

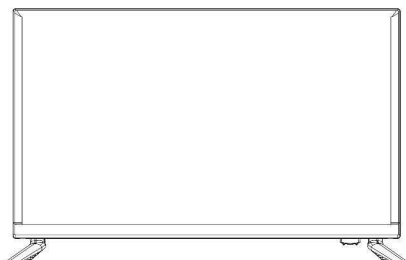
Service Manual

LED Television

Model No. TH-32FS490D

7N06T

Chassis



WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

1. CAUTION

CAUTION:

Use of controls, adjustments or procedures other than those specified herein may result in hazardous radiation exposure.



CAUTION
RISK OF ELECTRICAL
SHOCK DO NOT OPEN.



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, with an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to the person.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION:

Read all of these instructions. Save these instructions for later use. Follow all Warnings and Instructions marked on the audio equipment.

1. Read Instructions- All the safety and operating instructions should be read before the product is operated.
2. Retain Instructions- The safety and operating instructions should be retained for future reference.
3. Heed Warnings- All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions- All operating and use instructions should be followed.

FOR YOUR PERSONAL SAFETY

1. When the power cord or plug is damaged or frayed, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
2. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
3. Do not allow anything to rest on or roll over the power cord, and do not place the TV where power cord is subject to traffic or abuse. This may result in a shock or fire hazard.
4. Do not attempt to service this television set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
5. Never push objects of any kind into this television set through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the television set.
6. If the television set has been dropped or the cabinet has been damaged, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
7. If liquid has been spilled into the television set, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
8. Do not subject your television set to impact of any kind. Be particularly careful not to damage the picture tube surface.
9. Unplug this television set from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 10.1. Do not place this television set on an unstable cart, stand, or table. The television set may fall, causing serious injury to a child or an adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television set. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 10.2. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



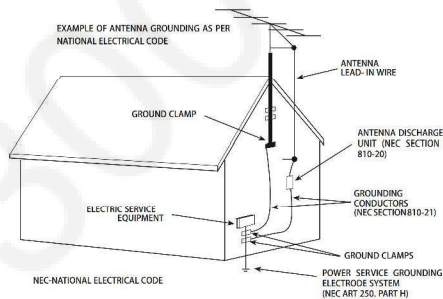
PROTECTION AND LOCATION OF YOUR SET

11. • Do not use this television set near water ... for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
 - Never expose the set to rain or water. If the set has been exposed to rain or water, unplug the set from the wall outlet and refer servicing to qualified service personnel.
12. Choose a place where light (artificial or sunlight) does not shine directly on the screen.
13. Avoid dusty places, since piling up of dust inside TV chassis may cause failure of the set when high humidity persists.
14. The set has slots, or openings in the cabinet for ventilation purposes, to provide reliable operation of the receiver, to protect it from overheating. These openings must not be blocked or covered.
 - Never cover the slots or openings with cloth or other material.
 - Never block the bottom ventilation slots of the set by placing it on a bed, sofa, rug, etc.
 - Never place the set near or over a radiator or heat register.
 - Never place the set in a "built-in" enclosure, unless proper ventilation is provided.

PROTECTION AND LOCATION OF YOUR SET

- 15.1. If an outside antenna is connected to the television set, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges, Section 810 of the National Electrical Code, NFPA No. 70-1975, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrode, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS



- 15.2. Note to CATV system installer : (Only for the television set with CATV reception)

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

16. An outside antenna system should not be located in the vicinity of overhead power lines or other electric lights or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
17. For added protection for this television set during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage due to lightning and power-line surges.

OPERATION OF YOUR SET

18. This television set should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply at your home, consult your television dealer or local power company. For television sets designed to operate from battery power, refer to the operating instructions.
19. If the television set does not operate normally by following the operating instructions, unplug this television set from the wall outlet and refer servicing to qualified service personnel. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television set to normal operation.
20. When going on a holiday : If your television set is to remain unused for a period of time, for instance, when you go on a holiday, turn the television set "off " and unplug the television set from the wall outlet.

IF THE SET DOES NOT OPERATE PROPERLY

21. If you are unable to restore normal operation by following the detailed procedure in your operating instructions do not attempt any further adjustment. Unplug the set and call your dealer or service technician.
22. Whenever the television set is damaged or fails, or a distinct change in performance indicates a need for service, unplug the set and have it checked by a professional service technician.
23. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and consult your dealer or service technician.

FOR SERVICE AND MODIFICATION

24. Do not use attachments not recommended by the television set manufacturer as they may cause hazards.
25. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
26. Upon completion of any service or repairs to the television set, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

SERVICE MANUAL

7N06G/T CHASSIS



Design and specifications are subject to change without prior notice. (Only for Reference)

SIZE:A4

Description: SERVICE MANUAL 7N06G/T	
MODEL.	Brand Name: Panasonic
JOB NO.	
Engineering Dept:	
Artwork By:	Date: 2017-07-15
Checked By:	Date:
Approved By:	Date:

CONTENT

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Technical Specification

4. Safety and Regulation

NO.	Item	Min	Typ	Max	Unit	Remark
1.	Force Stability-Incline plane Tip Test		10		deg	
2.	Force Stability-Level Tip Test		100		N	
3.	Isolation Gap AC-AC/AC-DC	3			mm	
4.	Isolation Gap	6			mm	
5.	Power Consumption		65		W	
					W	
					W	
					W	
					W	
6.	Power consumption Standby		0.3	0.5	W	
7.	Dielectric Voltage	3			kV	
8.	Isolation Resistance	4			MΩ	
9.	Leakage Current		5		mApp	
10.	Power cord captivity		40		N	
11.	Flammability—Back Cover		PASS			
12.	Sharp edge		PASS			
13.	UL Compliance		NO			
14.	FCC Compliance		NO			
15.	CDRH Radiation Compliance		NO			
16.	CSA Compliance		NO			
17.	CEB Compliance		NO			
18.	CE Compliance					Based on different orders
19.	CB Compliance		YES			

5. Video

NO.	Item	Min	Typ	Max	Unit	Remark
1.	Linearity Distortion, Vertical		1		%	
2.	Linearity Distortion, Horizontal		1		%	
3.	Trapezoidal Distortion, Vertical		1		%	
4.	Trapezoidal Distortion, Horizontal		1		%	
5.	Over scan, Vertical	95		97	%	
6.	Over scan, Horizontal	95		97	%	
7.	Brightness Maximum	180	240		Nit(s)	

Technical Specification

8.	Video Noise Limited Sensitivity(@S/N=30dB) VHF			51	dBuV	
9.	Video Noise Limited Sensitivity(@S/N=30dB) UHF			54	dBuV	
10.	Selectivity -1.5M	35			dB	
11.	Selectivity +8M	40			dB	
12.	Tuning Range	-0.7			MHz	
13.	Resolution Horizontal		1366		Lines	
14.	Resolution Vertical		768		Lines	

6. Chroma

NO.	Item	Min	Typ	Max	Unit	Remark
1.	White Balance, X axis					
2.	White Balance, Y axis					
3.	White Balance, Color Temperature	6500	9800	12.5k	kdeg	12500(266,276) 9800(280,290) 6500(313,329)
4.	Color Sensitivity		30		dB	
5.	Color Burst Lock-in Range	+/-300			Hz	
6.	Color Killer Sensitivity		30		dBuV	

7. Audio

NO.	Item	Min	Typ	Max	Unit	Remark
1.	Audio Noise Limited Sensitivity, VHF-L		25		dBuV	
2.	Audio Noise Limited Sensitivity,VHF-H		25		dBuV	
3.	Audio Noise Limited Sensitivity, UHF		28		dBuV	
4.	Buzz(S/N Ratio)		40		dB	
5.	Distortion		3		%	
6.	Audio ouput,L/R,at 10% THD		6		W	
7.	Audio ouput,Center		6		W	
8.	Stereo Separation		21		dB	
9.	Speaker Impedance		6		ohm	
10.	Speaker Power rating		6		W	

8. Power

NO.	Item	Min	Typ	Max	Unit	Remark
1.	DC Voltage, Audio		12		V	
2.	DC Voltage, Tuner		3.3		V	

Technical Specification

9. External Interface

NO.	Item	Min	Typ	Max	Unit	Remark
1.	Video Input Level		1		Vpp	75 ohm
2.	Video Input Frequency Response	4.5			MHz	
3.	Video Input S/N		40		dB	
4.	Audio Input Level		0.5		Vrms	
5.	Audio Input Frequency Response			20	kHz	
6.	Audio Input S/N		40		dB	
7.	Audio Input Distortion		3		%	
8.	Audio Input Dynamic Range		2		V	
9.	Video output Level		1		Vpp	
10.	Video output Frequency Response		4.2		MHz	
11.	Video output S/N		50		dB	
12.	Audio output Level		0.5		Vrms	
13.	Audio output Frequency Response	80		15K	Hz	
14.	Audio output S/N		40		dB	
15.	Audio output Distortion		6		%	
16.	Video Input Level,R/G/B		0.7		VPP	
17.	Video Input Level,Component(Y,Pb,Pr)		0.7		VPP	
18.	RGB Input Resolution,Vertical			768	pixel	
19.	RGB Input Resolution,Horizontal			1366	pixel	
20.	RGB Input Horizontal Frequency			68	kHz	
21.	RGB Input Frame Rate			60	Hz	

10. The Others

NO.	Item	Min	Typ	Max	Unit	Remark
1.	Search sensitivity		40		dBuV	
2.	Clock,real time gain or loss(sec per day)		NO		sec	
3.	Software Functionality Test		YES			
4.	REMOCON Working sensitivity,Straight		8		m	
5.	REMOCON Working sensitivity,T/B/L/R		6		m	
6.	Close caption sensitivity		46		dBuV	
7.	Teletext sensitivity		46		dBm	
8.	Resonance of unit(sweep freq:50~1000)		NO			

Technical Specification

11. Customer Menu Setup(as shipped condition)

NO.	Item	Specification	Remark
1.	PSM	Standard	
2.	SSM	Standard	
3.	Volume	30	
4.	Mute	off	
5.	Input Mode	RF-Air	
6.	Customer menu language	English	Based on different order
7.	AVL	off	
8.	Sleep Timer	off	
9.	Auto sleep	off	
10.	Surround	off	
11.	Noise Reduction	Middle	

12. Reliability

NO.	Item	Min	Typ	Max	Unit	Remark
1.	ESD		4		kV	IEC-1000-4-2
2.	EFT/Burst				kV	IEC-1000-4-4
3.	Surge Immunity				kV	IEC-1000-4-5
4.	Voltage Dip Test,10ms				%	IEC-1000-4-11
5.	Voltage Dip Test,100ms				%	IEC-1000-4-11
6.	Operation Temperature				deg	
7.	Operation Humidity				%	
8.	Storage Temperature				deg	
9.	MTBF(confidence Level:90%)				hour	

Technical Specification

DTV-Productions Specification

1	Outlook		
	Please refer to the picture		
2	Brief Information		
2.1		Product Name	32TE3
2.2		Chassis Name	7N06T
2.3		Key functions	ATV, DVB-T/T2, wifi
2.4		Target Market	Egypt
2.5		Product Category	DTV
2.6		Product Positioning	Low End
2.7		Product size	32"
3	Panel Specification		
3.1	Model Number		
3.1.1		Panel Manufacturer	Skyworth
3.1.2		Model Number	
3.2	Mechanical		
3.2.1		Panel Size	32"
3.2.2		Dimension	
3.2.3		Active Area (mm) : H x V	
3.2.4		Pixel Format (H x V)	
3.2.5		Back light Type	LED
3.2.6		Diagonal Screen Size	
3.2.7		Pixel Pitch (mm)	
3.3	Electronic Parameter		
3.3.1		Brightness (cd/m ²)	>210nits
3.3.2		Contrast Ratio	>600:1

