



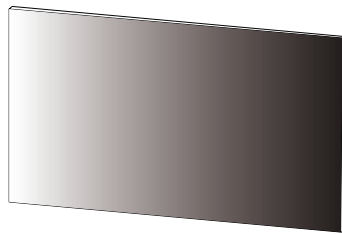
CONFIDENTIAL

LED MONITOR SERVICE MANUAL

MODEL : 32GN600/32GK60W

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



P/NO : MFL69406897 (2107-REV00)

CONTENTS

CONTENTS	2
SPECIFICATION	3
SAFETY PRECAUTIONS	8
BLOCK DIAGRAM	9
EXPLODED VIEW	10
TROUBLE SHOOTING GUIDE	12

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

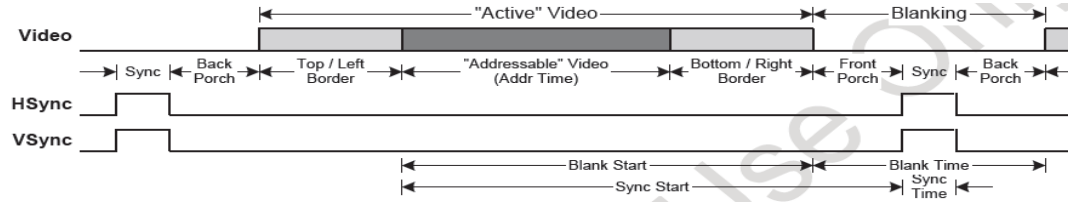
1. General Specification

No	Item		Content	Measurement	Result	Remark
1	Customer		BRAND	Checked	OK	
2	User Model Name		32GN600/32GN650	Checked	OK	
3	Sale region		Worldwide	Checked	OK	
4	Feature		32" LCD MONITOR(gaming)	Checked	OK	
5	Chassis Name		LM20V	Checked	OK	
6	General Scope	External SW & Adj.	5-way joystick switch	Checked	OK	
		Function	Game Mode, Aspect Ratio, S.E.S, Six Color, On Screen Control, Dual Controller, Gamma calibration	Checked	OK	
7	Power Cord		Length : 1.00±0.04 M / Shape : Wall-out / Color : Black Weight : 0.13kg ± 10%	Checked	OK 1.01m, 0.131kg	Power cord can be changed according to region. (For D/T type adapter)
8	Cable	HDMI	Length : 1.5m±0.05m / Shape : Detachable Type / Color : Black / Weight : 0.091kg± 10%	Checked	OK 1.5m, 0.095kg 100 Ω± 10%	SET accessory P/N : EAD63954401 4. Cable Impedance(Ω) : Differential : 100Ω±10%
			CABLE : 100Ω±10Ω CONNECTOR : 100Ω±15Ω			

		DisplayPort	Length : 1.5m±0.05m Shape : Detachable Type / Color : Black / Weight : 0.095kg± 10%	N/A	N/A	
			CABLE : 100Ω±5Ω CONNECTOR : 100Ω±10Ω	N/A	N/A	
9	Power		Output: DC 19V 3.42A, 65W Adapter Color: Black, Weight : 205g ±10%, without vinyl bag	Checked	OK	P/N : Refer to suffix standard.
10	Factory calibration report		0.002kg	Checked	OK	SET accessory / Refer to BOM
11	Applying module list		P/No	Specification		
			TBD	SEM320F0(AD0-M10)	Checked	OK

2. Signal Timing (Resolution)

2.1. Signal (Video & Sync)



mode	section	polarity	DOT CLOCK [MHz]	Frequency [kHz]/[Hz]	Total Period (E)	Display (A)	Front Porch (D)	Sync. (C)	Back Porch(B)	Resolution (HDMI / DP)
1	H(Pixels)	-	25.175	31.469	800	640	16	96	48	640 x 480
	V(Lines)	-		59.94	525	480	10	2	33	
2	H(Pixels)	+	40.0	37.879	1056	800	40	128	88	800 x 600
	V(Lines)	+		60.317	628	600	1	4	23	
3	H(Pixels)	-	65.0	48.363	1344	1024	24	136	160	1024 x 768
	V(Lines)	-		60.0	806	768	3	6	29	
4	H(Pixels)	+	148.50	67.50	2200	1920	88	44	148	1920 x 1080
	V(Lines)	+		60	1125	1080	4	5	36	
5	H(Pixels)	+	241.5	88.79	2720	2560	48	32	80	2560 x 1440
	V(Lines)	-		74.99	1481	1440	3	5	33	
6	H(Pixels)	+	497.75	183	2720	2560	48	32	80	2560 x 1440
	V(Lines)	+		120	1525	1440	3	5	77	
7	H(Pixels)	+	604.25	222.15	2720	2560	48	32	80	2560 x 1440
	V(Lines)	-		143.97	1543	1440	3	5	95	
8	H(Pixels)	+	679.30	249.74	2720	2560	48	32	80	2560 x 1440

