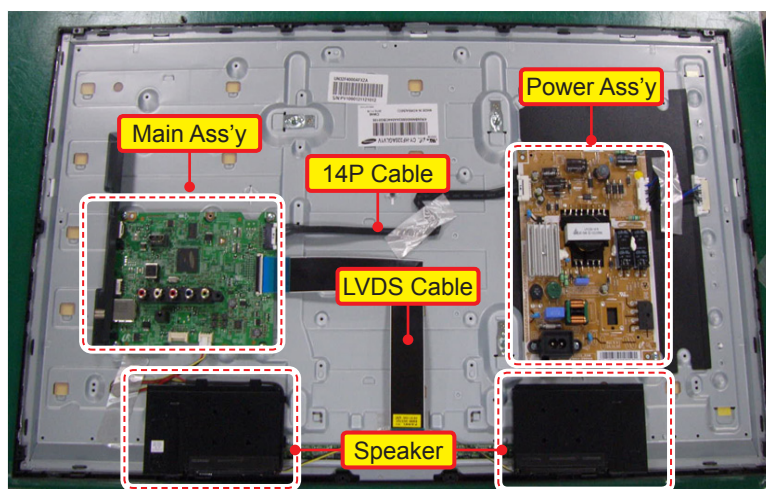


4. Troubleshooting

4-1. Troubleshooting

■ Previous Check

1. Check the various cable connections first.
 - Check to see if there is a burnt or damaged cable.
 - Check to see if there is a disconnected or loose cable connection.
 - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.



Main Board Assy (CN201)			
13	B13V	14	PWM_DIM
11	B13V	12	B13V
9	B13VS	10	SW_INV
7	B13VS	8	GND
5	GND	6	GND
3	B5.3V	4	A5.3V
1	B5.3V	2	SW_PW

Power Board Assy (CNM803)			
14	PS ON/OFF	13	B5V
12	A5V	11	B5V
10	GND	9	GND
8	GND	7	Vamp
6	BLU_ON/OFF	5	Vamp
4	ECO_ON/OFF	3	B13V
2	PWM_DIM	1	B13V

* Change the 14Pin to PWM_DIM(2013 years) from B13V(2012 years)

3. Check the power in & output between IP & Main Board, Main Board & Panel, IP & Panel.

■ How to know it is from Main Board or T-Con when some problems happen

1. No Picture : Backlight is on, but there is no picture and LED indicator in front of TV is blinking.
 - Check the LVDS Cable connection. If still problems, change the T-Con Board and then Main Board step by step.
2. Picture distortion : Enter the service mode → Choose 'SVC' → Check the 'internal pattern.'
 - Enter 'Service Mode.'
 - If you do not have Factory remote control

Power OFF

 →

Info

 →

MENU

 →

Mute

 →

Power On
 - If you have Factory remote control

INFO

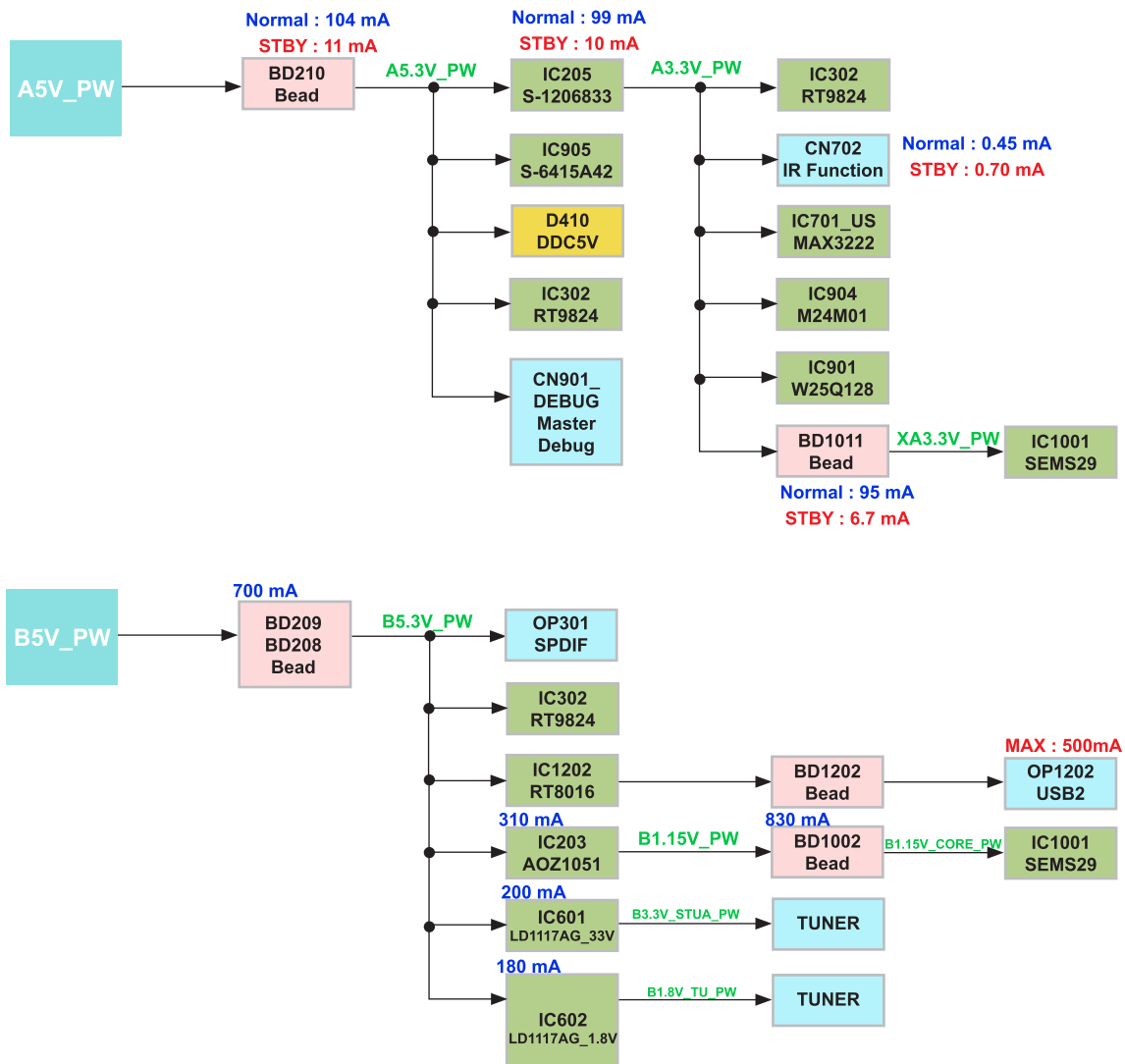
 →

Factory
3. Choose 'SVC.'
4. Choose 'Test pattern.'
5. Select the each pattern and then check all pattern is ok or not.

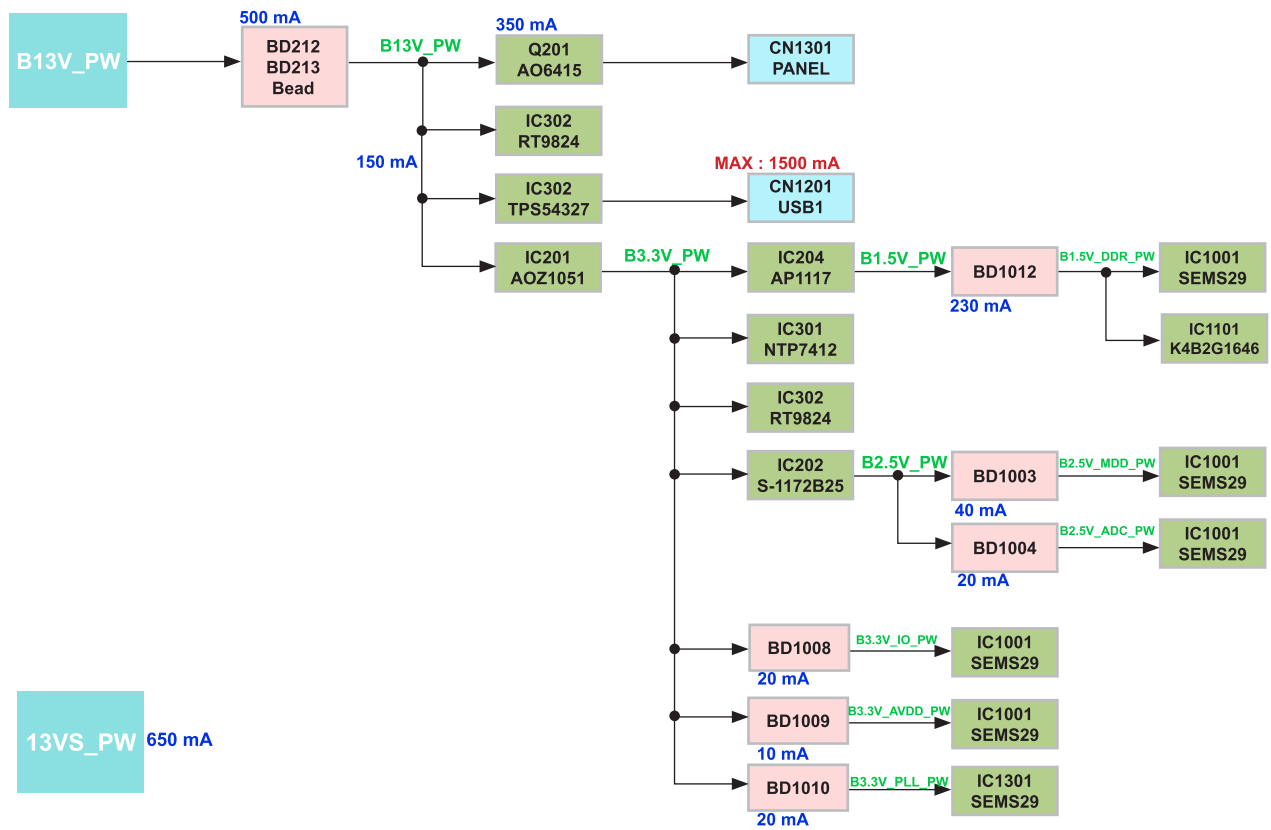


Pattern Status is	Change the	Test Pattern is made by the MSTAR IC
OK	Main Board	We guess front of MSTAR IC has problem.
NG	Panel and T-Con Board	We guess back of MSATR IC has problem.