3.3.3		Viewing Angle	Viewing angle free (R/L 176° , U/D 176°)(Not 3D mode)
3.3.4		Response Time (ms)	8.5ms
3.3.5		Back light Time (Hours)	15,000
3.3.6		120Hz(100Hz)/240Hz(200Hz)	60Hz
3.3.7		3D No/PR/SG	No
4	Signal Receiving System		
4.1	ATV Receiving System		
4.1.1		PAL BG/I/DK/ + NTSC-M	No
4.1.2		PAL/SECAM BG/DK/I + SECAM L/L"	PAL/SECAM BG/DK/I
4.1.3		PAL M/N + NTSC-M	No
4.2	DTV Receiving System		
4.2.1		ISDB-T/ISDB-S/SBTVD-T	No
4.2.2		ATSC	No
4.2.3		DTMB	No
4.2.4		DVB-T	Yes
4.2.5		DVB-T2	Yes
4.2.6		DVB-C	Yes
4.2.7		DVB-S	No
4.2.8		DVB-S2	No
4.2.9		DVB-CI(*Not a system, but important to indicate the type of DTV)	No
4.2.10		DVB-CI+(*Not a system, but important to indicate the type of DTV)	No
4.3	Antenna input		
4.3.1		Antenna Input port: 1 (1 for analogue)	No
4.3.2		Antenna Input port: 1 (1 for both analogue and digital)	Yes

4.3.3		Antenna Input port: 2 (1 air + 1 Cable)	No
		Antenna input port 2 (1 Sat)	No
4.3.4		Type of Antenna Input Port	IEC169-2 Female
4.3.5		Receiving Frequency range (ATV)	48.25MHz~855.25MHz
4.3.6		Receiving Frequency range (DTV)	-
4.4	External Signal Receiving System		
4.4.1	Composite Input	PAL 50Hz/60Hz	Yes
4.4.2		SECAM	Yes
4.4.3		NTSC 3.58	Yes
4.4.4		NTSC4.43	Yes
4.4.5	Component Input	480i /480p/720p/1080i (60Hz)	No
4.4.6		576i /576p/720p/1080i (50Hz)	No
4.4.7		1080P 24Hz/25Hz/30Hz/50Hz/60Hz	No
4.4.8	PC Input	VGA (640 x 480)	No
4.4.9		S-VGA (800 x 600)	No
4.4.10		XGA (1024 x 768)	No
4.4.11		W-XGA (1280 x 768)	No
4.4.12		W-XGA (1360x768)	No
4.4.13		S-XGA (1280 x 1024)	No
4.4.14	HDMI Input	480i /480p/720p/1080i/2160i (60Hz) (Video Format)	Yes
4.4.15		576i /576p/720p/1080i (50Hz) (Video Format)	Yes
4.4.16		1080P 24Hz/25Hz/30Hz/50Hz/60Hz (Video Format)	Yes
4.4.17		VGA (640 x 480) (PC Format)	Yes

4.4.18		S-VGA (800 x 600) (PC Format)	Yes
4.4.19		XGA (1024 x 768) (PC Format)	Yes
4.4.20		W-XGA (1280 x 768) (PC Format)	Yes
4.4.21		W-XGA (1360x768) (PC Format)	Yes
4.4.22		S-XGA (1280 x 1024) (PC Format)	Yes
4.4.23	USB	Media player formats	Refer to sheet "Mediaplayer Formats"
5	Features		
5.1	Picture		
5.1.1		Picture Mode	Dynamic/Standard/Football/Cinema/Game/User
5.1.2		Picture Size	16:9/4:3/Just Scan/Zoom1/Zoom2/Super Live/Auto
5.1.3		Picture Freeze	Yes
5.1.4		Back light Adjust	Yes
5.1.5		Auto Format	No
5.1.6		3:2 Pull Down	No
5.1.7		4:3 Stretch	No
5.1.8		Comb filter	3D
5.1.9		PIP(Single tuner)	No
5.1.10		Noise Reduction	Off/Low/Middle/High
5.1.11		MPEG Reduction	Off/Low/Middle/High
5.1.12		Color temperature	Natural/Warm/Cool
5.2	Sound		
5.2.1		Sound Mode	Standard/Movie/Music/Sports/User
5.2.2		For personal mode:Treble/Bass/Balance	Yes
5.2.3		Surround Sound	Yes
5.2.4		Equalizer	Yes
5.2.5		Audio Output Power	2x8W
5.2.6		NICAM	Yes
5.2.7		A2	Yes
5.2.8		BTSC(MTS)	No
5.3	Teletext		
5.3.1		FLOF/TOP	Yes/Yes
5.3.2		Memory Page	1000

5.3.3		Character Language	
5.3.4		Teletext Level	1.0/1.5
5.4	Program Management		
5.4.1		V-Chip	No
5.4.2		Parent Control(Child Lock)	Yes
5.4.3		Closed Caption	No
5.4.4		Subtitle	Yes
5.4.5		EPG	Yes
5.4.6		Channel list	Yes
5.4.7		Favorite Channel List	Yes
5.4.8		Channel Editor	Yes
5.4.9		Sleep Timer	Yes
5.4.10		On/Off timer	Yes
5.4.11		Channel Swap timer	No
5.4.12		Blue Screen	Yes
5.5	AC Input		
5.5.1		AC Input Range	100-240V AC (-10%,+10%)
5.5.2		AC Plug Type	VDE/2pins
5.5.3		AC Cable Length	1.5m
5.5.4		Power Consumption	75W max
5.5.5		Standby Power Consumption	<0.5w
5.6	HDMI		
5.6.1		CEC	Yes
5.6.2		ARC	No
5.6.3		3D	No
5.6.4		MHL	Yes
5.7	Software Update		
5.7.1		By USB	Yes
5.7.2		By Internet	Yes
5.7.3		Internet Auto search	No
5.7.4		By Over-Air	No
5.7.5		By other Service Port	No
5.8	PVR		

5.8.1		By External USB or HDD	No
5.8.2		Built in HDD	No
5.8.3		Time Shift	No
5.9	OSD Language		
5.9.1		OSD Language	English
5.10	USB File System		
5.10.1		FAT16	Yes
5.10.2		FAT32	Yes
5.10.3		NTFS	Yes(Only read)
5.11	Middle Ware		
5.11.1		MHEG5	No
5.11.2		Ginga	No
5.11.3		MHP	No
5.11.4		HbbTV	No
5.12	Wifi		
5.12.1		Wifi Dongle	No
5.12.2		Wifi Built in	Yes
6	Terminals Configuration		
6.1	Terminal Direction (Side and Bottom & Side and Rear)		Side and Rear
6.2	Input		
6.2.1		Tuner	1 (Rear)
6.2.2		Composite	1 (Rear)
6.2.3		S-Video	No
6.2.4		Full Scart	No
6.2.5		Half Scart	No
6.2.6		Component	No
6.2.7		PC input with 3.5mm mini jack audio input	No

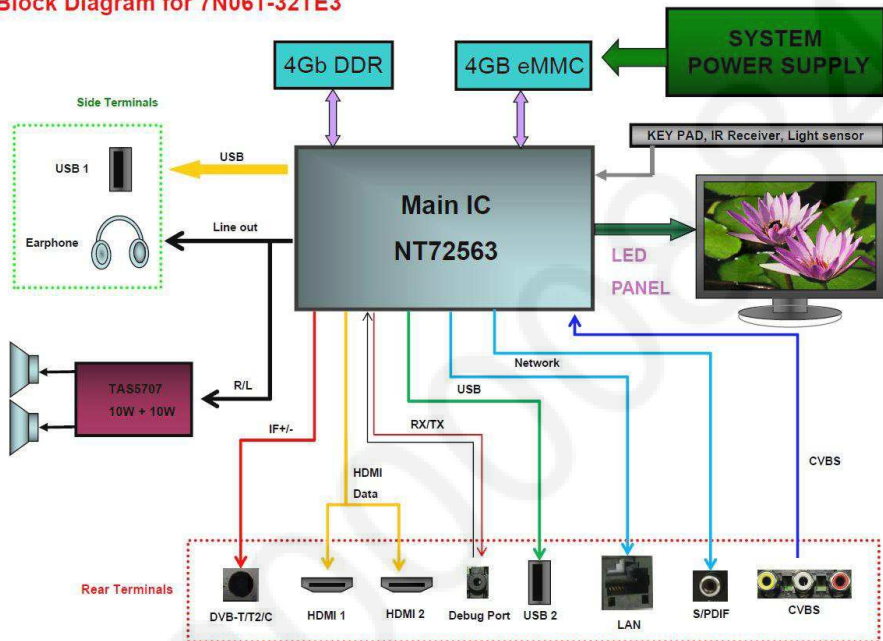
6.2.8		HDMI	2 (Rear)
6.2.9		USB	1 (Rear) & 1(Side)
6.2.10		LAN	1 (Rear)
6.2.11		CI Slot	No
6.2.12		CA Slot	No
6.3	Output		
6.3.1		Video Output	No
6.3.2		Audio Output (Fixed & Variable)	No
6.3.3		Digital Audio Output (Coaxial & Optical)	1 (Rear, Coaxial)
6.3.4		Earphone	1 (Side)
6.4	Diagram of Terminal Configuration		
7	Mechanical Spec		
7.1	Cabinet		
7.1.1	Cabinet color	For front back stand	TBD
7.1.2	Operation Keys / Touch sensor		1 Operation Key(Standby)
7.1.3	AC Power Switch	Mechanical power switch	No
7.1.4	LED Indicator	Power on (Green)	No
7.1.5		Power on / Standby (Green / Red)	Power on / Standby (Green / Red)
7.1.6		Power on / Standby / Recording(Green / Red / Orange)	No
7.1.7		Program Timer / Recording (Green / Red)	No
7.1.8		On Timer or Program Timer(Green)	No
		Red / Green / Blue, independent PWM controlled	No
7.1.9	Logo Style	Silk Printing / SUS Badge (inlet type)	TBD
7.1.10	Stand	Tilt / Swivel	No

7.2	Dimension & Stuffing		
7.2.1		Size (with stand)(mm)	
7.2.2		Size (without stand) (mm)	
7.2.3		Package Size (with stand)(mm)	
7.2.4		Net Weight(Kg)	
7.2.5		Gross Weight	
7.2.6		Loading quantity (20GP/40GP/40GP) with pallet	
7.2.7		Loading quantity (20GP/40GP/40GP) without pallet	
7.2.8		Stand build in Packing Box (together or separately)	
8	Accessories		
8.1	Remote Controller		
8.1.1		Type No.	TBD
8.1.2		Battery	Yes
8.2	Instruction Manual		
8.2.1		Paper size	TBD
8.2.2		Printing Color	TBD
8.2.3		Languages (Refer to Sales Country Sheet)	TBD
8.2.4		Total Pages	TBD
8.2.5		Instruction manual CD	TBD
8.2	Others		
8.2.1		3D Glasses	No
8.2.2		Camera	No
8.2.3		etc	No
9	Requested Certification		
9.1	CB		Yes
9.2	UL		No
9.3	EMC		Yes

9.4	FCC		No
9.5	HDMI		No
9.6	USB		No
9.7	CI+		Yes
9.8	Dolby		Yes
9.9	DOLBY +		Yes
9.10	Dvix Hometheatre		No
9.11	DviX HD		No
9.12	DviX+HD		No
9.13	MHL		No
9.14	DLNA		No
9.15	CTS		No
9.16	Energy Star		No
9.17	CE		No

