRC3D SRP UPGRADE		
FRC3D LD UPGRADE		
FRC2 3D FW UPGRADE		
Camera Upgade		<ul style="list-style-type: none"> Upgarde Camera module(There is upgrade program in Main-Image)
Mic Upgrade		<ul style="list-style-type: none"> Upgarde MIC in Camera module(There is upgrade program in Main-Image)
Jump UPGRADE		
IR Blaster Upgrade		
Pic Data USB Update	T:0x72/W:0x0D	
Eco Data USB Update	V:107(0x6B)	
SC ADK Upgrade		

4. Troubleshooting

Factory Menu Name	Data	Range
LD MCU Upgrade		
TheWall MuseW Upgrade		
FPGA1 upgrade		
FPGA2 upgrade		
FPGA3 upgrade		
Valens Tx		
Valens Rx		
Other Setting		
Delete S/N		
IPERF	Stopped	
Expert		
CAL Data Backup	...	
CAL Data Restore		
ATV IF AGC SPEED	0	
Upgrade UHD OSD Test	0	
Main USB Path		
JackP USB Path		
Apps Update		
Picture Direct	OFF	
Source Banner Hide	OFF	
Auto Detection Group	0	
V APP	OFF	
SWI	OFF	
Restart No	0	
SVC Panel	ORIGINAL	
S/N		
Serial number		
Writing S/N		
EW Diagnosis		
MASS Full Test		
MASS Simple Test		

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibaration		
Comp Calibration		
PC Calibration		
HDMI Calibration		7
ADC Result		
1st_Y_GH	0	
1st_Y_GL	0	
1st_Cb_BH	0	
1st_Cb_BL	0	
1st_Cr_RH	0	

Factory Menu Name	Data	Range
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	145	
WB_W2_B_Gain	80	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	131	
WB_N_B_Gain	121	
MGA		
MGA On/Off	OFF	
R1_Gain		
G1_Gain		
B1_Gain		
R2_Gain		
G2_Gain		
B2_Gain		
R3_Gain		
G3_Gain		
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		

4. Troubleshooting

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

■ Advanced

4-10. Replacing Main Board

When replacing Main Board, certain values needs to be manually input in Factory menu to complete the replacement.

■ Steps to Replace Main Board

1. Enter Factory Menu (Use Factory Remote only).

- Power TV on : **Select TV Source > Info/Factory > Option**

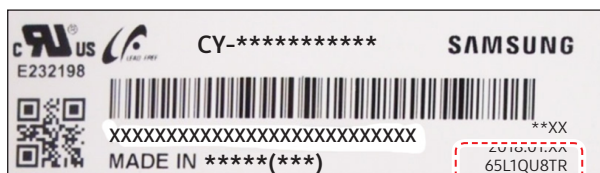
2. Change Each value according to the TV Model.

- Type, Local Set, SW Model, BOM Model** must be set to correct value.

- Sample Model : QA65Q80RAKXXV**

Type

- Check Panel label (located in the back chassis of panel) and choose same Type code from the list.



Type" in Panel Label

Home	Updates	Exit
Factory Reset		
Type	65L1QU8TR	
Writing Type		
ocal Set	ED_VIET	
SW Model	QRQ80_OC	
Model Code	QA65Q80RAKXXV	
TUNER	-	
Ch Table	-	
MRT Option		
Production Option		
Engineer Option		
55A1QU7QN	55L1QU7QN	
75L1QU7QN	55A1QU8XN	
55L1QU7QN	55A1QU7QN	
55L1QU8TR	65L1QU8TR	
75L1QU8TR	65L1QU7QN	
65A1QU8XN	65L1QU8XN	
55A6AU0NN	55L6AU0NN	

<Type list in the Factory Menu>

3. Change Each value according to the TV Model.

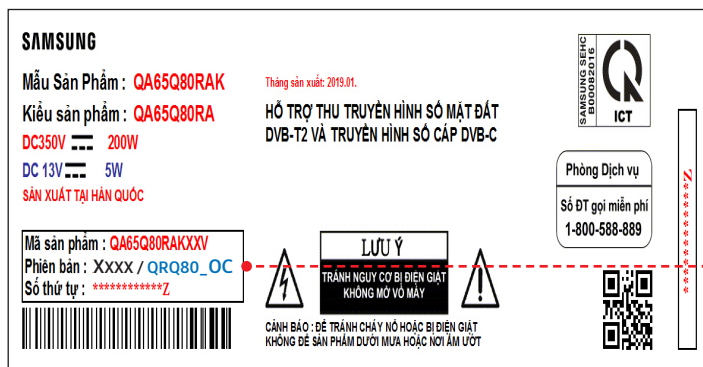
Local Set

- Set according to Local region(country).

4. Troubleshooting

SW Model

- Check Label Rating of the TV(located on the Rear Cover).
 - SW Model is digits **after "/"** in **Version No.**
 - Choose same SW Model code from the list.



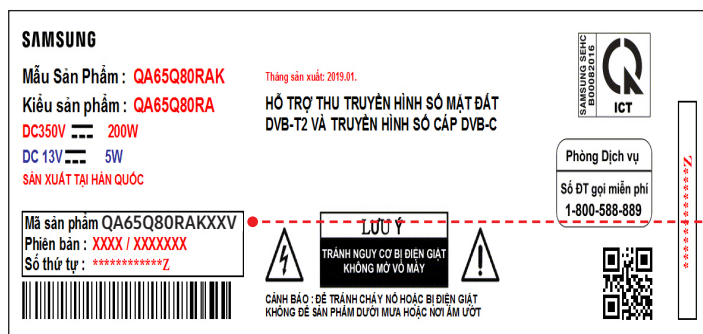
<"SW Model" in Label Rating>

Home	Updates	Exit
Factory Reset		
Type	65L1QU8TR	
Writing Type		
Local Set	ED_VIET	
SW Model	QRQ80_OC	
Model Code	QA65Q80RAKXXV	
TUNER	-	
Ch Table	-	
QNK6FK	BEN	
QRQ80	QRQ70	
URU7300	QRQ80_OC	
QRQ80_OC	QRQ75	
URU710D	URU730D	

<SW Model list in the Factory Menu>

Model Code

- 6th~9th Digit of Model Code.
 - Check 6th~9th digit of Model code and type in.
 - e.g.) Model Code : **QA65Q80RAKXXV**