Power-Tree



Power-Tree

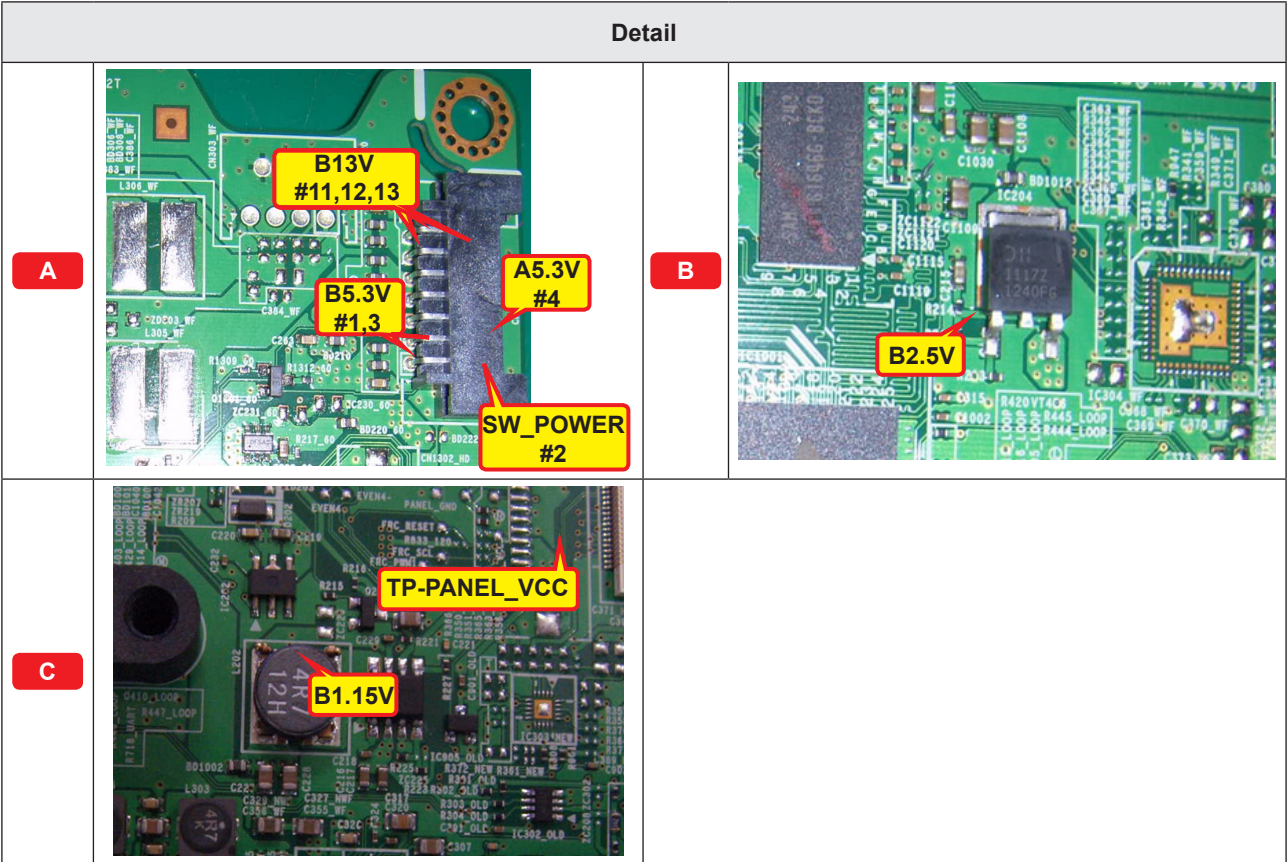
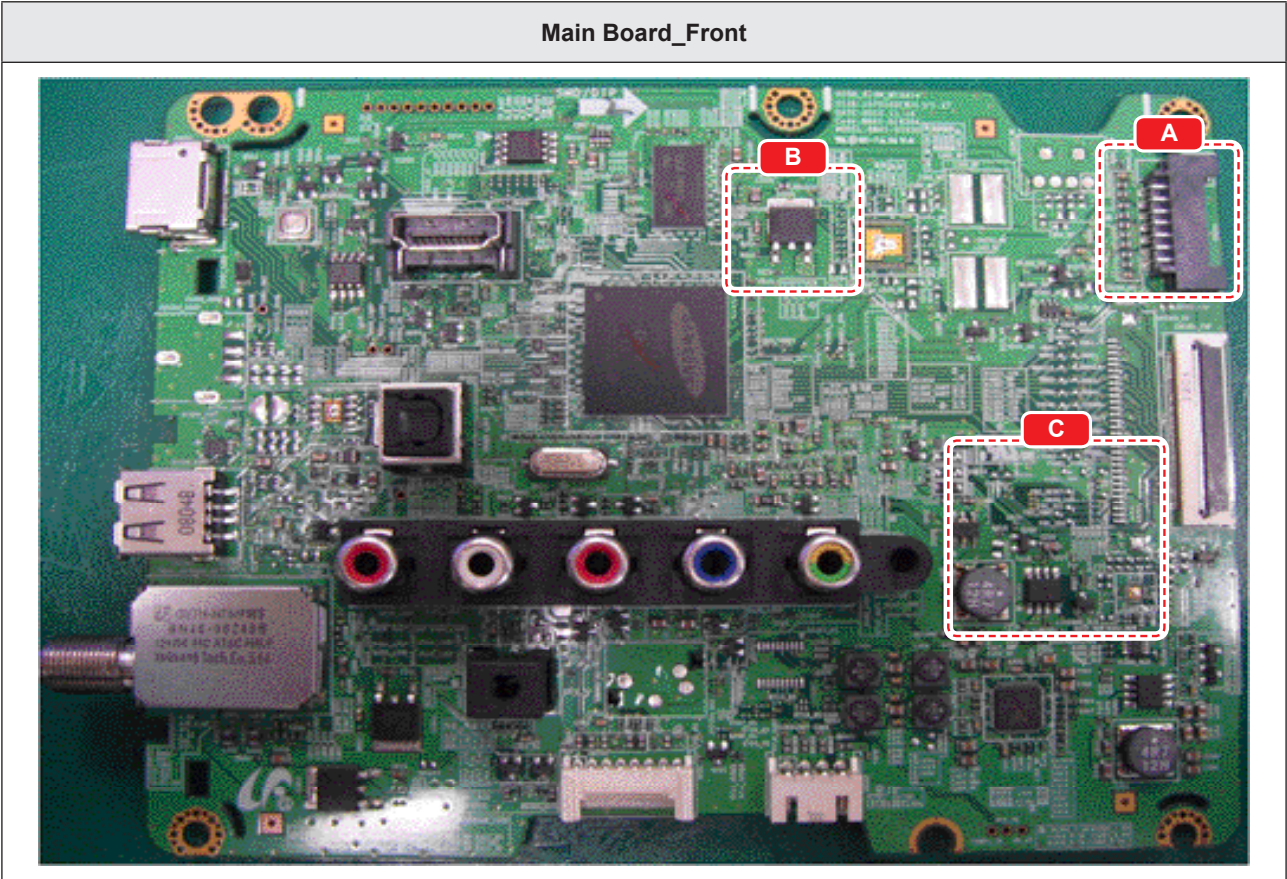


4-2. How to Check Fault Symptom

■ NO Power and No Video

Symptom	- The LEDs on The front panel do not work when connecting The power cord. - The SMPS relay does not work when connecting The power cord. - The units appears to be dead.
Major checkpoints	The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following: - Check the internal cable connection status inside the unit. - Check the fuses of each part. - Check the output voltage of SMPS. - Replace the Main Board.
Diagnostics	<pre> graph TD Start[Power cord on.] -- Yes --> Check1[Check 'Stand-By A5.3V' 5.3V appear at BD210? 5.3V (CN201 #4)] Check1 -- No --> Cause1[Cause : There did not supply the power from SMPS. Measure : Change 14p power cable and SMPS.] Check1 -- Yes --> SetOn[Set On.] SetOn -- Yes --> Check2[Check 'SW_POWER' more than 3.3V appear at CN201(#2) 3.3V↑ (CN201 #2)] Check2 -- No --> Cause2[Cause : Main IC(X13N) did not control the SW_Power. Measure : Change the Main Assy] Check2 -- Yes --> Check3[Check 'Power input of Main Ass'y' ? DC B13V, B5.3V appear at CN201 #11,12,13(B13V) CN201 #1,3 (B5.3V)? 13V (CN201 #11,12,13) 5.3V (CN201 #1,3)] Check3 -- No --> Cause3[Cause : There did not supply the power from SMPS. Measure : Change 14p power cable and SMPS.] Check3 -- Yes --> Check4[Check 'Power of main IC(B1.15V)' Check 'Power of DDR IC(B1.5V)' appear at B1.15V(L202), B1.5V(R214)] Check4 -- No --> Cause4[Cause : There is proble at DCDC(IC203)/LDO(IC204). Measure : Change the Main Assy.] Check4 -- Yes --> Check5[Check 'Power of LVDS (13V)' appear at TP-PANEL_VCC? 13V (TP-PANEL_VCC)] Check5 -- No --> Cause5[Cause : There is proble at FET(Q201_60) or tMain IC(X13N) did not control the SW_PVCC. Measure : Change the Main Assy.] Check5 -- Yes --> Check6[Change the LVDS cable ?] Check6 -- No --> End[Change the Panel.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts



4-3. Factory Mode Adjustments

4-3-1. Detail Factory Option



NOTE

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

■ 5000, 5200

Model Name		U*32F5*00A*	U*40F5*00A*	U*46F5*00A*	U*50F5*00A*
Panel	Vendor	SDC	SDC	SDC	CMI AUO AUO
	Code	BN95-00883A	BN95-00887A	BN95-00891A	BN07-01269A BN07-01278A BN07-01278B
	Spec.	LSF320HN02	LSF400HM02	LSF460HN02	HF500BGM-C1 HF500BGA-B1 HF500BGA-B2
SMPS	Vendor	SEM	SEM	SEM	HANSOL
	Code	BN44-00605A	BN44-00609A	BN44-00610A	BN44-00612B
	Spec.	L32SF_DSM	L42SF_DSM	L46SF_DSM	L55S1_DHS
MAIN ASSY	Chassis Ass'y	BN91-10321R	BN91-10321S	BN91-10321T	BN91-10321U
	PBA Ass'y code	BN94-06177R	BN94-06177S	BN94-06177T	BN94-06177U
Byte	Item				
0	Factory Reset	-	-	-	-
1	Type	32A6AF0S	40A6AF0S	46A6AF0S	50P6AF0S 50R6AF0S 50R6AF0S
2	Model	F5000	F5000	F5000	F5000
3	SVC Model	5000	5000	5000	5000
4	Local Set	BRA/PERU/ COLOMBIA_DTV, TAIWAN/PANAMA	BRA/PERU/ COLOMBIA_DTV, TAIWAN/PANAMA	BRA/PERU/ COLOMBIA_DTV, TAIWAN/PANAMA	BRA/PERU/ COLOMBIA_DTV, TAIWAN/PANAMA
5	Tuner	SI_ISDB	SI_ISDB	SI_ISDB	SI_ISDB
6	Ch Table	NONE	NONE	NONE	NONE