Block Diagram

Block Diagram for 7N06T-32TE3



List of key parts

name	position	model	Spec.	P/N
IR RECEVIER	M0K1	SDR138	SMD MODULE 38KHZ	5300-147438-1S00
SPEAKER		SL411-08E	SPEAKER 6 OHM 10W MAX	5631-106124-0360
CRYSTAL	Y1	CHY15YK128	12MHz	4900-112054-RS20
	X2T1	49S-16.000-20-30/A	16MHz	4900-116052-R000
TUNER	U0T5	MXL661	SMD IC	47C4-M66100-0240
IC	U22	NT72562BG-AA NOVATEK	SMD IC	475V-N72560-5740
	U9	H5TQ2G63GFR-RDC HYNIX	SMD IC	4711-H5T2G6-0960
	U7	H5TQ4G63CFR-RDC HYNIX	SMD IC	4711-H5T4G5-0960
	U0M1	MX25L1606EM2I-12G 16MB SPI FLASH	SMD IC	4797-X25161-0080
	U0M2	THGBMBG5D1KBAIL TOSHIBA	SMD IC	4701-T5D4G0-1530
	U0A3	TAS5707PHPR TEXAS	SMD IC	4722-T57070-0480
	U0A1	TPA6138A2PWR TI	SMD IC	4722-T61380-0140
	U0P4	MP1495DJ-LF-Z MPS	SMD IC	476A-M14950-0080
	U0P2	MP1470GJ-Z MPS	SMD IC	476A-M14700-0060
	U2P1	ME4953 MATSUKI	SMD IC	47D9-M49530-0080
	U0P7	MP1495DJ-LF-Z MPS	SMD IC	476A-M14950-0080
	U2P2	AS1117L/TR-HF A1	SMD IC	47B6-A11174-0300
	U1P1	AS1117L-3.3/TR-HF A1	SMD IC	47B6-A11170-03
	U0J2	AZC399-04S.R7G AMAZING	SMD IC	47FY-A39904-0060
MOS	U0L1	ME9435A MATSUKI	SMD IC	47D9-M94350-0080

IC Block Diagram

1. TUNER: MXL661

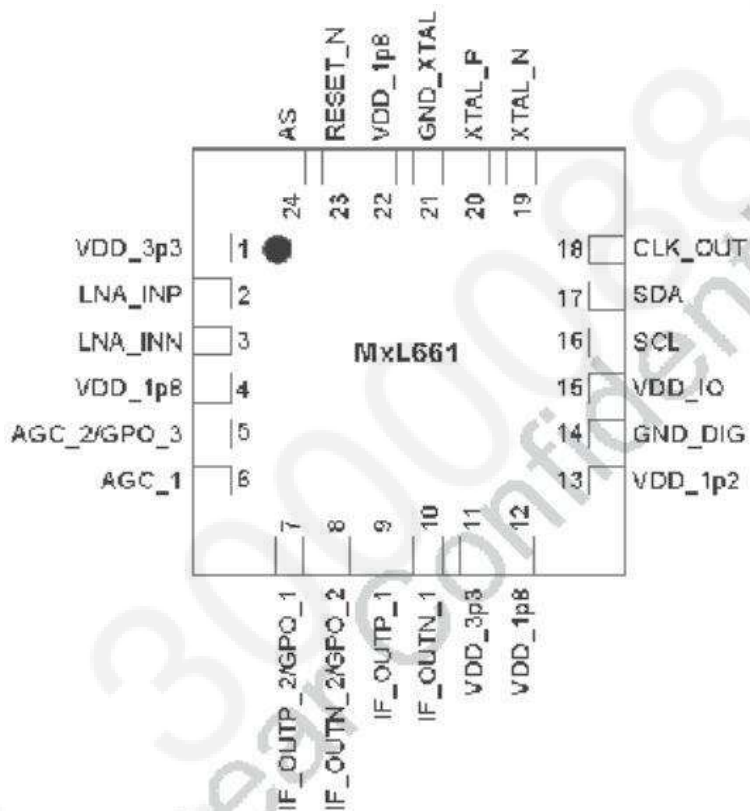


Fig 1, MXL661

2. NT72562BG-AA

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V _{DD}	1.1V power supply	1.0925	1.15	1.2075	V	
V _{1.5V}	1.5V power supply (DDR3)	1.425	1.5	1.575	V	
V _{1.8V}	1.8V power supply (eMMC)	1.7	1.8	1.9	V	
V _{DDIO}	3.3V power supply	2.97	3.3	3.63	V	
V _{IN3}	3.3V I/O with 5V Tolerance	0	3.3	5.25	V	
	Input voltage of 3.3V I/O	0	3.3	3.63	V	

Table 6-2, DC Characteristics of Power pad

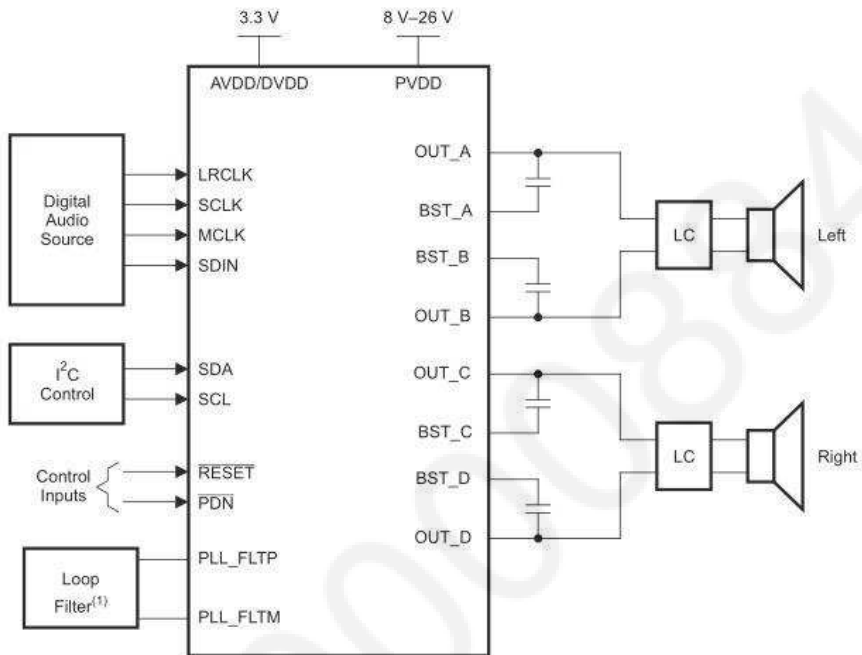
Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
VDDIO	IO power supply	2.97	3.3	3.63	V	
V _{IL}	Input Low Voltage	-0.3	-	0.8	V	
V _{IH}	Input High Voltage	2.0	-	3.6	V	
V _{OL}	Output Low Voltage	-	-	0.4	V	
V _{OH}	Output High Voltage	2.4	-	-	V	
I _{IN}	Input Leakage Current	-10		+10	uA	V _{IN} =V _{DD} /GND
I _{IZ}	Output tri-state Leakage Current	-10		+10	uA	output is tri-state
R _{PU}	Internal Pull-up Resistor	41	60	92	KΩ	V _{IN} =V _{DD} /GND
R _{PD}	Internal Pull-Down Resistor	43	64	104	KΩ	V _{IN} =V _{DD} /GND
I _{OL}	Low Level Output Current @V _{OL} (max)	8.7	13.5	18.2	mA	04mA pad
		13.1	20.2	27.4	mA	08mA pad
I _{OH}	High Level Output Current @V _{OH} (min)	13.8	27.3	48.1	mA	04mA pad
		19.3	38.2	64.5	mA	08mA pad

Table 6-3, DC Characteristics of 3.3V I/O

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
VDDIO	IO power supply	2.97	3.3	3.63	V	
V _{IL}	Input Low Voltage	-0.3	-	0.8	V	
V _{IH}	Input High Voltage	2.0	-	5.25	V	
V _{OL}	Output Low Voltage	-	-	0.4	V	
V _{OH}	Output High Voltage	2.4	-	-	V	
I _{IN}	Input Leakage Current	-10		+10	uA	V _{IN} =V _{DD} /GND
I _{IZ}	Output tri-state Leakage Current	-10		+10	uA	output is tri-state
R _{PU}	Internal Pull-up Resistor	29	41	61	KΩ	V _{IN} =V _{DD} /GND
R _{PD}	Internal Pull-Down Resistor	31	45	74	KΩ	V _{IN} =V _{DD} /GND
I _{OL}	Low Level Output Current @V _{OL} (max)	4.4	7.0	9.5	mA	04mA
		8.9	14.0	19.1	mA	08mA
I _{OH}	High Level Output Current @V _{OH} (min)	7.8	15.5	26.1	mA	04mA
		15.7	31.0	52.3	mA	08mA

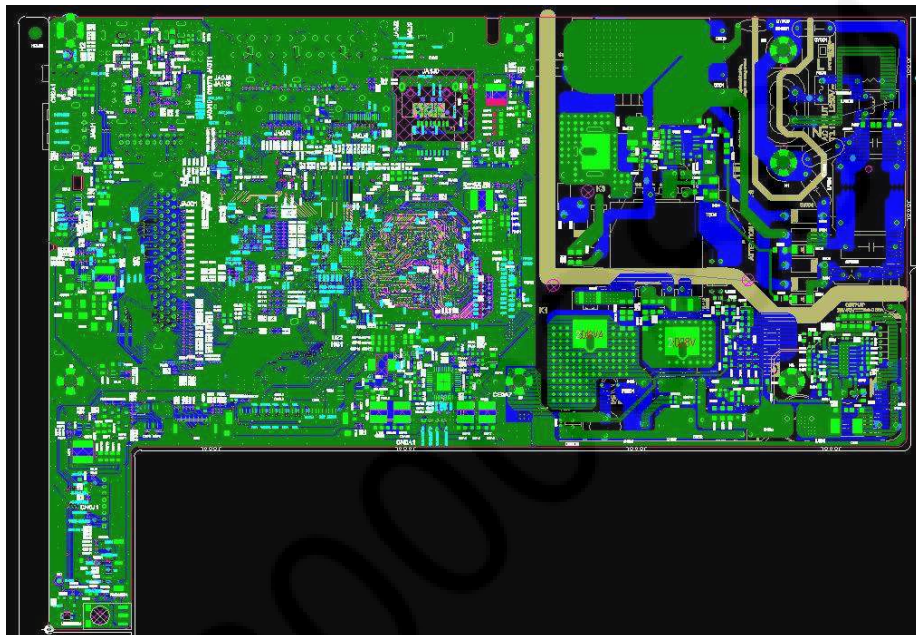
Table 6-4, DC Characteristics of 5V Tolerance I/O