	V(Lines)	-		164.96	1514	1440	3	5	66	
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HDMI Video input (Refer to Manual)

	Factory support mode	Horizontal frequency	Vertical frequency	Remark
	(Preset Mode)	(KHz)	(Hz)	
1	480P	31.5	60	
2	720P	45	60	
3	1080P	67.5	60	
4	1080P	135	120	Only HDMI 2.0 and HDMI Adaptive sync
5	2160P	135	60	Only HDMI 2.0 and HDMI Adaptive sync

SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by $\triangle$ in the Exploded View.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1 W), keep the resistor 10 mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1 M Ω and 5.2 M Ω .

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

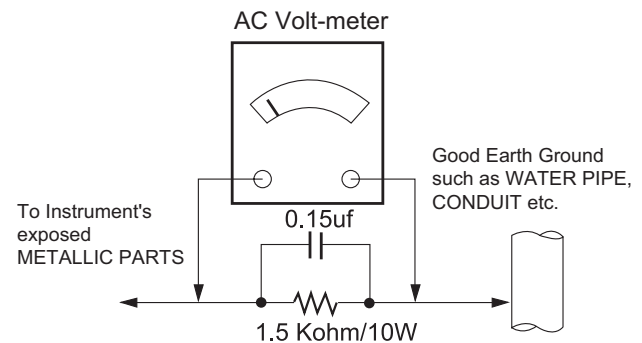
Connect 1.5 K / 10 watt resistor in parallel with a 0.15 uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5 mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