4000, 4200

Model Name		U*32F4*00A*
Panel	Vendor	SDC SHARP
	Code	BN95-00882A BN95-01108A
	Spec.	LSF320AN01 LK315T3HB7K
SMPS	Vendor	SEM
	Code	BN44-00604A
	Spec.	L32S0_DSM
MAIN ASSY	Chassis Ass'y	BN91-10316T
	PBA Ass'y code	BN94-06172T
Byte	Item	
0	Factory Reset	-
1	Type	32A6AH0S 32H6AH0S
2	Model	F4000
3	SVC Model	4000
4	Local Set	BRA/PERU/COLOMBIA_DTV, TAIWAN/ PANAMA
5	Tuner	SI_ISDB
6	Ch Table	NONE

4-3-2. Entering Factory Mode

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

- If you do not have Factory remote control



- If you have Factory remote control



- If you don't have Factory remote control, can't control some menus

■ Initial SERVICE MODE DISPLAY State

Option	T-NVTF6IBRC-1000.1 T-NVTFAUSS-0116
Control	
Debug	
SVC	HDCP : SUCCESS CALIB:HDMI/COMP/PC/AV/
ADC/WB	OPTION:32A6AHOS,BRA,4000,NONE
Advanced	USB Serial:OFF Picture Data:**.**. BuildDate : **._.**. Date Of Purchase : **/**/

4-3-3. Factory Data



Note

- Version of the software is written in 0002.
- Black : I should not be possible to adjust or change that does not require a change item
- Blue : Adjustment Services for the corresponding
- Red : Items that are secured

■ Option

Factory Menu Name	Data	Range	Remark	Key
Factory Reset	-	-		
Type	32A6AH0S	32A6AHOS is only UN32F4000AFXZA	use to change panel	
	32A6AF0S			
	40A6AF0S			
	46A6AF0S			
	50P6AF0S			
Model	UF4000	UF4000/UF5000		
SVC Model	5000			
Local Set	-			
Tuner	SI_ISDB		do not change	
Ch Table	NONE			
Front Color	NONE	NONE/U-S-C-5K		

■ Control

Factory Menu Name	Data	Range	Remark	Key
EDID				
EDID VERSION		HDMI 1.3/HDMI1.2		
Sub Option				
RS-232 Jack	UART	UART/FANET/LOGIC/DEBUG		
USB Serial	Off	On/Off		
Watchdog	Off	On/Off		
Checksum	0x0000			
EEPROM RESET				
ECOIC TYPE	CT802FN			
ready	Off			
TTXLIST	Flof			
TTXGroup	LangOSD			
OPTION_NUM				
Anynet+	Off	on/off		

Factory Menu Name	Data	Range	Remark	Key
HPIdent	High	High/Low		
PCIdent	on	on/off		
OSDResolution	1920*1080			
IgnoreVCTVersion	on	on/off		
ChangeOSDLanguage				
VCRMode	off	on/off		
WallMount Calibration				
Energy Star	on	on/off		
PDP Option				
Hotel Option				
Hotel Mode	off	on/off		
Power On Channel	3			
Power On Band	STD			
Power On Source	ATV			
Power On Volume	10			
Min Volume	0			
Max Volume	100			
Panel Button Lock	Off			
Pic Menu Lock	Off			
Video Mute Ch	1			
Video Mute Ch On/Off	Off			
Music Mode(AV)	Off			
Music Mode(PC)	Off			
Music Mode(Comp)	Off			
Music Mode Backlight	Off			
Menu Display	On			
Power On Opt	Last Option			
Ch Remap On/Off	Off			
Program Ch	3			
Original Ch/Src	3			
Auto PC	Off			
Energy Saving	Off			
Clone:TVtoUSB				
Clone:USBtoTV				
Shop Option				
Shop Mode	off	on/off		
Exhibition Mode	off	on/off		

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
Asia Option				
Sound				
Carrier Mute	on	On/Off		
High Devi	off	On/Off		
Speak Delay Normal	25ms	25~150ms		
SPDIF PCM Gain	-9dB			
FM M Prescale	48			
FM Prescale	68			
AM Prescale	50			
Nicam Prescale	72			
BTSC Mono Prescale	25			
BTSC Stereo Prescale	47			
BTSC SAP Prescale	43			
Pilot Level High Thld	0x20			
Pilot Level Low Thld	0x15			
Carrier2 Amp High Thld	0x04			
Carrier2 Amp Low Thld	0x03			
Carrier2 NSR High Thld	0x10			
Carrier2 NSR Low Thld	0x50			
A2Ident High Thld	0x24			
A2Ident Low Thld	0x09			
Sig Error On	0x23			
Sig Error Off	0x29			
BTSC Stereo High Thld	0x20			
BTSC Stereo Low Thld	0x26			
Amp Model	NTP7412s	NTP7411s/NTP7412s		
Woofer Type	Both			
Main Amp Volume	199			
Center Amp Volume	199			
Woofer Amp Volume	199			
Main Amp Scale	142			
Center Amp Scale	165			
Woofer Amp Scale	138			
Main Speaker EQ	on	On/Off		
Center Speaker EQ	on			
Woofer Speakr EQ	on			
Main Amp Checksum	0x0143C040			
Center Amp Checksum	0X00000000			
Woofer Amp Checksum	0X00000000			

■ Debug

Factory Menu Name	Data	Range	Remark	Key
Spread Spectrum				
Spread Spectrum	On	On/Off		
Period	40K	40K/50K/60K		
Amplitude	1.0	0/0.5/1/1.5/2		
DDR Spread	OFF	Off/1%/2%		
FRC LVDS Spread	on			
FRC LVDS Period	20K			
FRC LVDS Amplitude	1%			
FRC DDR Spread	on			
FRC DDR Period	30k			
FRC DDR Amplitude	0			
RF Mute Time				
RF Mute Time	4			
FRC				
IIC Bus Stop				
Tuner Status				

■ SVC

Factory Menu Name	Data	Range	Remark	Key
Test pattern	Middle	Low/Middle/High/Strong	use to solve HDMI Noise	
Mstar Test Pattern	off			
Mstar Test Pattern	off			
LOGIC Test Patten	off			
FRC Post Pattern	off			
FRC Pre Pattern	off			
Panel Display Time				
Panel Display Time	2Hr			
Delete S/N				
Delete S/N				
Upgrade				
T-CON Download				
ER COUNT				
Watch Dog Count	0			
LOG				
Log View				
OPTION_HDMI				
DVI Sound				

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
DVI Sound				
DVI Sound	0			
HDMI Hotplug				
HDMI Hotplug	on	on/off		
HDMI Hotplug CLK Ctrl				
HDMI Hotplug CLK Ctrl	on	on/off		
HDMI Hot Plug Delay				
HDMI Hot Plug Delay	12			
HDMI EQ1	Middle	Low/Middle/High/Strong		
HDMI EQ2	Middle	Low/Middle/High/Strong		
HDMI EQ3	Middle	Low/Middle/High/Strong		
HDMI EQ4	Middle	Low/Middle/High/Strong		
HDMI Sync	DE	DE/HV		

■ Expert

■ ADC/WB

Factory Menu Name	Data	Range	Remark	Key
ADC				
AV Calibration	Success	Success / Failure		
Comp Calibration				
PC Calibration				
HDMI Calibration				
ADC Target				
1st_AV_Low	16	0~255		
1st_AV_High	220	0~255		
1st_AV_Delta	1	0~255		
1st_COMP_Low	16	0~255		
1st_COMP_High	235	0~255		
1st_COMP_Delta	1	0~255		
1st_PC_Low	2	0~255		
1st_PC_High	251	0~255		
1st_PC_Delta	1	0~255		
2nd_Low	1	0~255		
2nd_High	235	0~255		
2nd_Delta	1	0~255		
ADC Result				
1st_AV_Gain	126			
1st_AV_Offset	153			
1st_Comp_Gain	143			
1st_Comp_Gain_Cb	142			

Factory Menu Name	Data	Range	Remark	Key
1st_Comp_Gain_cr	142			
1st_Comp_Offset	128			
1st_Comp_Offset_Cb	128			
1st_Comp_Offset_Cr	128			
1st_PC_R_Gain	166			
1st_PC_G_Gain	166			
1st_PC_B_Gatin	166			
1st_PC_R_Offset	128			
1st_PC_G_Offset	128			
1st_PC_B_Offset	128			
2nd_R_Offset	132	0~255		
2nd_G_Offset	132	0~255		
2nd_B_Offset	132	0~255		
2nd_R_Gain	70	0~255		
2nd_G_Gain	70	0~255		
2nd_B_Gain	70	0~255		
WB				
Sub Brightness	128	0~255		
R_Offset	128	0~255		
G_Offset	128	0~255		
B_Offset	128	0~255		
Sub Contrast	128	0~255		
R_Gain	128	0~255		
G_Gain	128	0~255		
B_Gain	128	0~255		
W2_R_Offset	128	0~255		
W2_B_Offset	128	0~255		
W2_R_Gain	160	0~255		
W2_B_Gain	66	0~255		
N_R_Offset	128	0~255		
N_B_Offset	128	0~255		
N_R_Gain	147	0~255		
N_B_Gain	108	0~255		
MGA				
MGA On/Off	off	on/off		

■ Advanced

Factory Menu Name	Data	Range	Remark	Key
Sub setting				info+ factory
PWM(Video)				

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
Dynamic Dimming				
LED Peak OnOff				
Delete alt.ver				
OTA				
Power Key Protects				
1080p 48hz				
HDCP Download				
Media Play(USB)				
WB Movie				
W/B MOVIE	off			
Mode	Movie			
Color Tone	Cool			
MultiAcc	off			
Sub Brightness	128			
Sub Contrast	135			
M Sub Brightness	126			
M Sub Contrast	118			
W2_RGAIN	32			
W2_BGAIN	-62			
W2_ROFFS	0			
W2_BOFFS	0			
N_RGAIN	19			
N_BGAIN	-20			
N_ROFFS	0			
N_BOFFS	0			
M_N_RGAIN	0			
M_N_BGAIN	0			
M_N_ROFFS	0			
M_N_BOFFS				
M_W2_RGAIN	0			
M_W2_BGAIN	0			
M_W2_ROFFS	0			
M_W2_BOFFS	0			
Movie Contr	100			
Movie Brigh	45			
Movie Color	55			
Movie Sharp	55			
Movie Tint	0			
Movie BkLight	20			