3.TAS5707PHPR

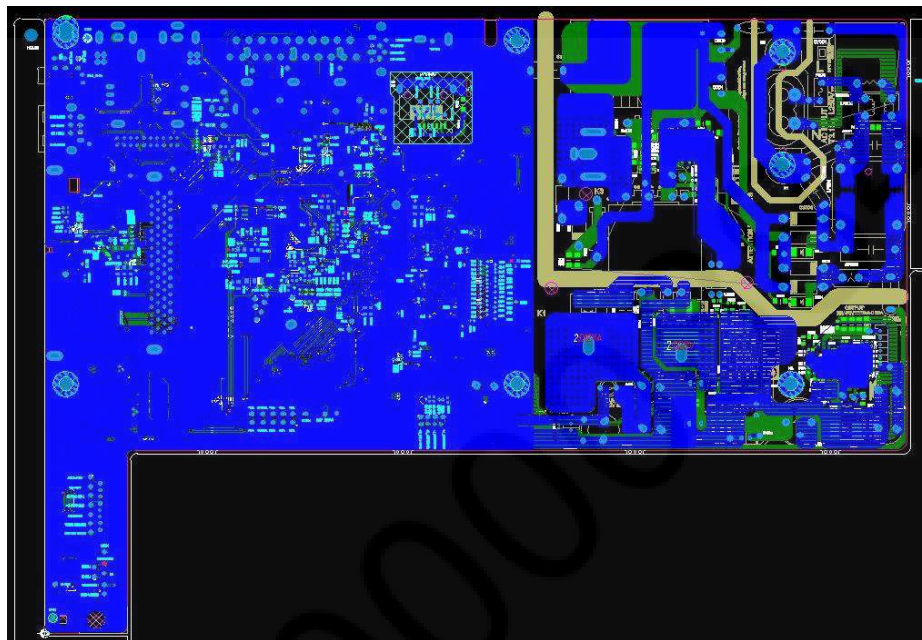


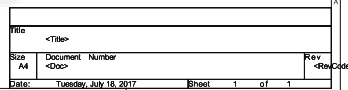
MAIN PCB

1.TOP

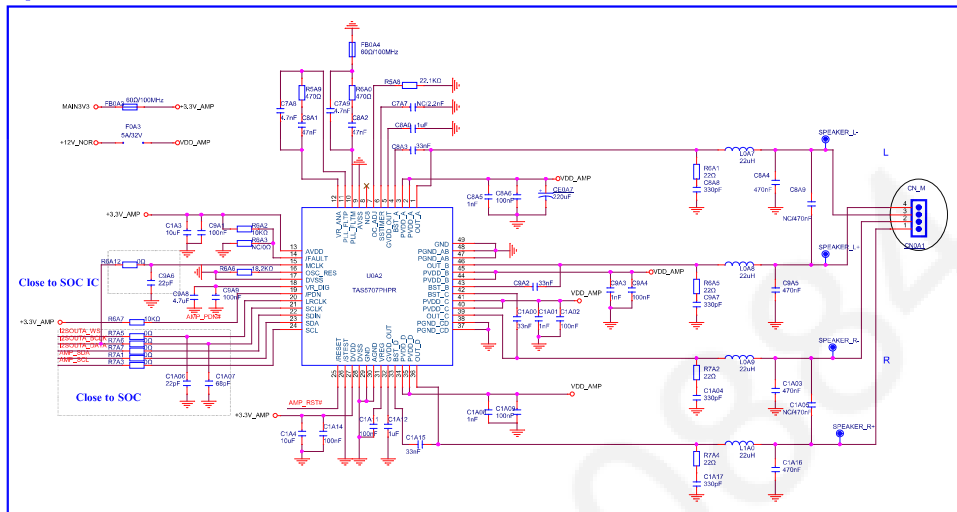


2、BOTTOM

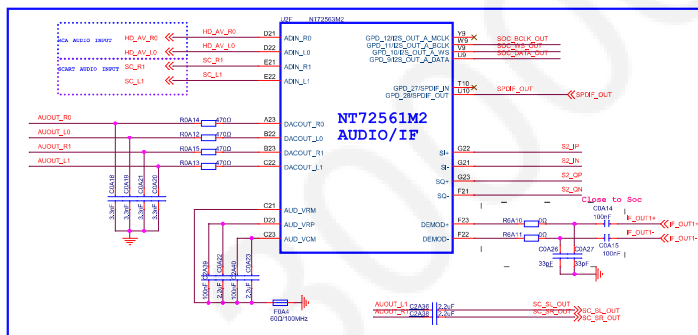




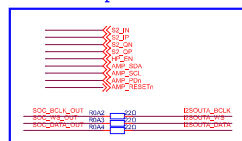
Amplifier Circuits TAS5707



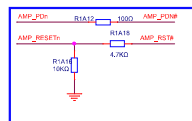
Interfaces for AMP from NT72563



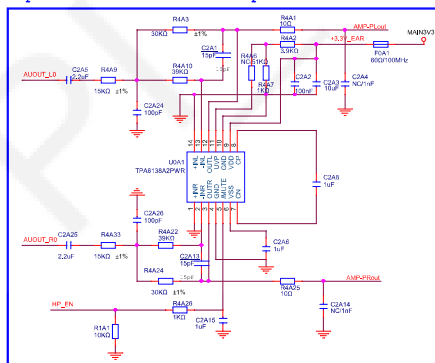
I2S for Amplifier



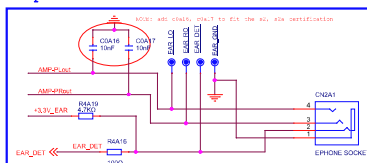
Mute Circuits



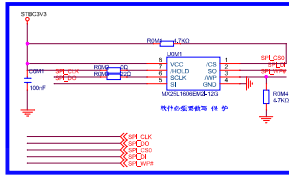
Amplifier Circuits for Earphone



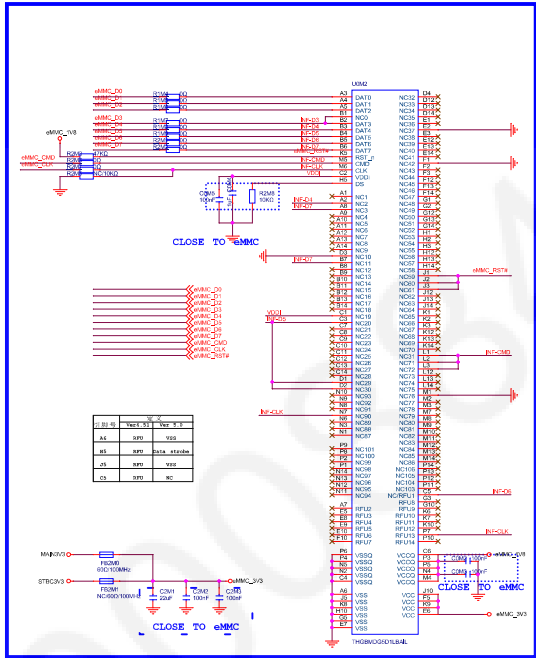
Earphone Jack and Circuits

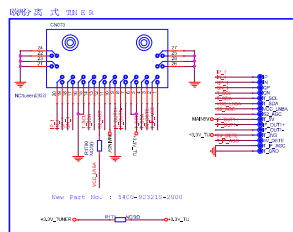
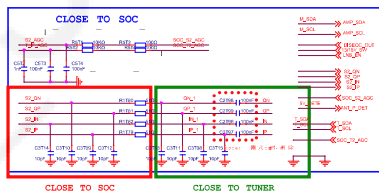


16MB SPI NOR FLASH

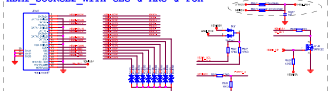
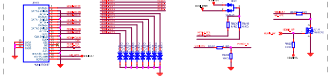


4GB Toshiba eMMC THGBMG5D1KBALL

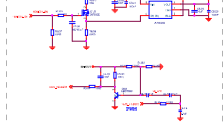
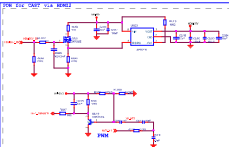




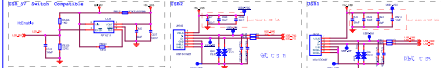
HDMI SOURCE2 WITH CEC & ARC & POW

[illegible]

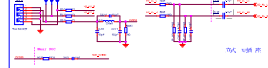
PCW ECG CAPS



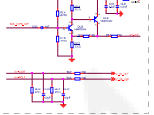
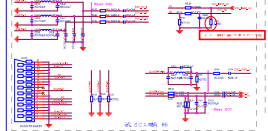
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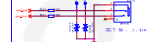
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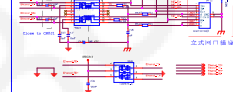
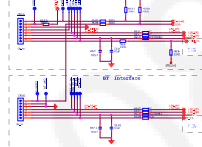
100%



100



1

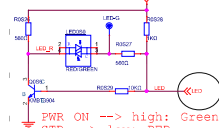


Interfaces of IR/KEY/Indicator/Light Sensor

[illegible]

R0S3 for TOSHIBA

For TOSHIBA, LED0S0 & R0S27 NC
Indicator on Board



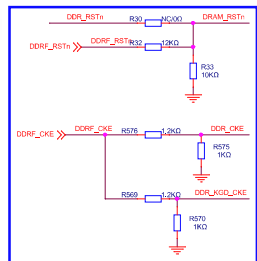
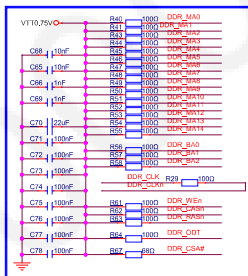
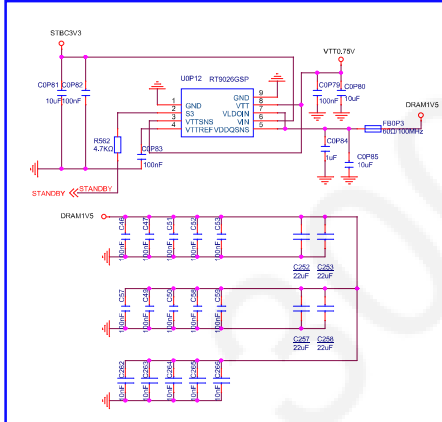
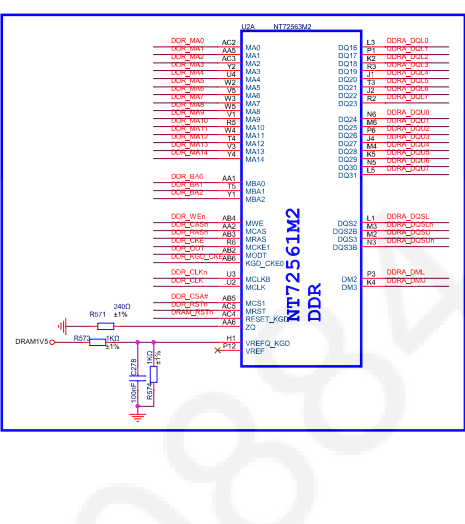
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_PWR ON --> high: Green
_STB --> low: RED

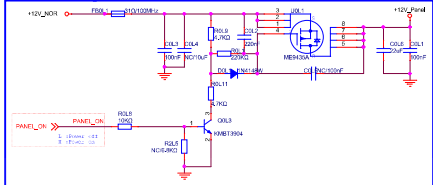
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A detailed circuit diagram of a temperature sensor module. It features an ADXL05 sensor chip with pins labeled VDD, GND, SDA, and SCL. The SDA pin is connected to a pull-up resistor R6923 (10KΩ) which leads to a +5V supply. The SCL pin is connected to another pull-up resistor R6920 (10KΩ) also leading to +5V. A 100nF capacitor C6906 is connected between VDD and GND. A 10μF capacitor C6907 is connected between the sensor's ground and the system ground. The sensor's output signal is connected through a 1N4148 diode D6904 to a microcontroller unit (MCU).