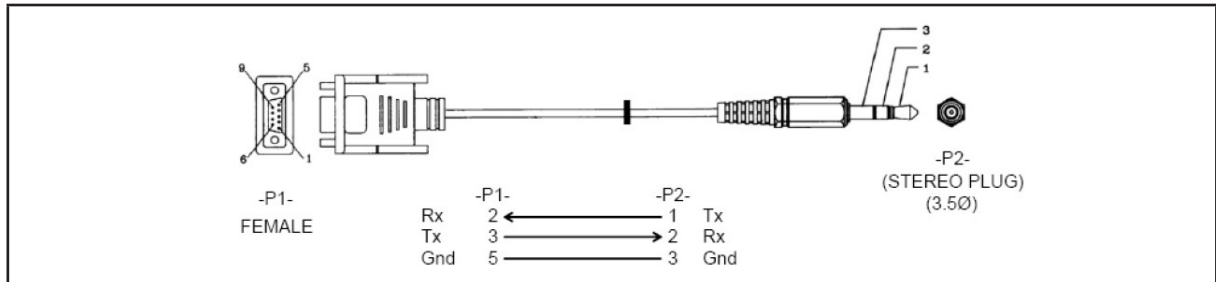
<"BOM Model" in Label Rating>

Home	Updates	Exit
Factory Reset		
Type	65L1QU8TR	
Writing Type		
Local Set	ED_VIET	
SW Model	QRQ80_OC	
Model Code	QA65Q80RAKXXV	
TUNER	-	
Set Model Code		
QA65Q80RAKXXV		
As you enter characters, recommended text will be		
	1	2
	Q	W

<Model Code input in Factory Menu>

4-11. RS-232C

- **RS232C Control**
 - Port : COM#(Serial)
 - Baud rate : 115200
 - Data Bit : 8 bit
 - Parity : None
 - Stop Bits : 1
 - Flow Control : None



- Description of RS232C

Pin#	Name	Full Name	Pin#	Name	Full Name	Pin#	Name	Full Name
1	CD	Carrier Detect	4	DTR	Data Terminal Ready	7	RTS	Request To Send
2	RxD	Received Data	5	GND	Signal Ground	8	CTS	Clear To Send
3	TxD	Transmitted Data	6	DSR	Data Set Ready	9	RI	Ring Indicator

4-12. AV Control Tab

Control Item				Cmd1	Cmd2	Cmd3	Value
General	Power	Power		0x00	0x00	0x00	0x00
		Off					0x01
		On					0x02
	Volume	Direct		0x01	0x00	0x00	(0~100)
		Up				0x01	0x00
		Down				0x02	0x00
	Mute			0x02	0x00	0x00	0x00
	Ch.	Direct		0x04	-		
		Continuous	Up	0x03	0x00	0x01	0x00
			Down			0x02	0x00
Input	Source List	TV	TV	0x0a	0x00	0x00	0x00
			AV1			0x01	0x00
		AV	AV2				0x01
			AV3				0x02
		S-Video	S-Video1			0x02	0x00
			S-Video2				0x01
			S-Video3				0x02
		Component	Component1			0x03	0x00
			Component2				0x01
			Component3				0x02
		PC	PC1			0x04	0x00
			PC2				0x01
			PC3				0x02
		HDMI	HDMI1			0x05	0x00
			HDMI2				0x01
			HDMI3				0x02
			HDMI4				0x03
		DVI	DVI1			0x06	0x00
			DVI2				0x01
			DVI3				0x02
		RVU	RVU			0x07	0x00
PICTURE	Mode	Dynamic(Entertain)		0x0b	0x00	0x00	0x00
		Standard					0x01
		Movie					0x02
		Natural					0x03
		CAL-NIGHT					0x04
		CAL-DAY					0x05
		BD Wise					0x06
		Relax					0x07

Control Item			Cmd1	Cmd2	Cmd3	Value
PICTURE	BackLight(CellLight)			0x01	0x00	(0~20)
	Contrast			0x02	0x00	(0~100)
	Brightness			0x03	0x00	(0~100)
	Sharpness			0x04	0x00	(0~100)
	Color			0x05	0x00	(0~100)
	Tint	G/R		0x06	0x00	(0~100)
	Advanced Settings	Black Tone	Off	0x07	0x00	0x00
			Dark			0x01
			Darker			0x02
			Darkest			0x03
		Dynamic Contrast	Off		0x01	0x00
			Low			0x01
			Medium			0x02
			High			0x03
		Gamma	-3 ~ 3		0x03	(-3~3)
		RGB Only Mode	Off		0x05	0x00
			Red			0x01
			Green			0x02
			Blue			0x03
		Color Space	Auto		0x06	0x00
			Native			0x01
			Custom			0x02
		White Balance	R-Offset(LCD)		0x07	(-50~50)
		White Balance	G-Offset(LCD)		0x08	(-50~50)
		White Balance	B-Offset(LCD)		0x09	(-50~50)
		White Balance	R-Gain(LCD)		0x0a	(-50~50)
		White Balance	G-Gain(LCD)		0x0b	(-50~50)
		White Balance	B-Gain(LCD)		0x0c	(-50~50)
		White Balance	Reset(LCD)		0x0d	0x00
		Flesh Tone	-15 ~ 15		0x0e	(-15~15)
		xvYCC	Off		0x10	0x00
			On			0x01
		Motion Lighting	Off		0x11	0x00
			On			0x01
		Color Space Custom Color	Red		0x12	0x00
			Green			0x01
			Blue			0x02
			Yellow			0x03

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE			Cyan				0x04
			Magenta				0x05
		Color Space Custom Color Red Value	0~100			0x13	0~100
		Color Space Custom Color Green Value	0~100			0x14	0~100
		Color Space Custom Color Blue Value	0~100			0x15	0~100
		Reset				0x16	0x00
		LED Motion Plus	Off		0x0a	0x07	0x00
			On(Normal)				0x01
			Cinema				0x02
			Ticker				0x03
		10p White Balance	Off		0x0e	0x00	0
			On			0x00	1
			Red		0x0f	(1~10)	(-50~50)
			Green		0x10	(1~10)	(-50~50)
			Blue		0x11	(1~10)	(-50~50)
			Reset		0x12	0	(1~10)
			10 Point		0x13	0x00	0x00
			Interval		0x14	0x00	0x00
	Picture Option	Color Tone	Cool		0x0a	0x00	0x00
			Standard				0x01
			Warm1				0x02
			Warm2				0x03
		Digital Noise Filter	Off			0x02	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
			Auto Visualization				0x05
		MPEG Noise Filter	Off			0x03	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
		HDMI Black Level	Normal			0x04	0x00
			Low				0x01

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE		Film Mode	Off			0x05	0x00
			Auto1				0x01
			Auto2				0x02
			Cinema Smooth				0x03
		Auto Motion Plus	Off			0x06	0x00
			Clear				0x01
			Standard				0x02
			Smooth				0x03
			Custom				0x04
		Blur Reduction				0x07	value
		Judder Reduction				0x08	value
		LED Clear Motion				0x09	Off
		Reset				0x10	0x00
		HDMI UHD Color	Off			0x11	0x00
			On				0x01
		Analog Clean View	On			0x12	0x00
			Off				0x01
	Screen Adjustment	Picture Size	16:9	0x0c	0x0a	0x01	0x00
			Zoom1				0x01
			Zoom2				0x02
			Wide Fit				0x03
			4:3				0x04
			Screen Fit				0x05
			Smart View I				0x06
			Smart View II				0x07
			Auto Wide				0x08
			Wide Zoom				0x09
			Zoom				0x0a
		Fit to Screen	Off		0x0b	0x00	0x00
		Zoom	Zoom1		0x0c	0x00	0x00
			Zoom2				0x01
			Zoom3				0x02
			Zoom4				0x03
		Position	Position1			0x01	0x00
			Position2				0x01
			Position3				0x02
			Position4				0x03
		Reset			0x0d	0x00	0x00