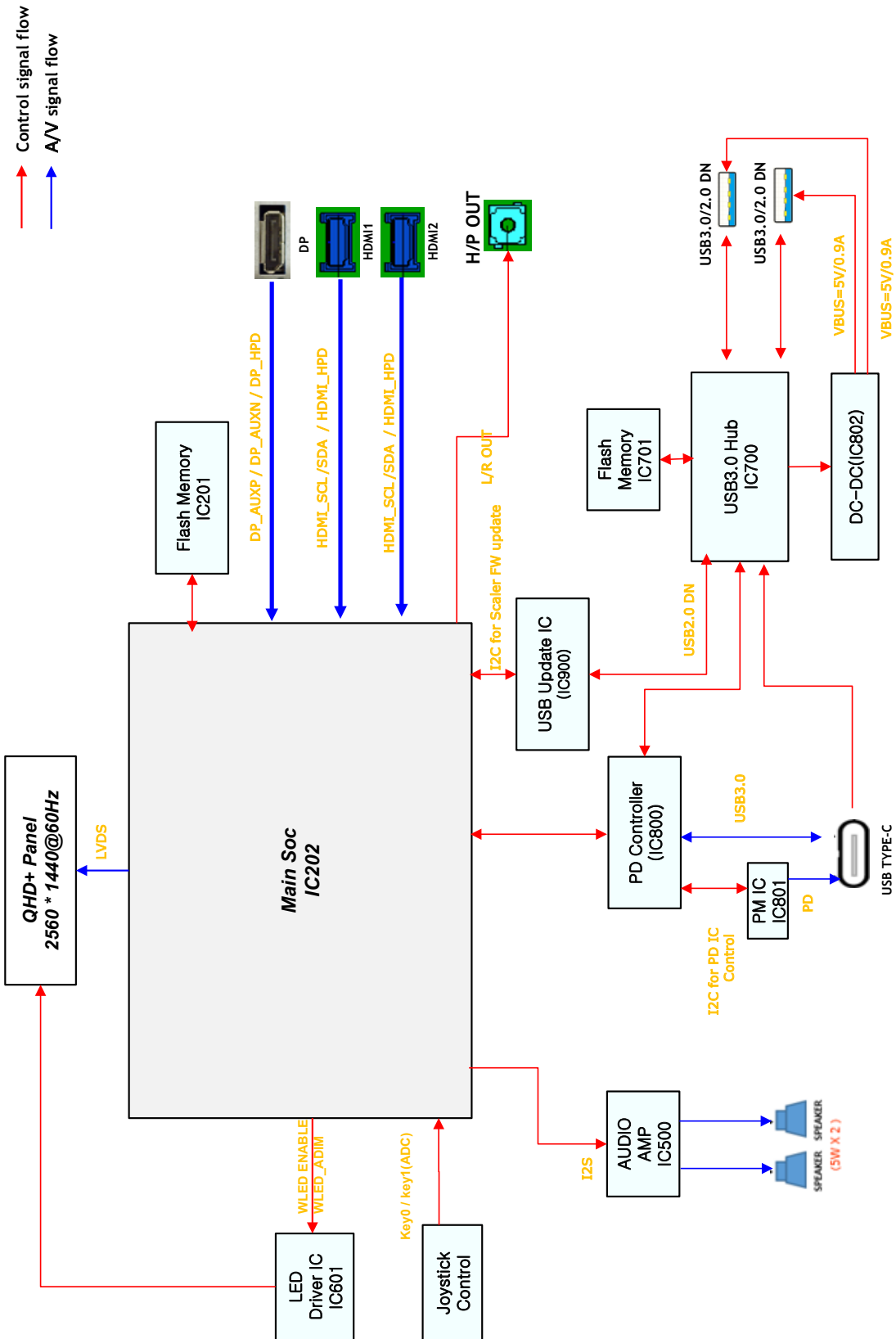
Leakage Current Hot Check circuit



When 25A is impressed between Earth and 2nd Ground for 1 second, Resistance must be less than 0.1

*Base on Adjustment standard

BLOCK DIAGRAM



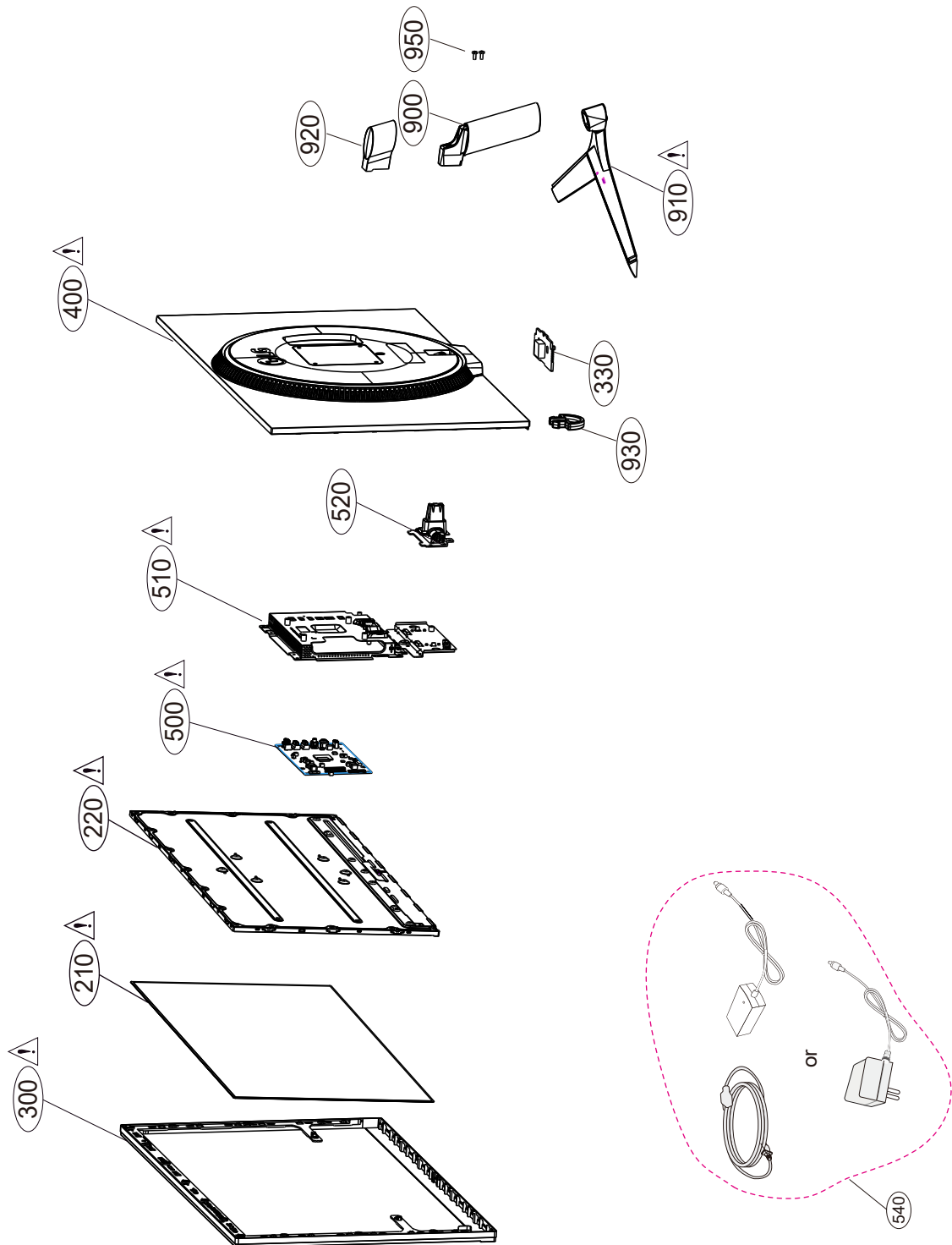
EXPLODED VIEW

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by ⚠ in the EXPLODED VIEW.