For TOSHIBA, IR0S1 & R0S23, C0S5, C0S8 NC



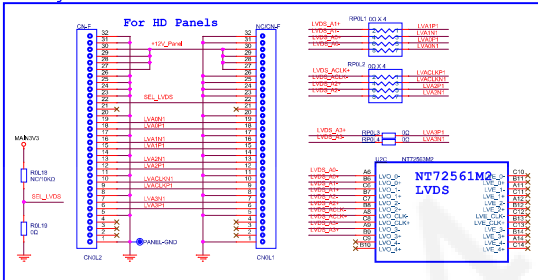
Power for panel



Test Points

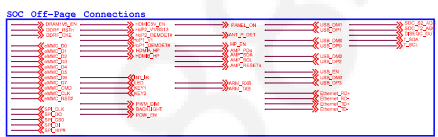
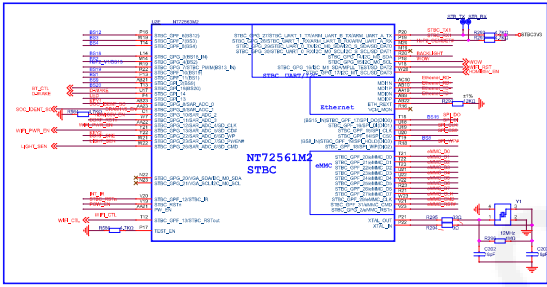
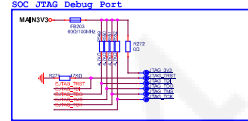
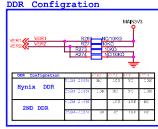
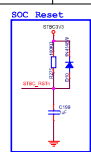
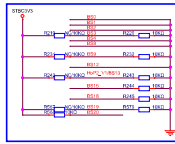
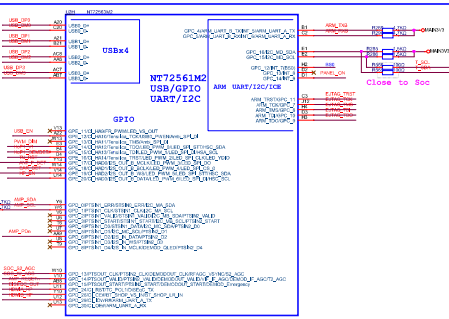


LVDS Signals Interface



Ref	Component Number	Rev
1.0	1.0	1.0

DP0: USB1
DP1: BT
DP2: USB2
DP3: WIFI



IGP LIST

PartDescription	PartCode	GenericDescription	UsedQty/Unit	HS Code	Model(PI)	Model(ODM)
B,CAB HIPS (94-V0) DG001 32E2A000-PB6 3>	1002-32E2X009-2101	BackCover	1	8529908100	TH-32FS490D	32PE2A
7N06T-32PE2A(TI)MAIN BOARD ASEMBLE	7N06T-01S32PE2A-S2	MainBoard	1	8529908100	TH-32FS490D	32PE2A
32" CKD SKYWORTH LCD RDL320HY(LD0-E05) BD 1366*768 F4	7618-T3200C-Y730	Panel	1	9013803020	TH-32FS490D	32PE2A
BASE(L) ABS+PMMA HNB001 32E3XLR1-PA 32E3	1020-32E3XL10-2104	Pedestal	1	8529908100	TH-32FS490D	32PE2A
BASE(R) ABS+PMMA HNB001 32E3XLR1-PA 32E3	1020-32E3XR10-2104	Pedestal	1	8529908100	TH-32FS490D	32PE2A
AC LINE CORD 1500MM 0.75*2 BIS PLUG + INTERNAL SOCKE	5942-A15208-1020	PowerCord	1	8544422900	TH-32FS490D	32PE2A
FFC 30 PINS P=1,0MM L=485MM(55*210*85+90	594A-F481A0-3000	LVDS Cable	1	8544422900	TH-32FS490D	32PE2A
HANDSET ASS'Y HS-0404P-00 FOR 6M37T-32E2	53H1-260404-W000	Remote	1	8543709990	TH-32FS490D	32PE2A
		Speaker(Local)				

BOM LIST			
编号	物料描述	数量	单位
207N-06TCPE2AW02	7N06T-32PE2A PANEL BOM	1	ST
7N06T-32PE2A0-01	ELE. BOM 7N06T-32PE2A	1	ST
FWCW-CPE2AAB7N06T	SKD STR. LED BOM 7N06T-32PE2A(INDIA)	1	ST
2032-T7N06TW-01	ELE. SCREEN ASS'Y(7618-T3200C-Y730) 7N06T-	1	ST
7N01G-01SB0W-00	(TI) MAIN MATCH SCREEN ASS'Y(7618-T3200C	1	ST
168P-G2U032-W3	LED POWER ASS'Y 50W FUJI(FA8A00N) INPUT	1	ST
7618-T3200L-Y710	32" SKYWORTH LCD SDL320HY(LD0-316) 1366*	1	PC
7N01A-04HA00-01	(HI) CONTROL BOARD ASS'Y 7N01A-32PE3 SKD	1	ST
7N01A-04SA00-01	(TI) CONTROL BOARD ASS'Y 7N01A-32PE3 SKD	1	ST
7N06T-01HA00-02	(HI) MAIN & POWER & DRIVER ASS'Y 7N06T-3	1	ST
7N06T-01SA00-03	(TI) MAIN & POWER & DRIVER ASS'Y 7N06T-3	1	ST
7N06T-27HA00-04	NON COMMON ASS'Y 7N06T-32PE2A	1	ST
PP00-32P2X0-W0	PACKAGING PARTS 32P2	1	ST
CM00-CPE2AB-W0	CABINET COLOUR MATCH 32PE2A	1	ST
AP00-CPE2A0-W1	ALL MECHANICAL PARTS 32PE2A(INDIA)	1	ST
OP00-CPE2A0-W0	OTHER PARTS 7N06T-32PE2A	1	ST
ST00-32E2X0-W7	STAND PARTS XIAO MY HNB001 E2-A 32E2(REA	1	ST
594A-F481A0-3000	FFC 30 PINS P=1.0MM L=485MM(55+210+85+90	1	PC
544G-99410S-3010	SMD FPC CONNECTOR 30 PIN P=1.0MM H-TYPEL	1	PC
168P-G2U032-AAW3	(AT) POWER ASS'Y 168P-G2U032-W3	1	ST
168P-G2U032-SAW3	(TI) POWER ASS'Y 168P-G2U032-W3	1	ST
168P-G2U032-HAW3	(HI) POWER ASS'Y 168P-G2U032-W3	1	ST
7702-132000-2130	32" LG OPEN CELL LC320DXY-SKA8 1366*768	1	PC
7702-332000-0130	32" LG T-CON LC320DXY-SKA8 (6871L-5257A)	1	PC
543M-391151-0300	HOUSING 03(1.25)+ HOUSING 03(1.25)+ 150M	1	PC
4100-CA1639-2200	SMD RESISTOR 16.9K OHM $\pm 1\%$ 1/16W 1005 TA	1	PC
4143-CA3030-2200	SMD RESISTOR 30K OHM 1/16W +/-1% (1.0*0.5	1	PC
4143-CA6830-2200	SMD RESISTOR 68K OHM 1/16W +/-1% (1.0 X0	1	PC
544N-99113S-0300	SMD WAFER(M) P=1.25MM V-TYPE SINGLE ROW	1	PC
5582-11525B-0S10	SMD TACT SWITCH V-TYPE 1P5T T=0.15mm 6 P	1	PC
5823-D32E30-0P00	CONTROL PCB 20*19.8*1.6 FR-4 OSP FOR 3M1	1	PC
5400-921120-0820	WAFER(M) P=2.0MM H-TYPE SINGLE ROW 8 PIN	1	PC
614P-080010-0600	USB SOCKET (180*D PLUG BLACK)	1	PC
6146-020000-0440	EARPHONE JACK 2.5MM V-TYPE BALCK	1	PC
6146-049000-0110	RF CONNECTOR (F) V-TYPE 14.2MM D=5.25MM	1	PC
614P-099000-0800	NETWORK CONNECTIONS SOCKET V-TYPE 8 PINS	1	PC
6153-16F010-0330	RCA JACK X 3 V-TYPE PITCH=14MM (YELLOW,W	1	PC
6146-089110-0410	USB(AF) SOCKET H-TYPE 4 PINS (13.9*13*12	1	PC
6153-160010-0110	RCA JACK X 1 V-TYPE BLACK H=13MM	1	PC
150S-M0610410-0302	HEAT SINK 2-110A# L61.2*W41.5*H5.4	1	PC
544E-921120-0420	WAFER(M) P=2.0MM H-TYPE SINGLE ROW 4 PIN	1	PC
492W-116052-R000	CRYSTAL 16.000000MHZ HC-49U/S CL:20PF +/-	1	PC
6146-020100-0410	EARPHONE JACK 3.6MM H-TYPE FOR 8M70	1	PC
4144-CA0000-T0	SMD RESISTOR 0 OHM 1/10W +/-5% 1608 TAPE	4	PC

4144-CA0470-T7	SMD RESISTOR 4.7 OHM 1/16W +/-5% (040	1	PC
4144-CA1000-T7	SMD RESISTOR 10 OHM 1/16W +/-5% 1005 TAP	2	PC
4144-CA1010-T7	SMD RESISTOR 100 OHM 1/16W +/-5% 1005 TA	44	PC
4144-CA1020-2200	SMD RESISTOR 1K OHM 1/16W +/-1% 1005 TAP	6	PC
4144-CA1020-T7	SMD RESISTOR 1K OHM 1/16W +/-5% 1005 TAP	12	PC
4144-CA1040-T7	SMD RESISTOR 100K OHM 1/16W +/-5% 1005 T	10	PC
4144-CA1210-2200	SMD RESISTOR 120 OHM 1/16W +/-1%(1.0*0.5	1	PC
4144-CA1220-T7	SMD RESISTOR 1.2K OHM 1/16W +/-5% 1005 T	2	PC
4144-CA1230-2200	SMD RESISTOR 12K OHM 1/16W +/-1% 1005 TA	1	PC
4144-CA1230-T7	SMD RESISTOR 12K OHM 1/16W +/-5% 1005 TA	3	PC
4144-CA1510-T7	SMD RESISTOR 150 OHM 1/16W +/-5% 1005 TA	1	PC
4144-CA1520-T7	SMD RESISTOR 1.5K OHM 1/16W +/-5% (0402	2	PC
4144-CA1530-2200	SMD RESISTOR 15K OHM 1/16W +/-1% 1005 TA	2	PC
4144-CA1832-2200	SMD RESISTOR 18K2 OHM 1/16W +/-1% 1005 T	1	PC
4144-CA2010-2200	SMD RESISTOR 200 OHM 1/16W +/-1%(1.0*0.5	3	PC
4144-CA2020-2200	SMD RESISTOR 2K OHM 1/16W +/-1%(1.0X0.5X	1	PC
4144-CA2030-T7	SMD RESISTOR 20K OHM 1/16W +/-5% 1005 TA	1	PC
4144-CA2200-T7	SMD RESISTOR 22 OHM 1/16W +/-5% 1005 TAP	5	PC
4144-CA2230-T7	SMD RESISTOR 22K OHM 1/16W +/-5% 1005 TA	3	PC
4144-CA2231-2200	SMD RESISTOR 22.1K OHM 1/16W +/-1% 1005	1	PC
4144-CA2240-2200	SMD RESISTOR 220K OHM 1/16W +/-1% (1.0 X	1	PC
4144-CA2410-T6	SMD RESISTOR 240 OHM 1/16W +/-1% 1005 TA	2	PC
4144-CA2720-T7	SMD RESISTOR 2.7K OHM 1/16W +/-5% (0402	1	PC
4144-CA2730-T7	SMD RESISTOR 27K OHM 1/16W +/-5% 1005 TA	1	PC
4144-CA3300-T7	SMD RESISTOR 33 OHM 1/16W +/-5% 1005 TAP	1	PC
4144-CA3320-2200	SMD RESISTOR 3.3K OHM 1/16W +/-1% 1005 T	1	PC
4144-CA3920-T7	SMD RESISTOR 3.9K OHM 1/16W +/-5% (0402	1	PC
4144-CA3930-T7	SMD RESISTOR 39K OHM 1/16W +/-5% 1005 TA	2	PC
4144-CA4710-T0	SMD RESISTOR 470 OHM 1/10W +/-5% (1.6x0.	2	PC
4144-CA4710-T7	SMD RESISTOR 470 OHM 1/16W +/-5% 1005 TA	4	PC
4144-CA4720-T7	SMD RESISTOR 4.7K OHM 1/16W +/-5% 1005 T	24	PC
4144-CA4730-T7	SMD RESISTOR 47K OHM 1/16W +/-5% 1005 TA	6	PC
4144-CA4740-T7	SMD RESISTOR 470K OHM 1/16W +/-5% 1005 T	1	PC
4144-CA4919-2200	SMD RESISTOR 499 OHM 1/16W +/-1% 1005 TA	1	PC
4144-CA4949-2200	SMD RESISTOR 499K OHM 1/16W +/-1% (1.0 X	1	PC
4144-CA5100-T7	SMD RESISTOR 51 OHM 1/16W +/-5% (0402 1.	1	PC
4144-CA5110-T7	SMD RESISTOR 510 OHM 1/16W +/-5% 1005 TA	1	PC
4144-CA5130-2200	SMD RESISTOR 51K OHM 1/16W +/-1% (1.0x	1	PC
4144-CA5600-5200	SMD RESISTOR 56 OHM 1/16W +/-5% (1.0 X0.	2	PC
4144-CA5610-T7	SMD RESISTOR 560 OHM 1/16W +/-5% 1005 TA	2	PC
4144-CA6220-2200	SMD RESISTOR 6.2K OHM 1/16W +/-1% 1005 TA	1	PC
4144-CA6800-T7	SMD RESISTOR 68 OHM 1/16W +/-5% 1005 TAP	2	PC
4144-CA6820-T7	SMD RESISTOR 6.8K OHM 1/16W +/-5% 1005 T	1	PC
4144-CA6830-T7	SMD RESISTOR 68K OHM 1/16W +/-5% 1005 TA	1	PC
4144-CA7500-T1	SMD RESISTOR 75 OHM 1/10W +/-1% (1.6X0.8	4	PC
4144-CA7500-T7	SMD RESISTOR 75 OHM 1/16W +/-5% 1005 TAP	2	PC
4144-CA7520-2200	SMD RESISTOR 7K5 OHM 1/16W +/-1% (1.0*0.	2	PC