4. Troubleshooting

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE	Reset Picture	Reset Picture		0x0d	0x0b	0x00	0x00
	Factory-SVB	Expert-N/D Adj	On	0x0b	0x0d	0x00	0x00
			Off				0x01
			Fix				0x02
	Apply Picture Mode	All Sources		0x0f	0x00	0x00	0x00
		Current Source					0x01
	Pip	Pip	Off	0x11	0x00	0x00	0x00
			On				0x01
		Antenna	Cable			0x01	0x00
			Air				0x01
		Channel	DTV Cable			0x02	0x00
			DTV Terrestrial				0x01
		Size	Size1			0x03	0x00
			Size2				0x01
			Size3				0x02
			Size4				0x03
		Position	Position1			0x04	0x00
			Position2				0x01
			Position3				0x02
			Position4				0x03
		Sound Select	Main			0x05	0x00
			Sub				0x01
		Picture Off			0x12	0x00	0x00
Sound		Sound Mode	Standard		0x0c	0x00	0x00
	Music					0x01	
	Movie					0x02	
	Clear Voice					0x03	
	Amplify					0x04	
	Equalizer	Balance			0x01	0x00	(0~20)
		100hz				0x01	(0~20)
		300hz				0x02	(0~20)
		1khz				0x03	(0~20)
		3khz				0x04	(0~20)
		10khz				0x05	(0~20)
		Reset				0x06	0x00
	SRS TruSurround HD (internalization)	Off			0x02	0x00	0x00
	Virtual Surrond (externalization)	On					0x01

Control Item			Cmd1	Cmd2	Cmd3	Value
Sound	SRS TruDialog (internalization)	Off		0x03	0x00	0x00
	Dialog Clarify (externalization)	On				0x01
	Preferred Language	English		0x04	0x00	0x00
		Spanish				0x01
		French				0x02
		Korean				0x03
		Japanese				0x04
	Multi-Track Sound	Mono		0x05	0x00	0x00
		Stereo				0x01
		SAP				0x02
	Auto Volume	Off		0x06	0x00	0x00
		Normal				0x01
		Night				0x02
	Speaker Select	TV Speaker		0x07	0x00	0x00
		External Speaker				0x01
		Audio Out				0x01
	Sound Select	Main		0x08	0x00	0x00
		Sub				0x01
	Sound Reset	Sound Reset		0x09	0x00	0x00
	3D Audio	Off		0x0a	0x00	0x00
		Low				0x01
		Medium				0x02
		High				0x03
	Auto Stereo	Manual		0x0b	0x00	0x00
		Auto				0x01
	TV Installation Type	Stand		0x0c	0x00	0x00
		Wallmount				0x01
	Audio Delay	Dealy Value (0~250)		0x0d	0x00	0~250 (0x00~0xFA)
	SRS CS Headphone	Off		0x0e	0x00	0x00
	Balance			0x0f	0x00	0x00
	Add New Device	On		0x10	0x00	0x00
		Off				0x01
	Audio Multi-Output	Off		0x11	0x00	0x00
	Multiroom Link Settings	Multiroom		0x12	0x00	0x00
	HDMI Audio Input Format	Bitstream		0x13	0x00	0x00
		PCM				0x01

4. Troubleshooting

Control Item			Cmd1	Cmd2	Cmd3	Value
	Audio Format	PCM		0x14	0x00	0x00
		Dolby Digital				0x01
		DTS				0x02
		DTS Neo 2:5				0x03
		AAC/HEAAC				0x04
Sound	Dolby Digital Comp	RF		0x15	0x00	0x01
		Off		0x16	0x00	0x00
	HD Audio	On				0x01
KEY	Key Generation		0x0d	0x00	0x00	Refer to next table
OSD	Show/Hide Control	Show	0x0e	0x00	0x00	0x00
		Hide				0x01
Get Status	Power (On/Off)		0xf0	0x00	0x00	0x00
	Volume(0~100)		0xf0	0x01	0x00	0x00
	Mute (On/Off)		0xf0	0x02	0x00	0x00
	Channel Number		0xf0	0x03	0x00	0x00
	Source (TV/AV/.../HDMI/...)		0xf0	0x04	0x00	0x00
	Picture Size		0xf0	0x05	0x00	0x00
	3D (On/Off)		0xf0	0x06	0x00	0x00
	Picture Mode		0xf0	0x07	0x00	0x00
	Sound Mode		0xf0	0x08	0x00	0x00

* Refer for Table

KEY	Value
Up	96 (0x60)
Down	97 (0x61)
Left	101 (0x65)
Right	98 (0x62)
Menu	26 (0x1A)
Enter(OK)	104 (0x68)
EXIT	45 (0x2D)

4-13. Updating the TV's Software

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



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.

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

■ Updating through the Internet

-  >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#)

- Updating from the Internet requires an active Internet connection.

■ Updating through a USB device

-  >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#)

After downloading the update file from the Samsung website and storing it on a USB device, connect the USB device to the TV to update.

- 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.

■ Updating the TV automatically

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

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

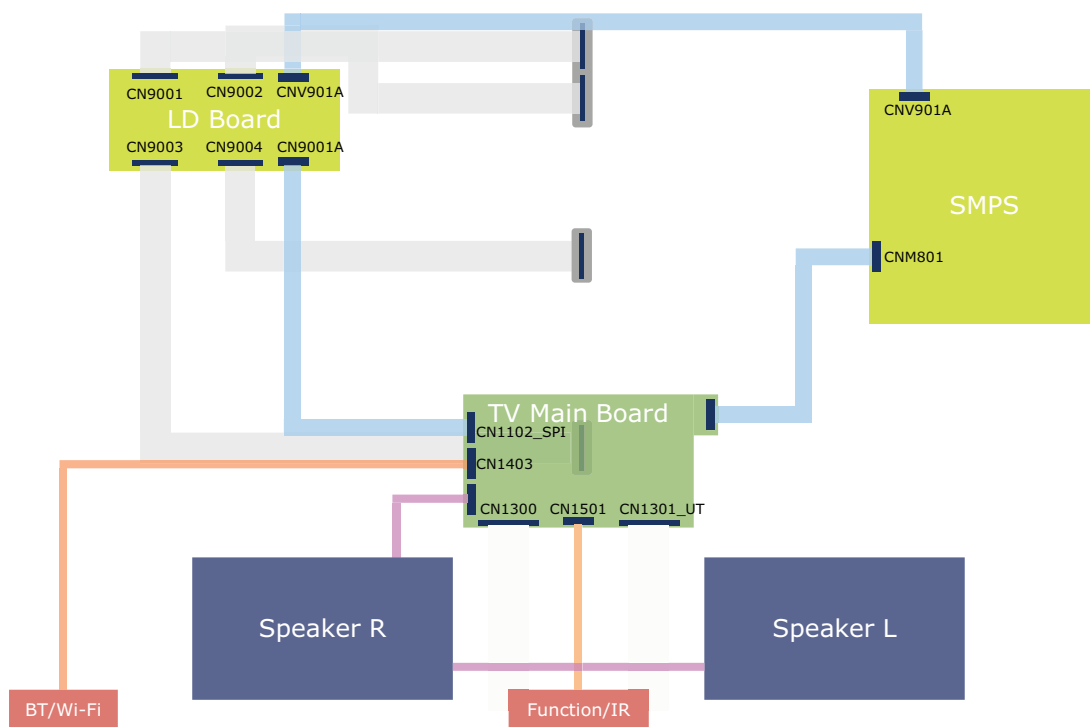
If you agree to the Smart Hub terms and conditions, [Auto Update](#) is set to **On** automatically. If you want this function disabled, use the Select button to turn it off.