Factory Menu Name	Data	Range	Remark	Key
Movie Gamma	OFF			
M Sub Gamma	0			
HDMI Black Level	Normal			
Gamma	0.93			
EPA Standard				
Std Contr	100			
Std Bright	45			
Std Sharp	50			
Std Color	50			
Std Tint	50			
Std Backlight	12			
COLOR MAPPING				
A_Red_R	44			
A_Red_G	0			
A_Red_B	0			
A_Green_R	0			
A_Green_G	58			
A_Green_B	0			
A_Blue_R	0			
A_Blue_G	0			
A_Blue_B	50			
A_Yellow_R	55			
A_Yellow_G	50			
A_Yellow_B	0			
A_Cyan_R	0			
A_Cyan_G	47			
A_Cyan_B	40			
A_Magenta_R	52			
A_Magenta_G	0			
A_Magenta_B	62			
N_Red_R	50			
N_Red_G	0			
N_Red_B	0			
N_Green_R	0			
N_Green_G	50			
N_Green_B	5			
N_Blue_R	0			
N_Blue_G	0			
N_Blue_B	50			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
N_Yellow_R	55			
N_Yellow_G	45			
N_Yellow_B	0			
N_Cyan_R	0			
N_Cyan_G	50			
N_Cyan_B	50			
N_Magenta_R	50			
N_Magenta_G	0			
N_Magenta_B	50			
S_Red_R	50			
S_Red_G	0			
S_Red_B	0			
S_Green_R	0			
S_Green_G	50			
S_Green_B	5			
S_Blue_R	0			
S_Blue_G	0			
S_Blue_B	50			
S_Yellow_R	55			
S_Yellow_G	45			
S_Yellow_B	0			
S_Cyan_R	0			
S_Cyan_G	50			
S_Cyan_B	50			
S_Magenta_R	50			
S_Magenta_G	0			
S_Magenta_B	50			
WCE				
WRHue	64			
WRSat	17			
WYHue	74			
WYSat	16			
WGHue	57			
WGSat	16			
WCHue	62			
WCSat	17			
WBHue	64			
WBSat	17			
WMHue	64			

Factory Menu Name	Data	Range	Remark	Key
WMSat	17			
S_WRHue	64			
S_WRSat	16			
S_WYHue	69			
S_WYSat	16			
S_WGHue	61			
S_WGSat	16			
S_WCHue	63			
S_WCSat	16			
S_WBHue	64			
S_WBSat	16			
S_WMHue	64			
S_WMSat	16			
VDEC				
AGC_Manual_Gain	78			
Saturation	145			
SecamFilterSel	0			
RGB_Delay	6			
COM PHASE	128			
SHARPNESS				
Post_H1	26			
Post_H2	28			
Post_H3	20			
Post_H4	16			
Post_V1	26			
Post_V2	26			
D_Tot_Gain	44			
S_Tot_Gain	44			
ENHANCE				
BLE_Gain	15			
D_Sub_Color	75			
D_Skin_Hue	102			
D_Skin_Sat	17			
S_Sub_Color	65			
S_Skin_Hue	102			
S_Skin_Sat	17			
M_Sub_Color	59			
M_Skin_Hue	64			
M_Skin_Sat	16			

4. Troubleshooting

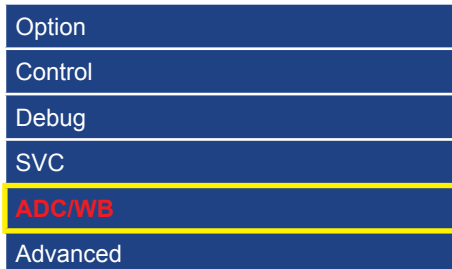
Factory Menu Name	Data	Range	Remark	Key
D Sub Tint	50			
S Sub Tint	50			
M Sub Tint	50			
CE_H_Left_Gain	30			
CE_H_Right_Gain	30			
CE_H_Normal_Gain	-10			
CE_M_Left_Gain	20			
CE_M_Right_Gain	20			
CE_L_Left_Gain	10			
CE_L_Right_Gain	10			
CE_Off_Left_Gain	0			
CE_Off_Right_Gain	0			
LNA_Plus				
SyncTip_Noise	214			
dB0	3			
dB1	4			
dB2	5			
dB3	7			
dB4	9			
dB5	12			
dB6	16			
dB7	28			
LNA+_Yfilter	10			
NR				
Dyn_Off_NR_EN	1			
MOV_Off_NR_EN	0			
PreFilter	0			
FCC				
FCC2_Cb_Target_F	0			
FCC2_Cr_Target_F	0			
FCC2_Gain	4			
FCC3_Cb_Target_F	0			
FCC3_Cr_Target_F	0			
FCC3_Gain	3			
FCC4_Cb_Target_F	0			
FCC4_Cr_Target_F	0			
FCC4_Gain	4			
FCC5_Cb_Target_F	0			
FCC5_Cr_Target_F	0			

Factory Menu Name	Data	Range	Remark	Key
FCC5_Gain	4			
FCC6_Cb_Target_F	0			
FCC6_Cr_Target_F	0			
FCC6_Gain	4			
Clear White	6			
PC_Contrast				
PC_Contrast_Cool	128			
PC_Contrast_Normal	128			
PC_Contrast_Warm1	128			
PC_Contrast_Warm2	128			
YC_Delay				
RF PAL BG	12			
RF PAL DK	12			
RF PAL I	12			
RF PAL M	8			
RF PAL N	10			
RF SECAM BG	6			
RF SECAM DK	6			
RF SECAML	6			
RF NTSC 358	13			
RF NTSC 443	6			
AV PAL	9			
AV PAL M	9			
AV PAL N	8			
AV SECAM	4			
AV NT358	9			
AV NT443	6			
AV PAL60	8			
PQ Others				
7.5 IRE NTSC	OFF	ON/OFF		
7.5 IRE OFFSET	60	0~60		

4-4. White Balance

4-4-1. Calibration

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



ADC

AV Calibration
Comp Calibration
PC Calibration
HDMI Calibration

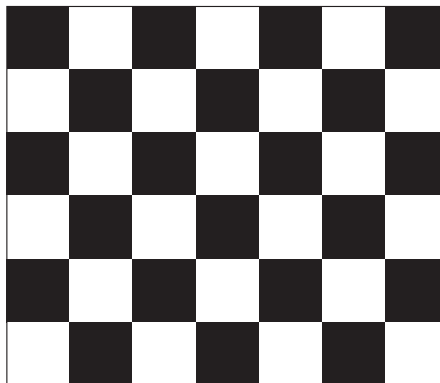
4-4-2. Service Adjustment

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

■ Color Calibration

- Adjust Specification

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



(Chess Pattern)

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

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

■ Method of Color Calibration (AV)

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

■ Method of Color Calibration (Component)

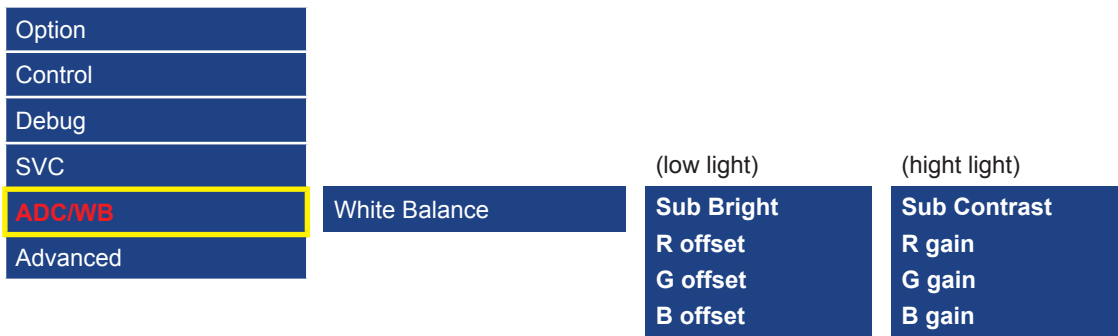
1. Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port.
2. Press the Source key to switch to "Component1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "Comp Calibration" menu.
6. In "Comp Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "Comp Calibration" status from Failure to Success.

■ Method of Color Calibration (HDMI)

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

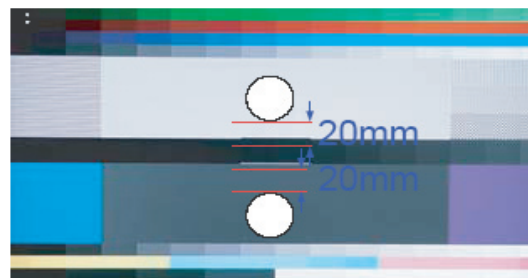
4-4-3. Adjustment

- 1. Into the Factory Mode.
- 2. Select **SVC** Menu.
- 3. Select **ADC/WB** menu.
- 4. Select **White Balance** menu.



4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).
2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.
3. The optimal values for each mode are configured by default. It varies with Panel's size and Specification.
 - Equipment : CS-210
 - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
 - Alternate Equipment : CA200& anyone Master supported pattern#92(refer to right photo)
 - Use other Equipment only after comparing the result with that of the Master equipment.
 - Set Aging time : 60 min



Calibration and Manual setting for WB adjustment

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



Note

If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.

White Balance Manual adjustment

- UN32F40**A*, UN**F50**A*, UA32F40**AM, UA**F50**AM, UN32F42**AG, UN**F52**AG

Type
LED_LOW

RGB Measurement		
Levels	Code	Check
10 IRE	0x01	O
20 IRE	0x02	O
30 IRE	0x03	X
40 IRE	0x04	O
50 IRE	0x05	X
60 IRE	0x06	X
70 IRE	0x07	O
80 IRE	0x08	X
90 IRE	0x09	X
100 IRE	0x0A	O

Panel Inspection Spec.				
Levels	Check	x(±)	y(±)	Gamma(±)
10 IRE	O	0.020	0.020	0.35
20 IRE	O	0.020	0.020	0.35
30 IRE	O	0.020	0.020	0.35
40 IRE	O	0.020	0.020	0.35
50 IRE	O	0.020	0.020	0.35
60 IRE	O	0.020	0.020	NA
70 IRE	O	0.020	0.020	NA
80 IRE	O	0.020	0.020	NA
90 IRE	O	0.020	0.020	NA
100 IRE	O	NA	NA	NA

4. Troubleshooting

Gray Check			Adjust Spec(xyL)			2nd Adjust Spec(xyL)		
Levels	Code	Check	x(±)	y(±)	L(±)	x(±)	y(±)	L(±)
10 IRE	0x01	X	0.007	0.007	0.11	0.007	0.007	0.11
20 IRE	0x02	O	0.007	0.007	0.08	0.007	0.007	0.08
30 IRE	0x03	X	0.007	0.007	0.06	0.007	0.007	0.06
40 IRE	0x04	O	0.005	0.005	0.05	0.005	0.005	0.05
50 IRE	0x05	X	0.005	0.005	0.04	0.005	0.005	0.04
60 IRE	0x06	X	0.005	0.005	0.03	0.005	0.005	0.03
70 IRE	0x07	O	0.004	0.004	0.02	0.004	0.004	0.02
80 IRE	0x08	X	0.004	0.004	0.01	0.004	0.004	0.01
90 IRE	0x09	X	0.004	0.004	0.01	0.004	0.004	0.01
100 IRE	0x0A	X	NA	NA	NA	NA	NA	NA