4144-JA0000-T2	SMD RESISTOR NETWORK (0 OHM*4) 1/16W +/-	2	PC
4176-L18002-T0	SMD VARISTOR 18V/2PF ESD 0402 TAPE TYPE(	1	PC
431U-CA2260-A300	SMD X5R MLCC 22UF 6V3 +/-20% 1608 TAPE T	9	PC
4393-CA475D-T2	SMD CERAMIC CAPACITOR 4.7UF 6.3V +/-10%(	7	PC
4393-CB1050-A200	SMD X5R CERAMIC CHIP CAP. 1UF 10V +/-20%	3	PC
431U-CB2250-A200	SMD X5R MLCC 2U2F 10V +/-20% (1.0*0.5MM)	6	PC
4393-CB2260-A400	SMD X5R CERAMIC CHIP CAP. 22UF 10V +/-20	2	PC
431U-CC1050-7200	SMD CERAMIC CHIP CAPACITOR 1UF 16V +/-10	4	PC
4311-CC105D-T2	SMD CERAMIC CHIP CAPACITOR 1UF 16V +/-10	4	PC
433V-CC2240-7200	SMD X5R MLCC 220NF 16V +/-10% (1.0*0.5MM	2	PC
4393-CC225D-T1	SMD CERAMIC CHIP CAPACITOR 2.2UF 16V +/-	2	PC
431R-CC473D-T5	SMD X7R CERAMIC CHIP CAPACITOR 0.047UF16	10	PC
4393-CD1050-7300	SMD X5R CERAMIC CHIP CAP. 1UF 25V +/-10%	2	PC
431U-CD2260-A500	SMD X5R CERAMIC CHIP CAP.22UF 25V +/-20%	2	PC
431R-CF102D-T5	SMD CERAMIC CHIP CAPACITOR 0.001UF 50V +	10	PC
4393-CF104D-T2	SMD CERAMIC CHIP CAPACITOR 0.1UF 50V +/-	4	PC
431R-CF2220-7200	SMD X7R CERAMIC CHIP CAPACITOR 2N2F 50V	1	PC
433V-CF224E-T2	SMD CERAMIC CHIP CAPACITOR 0.22UF 50V +/-	1	PC
431R-CF331D-T5	SMD CERAMIC CHIP CAPACITOR 330PF 50V +/-	4	PC
431R-CF3320-7200	SMD CERAMIC CHIP CAPACITOR 3.3NF 50V +/-	4	PC
433V-CF333D-T2	SMD CERAMIC CHIP CAPACITOR 0.033UF 50V +	4	PC
431R-CF472D-T5	SMD X7R CERAMIC CHIP CAPACITOR 0.0047UF	5	PC
4393-CF474D-T1	SMD C-CERAMIC, CHIP; 470NF, +/-10%, 50V, X7R,	4	PC
433V-CT1020-7500	SMD X7R MLCC 1000PF 2KV +/-10% (3.2*1.6M	2	PC
432N-KE227E-T1	SMD ELECTROLYTIC CAPACITOR 220UF 35V +/-	1	PC
4393-NA4760-A400	SMD X5R MLCC 47UF 6.3V +/-20% 2012 TAPE	1	PC
431R-NF150C-T5	SMD COG CERAMIC CHIP CAPACITOR 15PF 50V	2	PC
431R-NF180C-T5	SMD NPO CERAMIC CHIP CAPACITOR 18PF 50V	2	PC
431R-NF181C-T5	SMD COG CERAMIC CHIP CAPACITOR 180PF 50V	2	PC
431R-NF2210-5200	SMD COG CERAMIC CHIP CAPACITOR 220PF 50V	1	PC
431R-NF330C-T5	SMD NPO CERAMIC CHIP CAPACITOR 33PF 50V	3	PC
431R-NF470C-T5	SMD NPO CERAMIC CHIP CAPACITOR 47PF 50V	2	PC
431R-NF4710-5200	SMD COG CERAMIC CHIP CAPACITOR 470PF 50V	2	PC
431R-NF6800-5200	SMD NPO MLCC 68PF 50V +/-5% (1.0*0.5MM)	1	PC
431R-NF8200-5200	SMD COG CERAMIC CHIP CAPACITOR 82PF 50V	1	PC
4303-CF56A0-K200	SMD MLCC 5P6F 50V +/-0.1PF(1.0*0.5)TAPE	1	PC
4522-254000-T0	SMD SCHOTTKY BARRIER DIODE BAT54C PACKAG	2	PC
452F-75V3U0-0S00	SMD ESD PROTECTION DIODE 5V3 ESD5V3U1U-0	1	PC
4666-M23450-0S00	SMD TRANSISTOR ME2345A(-30V/-4.2A P-CHAN	3	PC
4666-N70020-0S00	SMD TRANSISTOR ME2N7002D N-CH 60V/300MA	2	PC
4661-T39040-T0	SMD BJTR NPN 40V SOT-23	11	PC
4661-T39060-T0	SMD TRANSISTOR LMBT3906LT1G PNPPACKAGE (	1	PC
4701-T5D4G1-1530	SMD IC THGBMDG5D1LBAIL TOSHIBA (4GB E-MM	1	PC
4711-H5T4G7-0960	SMD IC H5TQ4G63EFR-RDC HYNIX(256M*16 DDR	1	PC
4722-T15010-0060	SMD IC SN1501019DDCR TI(3A 4.5V-17V STEP	2	PC
4722-T56220-0060	SMD IC TPS562201DDCR TI(2A 4.5V-17V STEP	1	PC
4722-T57070-0480	SMD IC TAS5707PHPR TEXAS(20W STEREO DIGI	1	PC

4722-T61380-0140	SMD IC TPA6138A2PWR TI(HEADPHONES DRIVE)	1	PC
472L-R90260-0080	SMD IC RT9026GSP RICHTEK (DDR TERMINATIO	1	PC
475V-N72561-4240	SMD IC NT72563MBG-AC NOVATEK(INTERNET ID	1	PC
476A-M87560-0120	SMD IC MP8756GD-Z MPS(6A 26V STEP DOWN C	1	PC
47F2-G25161-0080	SMD IC GD25Q16CSIG GD(16M BIT SPI FLASH)	1	PC
47C4-M66100-0240	SMD IC MXL661 MAXLINEAR (SILICON TUNER)	1	PC
47JN-J11170-0030	SMD IC JY1117EA JY(1A ADJUSTABLE LDO) SO	2	PC
47D9-M49530-0080	SMD IC ME4953 MATSUKI (DUAL P-CHANNEL MO	1	PC
47D9-M94350-0080	SMD IC ME9435A MATSUKI (P-CHANNEL MOSFET	1	PC
47HL-C0809C-0060	SMD IC CS0809V-C TITAN(5V/3pF 4-WAY TVS	1	PC
47J5-A16211-0050	SMD IC AP1621AHKTBER CHIPOWN (HIGH-SIDE	1	PC
4871-S033B0-7300	SMD CHIP COIL R33UH +/-10% (1.6 X 0.8MM)	3	PC
4876-S11000-AS80	SMD POWER INDUCTORS 10UH +/-20% 3.0A(6.0	2	PC
4897-S12200-7S00	SMD WIRE WOUND COIL 22UH +/-10% 2.2A (5.	4	PC
4876-S123A0-DS00	SMD POWER INDUCTORS 2U3H +/-30% 6.4A(6.0	1	PC
484G-S222A0-AS00	SMD MOLDED INDUCTOR 2.2UH ±20% 10A (6.6*	1	PC
482J-S082D0-4200	SMD CHIP COIL 8.2NH +/-3% 380mA (1.0*0.5	1	PC
4876-S033B0-5300	SMD ML COIL 330NH +/-5% 1608 TAPE TYPE	1	PC
4876-2833C0-5200	SMD RF CERAMIC INDUCTOR 33NH +/-5% 200MA	2	PC
4876-S022B0-5220	SMD CHIP COIL 220NH +/-5% 100MA (1.0*0.5	1	PC
491T-112054-RS20	SMD CRYSTAL 12.000MHZ CL:18PF +/-20PPM(3	1	PC
5189-101607-0S00	SMD LAN TRANSFORMER PSF-1626 FOR 10/100	1	PC
5400-99112S-0300	SMD WAFER(M) P=1.25MM H-TYPE SINGLE ROW	1	PC
5844-A7N06G-0P00	MAIN PCB 260*130*1.6MM+55*25*1.6MM FR-4	1	PC
6008-500429-T0	SMD FUSE 5A/32V FAST TIME-TO-TRIP UL/CSA	1	PC
6023-C20103-0500	SMD PTC RESETTABLE FUSE 0.2A/24V (3.0*1.5	1	PC
614G-150010-1950	SMD HDMI SOCKET BLACK V-TYPE 19PIN	2	PC
6463-011600-T0	SMD FERRITE BEAD (1.6 X 0.8MM) TAPE TYPE	2	PC
6463-011608-T0	SMD FERRITE BEAD (1.6 X 0.8MM) TAPE TYPE	1	PC
4144-CB0000-T0	SMD RESISTOR 0 OHM 1/8W +/-5% 2012 TAPE	1	PC
6463-012600-T0	SMD FERRITE BEAD (2 X 1.25MM) TAPE TYPEZ	1	PC
6435-C10255-0300	SMD FERRITE BEAD Z=100MHZ/1000 OHM I=500	1	PC
6463-C60033-0300	SMD FERRITE BEAD Z=100MHZ/60 OHM I=3000M	15	PC
4100-CD0000-T0	SMD RESISTOR 0 OHM 1/4W (1206:3.1 X 1.6M	4	PC
4311-CB1060-7400	SMD X5R CERAMIC CHIP CAP. 10UF 10V +/-10	26	PC
5700-250AA2-0510	SMD LED LIGHT EMISSION RED/GREEN 5V/2mA	1	PC
5300-14438R-0S00	SMD IR RECEIVER MODULES 38KHZ H-TYPE	1	PC
4144-CA4700-T7	SMD RESISTOR 47 OHM 1/16W +/-5% (0402 1	1	PC
5400-321301-04A0	HOUSING 04(2.0)+ HOUSING 02*2(2.5)+300MM	1	PC
534L-36NTUD-H010	INSIDE WIFI MODULE NTUD-B14 2.412-2.814G	1	PC
539C-260404-W000	HANDSET ASS'Y HS-0404J-00 "Panasonic TV"	1	PC
5407-393451-0820	HOUSING 08(1.25)+ HOUSING 08(2.0)+450MM	1	PC
53FJ-3932E2-0020	SPEAKER BOX 6 OHM 10W MAX 12W 107*38.5*2	2	PC
53ED-37LR60-1000	ZINC-MANGANESE DRY BATTERY LR6-AA 1.5V	2	PC
1310-L20010A1-0112	TRANSMIT HOT SILICA GEL PIECE 20*10*11MM	1	PC
5942-A15208-1020	AC LINE CORD 1500MM 0.75*2 BIS PLUG + IN	1	PC
0100-32E2X000-0008	CARTON BOX FOR 32E2-OVERSEA NO PRINTING	1	PC