- This function may take a longer time if another network function is running concurrently.
- This function requires an Internet connection.

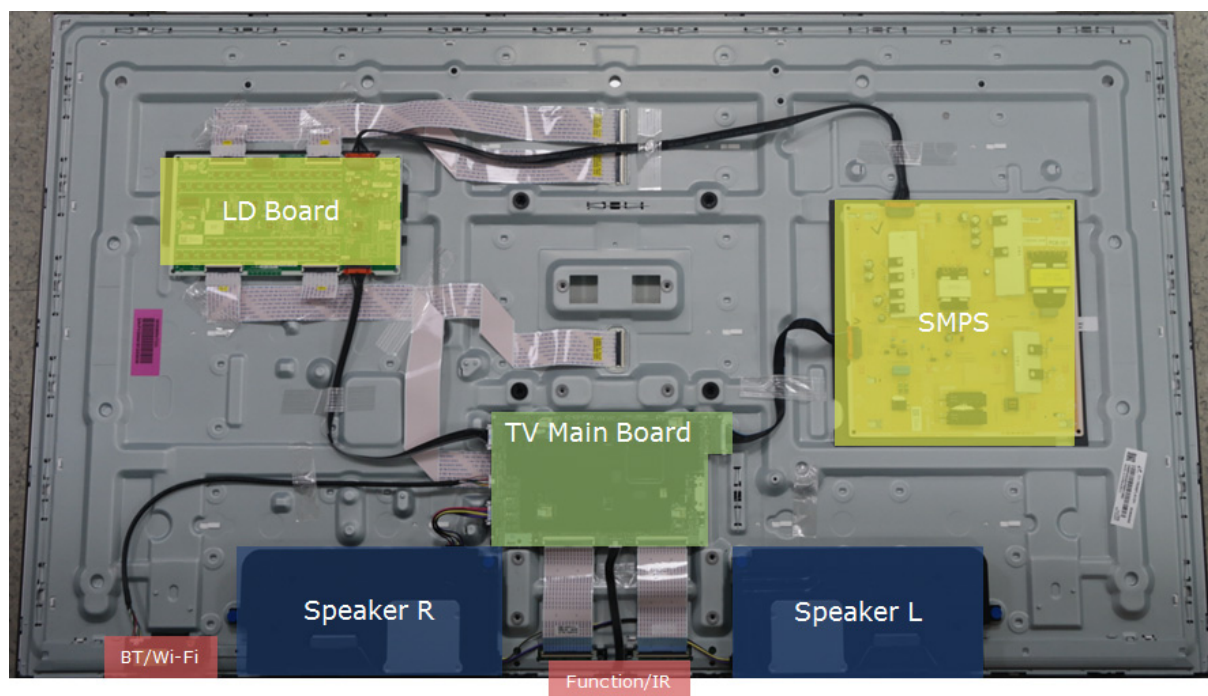
5. Wiring Diagram

5-1. Wiring Diagram

- 55"/65" _ Wiring Diagram

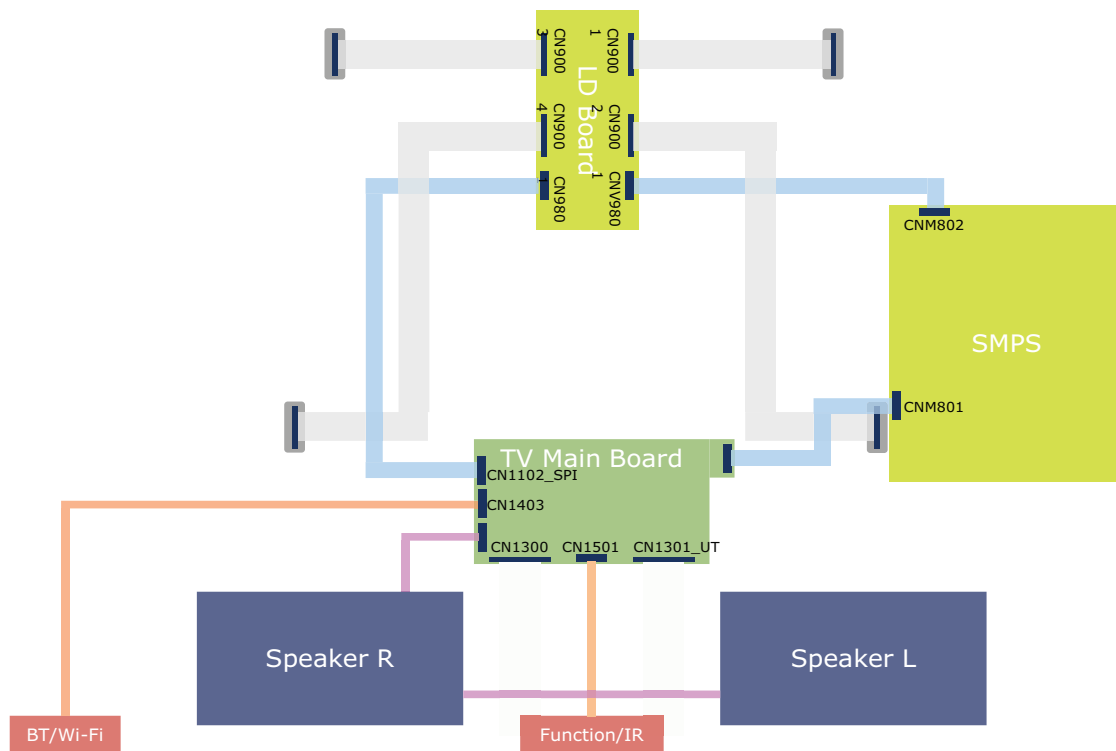


- 55"/65" _inner

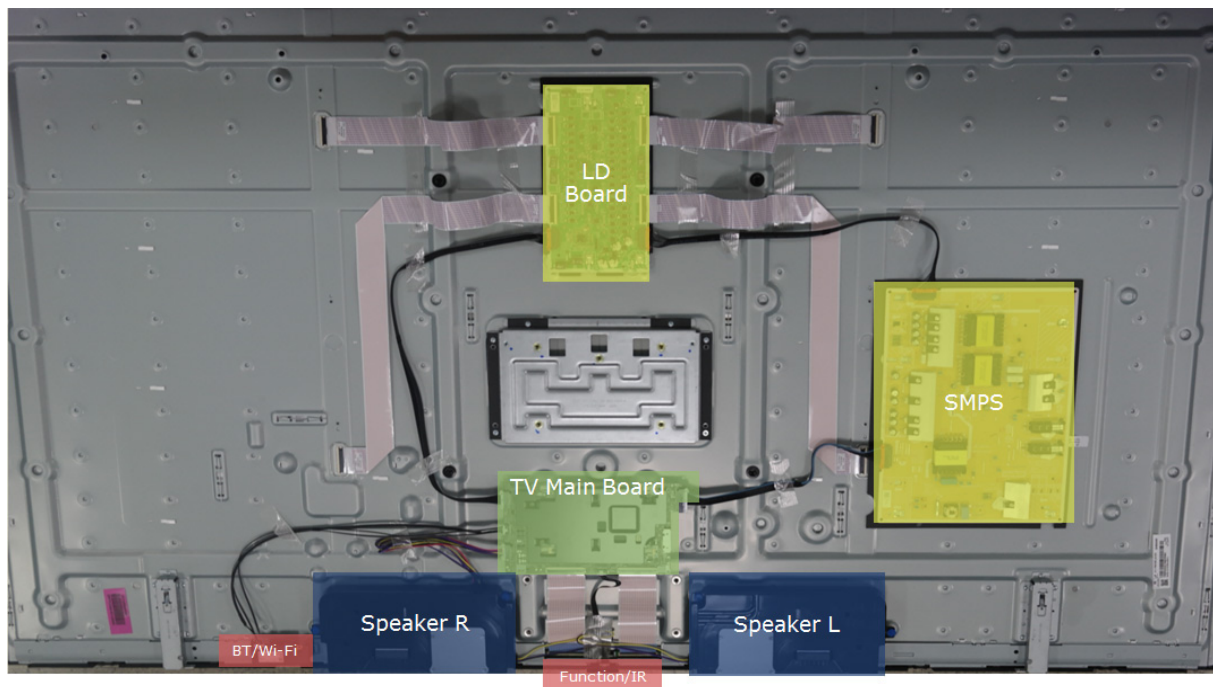


5. Wiring Diagram

- 75" _ Wiring Diagram

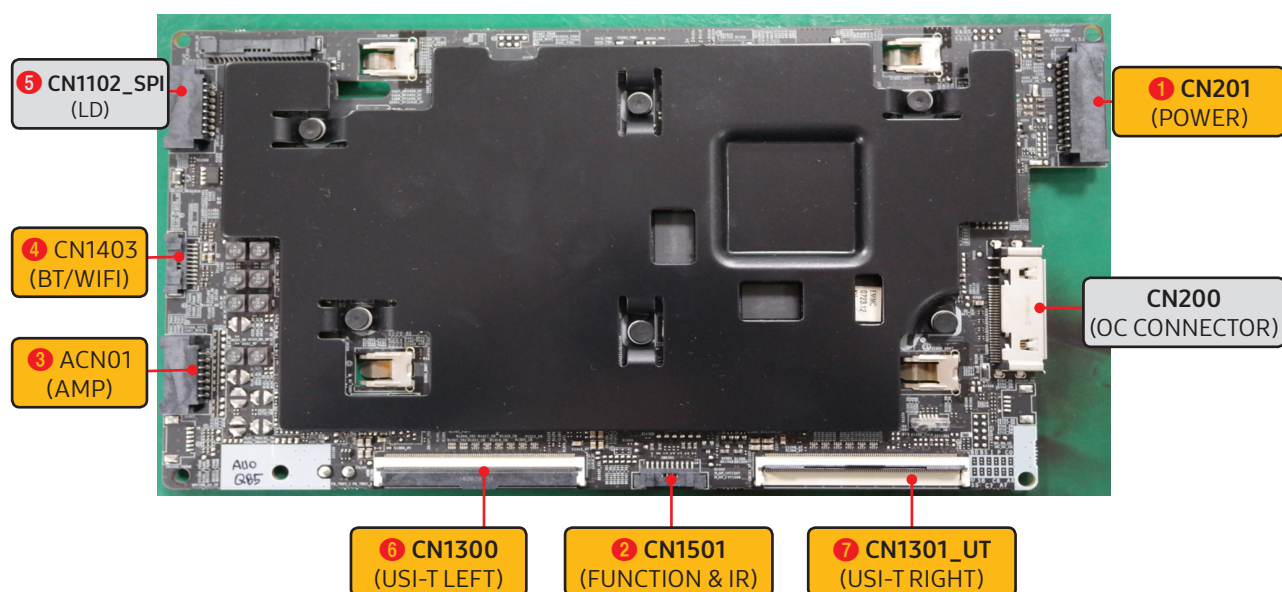


- 75" _inner



5-2. Connector

5-2-1. Main Board



■ Main Board Pin Map

1 CN201 (Power)				3 ACN01 (AMP)			
1	PWM_1WIRE	2	PWM_DIMMING_OUT1	1	TWT_R+	2	WT_R-
3	GND	4	OVD_ONOFF_LD_SDA_I2C	3	MID_R+	4	MID_R-