Target Gamma		2.30	
Black	x	y	Contrast
	0.231	0.208	300000
Target xy	Option	x	y
	Auto	0.282	0.299

Panel Spec.		±	
Gamma	2.2	0.30	20~128
x	0.281	0.030	255
y	0.288	0.030	
ACC x	255 white	0.015	26~255
ACC y	x,y value	0.015	

Color Tone Target			Spec.	
High	x	y	x(±)	y(±)
COOL	0.274	0.286	0.004	0.004
NORMAL	0.293	0.307		
WARM2	0.328	0.353		
Low	x	y	x(±)	y(±)
COOL	NA	NA	NA	NA
NORMAL	NA	NA		
WARM2	NA	NA		

10IRE Gamma target	2.30
RetryCount	3

4-6. Detail Specifications

4-6-1. U*32F40**A*

• General Information

Item	U*32F4000A* / UN32F4200AG
Product	LED
Cabinet Basic Code	FB
Series	4
Series Name	LED F4000
Country	BRAZIL/ PERU / COLOMBIA / TAIWAN / PANAMA
Tools Support	
Platform(TV)	Novatek NT13

• Display

Item	U*32F4000A* / UN32F4200AG
Inch	32
Resolution	1,366 x 768
Ultra Clear Panel	No
Cell Light Series	N/A
Real Black Pro Panel	N/A
Clear Image Panel	N/A
Lvds Format	JEIDA
HV Flip	ON

• Video

Item	U*32F4000A* / UN32F4200AG
Picture Engine	HyperReal Engine
OLED Motion Rate	N/A
Clear Motion Rate	120
600Hz Subfield Motion	N/A
Dynamic Contrast Ratio	Mega Contrast
New Picture Differentiation	N/A
Micro Dimming	No
Cinema Smooth	N/A
Precision Black (Local Dimming)	No
Wide Color Enhancer (Plus)	Yes
Auto Motion Plus 120/240Hz	No
Motion Judder Cancellor	N/A
Film Mode	Yes
Brightness	250nits
Contrast Ratio	3000:1
Picture	Film Mode,HDMI Black Level

4. Troubleshooting

Detail Resolution	60Hz
Response Time	6.5
Viewing Angle (H/V)	178/178
Natural Mode Support	No
Relax Mode Support	N/A

• Audio

Item	U*32F4000A* / UN32F4200AG
Dolby	Dolby Digital Plus / Dolby Pulse
SRS / DNSe+	DTS Studio Sound
dts 2.0+Digital Out / DTS Premium Audio	DTS Premium Audio
3D Sound	No
Sound Customizer	No
Speaker Type	Down Firing + Full Range
Sound Output (RMS)	10W x 2
Woofer	No
Sound	Mono,Stereo,Auto volume,SRS-Trusurround
Sound Amp IC	NeoFidelity NTP7412S
Speaker Volume	10W x 2
Woofer Speaker Volume	N/A
Analog	2Ch
Digital	N/A

• SMART TV Functionality

Item	U*32F4000A* / UN32F4200AG
Samsung SMART TV	N/A
Smart Guide	No
Family Story	No
Movie & TV Shows	No
Fitness	No
Apps	No
Kids	No
Social	No
Automated Content Recognition (ACR)	N/A
Music, Photos & Clip	No
Samsung SMART View	No
Smart Hub	No
Search All	N/A
Your Video	No
Social TV	N/A
Samsung Sports Experience (SSE)	No
Samsung Apps	N/A

Smart Scene	No
Skype™ on Samsung TV	N/A
Web Browser	No
AllShare Control	No
Recommendation Bar	No

- VESA Standard**

Item	U*32F4000A* / UN32F4200AG
Samsung SMART TV	M8

- Smart Interaction**

Item	U*32F4000A* / UN32F4200AG
Camera Built-in	No
Face Recognition	No
Hand Gesture Recognition	No
Voice Recognition (Embedded)	No
Voice Recognition (Server)	No
VM App	N/A
NLU (Natural Language Understanding)	No
Camera App	No
HM App	N/A
Samsung TV Apps supported	No

- Feature**

Item	U*32F4000A* / UN32F4200AG
Samsung 3D	No
3D Converter	No
Dual View	N/A
Samsung One Line	N/A
History	No
MultiTasking	No
Smart Phone Remote support	No
Smart Evolution Support	No
Extended PVR	No
Time Shift	No
Allshare Play	No
AllShare Cloud Storage	N/A
ConnectShare™ (USB2.0)	Movie
AllShare Cast	No
RUI	No
RVU	No
WiFi Direct	No
Wireless LAN Built-in	No

4. Troubleshooting

Wireless LAN Adaptor Support	No
ISP Bound Service	No
BT HID Built-in	No
USB HID Support	No
OSD Language	Local Languages
Samsung IR Blaster Support	N/A
User Interface	Golden Bridge Lite
Digital Noise Filter	Yes
Analog Signal Booster	N/A
Network Speaker Support	No
MHL	No
Sound Share	No
WiDi	No
Regional EQ	N/A
InstaPort S (HDMI quick switch)	No
HDMI 1.4 3D Auto Setting	No
HDMI 1.4 A/Return Ch. Support	No
EPG	No
Analog Clean View	N/A
HbbTV	N/A
Teletext (TTX)	No
Triple Protector	N/A
Miracast	No
Anynet+ (HDMI-CEC)	No
BD Wise Plus	No
Auto Channel Search	Yes
Auto Power Off	Yes
Auto Volume Leveler	Yes
Caption (Subtitle)	Yes
2 Tuner	No
Clock&On/Off Timer	Yes
Game Mode	Yes
Battery Ready	N/A
Picture-In-Picture	No
Sleep Timer	Yes
Screen Burn Protection	N/A
Channel List USB-Clone	N/A
V-Chip	Yes
Embedded POP	Yes
Calibration Mode	N/A
Channel	Auto Store,Signal Level,Fine Tune
Plug&Play	Yes

Child Lock	Yes
Sports Mode	No
Paratal Lock	No
Kids Lock	N/A
Media Play(USB & DLNA)	Yes
Bluetooth	No
Home Network Centre	No
Zero Stand-By Power	N/A
USB Copy	N/A
ACS	N/A
IP Video Closed Caption	No

- Additional Feature**

Item	U*32F4000A* / UN32F4200AG
Self Diagnosis	Yes
Software Upgrade	Yes
HD Connection Guide	Yes
Contact Samsung	Yes

- S/W**

Item	U*32F4000A* / UN32F4200AG
MCU	NT13 (NT72569)
OS	N/A

- System**

Item	U*32F4000A* / UN32F4200AG
DTV Tuner	ISDB-T
Analog Tuner	Yes
CI/CI+	N/A
MHP / MHEG (version) / ACAP	N/A
NTSC 3.58	Yes
NTSC 4.43, VIT	N/A
PAL-B/G, D/K, I, I/I'	N/A
Scan Type	N/A
SECAM-B/G, D/K	N/A
SECAM-B/G, D/K, L/L`	N/A
Trinorma (PAL M,N)	N/A
Broadcast System	N/A
ATV Sound System	M
DTV Video System	ISDB-T
DTV Sound System	Dolby
Tuner Vendor & Model	Xuguang BN40-00250B

4. Troubleshooting

• Core Component

Item	U*32F4000A* / UN32F4200AG
DDR SDRAM	Samsung
Nand Flash Memory	N/A
OneNand Flash Memory	N/A
FlexOneNand Flash Memory	N/A
Serial Flash Memory	WINBOND
HDMI Switch	N/A
Display Device Vender	AMLCD

• Input & Output

Item	U*32F4000A* / UN32F4200AG
HDMI	2
Resolution	640 x 480p, 1280 x 720p 60, 1366 x 768p
DVI Port	Port1 Type
PC Resolution	1360 x 768 60 Hz
MHL Port	N/A
HDMI/DVI SEL	N/A
USB	1
Port 1 Type	Host
Port 2 Type	N/A
Port 3 Type	N/A
Port 4 Type	N/A
Port 5 Type	N/A
OS	N/A
Component In (Y/Pb/Pr)	1
Composite In (AV)	1 (Common Use for Component Y)
Ethernet (LAN)	No
Headphone	No
Digital Audio Out (Optical)	1
Audio Out (Mini Jack / LR)	1
PC In (D-sub)	No
PC Audio In (Mini Jack)	No
DVI Audio In (Mini Jack)	No
RF In (Terrestrial/Cable Input)	1
RF In (Satellite Input)	No
RS232C (AV CONTROL)	No
CI Slot	N/A
Scart	N/A
Port 1 Type	N/A
Port 2 Type	N/A
Port 3 Type	N/A
Port 4 Type	N/A

Port 5 Type	N/A
Coaxial	N/A
EX-Link	N/A
Monitor Output	Yes
DVI	
Resolution	N/A
DVI Port	N/A
PC Resolution	N/A N/A
D-Sub Resolution	N/A N/A

- Design**

Item	U*32F4000A* / UN32F4200AG
Design	RHCM
Bezel Type	NNB
Slim Type	Slim 1
Front Color	Black
Light Effect (Deco)	No
Stand Type	Square
Swivel (Left/Right)	No
Push & Pull Camera	N/A
Design Name	N/A
Design	Steam Mold
Front Resin	PC+ABS-GF15%
Stand Packing Type	Bundle

- Eco**

Item	U*32F4000A* / UN32F4200AG
Energy Efficiency Class	TBD
Eco Mark	Planet First
Eco Label	N/A
Eco Sensor	No

- Power**

Item	U*32F4000A* / UN32F4200AG
Power Supply (V)	AC100-240V 50/60Hz
Power Consumption (Max)	TBD
Power Consumption (Energy Saving Mode)	TBD
Power Consumption (Stand-by)	TBD
Power Consumption (IEC 62087 Edition 2)	N/A
Peak Luminance Ratio	N/A
Yearly Power Consumption (EU standard)	N/A
AC Power Voltage & Frequency	60Hz
SMPS/IP Board	SEM

4. Troubleshooting

- **Security**

Item	U*32F4000A* / UN32F4200AG
Kensington Lock	Yes

- **Dimension (WxHxD)**

Item	U*32F4000A*
Set Size without Stand (mm)	737.9*435.8*49.5
Set Size with Stand (mm)	737.9*479.0*252.6
Package Size (mm)	985.0*514.0*143.0