0601-32P2X000-0002	BACK LABEL FOR 32P2 NO ANYTHING	1	PC
0773-32P2X000-0002	I/B FOR 32P2 OVERSEAS NO ANYTHING	1	PC
3909R04700E00-0140	ADHESIVED TAPE 70MM*50M (TRANSPARENT)	3	M
1523R821800-0421	STAPLE (GOLD) (ROHS)	4	PC
1007-CPE2A000-2102	F.LENS PC+PC CPE2A000-PA 32PE2A	1	PC
0201-CE390F00-2101	EPE FRONT 500*200*18MM FOR 32E390	1	PC
0301-32E2X000-2101	EPS(T-B) FOR 32E2	1	ST
0404-23133105-3103	POLY BAG 230*330*0.05MM WITH PRINTING	1	PC
26PM-03008001-NS01	PM 3 X 8 WITH PLAN WASHER AND SPRING WAS	6	PC
0404-99182105-1103	POLY BAG 990*820*0.05MM WITH PRINTING	1	PC
1002-32E2X009-2101	B.CAB HIPS(94-V0) DG001 32E2X000-PA9 7N0	1	PC
1005-40T3XS00-2103	SIDE AV BKT HIPS(94-V0) DG001 40T3XS00-P	1	PC
1011-43E2X000-2103	WIFI BKT HIPS(94-V0) DG001 43E2X000-PA 4	1	PC
1023-CT200000-2102	CTRL.KEY ABS HUITONG ABS-3070H NB001 CT2	1	PC
1023-CT200110-2102	CTRL.KEY COVER PC HNB001 CT200100-PA 32T	1	PC
0404-06008005-2003	POLY BAG PE 60*80*0.05MM	1	PC
0700-32E2X100-0003	INSTRUCTION PAGE FOR XIAO MY BASE 32E2	1	PC
1020-32E3XL10-2104	BASE(L) ABS+PMMA HNB001 32E3XLR1-PA 32E3	1	PC
1020-32E3XR10-2104	BASE(R) ABS+PMMA HNB001 32E3XLR1-PA 32E3	1	PC
26BT-04018020-B001	BT 4 X 18 (BLACK)	2	PC
432R-BD4773-AT20	ELEC. CAP. 470UF 25V $\pm 20\%$ 10*12.5MM 105*	3	PC
432R-BF4763-AT10	ELEC.CAP. 47UF 50V $\pm 20\%$ 105*C HFLZ 6.3	2	PC
432R-BH4763-AT00	ELEC. CAP. 47UF 100V $\pm 20\%$ 105*C HFLZ 1	2	PC
6014-D3121A-OT00	FUSE 3.15A/250V VDE/CQC/UL 8.4*7.2MM SQU	1	PC
411Q-CD1000-00	SMD RESISTOR 10 OHM 1/4W $\pm 5\%$ (1206 TYP	1	PC
4143-CA1000-T0	SMD RESISTOR 10 OHM 1/10W $\pm 5\%$ (1.6x0.8	3	PC
4143-CA1010-T0	SMD RESISTOR 100 OHM 1/10W $\pm 5\%$ (1.6x0.	1	PC
4143-CA1030-T1	SMD RESISTOR 10K OHM 1/10W $\pm 1\%$ (1.6x0.	2	PC
4143-CA1040-T0	SMD RESISTOR 100K OHM 1/10W $\pm 5\%$ (1.6x0	2	PC
4143-CA1840-T0	SMD RESISTOR 180K OHM 1/10W $\pm 5\%$ 0603 T	1	PC
4143-CA2200-T0	SMD RESISTOR 22 OHM 1/10W $\pm 5\%$ (1.6x0.8	3	PC
4143-CA3030-T0	SMD RESISTOR 30K OHM 1/10W $\pm 5\%$ (1.6x0.	1	PC
4143-CA3030-T1	SMD RESISTOR 30K OHM 1/10W $\pm 1\%$ (1.6x0.	1	PC
4143-CA3940-T1	SMD RESISTOR 390K OHM 1/10W $\pm 1\%$ (06031	3	PC
4143-CB1020-T0	SMD RESISTOR 1K OHM 1/8W $\pm 5\%$ (0805 TYP	1	PC
4143-CB1020-T1	SMD RESISTOR 1K OHM 1/8W $\pm 1\%$ (2X1.25MM	2	PC
4143-CB1030-T1	SMD RESISTOR 10K OHM 1/8W $\pm 1\%$ (0805 TY	3	PC
4143-CB3930-2400	SMD RESISTOR 39K OHM 1/8W $\pm 1\%$ (2.0*1.2	1	PC
4143-CB4720-T0	SMD RESISTOR 4.7K OHM 1/8W $\pm 5\%$ (0805 T	2	PC
4143-CB5640-2400	SMD RESISTOR 560K OHM 1/8W $\pm 1\%$ (2*1.25	1	PC
4143-CB6830-2400	SMD RESISTOR 68K OHM 1/8W $\pm 1\%$ (2.0*1.2	1	PC
4143-CD0220-T1	SMD RESISTOR 2.2 OHM 1/4W $\pm 1\%$ (1206 3.	3	PC
4143-CD0270-T1	SMD RESISTOR 2.7 OHM 1/4W $\pm 1\%$ (1206 3.	1	PC
4143-CD1020-T1	SMD RESISTOR 1K 1/4W $\pm 1\%$ (1206 3.2 X1.	1	PC
4143-CD2030-T0	SMD RESISTOR 20K OHM 1/4W $\pm 5\%$ (3.2 X 1	3	PC
4143-CD2730-2500	SMD RESISTOR 27K OHM 1/4W $\pm 1\%$ (3.2 X 1	5	PC
4143-CD3300-T0	SMD RESISTOR 33 OHM 1/4W $\pm 5\%$ (3.2 X 1.	2	PC

4143-CD3310-T0	SMD RESISTOR 330 OHM 1/4W +/-5% (3.2 X 1	3	PC
4143-CD4700-T0	SMD RESISTOR 47 OHM 1/4W +/-5% (1206 TYP	1	PC
4143-CD6800-2500	SMD RESISTOR 68 OHM 1/4W +/-1% (3.2 X 1.	3	PC
4143-CD8240-5500	SMD RESISTOR 820K OHM 1/4W +/-5%(3.2 X 1	2	PC
4303-CR4710-7500	SMD X7R CERAMIC CHIP CAP. 470PF 1KV +/-1	2	PC
433V-NF101C-T1	SMD NPO CERAMIC CHIP CAPACITOR 100PF 50V	2	PC
431R-NT1010-5500	SMD NPO CERAMIC CAPACITOR 100PF 2KV +/-5	2	PC
4393-NT4700-5500	SMD COG MLCC 47PF 2KV ±5% 3216 TAPE TYPE	1	PC
433V-CD1050-7300	SMD X5R CERAMIC CHIP CAP. 1UF 25V +/-10%	1	PC
433V-CF102D-T1	SMD CERAMIC CHIP CAPACITOR 0.001UF 50V +	1	PC
433V-CF102D-T2	SMD CERAMIC CHIP CAPACITOR 0.001UF 50V +	1	PC
433V-CF103D-T1	SMD CERAMIC CHIP CAPACITOR 0.01UF 50V +/-	1	PC
433V-CF104D-T1	SMD X7R CERAMIC CHIP CAPACITOR 0.1UF 50V	3	PC
433V-CF221D-T2	SMD CERAMIC CHIP CAPACITOR 220PF 50V +/-	2	PC
433V-CF224D-T1	SMD CERAMIC CHIP CAPACITOR 0.22UF 50V +/-	1	PC
433V-NF331C-T1	SMD NPO CERAMIC CHIP CAPACITOR 330PF 50V	1	PC
433V-NF471C-T1	SMD NPO CERAMIC CHIP CAPACITOR 470PF 50V	1	PC
433V-NR1020-5500	SMD COG CERAMIC CHIP CAP. 1000PF 1KV ±5%	2	PC
451F-210200-0S00	SMD SCHOTTKY BARRIER RECTIFIER DIODE 10A	2	PC
4522-25150C-0S00	SMD SCHOTTKY RECTIFIER 5A/150V SMC TAPE	1	PC
4522-2M7000-0S00	SMD SCHOTTKY DIODE 1000V/1A SMA TAPE TYP	3	PC
4522-400027-S5	SMD ZENER DIODE 2V7 1/2W +/-5% ZMM2.7 3.	1	PC
4522-400270-T1	SMD ZENER DIODE 27V 1/2W TAPE TYPE	1	PC
4522-401530-3S00	SMD ZENER DIODE 15V +/-2% 500MW SOD-123	2	PC
4522-402430-3S00	SMD ZENER DIODES 24V +/-2% 0.5W SOD-123	1	PC
4522-402730-3S00	SMD ZENER DIODE 27V +/-2% 500mW SOD-123	1	PC
4522-403330-3S00	SMD ZENER DIODE 33V +/-2% 500mW SOD-123	1	PC
4522-431051-T0	SMD ZENER DIODE 5V1 1/4W +/-5% 2 PINS (T	1	PC
4628-J12N65-0S00	SMD TRANSISTOR JCS12N65T (650V/12A 250W	1	PC
4661-T44010-S0	SMD TRANSISTOR MMBT4401LT1 NPN SILICON S	2	PC
476K-Z56000-0160	SMD IC 0Z560EGN-B1-0-TR 02 MICRO (LED DR	1	PC
4776-ASA000-0080	SMD IC FA8A00N FUJI (PWM CONTROL) SOP-8	1	PC
47B6-A43101-0030	SMD IC AS431AHM/TR-LF A1(ADJUSTABLE PREC	1	PC
1020-24L42000-2102	SUPPORTER PA66(94V0) L22W11-H17 FOR24L42	2	PC
4134-NJ0510-00	POWER THERMISTOR RESISTOR 5 OHM 4A +/-15	1	PC
4157-DH1040-5T00	METAL OXIDE FILM RESISTOR 100K OHM 2W +/-	1	PC
4171-DH15B0-5T00	METAL OXIDE FILM RESISTOR 0R15 OHM 2W +/-	1	PC
4176-L68166-7Q10	VARISTOR 680V ±10% I(MAX)=6000A D=14MM (	1	PC
432R-BF1073-AZX0	ELEC. CAP. 100UF 50V +/-20% 105°C HFLZ 8	3	PC
433X-F32240-7ZE0	AC CAPACITOR 220NF AC275V ±10%(P=15MM,L	2	PC
433Z-S24700-7Z20	SAFETY CERAMIC Y1 CAP. 47PF AC250V ±10%	2	PC
4380-BN6861-A040	ELEC. CAP. 68UF 450V ±20% 105°C 12.5*40M	2	PC
4522-120080-T0	NORMAL RECTIFIER DIODE 2A/800V (TAPE TYP	6	PC
47AH-P817C0-04	IC BPC-817C BRIGHT LED (PHOTOCOUPLER))	1	PC
483V-061830-Z040	AC LINE FILTER 18mH X 2(MIN) TOLERANCE≤0	1	PC
483W-029000-7Z10	CHOKE COIL 90uH +/-10% 2A T=43.5 V-TYPE(	1	PC
4846-061000-Z000	AC LINE FILTER (3-10)uH X 2 4PINS ROUND	1	PC