5	ANA_DIMMING	6	OVD_LEVEL_LD_SCL_I2C	5	WF_R+	6	WF_R-
7	SW_POWER_TV	8	SW_POWER_LOW	7	WT_L+	8	TWT_L-
9	A13V_PW	10	GND	9	MID_L+	10	MID_L-
11	B18VS_PW	12	B13V_PW	11	WF_L+	12	WF_L-
13	B18VS_PW	14	B13V_PW	13	N.C.	14	N.C.
15	B18VS_PW	16	B13V_PW	3 CN1403 (BT/WIFI)			
17	N.C.	18	GND	1	BTWIFI_NRESET	2	WIFI_WOW
19	N.C.	20	N.C.	3	VCC	4	GND
21	B350V_PW	22	B350V_PW	5	D-_USB_BTWIFI	6	D+_USB_BTWIFI
23	N.C.	24	N.C.	7	GND	8	WIFI_PHY_ON
25	350V_DGND	26	350V_DGND	9	BT_UART_TX	10	BT_WAKE
2 CN1501 (FUNCTION/IR)							
1	IR	2	IR_GND				
3	A3.3V_PW	4	SENSOR_SCL_I2C				
5	SENSOR_SDA_I2C	6	KEY_INPUT1				
7	KEY_INPUT2	8	LED_STB_OUT				
9	IR_OUT_1	10	IR_OUT_2				