- **Weight**

Item	U*32F4000A* / UN32F4200AG
Set Weight without Stand (kg)	5
Set Weight with Stand (kg)	6.5
Package Weight (kg)	8.5

- **Loading Quantity**

Item	U*32F4000A* / UN32F4200AG
20/40Ft	320/672

- **Accessory**

Item	U*32F4000A* / UN32F4200AG
3D Active Glasses (Included)	No
IR Blaster (Included)	No
Wireless LAN Adaptor (Included)	No
Network Speaker (Included)	No
MOIP Camera (Included)	No
Wireless Keyboard (Included)	No
Battery Pack (for Battery Ready TV)	N/A
Remote Controller Model	TM1240
Battery (for Remote Control)	Yes
Mini Wall Mount Support	Yes
Ultra Slim Wall Mount Support	No
VESA Wall Mount Support	Yes
Electric Wall Mount Support	N/A
Electric Stand Support	N/A
Slim Gender Cable	No
ANT-Cable	No
Power Cable	Yes
User Manual	Yes
E-Manual	No
Floor Stand Support	No

- License

Item	U*32F4000A* / UN32F4200AG
Oracle JAVA	NO
Universal Remote Control	NO
MS DRM	NO
Movie Codec	DivX

4-6-2. UN**F50**A*

- General Information

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Product	LED	LED	LED	LED
Cabinet Basic Code	FF	FF	FF	FF
Series	5	5	5	5
Series Name	LED F5000	LED F5000	LED F5000	LED F5000
Country	BRAZIL/ PERU / COLOMBIA / TAIWAN / PANAMA	BRAZIL/ PERU / COLOMBIA / TAIWAN / PANAMA	BRAZIL/ PERU / COLOMBIA / TAIWAN / PANAMA	BRAZIL/ PERU / COLOMBIA / TAIWAN / PANAMA
Tools Support				
Platform(TV)	Novatek NT13	Novatek NT13	Novatek NT13	Novatek NT13

- Display

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Inch	32	40	46	50
Resolution	1,920 x 1,080	1,920 x 1,080	1,920 x 1,080	1,920 x 1,080
Ultra Clear Panel	No	No	No	No
Cell Light Series	N/A	N/A	N/A	N/A
Real Black Pro Panel	N/A	N/A	N/A	N/A
Clear Image Panel	N/A	N/A	N/A	N/A
Lvds Format	JEIDA	JEIDA	JEIDA	JEIDA
HV Flip	ON	ON	ON	ON

- Video

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Picture Engine	HyperReal Engine	HyperReal Engine	HyperReal Engine	HyperReal Engine
OLED Motion Rate	N/A	N/A	N/A	N/A
Clear Motion Rate	120	120	120	TBD
600Hz Subfield Motion	N/A	N/A	N/A	N/A
Dynamic Contrast Ratio	Mega Contrast	Mega Contrast	Mega Contrast	Mega Contrast

4. Troubleshooting

New Picture Differentiation	N/A	N/A	N/A	N/A
Micro Dimming	No	No	No	No
Cinema Smooth	N/A	N/A	N/A	N/A
Precision Black (Local Dimming)	No	No	No	No
Wide Color Enhancer (Plus)	Yes	Yes	Yes	Yes
Auto Motion Plus 120/240Hz	No	No	No	No
Motion Judder Cancellor	N/A	N/A	N/A	N/A
Film Mode	Yes	Yes	Yes	Yes
Brightness	300nits	300nits	300nits	300nits
Contrast Ratio	4000:1	4000:1	4000:1	4000:1
Picture	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level
Detail Resolution	60Hz	60Hz	60Hz	60Hz
Response Time	6.5	6.5	6.5	6.5
Viewing Angle (H/V)	178/178	178/178	178/178	178/178
Natural Mode Support	Yes	Yes	Yes	Yes
Relax Mode Support	N/A	N/A	N/A	N/A

• Audio

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Dolby	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse
SRS / DNSe+	DTS Studio Sound	DTS Studio Sound	DTS Studio Sound	SRS TheaterSound
dts 2.0+Digital Out / DTS Premium Audio	DTS Premium Audio	DTS Premium Audio	DTS Premium Audio	DTS 2.0 + Digital Out
3D Sound	No	No	No	No
Sound Customizer	No	No	No	No
Speaker Type	Down Firing + Full Range	Down Firing + Full Range	Down Firing + Full Range	Down Firing + Full Range
Sound Output (RMS)	10Wx2	10Wx2	10Wx2	10Wx2
Woofer	No	No	No	No
Sound	Mono,Stereo,Auto volume,SRS-Trusurround	Mono,Stereo,Auto volume,SRS-Trusurround	Mono,Stereo,Auto volume,SRS-Trusurround	Mono,Stereo,Auto volume,SRS-Trusurround
Sound Amp IC	NeoFidelity NTP7412S	NeoFidelity NTP7412S	NeoFidelity NTP7412S	NeoFidelity NTP7412S
Speaker Volume	10W x 2	10W x 2	10W x 2	10W x 2
Woofer Speaker Volume	N/A	N/A	N/A	N/A
Analog	2Ch	2Ch	2Ch	2Ch
Digital	N/A	N/A	N/A	N/A

• SMART TV Functionality

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Samsung SMART TV	N/A	N/A	N/A	N/A
Smart Guide	No	No	No	No
Family Story	No	No	No	No
Movie & TV Shows	No	No	No	No
Fitness	No	No	No	No
Apps	No	No	No	No
Kids	No	No	No	No
Social	No	No	No	No
Automated Content Recognition (ACR)	N/A	N/A	N/A	N/A
Music, Photos & Clip	No	No	No	No
Samsung SMART View	No	No	No	No
Smart Hub	No	No	No	No
Search All	N/A	N/A	N/A	N/A
Your Video	No	No	No	No
Social TV	N/A	N/A	N/A	N/A
Samsung Sports Experience (SSE)	No	No	No	No
Samsung Apps	N/A	N/A	N/A	N/A
Smart Scene	No	No	No	No
Skype™ on Samsung TV	N/A	N/A	N/A	N/A
Web Browser	No	No	No	No
AllShare Control	No	No	No	No
Recommendation Bar	No	No	No	No

• VESA Standard

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Screw Size	M8	M8	M8	M8e

• Smart Interaction

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Camera Built-in	No	No	No	No
Face Recognition	No	No	No	No
Hand Gesture Recognition	No	No	No	No
Voice Recognition (Embedded)	No	No	No	No
Voice Recognition (Server)	No	No	No	No

4. Troubleshooting

VM App	N/A	N/A	N/A	N/A
NLU (Natural Language Understanding)	No	No	No	No
Camera App	No	No	No	No
HM App	N/A	N/A	N/A	N/A
Samsung TV Apps supported	No	No	No	No

• Feature

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Samsung 3D	No	No	No	No
3D Converter	No	No	No	No
Dual View	N/A	N/A	N/A	N/A
Samsung One Line	N/A	N/A	N/A	N/A
History	No	No	No	No
MultiTasking	No	No	No	No
Smart Phone Remote support	No	No	No	No
Smart Evolution Support	No	No	No	No
Extended PVR	No	No	No	No
Time Shift	No	No	No	No
Allshare Play	No	No	No	No
AllShare Cloud Storage	N/A	N/A	N/A	N/A
ConnectShare™ (USB2.0)	Movie	Movie	Movie	Movie
AllShare Cast	No	No	No	No
RUI	No	No	No	No
RVU	No	No	No	No
WiFi Direct	No	No	No	No
Wireless LAN Built-in	No	No	No	No
Wireless LAN Adaptor Support	No	No	No	No
ISP Bound Service	No	No	No	No
BT HID Built-in	No	No	No	No
USB HID Support	No	No	No	No
OSD Language	Local Languages	Local Languages	Local Languages	Local Languages
Samsung IR Blaster Support	N/A	N/A	N/A	N/A
User Interface	Golden Bridge Lite	Golden Bridge Lite	Golden Bridge Lite	Golden Bridge Lite
Digital Noise Filter	Yes	Yes	Yes	Yes
Analog Signal Booster	N/A	N/A	N/A	N/A

Network Speaker Support	No	No	No	No
MHL	No	No	No	No
Sound Share	No	No	No	No
WiDi	No	No	No	No
Regional EQ	N/A	N/A	N/A	N/A
InstaPort S (HDMI quick switch)	No	No	No	No
HDMI 1.4 3D Auto Setting	No	No	No	No
HDMI 1.4 A/ Return Ch. Support	No	No	No	No
EPG	No	No	No	No
Analog Clean View	N/A	N/A	N/A	N/A
HbbTV	N/A	N/A	N/A	N/A
Teletext (TTX)	No	No	No	No
Triple Protector	N/A	N/A	N/A	N/A
Miracast	No	No	No	No
Anynet+ (HDMI-CEC)	No	No	No	No
BD Wise Plus	No	No	No	No
Auto Channel Search	Yes	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes	Yes
Auto Volume Leveler	Yes	Yes	Yes	Yes
Caption (Subtitle)	Yes	Yes	Yes	Yes
2 Tuner	No	No	No	No
Clock&On/Off Timer	Yes	Yes	Yes	Yes
Game Mode	Yes	Yes	Yes	Yes
Battery Ready	N/A	N/A	N/A	N/A
Picture-In-Picture	No	No	No	No
Sleep Timer	Yes	Yes	Yes	Yes
Screen Burn Protection	N/A	N/A	N/A	N/A
Channel List USB-Clone	N/A	N/A	N/A	N/A
V-Chip	Yes	Yes	Yes	Yes
Embedded POP	Yes	Yes	Yes	Yes
Calibration Mode	N/A	N/A	N/A	N/A
Channel	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune
Plug&Play	Yes	Yes	Yes	Yes
Child Lock	Yes	Yes	Yes	Yes
Sports Mode	No	No	No	No

4. Troubleshooting

Paratal Lock	No	No	No	No
Kids Lock	N/A	N/A	N/A	N/A
Media Play(USB & DLNA)	Yes	Yes	Yes	Yes
Bluetooth	No	No	No	No
Home Network Centre	No	No	No	No
Zero Stand-By Power	N/A	N/A	N/A	N/A
USB Copy	N/A	N/A	N/A	N/A
ACS	N/A	N/A	N/A	N/A
IP Video Closed Caption	N/A	N/A	N/A	N/A

• Additional Feature

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Self Diagnosis	Yes	Yes	Yes	Yes
Software Upgrade	Yes	Yes	Yes	Yes
HD Connection Guide	Yes	Yes	Yes	Yes
Contact Samsung	Yes	Yes	Yes	Yes