4852-0213A0-DZ00	CHOKE COIL 1u3H +/-30% 5*6MM ROUND V-TYP	1	PC
5157-06ER26-0020	SWITCHING TRANSFORMER BCK-30-L02513 380u	1	PC
541E-921120-0610	WAFER(M) P=2.0MM H-TYPE SINGLE ROW 6 PIN	1	PC
5448-921130-0220	WAFER(M) P=2.0MM V-TYPE SINGLE ROW 2 PIN	1	PC
544N-921130-0230	WAFER(M) P=2.5MM V-TYPE SINGLE ROW 2 PIN	1	PC
6153-120000-02B0	AC POWER SOCKET 2 TERMINAL V-TYPE BLACK	1	PC
4348-S54710-7Z20	SAFETY CERAMIC CAP. 470PF AC400V +/-10%(	3	PC
MD00-23SA00-50	(TI) INSIDE WIFI ASS'Y 7N06T-32TE3	1	ST
1519-JE510000-01	CONNECT FOR SUPPORT FOR B.CAB 19E510	4	PC
1508-8188E000-0233	SEAL CAN COVER FOR 8188E	1	PC
4143-CA1050-T7	SMD RESISTOR 1M OHM 1/16W +/-5% (0402 1	1	PC
4143-CA1540-5200	SMD RESISTOR 150K OHM 1/16W +/-5% (1.0 X	1	PC
4143-CA2430-2200	SMD RESISTOR 24K OHM 1/16W +/-1% (1.0*0.	1	PC
4143-CA6840-5200	SMD RESISTOR 680K OHM 1/16W +/-5% 1005	1	PC
4303-CA1060-A300	SMD CC CAP 10UF/6.3V +/-20% 1608	1	PC
4303-CC1060-7400	SMD X5R CERAMIC CHIP CAPACITOR 10UF 16V+	2	PC
4303-CF1000-3200	SMD MLCC 10PF 50V +/-2%(1.0*0.5)TAPE TYP	1	PC
4303-CF1200-3200	SMD MLCC 12PF 50V +/-2% (1.0*0.5)TAPE TY	1	PC
4303-CF12A0-K210	SMD MLCC 1P2F 50V +/-0.1PF (1.0*0.5)TAPE	3	PC
4303-CF80B0-K200	SMD MLCC P80F 50V +/-0.1PF (1.0*0.5)TAPE	1	PC
4303-NF68A0-L200	SMD COG CERAMIC CHIP CAP. 6P8F 50V ±0.25	4	PC
474Z-R81880-0460	SMD IC RTL8188ETV-CG REALTEK(1T1R WLAN C	1	PC
47J5-A24080-0050	SMD IC APS2408ES5-ADJ CHIPOWN (STEP-DOWN	1	PC
482J-2830D0-M200	SMD RF CERAMIC INDUCTOR 3NH +/-0.3NH 100	1	PC
482J-S010C0-5220	SMD CHIP COIL 10NH +/-5% 300mA(1.0*0.5MM	2	PC
482J-S027D0-M210	SMD CHIP COIL 2N7H +/-0.3NH 300mA(1.0*0.	2	PC
482J-S147A0-AS60	SMD POWER INDUCTORS 4R7 UH ±20% 1.25A 25	1	PC
491T-140054-QS00	SMD CRYSTAL 40.000MHZ CL:15PF +/-10PPM (	1	PC
53BA-44MAC0-0000	MAC ADDRESSES FOR COMMON	1	PC
5448-99112S-0800	SMD WAFER(M) P=1.25MM H-TYPE SINGLE ROW	1	PC
5851-W81881-1P00	WIFI PCB 40*29*1.0MM FR4 OSP FOR RTL8188	1	PC

Factory Manual

1 、 How to enter and exit factory mode

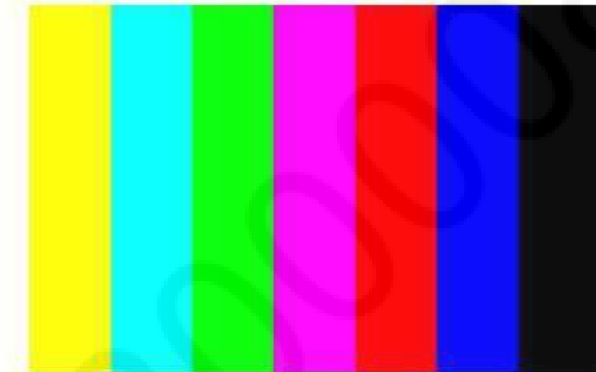
1.1.1 Press Source button, and then press digital button “3”, “1”, “9”, “5” in turns to enter the factory menu. Press  and  button to choose the item , press OK button to enter the submenu and press  button to adjust the value.

In the factory mode, press “menu” key can exit the factory mode.

2 、 How to adjust White Balance

2.1 ADC ADJUST

Before adjusting, enter the channel you want to adjust and input adjust signal (YPBPR channel: 576P and 720P & 100% color bar; VGA channel: 1366*768 & tessellated white and black). Select AUTO ADC, press  button to auto adjust the ADC value.



100% color bar



tessellated white and black

Note: 1、 The YPBPR and VGA's Auto White Balance adjust (AUTO ADC) must be done on

the product line.

2、 In YPBPR channel ,must adjust the SD and HD two modes.

2.2 W/B ADJUST

Enter factory mode, select W/B ADJUST, go to the “MODE” item to select the channel which you want to adjust then select the color temperature (Medium, Warm, Favorite,Cool). Then press 

Key to go to these items you want to adjust:

R Gain

G Gain

B Gain

R Offset

G Offset

B Offset

Press  or  key can adjust the value to the best effect.

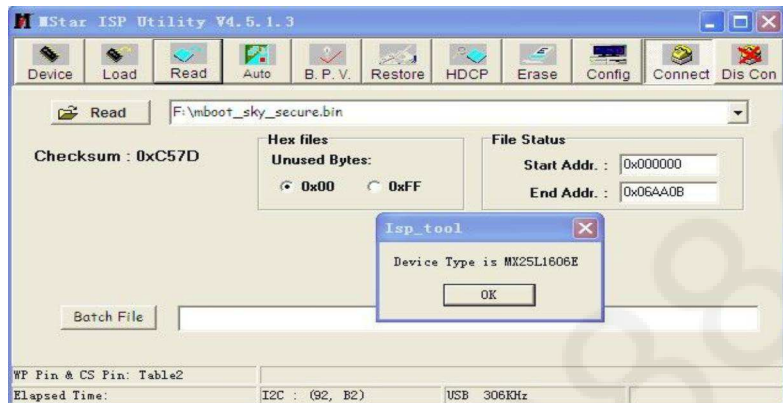
COPY ALL : Copy there values to all source!

3、 How to update software

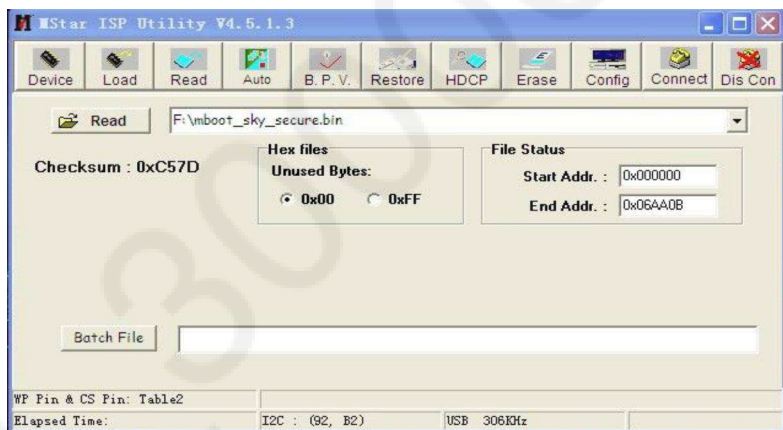
3.1 Open MSTAR ISP Utility tool



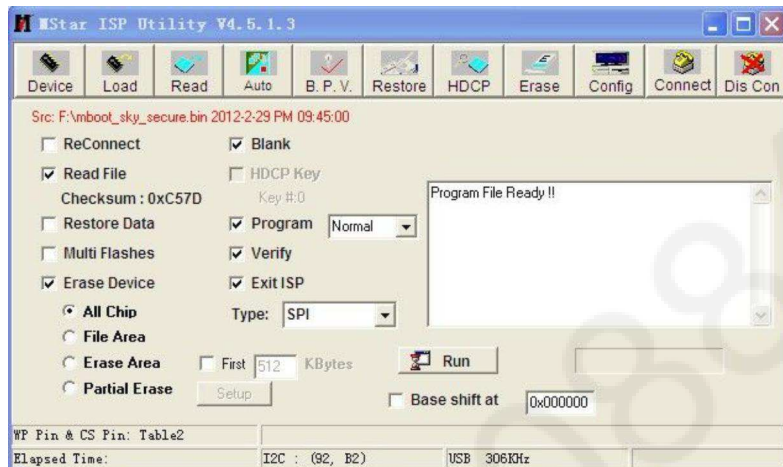
3.2、 Connect the tool to the device ,turn on TV .press “Connect”。



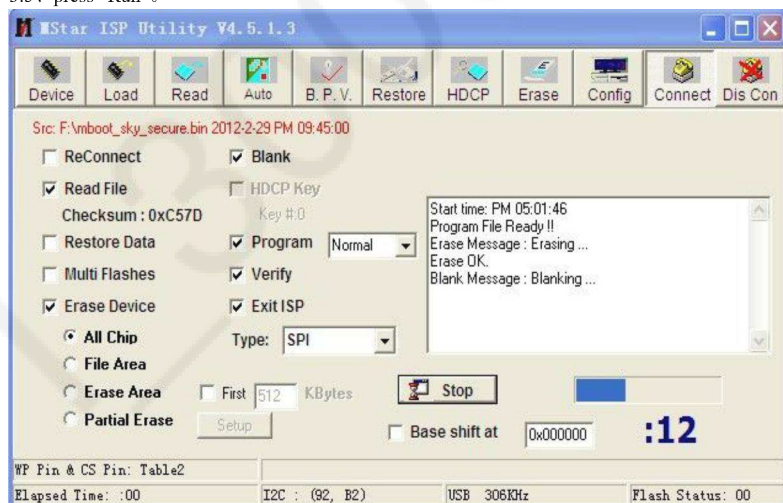
3.3、press “Read” to choose the “merge.bin” file .

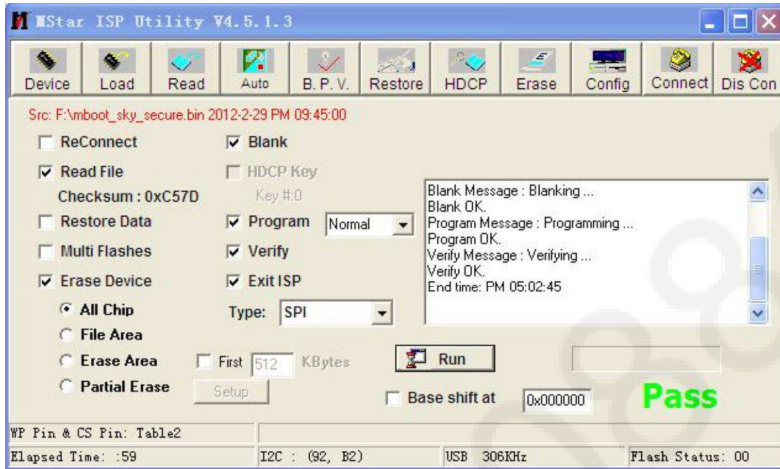


3.4、Press “Auto”, set parameter.



3.5、press “Run”.





4、Update software (by USB):

Copy the new software (name by “MERGE.bin”) to the root directory of USB drive. Plug the drive to the USB socket (if there are two USB socket, make sure you use the socket 1). Enter MENU and select SETUP item , select “Software Upgrade(USB)” item and press OK button to begin update. TV set will restart when finish. Note, you need to restart the TV set again by AC power.

Note: We suggest you need to do “**Restore Default**” after software update.