5. Wiring Diagram

5 CN1102_SPI (DIMMING)				CN200 (OC CONNECTOR)			
1	GND	2	GND	1	GND	2	SERDES_RX_L1-
3	PWM_DIMMING_OUT12_SDATA	4	GND	3	SERDES_RX_L1+	4	GND
5	PWM_DIMMING_OUT11_SSTT	6	PWM_DIMMING_OUT10_SCLK	5	SERDES_TX_L1+	6	SERDES_TX_L1-
7	N.C	8	PWM_DIMMING_OUT9_VSYNC	7	GND	8	OCL_M_RXCLK-_HDMI
9	OVD_ONOFF_LD_SDA_I2C	10	GND	9	OCL_M_RXCLK+_HDMI	10	GND
11	B5V_PW	12	N.C	11	OCL_M_RX0-_HDMI	12	OCL_M_RX0+_HDMI
13	GND	14	OVD_LEVEL_LD_SCL_I2C	13	GND	14	OCL_M_RX1-_HDMI
15	GND	16	PWM_DIMMING_OUT8_SEAMLESS	15	OCL_M_RX1+_HDMI	16	GND
				17	OCL_M_RX2-_HDMI	18	OCL_M_RX2+_HDMI
				19	S0	20	S1
				21	ACT	22	22 CABLE_DETECT
				23	A3.3V_PW	24	IMON
				25	SIGNAL_DETECT	26	B3.3V_PW
				27	350V_DGND	28	A13V_PW
				29	350V_DGND	30	B350V_PW

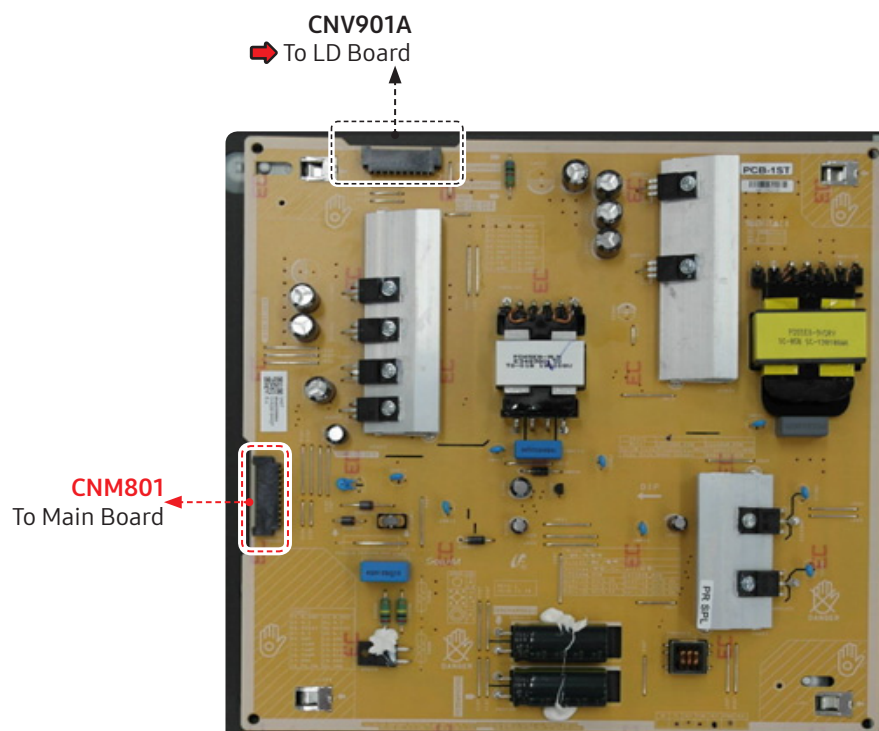
6 CN1300 (USI-T LEFT)							
1	FB_TRDY_1	25	DEMURA_SSPHOLD_SPI	49	DGND	73	DGND
2	DGND	26	DEMURA_SSPWP_SPI	50	TX_CH3_A+_USIT	74	TX_CH7_A+_USIT
3	PANEL_3.3V_PW	27	DEMURA_SSPRXD_SPI	51	TX_CH3_A-_USIT	75	TX_CH7_A-_USIT
4	PANEL_3.3V_PW	28	DEMURA_SSPTXD_SPI	52	DGND	76	DGND
5	FB_VCOM1_2_CELL	29	DEMURA_SSPFRM_SPI	53	TX_CH3_B+_USIT	77	TX_CH7_B+_USIT
6	VCOM1_CELL	30	SFC2	54	TX_CH3_B-_USIT	78	TX_CH7_B-_USIT
7	VCOM2_CELL	31	DGND	55	DGND	79	DGND
8	VCOM3_CELL	32	TX_CH0_A+_USIT	56	TX_CH4_A+_USIT	80	SFC1
9	VSS_OUT1_CELL	33	TX_CH0_A-_USIT	57	TX_CH4_A-_USIT	81	DGND
10	VOFF_-11V_PW	34	DGND	58	DGND	82	PI_DSF_MON
11	VGHD_30V_PW	35	TX_CH0_B+_USIT	59	TX_CH4_B+_USIT	83	PORTNUM
12	CKV1_GOA	36	TX_CH0_B-_USIT	60	TX_CH4_B-_USIT	84	CCA_1.9V_PW
13	CKV2_GOA	37	DGND	61	DGND	85	VCCB_1.8V_PW
14	CKV3_GOA	38	TX_CH1_A+_USIT	62	TX_CH5_A+_USIT	86	LL_CELL
15	CKV4_GOA	39	TX_CH1_A-_USIT	63	TX_CH5_A-_USIT	87	LH_CELL
16	CKVB1_GOA	40	DGND	64	DGND	88	HAVDD_8.5V_PW
17	CKVB2_GOA	41	TX_CH1_B+_USIT	65	TX_CH5_B+_USIT	89	UL_CELL
18	CKVB3_GOA	42	TX_CH1_B-_USIT	66	TX_CH5_B-_USIT	90	UH_CELL
19	CKVB4_GOA	43	DGND	67	DGND	91	VDD_17V_PW
20	STVP1_GOA	44	TX_CH2_A+_USIT	68	TX_CH6_A+_USIT	92	VDD_17V_PW
21	LC1_VGP1_GOA	45	TX_CH2_A+_USIT	69	X_CH6_A-_USIT	93	VDD_17V_PW
22	ST_GOA	46	DGND	70	DGND	94	VDD_17V_PW
23	DEMURA_SSPFRM_SPI	47	TX_CH2_B+_USIT	71	TX_CH6_B+_USIT	95	NC
24	DEMURA_SSPCLK_SPI	48	TX_CH2_B-_USIT	72	TX_CH6_B-_USIT	96	FB_TRDY_2