• S/W

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
MCU	NT13 (NT72569)	NT13 (NT72569)	NT13 (NT72569)	NT13 (NT72569)
OS	N/A	N/A	N/A	N/A

• System

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
DTV Tuner	ISDB-T	ISDB-T	ISDB-T	ISDB-T
Analog Tuner	Yes	Yes	Yes	Yes
CI/CI+	N/A	N/A	N/A	N/A
MHP / MHEG (version) / ACAP	N/A	N/A	N/A	N/A
NTSC 3.58	Yes	Yes	Yes	Yes
NTSC 4.43, VIT	N/A	N/A	N/A	N/A
PAL-B/G, D/K, I, I'	N/A	N/A	N/A	N/A
Scan Type	N/A	N/A	N/A	N/A
SECAM-B/G, D/K	N/A	N/A	N/A	N/A
SECAM-B/G, D/K, L/L'	N/A	N/A	N/A	N/A
Trinorma (PAL M,N)	N/A	N/A	N/A	N/A

Broadcast System	N/A	N/A	N/A	N/A
ATV Sound System	M	M	M	M
DTV Video System	ISDB-T	ISDB-T	ISDB-T	ATSC
DTV Sound System	Dolby	Dolby	Dolby	Dolby
Tuner Vendor & Model	Xuguang BN40-00250B	Xuguang BN40-00250B	Xuguang BN40-00250B	Xuguang BN40-00250B

• Core Component

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
DDR SDRAM	Samsung	Samsung	Samsung	Samsung
Nand Flash Memory	N/A	N/A	N/A	N/A
OneNand Flash Memory	N/A	N/A	N/A	N/A
FlexOneNand Flash Memory	N/A	N/A	N/A	N/A
Serial Flash Memory	WINBOND	WINBOND	WINBOND	WINBOND
HDMI Switch	N/A	N/A	N/A	N/A
Display Device Vender	AMLCD	AMLCD	AMLCD	AMLCD

• Input & Output

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
HDMI	2	2	2	2
Resolution	640 x 480p, 1920 x 1080i 60, 1280 x 720p 60	640 x 480p, 1920 x 1080i 60, 1280 x 720p 60	640 x 480p, 1920 x 1080i 60, 1280 x 720p 60	640 x 480p, 1920 x 1080i 60, 1280 x 720p 60
DVI Port	Port1 Type	Port1 Type	Port1 Type	Port1 Type
Optimal PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz
MHL Port	N/A	N/A	N/A	N/A
HDMI/DVI SEL	N/A	N/A	N/A	N/A
USB	1	1	1	1
Port 1 Type	Host	Host	Host	Host
Port 2 Type	N/A	N/A	N/A	N/A
Port 3 Type	N/A	N/A	N/A	N/A
Port 4 Type	N/A	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A	N/A
OS	N/A	N/A	N/A	N/A
Component In (Y/Pb/Pr)	1	1	1	1
Composite In (AV)	1 (Common Use for Component Y)	1 (Common Use for Component Y)	1 (Common Use for Component Y)	1 (Common Use for Component Y)
Ethernet (LAN)	No	No	No	No
Headphone	No	No	No	No

4. Troubleshooting

Digital Audio Out (Optical)	1	1	1	1
Audio Out (Mini Jack / LR)	1	1	1	1
PC In (D-sub)	No	No	No	No
PC Audio In (Mini Jack)	No	No	No	No
DVI Audio In (Mini Jack)	No	No	No	No
RF In (Terrestrial/Cable Input)	1	1	1	1
RF In (Satellite Input)	No	No	No	No
RS232C (AV CONTROL)	No	No	No	No
CI Slot	N/A	N/A	N/A	N/A
Scart	N/A	N/A	N/A	N/A
Port 1 Type	N/A	N/A	N/A	N/A
Port 2 Type	N/A	N/A	N/A	N/A
Port 3 Type	N/A	N/A	N/A	N/A
Port 4 Type	N/A	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A	N/A
Coaxial	N/A	N/A	N/A	N/A
EX-Link	N/A	N/A	N/A	N/A
Monitor Output	N/A	N/A	N/A	N/A
DVI				
Resolution	N/A	N/A	N/A	N/A
DVI Port	N/A	N/A	N/A	N/A
PC Resolution	N/A N/A	N/A N/A	N/A N/A	N/A N/A
D-Sub Resolution	N/A N/A	N/A N/A	N/A N/A	N/A N/A

• Design

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Design	RHCM	RHCM	RHCM	RHCM
Bezel Type	NNB	NNB	NNB	NNB
Slim Type	Slim 1	Slim 1	Slim 1	Slim 1
Front Color	Black	Black	Black	Black
Light Effect (Deco)	No	No	No	No
Stand Type	Square	Square	Square	Square
Swivel (Left/ Right)	No	No	No	No
Push & Pull Camera	N/A	N/A	N/A	N/A
Design Name	N/A	N/A	N/A	N/A
Design	Steam Mold	Steam Mold	Steam Mold	Steam Mold

Front Resin	PC+ABS+GF15%	PC+ABS+GF15%	PC+ABS+GF15%	PC+ABS+GF15%
Stand Packing Type	Bundle	Bundle	Bundle	Bundle

- Eco**

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Energy Efficiency Class	TBD	TBD	TBD	TBD
Eco Mark	Planet First	Planet First	Planet First	Planet First
Eco Label	N/A	N/A	N/A	N/A
Eco Sensor	Yes	Yes	Yes	Yes

- Power**

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Power Supply (V)	AC100-240V 50/60Hz	AC100-240V 50/60Hz	AC100-240V 50/60Hz	AC100-240V 50/60Hz
Power Consumption (Max)	TBD	TBD	TBD	TBD
Power Consumption (Energy Saving Mode)	TBD	TBD	TBD	TBD
Power Consumption (Stand-by)	TBD	TBD	TBD	TBD
Power Consumption (IEC 62087 Edition 2)	N/A	N/A	N/A	N/A
Peak Luminance Ratio	N/A	N/A	N/A	N/A
Yearly Power Consumption (EU standard)	N/A	N/A	N/A	N/A
AC Power Voltage & Frequency	60Hz	60Hz	60Hz	60Hz
SMPS/IP Board	SEM	SEM	SEM	SEM

- Security**

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Kensington Lock	Yes	Yes	Yes	Yes

- Dimension (WxHxD)**

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Set Size without Stand (mm)	738.2*445.4*49.0	928.2*552.3*49.4	1059.6*626.2*49.4	1135.4*668*49.8

4. Troubleshooting

Set Size with Stand (mm)	738.0*505.8*191.7	928.2*612.2*235.0	1059.6*686.1*235	1135.4*727.9*235
Package Size (mm)	919*514*143	1160*616*147	1309*721*158	.

• Weight

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Set Weight without Stand (kg)	5.8	8.7	12.5	.
Set Weight with Stand (kg)	6.5	10	14.3	.
Package Weight (kg)	8	12.5	16.4	.

• Loading Quantity

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
20/40Ft	354/704	198/414	165/345	.

• Accessory

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
3D Active Glasses (Included)	No	No	No	No
IR Blaster (Included)	No	No	No	No
Wireless LAN Adaptor (Included)	No	No	No	No
Network Speaker (Included)	No	No	No	No
MOIP Camera (Included)	No	No	No	No
Wireless Keyboard (Included)	No	No	No	No
Battery Pack (for Battery Ready TV)	N/A	N/A	N/A	N/A
Remote Controller Model	TM1240	TM1240	TM1240	TM1240
Battery (for Remote Control)	Yes	Yes	Yes	Yes
Mini Wall Mount Support	Yes	Yes	Yes	Yes
Ultra Slim Wall Mount Support	No	No	No	No
VESA Wall Mount Support	Yes	Yes	Yes	Yes
Electric Wall Mount Support	N/A	N/A	N/A	N/A
Electric Stand Support	N/A	N/A	N/A	N/A
Slim Gender Cable	No	No	No	No

ANT-Cable	No	No	No	No
Power Cable	Yes	Yes	Yes	Yes
User Manual	Yes	Yes	Yes	Yes
E-Manual	No	No	No	No
Floor Stand Support	No	No	No	No

- **License**

Item	U*32F5000A* UN32F5200AG	U*40F5000A* UN40F5200AG	U*46F5000A* UN46F5200AG	UF5F-50 FHD D.NAM 1 UN50F5200AG
Oracle JAVA	NO	NO	NO	NO
Universal Remote Control	NO	NO	NO	NO
MS DRM	NO	NO	NO	NO
Movie Codec	DivX	DivX	DivX	DivX

4-7. Software Upgrade

Software Upgrade can be performed by downloading the latest firmware from samsung.com to a USB memory device.

- Current Version - The software already installed in the TV.
- Software is represented as 'Year/Month/Day_Version'.

4-7-1. How to Check the Software Version

■ Use the Main Menu

1. Click the "MENU" key in remote controller.
2. Select "Support" menu.
3. Locate the menu cursor "Software Upgrade" menu.
4. Click the "INFO" key.
 - Check the Main SW and Micom version.



■ Use the Factory Mode

Option	T-MX13AUSC-0224.0
Control	DTP-LP3-0278
Debug	DTP-LP3-App-0278
SVC	HDCP : SUCCESS
ADC/WB	CALIB:HDMI/COMP/PC/AV/
Advanced	OPTION:32A6AHOS,US,4000,NONE
	USB Serial:OFF
	Picture Data: **. **. **
	BuildDate : **. **. ****
	Date Of Purchase : **/**/**

4-7-2. How to Upgrade Software and Micom

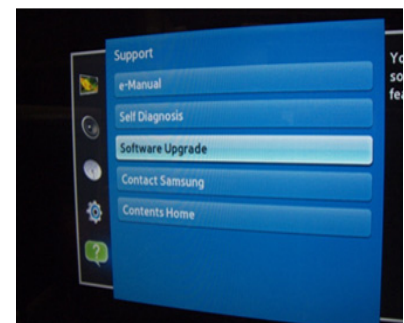
Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the TV. Please be careful not to disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version). When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings before beginning firmware update. After update is completed, restore your previous settings.

■ Main Software Upgrade

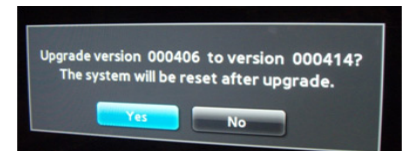
1. Save the firmware(T-NVTF6IBRC) folder to the root directory of a USB drive.
 - Connect the USB.



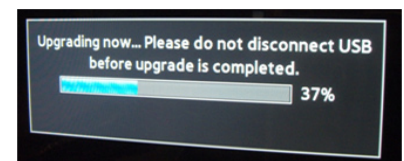
2. Click the "MENU" key in Remote Controller.
3. Select "Support" menu.
 - Select "Software Upgrade".