5. Wiring Diagram

7 CN1301_UT(USI-T RIGHT)							
1	FB_TRDY_2	25	DGND	49	DGND	73	ST_GOA
2	NC	26	_CH8_B+_USIT	50	TX_CH12_B+_USIT	74	LC1_VGP1_GOA
3	AVDD_17V_PW	27	TX_CH8_B-_USIT	51	TX_CH12_B-_USIT	75	STVP1_GOA
4	AVDD_17V_PW	28	DGND	52	DGND	76	CKVB4_GOA
5	AVDD_17V_PW	29	TX_CH9_A+_USIT	53	TX_CH13_A+_USIT	77	CKVB3_GOA
6	AVDD_17V_PW	30	TX_CH9_A-_USIT	54	TX_CH13_A-_USIT	78	CKVB2_GOA
7	UH_CELL	31	DGND	55	DGND	79	CKVB1_GOA
8	UL_CELL	32	TX_CH9_B+_USIT	56	TX_CH13_B+_USIT	80	CKV4_GOA
9	HAVDD_8.5V_PW	33	TX_CH9_B-_USIT	57	TX_CH13_B-_USIT	81	CKV3_GOA
10	_CELL	34	DGND	58	DGND	82	CKV2_GOA
11	CELL	35	TX_CH10_A+_USIT	59	TX_CH14_A+_USIT	83	CKV1_GOA
12	VCCB_1.8V_PW	36	TX_CH10_A-_USIT	60	TX_CH14_A-_USIT	84	NC
13	VCCA_1.9V_PW	37	DGND	61	DGND	85	VOFF_-11V_PW
14	PI_DSF_MON	38	TX_CH10_B+_USIT	62	TX_CH14_B+_USIT	86	VSS_OUT2_CELL
15	PORTNUM	39	TX_CH10_B-_USIT	63	TX_CH14_B-_USIT	87	NC
16	DGND	40	DGND	64	DGND	88	VCOM3_CELL
17	NC	41	TX_CH11_A+_USIT	65	TX_CH15_A+_USIT	89	FB_VCOM3_CELL
18	NC	42	TX_CH11_A-_USIT	66	TX_CH15_A-_USIT	90	VCOM2_CELL
19	NC	43	DGND	67	DGND	91	VCOM1_CELL
20	DGND	44	TX_CH11_B+_USIT	68	TX_CH15_B+_USIT	92	BLINK_O
21	SFC1	45	TX_CH11_B-_USIT	69	TX_CH15_B-_USIT	93	PANEL_3.3V_PW
22	DGND	46	DGND	70	DGND	94	PANEL_3.3V_PW
23	TX_CH8_A+_USIT	47	TX_CH12_A+_USIT	71	SFC2	95	FB_TRDY_3
24	TX_CH8_A-_USIT	48	TX_CH12_A-_USIT	72	DGND	96	FB_TRDY_3

5-2-2. SMPS Board

- 55"



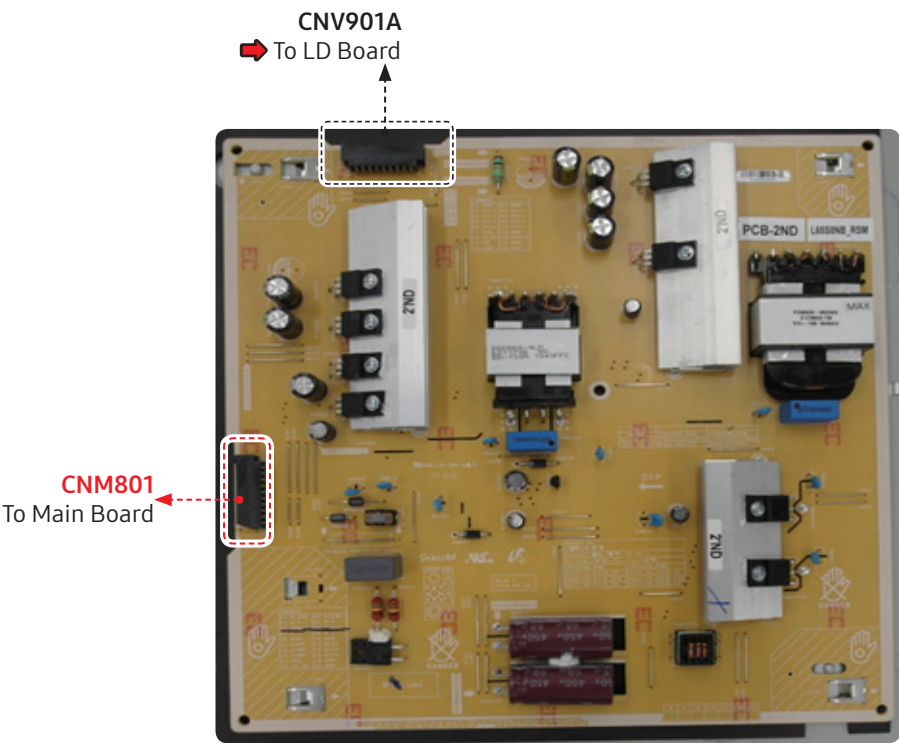
■ SMPS Board Pin Map

CNM801											
1	B_GND	2	b_GND	3	N.C	4	N.C	5	B350V	6	B350V
7	N.C	8	N.C	9	GND	10	GND	11	V AMP	12	B13V
13	V AMP	14	B13V	15	V AMP	16	B13V	17	GND	18	GND
19	PS/ON	20	GND								

CNV901A											
1	GND	2	GND	3	Vdrv	4	Vdrv	5	Vdrv	6	Vdrv
7	Vdrv	8	Vdrv	9	Vdrv	10	Vdrv	11	GND	12	GND
13	b13V	14	FAULT	15	FB	16	GND	17	GND	18	GND

5. Wiring Diagram

- 65"

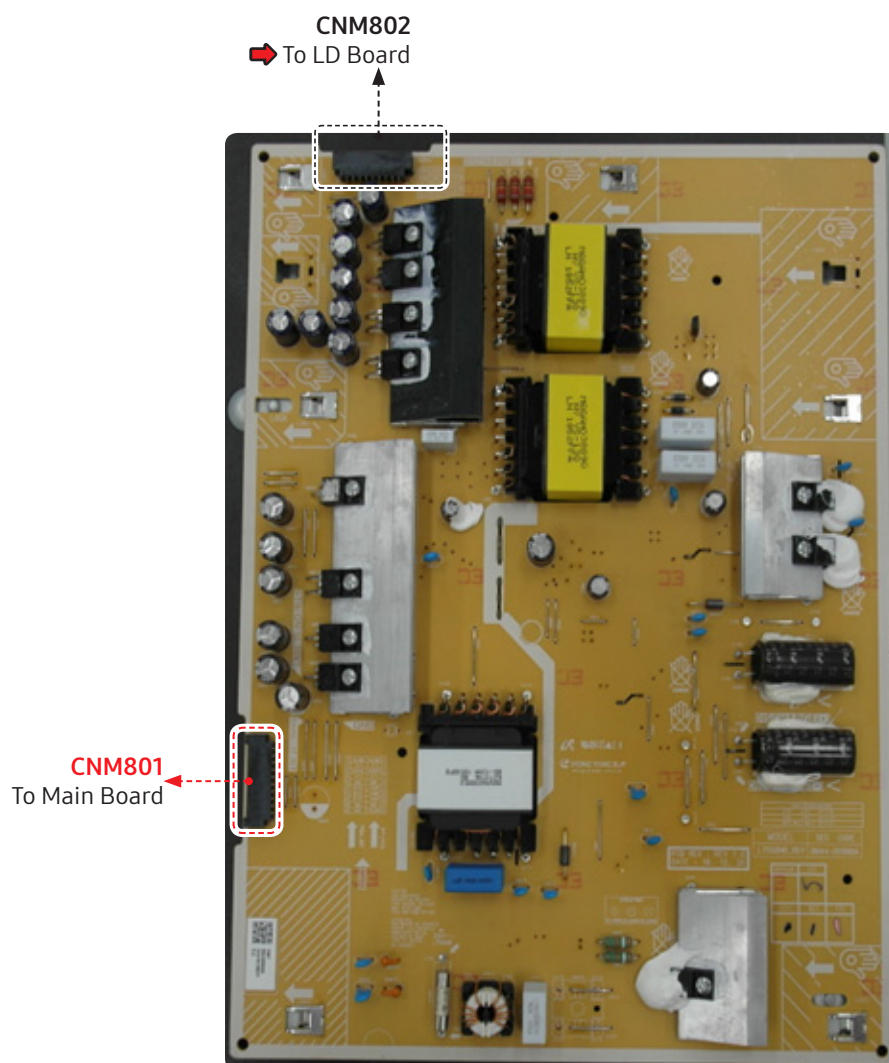


■ SMPS Board Pin Map

CNM801											
1	B_GND	2	b_GND	3	N.C	4	N.C	5	B350V	6	B350V
7	N.C	8	N.C	9	GND	10	GND	11	V AMP	12	B13V
13	V AMP	14	B13V	15	V AMP	16	B13V	17	GND	18	GND
19	PS/ON	20	GND								

CNV901A											
1	GND	2	GND	3	Vdrv	4	Vdrv	5	Vdrv	6	Vdrv
7	Vdrv	8	Vdrv	9	Vdrv	10	Vdrv	11	GND	12	GND
13	b13V	14	FAULT	15	FB	16	GND	17	GND	18	GND

- 75"



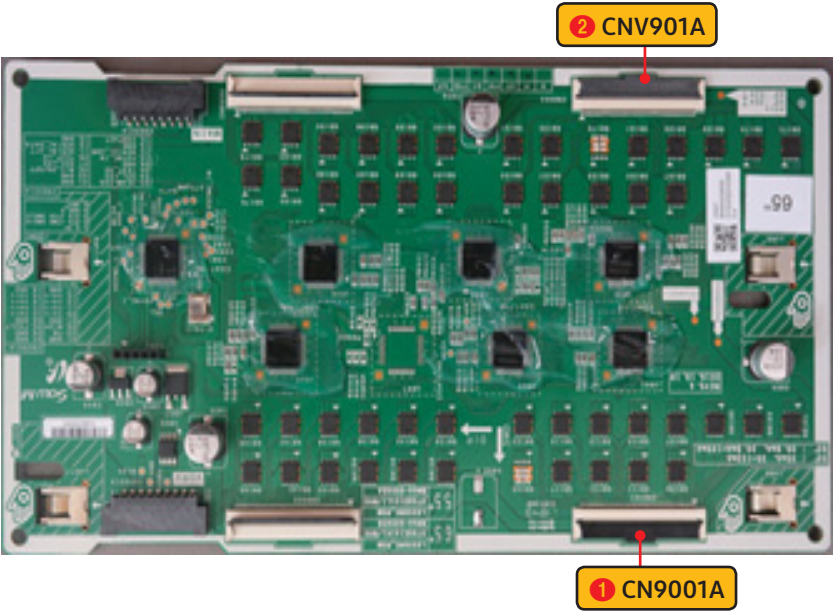
■ SMPS Board Pin Map

CNM801											
1	B_GND	2	b_GND	3	N.C	4	N.C	5	B350V	6	B350V
7	N.C	8	N.C	9	GND	10	GND	11	V AMP	12	B13V
13	V AMP	14	B13V	15	V AMP	16	B13V	17	GND	18	GND
19	PS/ON	20	GND								

CNM802											
1	GND	2	GND	3	Vdrv	4	Vdrv	5	Vdrv	6	Vdrv
7	Vdrv	8	Vdrv	9	Vdrv	10	Vdrv	11	GND	12	GND
13	b13V	14	FAULT	15	FB	16	GND	17	GND	18	GND

5-2-3. LD Board

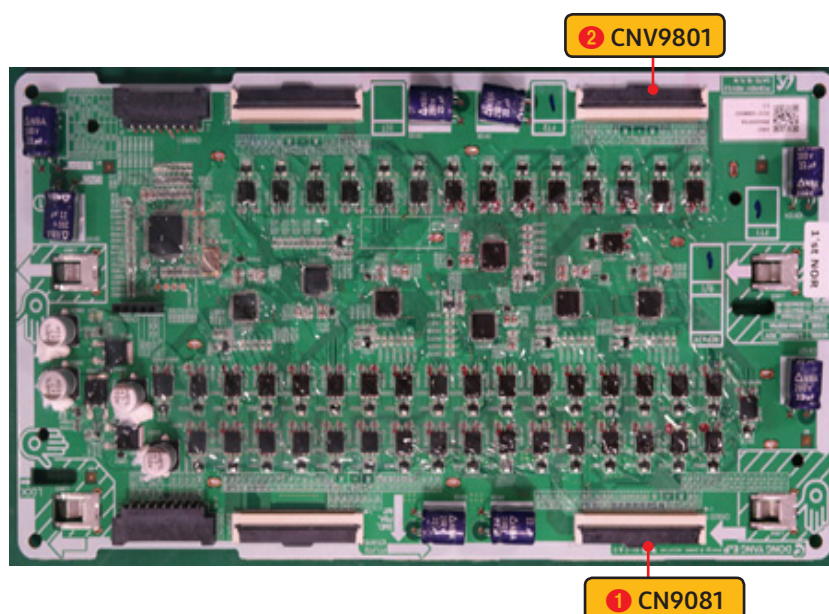
- 55"/65"



■ Main Board Pin Map

1 CN9001A (To Main Board)				2 CNV901A (To SMPS Board)			
1	GND	2	SEAMLESS	1	GND	2	GND
3	GND	4	SCL_LED	3	FB	4	GND
5	BLU On/Off	6	TEST_SD	5	B13V	6	FAULT
7	SDA_LED	8	GND	7	GND	8	GND
9	TEST_LD	10	VSYNC_IN	9	Vdrv	10	Vdrv
11	SERIAL_STT	12	SERIAL_UHR	11	Vdrv	12	Vdrv
13	SERIAL_DATA	14	GND	13	Vdrv	14	Vdrv
15	GND	16	CONTACT	15	Vdrv	16	Vdrv
				17	GND	18	GND

- 75"



■ Main Board Pin Map

1 CN9081 (To Main Board)				2 CNV9801 (To SMPS Board)			
1	GND	2	SEAMLESS	1	GND	2	GND
3	GND	4	SCL_LED	3	FB	4	GND
5	BLU On/Off	6	TEST_SD	5	B13V	6	FAULT
7	SDA_LED	8	GND	7	GND	8	GND
9	TEST_LD	10	VSYNC_IN	9	Vdrv	10	Vdrv
11	SERIAL_STT	12	SERIAL_UHR	11	Vdrv	12	Vdrv
13	SERIAL_DATA	14	GND	13	Vdrv	14	Vdrv
15	GND	16	CONTACT	15	Vdrv	16	Vdrv
				17	GND	18	GND