4. Click the "ENTER" key.



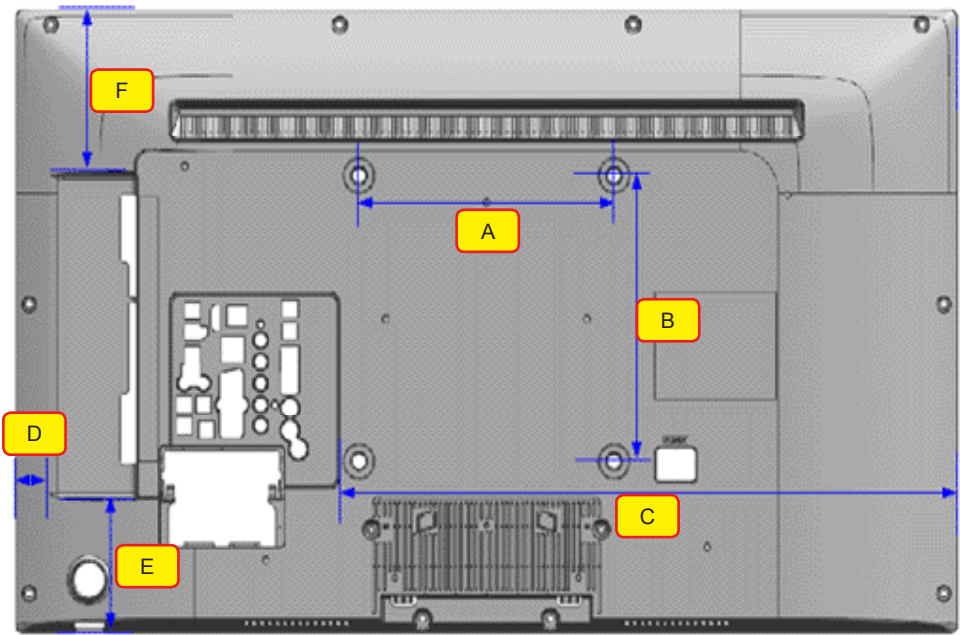
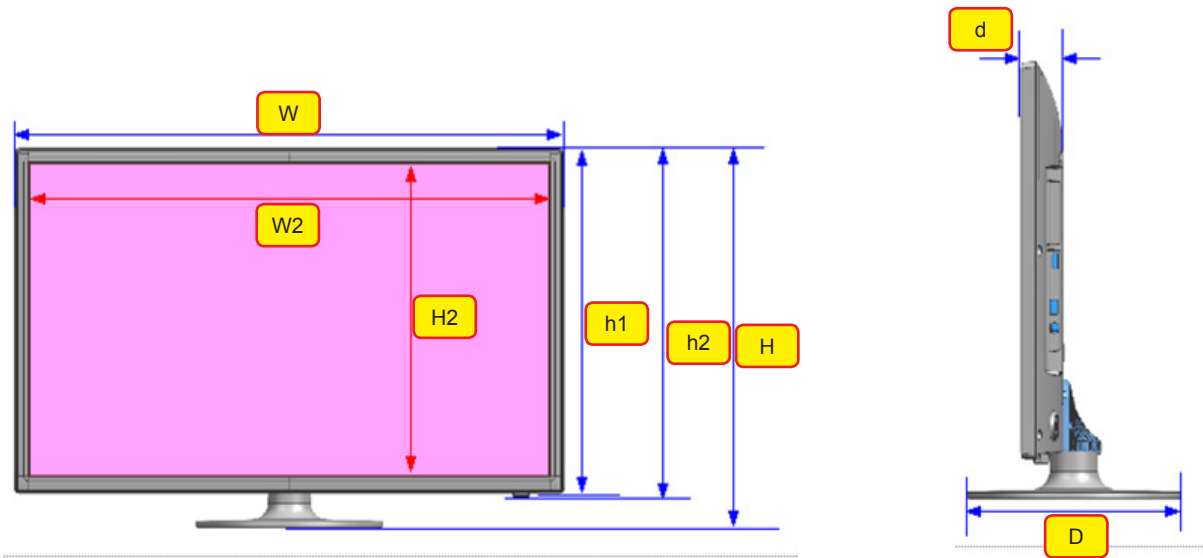
5. Click the "ENTER" key.
 - Wait for upgrade complete.
 - Check the Software Version.



4-8. Dimension

■ U*32F40**A*

Item	32"
SET (w/stand) mm (W * H * D)	737.9 * 509.1 * 191.7
SET (w/o stand) mm (W * h1(h2) * d)	737.9 * 435.8(440.5) * 49.5
Opening Size mm (W2 * H2 * Diagonal-)	703.4 * 397.8 * 807.3
Packing (out) mm (W * H * D)	909 * 514 * 143
SET Depth (d/D) mm	49.5/191.7
Net Weight (w/o stand) Kg	5.2
Net Weight (with stand) Kg	5.7
Gross Weight Kg	7.6



A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
200	200	483.5	25.8	112.4	93.8

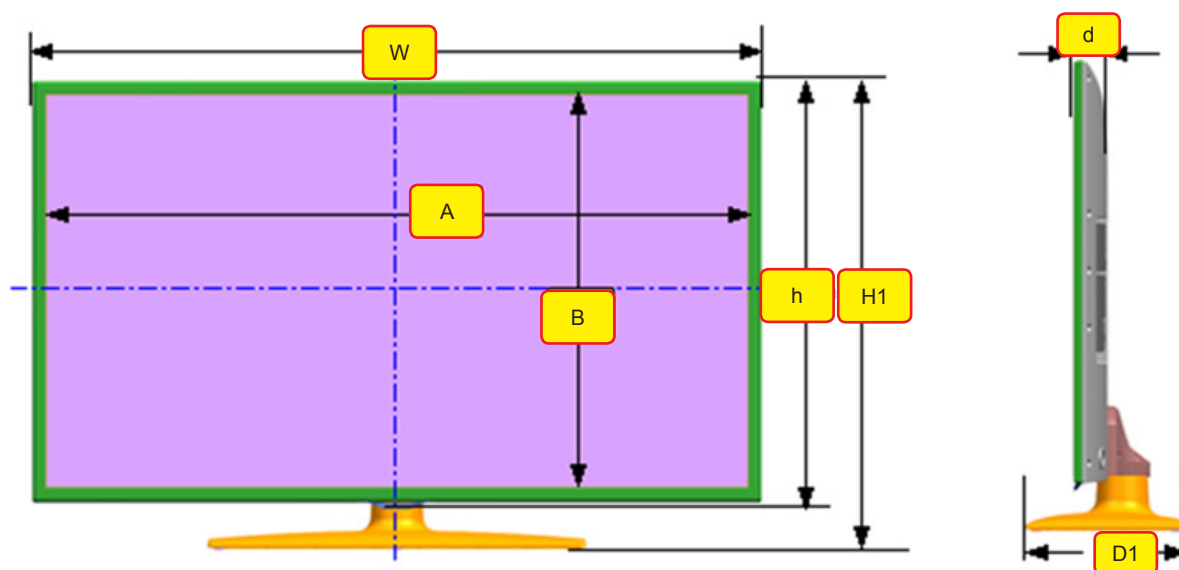
■ UN**F50**A* / UA**F50**AM

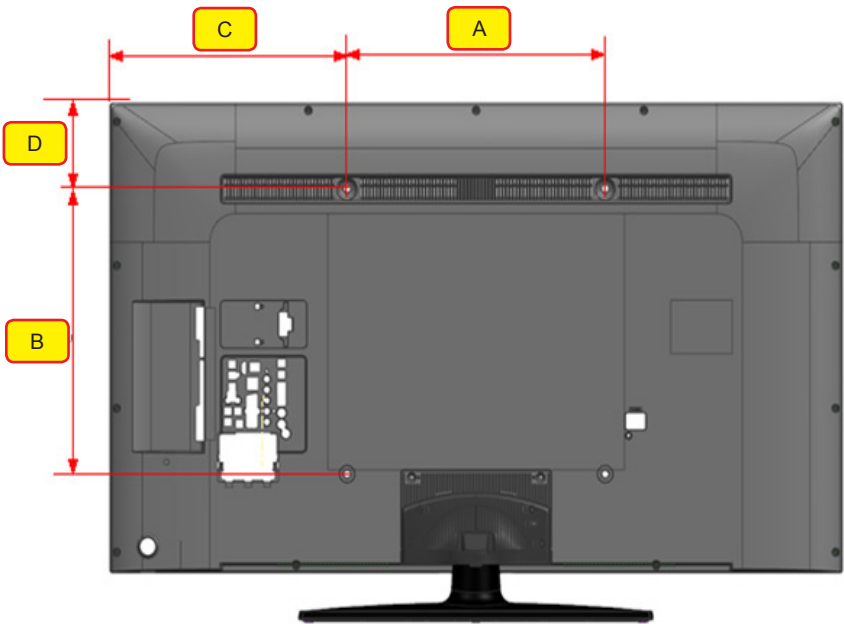
32", 40"

Item		32"	40"
SET (w/Square Stand) mm (W * H1 * D1)		738.0 * 505.8 * 191.7	928.2 * 612.2 * 235.0
SET (W/O Stand) mm (W * h * d)		738.0 * 445.4 * 49.0	928.2 * 552.3 * 49.4
Packing (out) mm (W * H * D)		919 * 514 * 143	1160 * 616 * 147
SET Depth mm (d)		49	49.4
Screen Size (A * B) (Diagonal)		703.4 * 397.8 (807.4)	890.6 * 503.2 (1022.2)
Net Weight (W/O Stand) Kg	USA	5.0	8.0
Net Weight (W/O Stand) Kg	USA	5.6	9.5
Gross Weight Kg	USA	7.4	12

46", 50"

Item		46"	50"
SET (w/Square Stand) mm (W * H1 * D1)		1059.6 * 686.1 * 235	1135.4 * 727.9 * 235
SET (W/O Stand) mm (W * h * d)		1059.6 * 626.2 * 49.4	1135.4 * 668 * 49.8
Packing (out) mm (W * H * D))		1309 * 716 * 158	1385 * 771 * 163
SET Depth mm (d)		49.4	49.8
Screen Size (A * B) (Diagonal)		1021.4 * 576 (1171.9)	1098.8 * 619.4 (1260.6)
Net Weight (W/O Stand) Kg	USA	10.8	113
Net Weight (W/O Stand) Kg	USA	12.3	114.5
Gross Weight Kg	USA	16	





UF5000	32"	40"	46"	50"
WALL MOUNT (A * B)	200 * 200	200 * 200	400 * 400	400 * 400
C	269	364.1	329.8	367.7
D	116.2	170.4	78.1	120