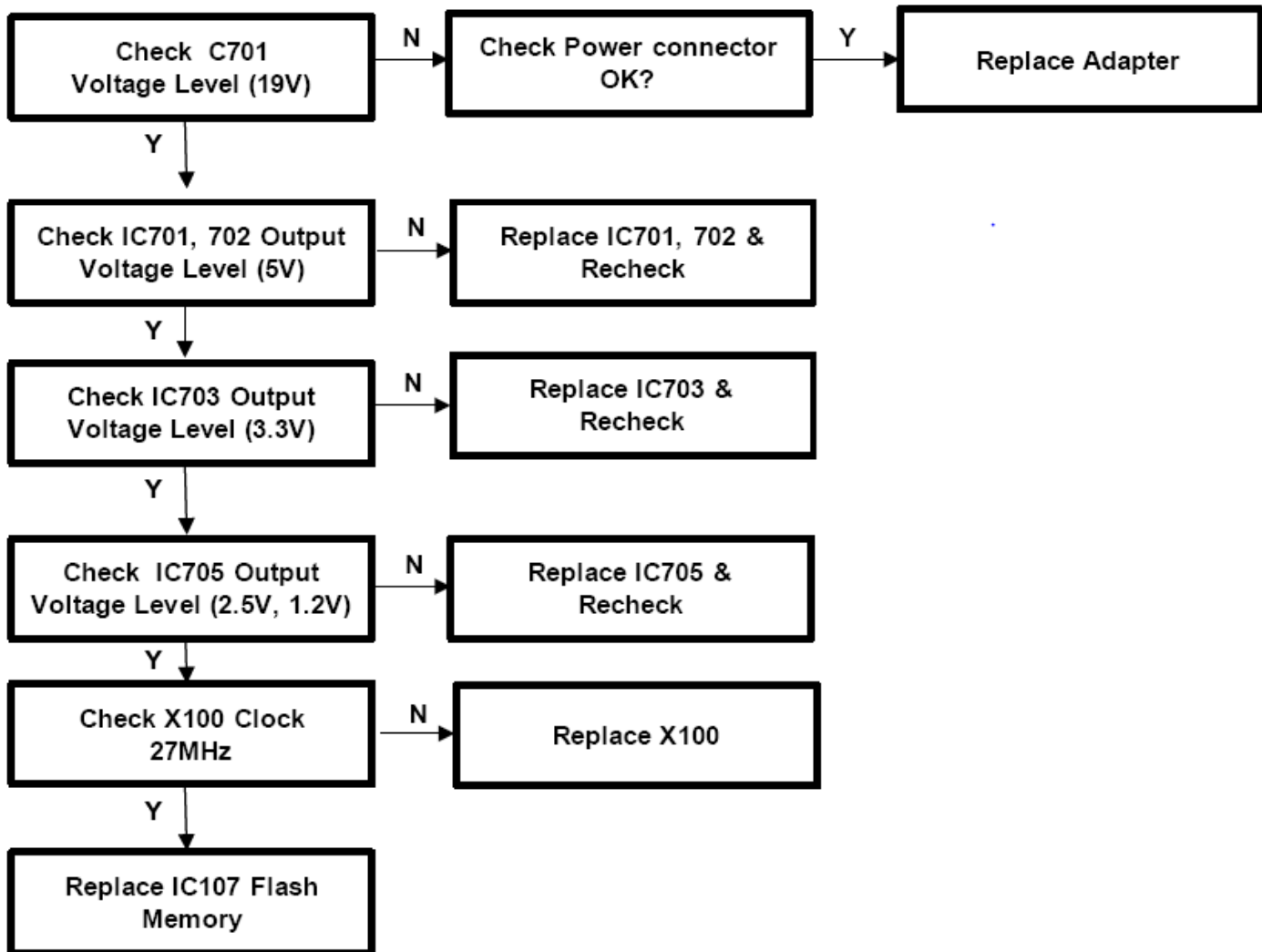
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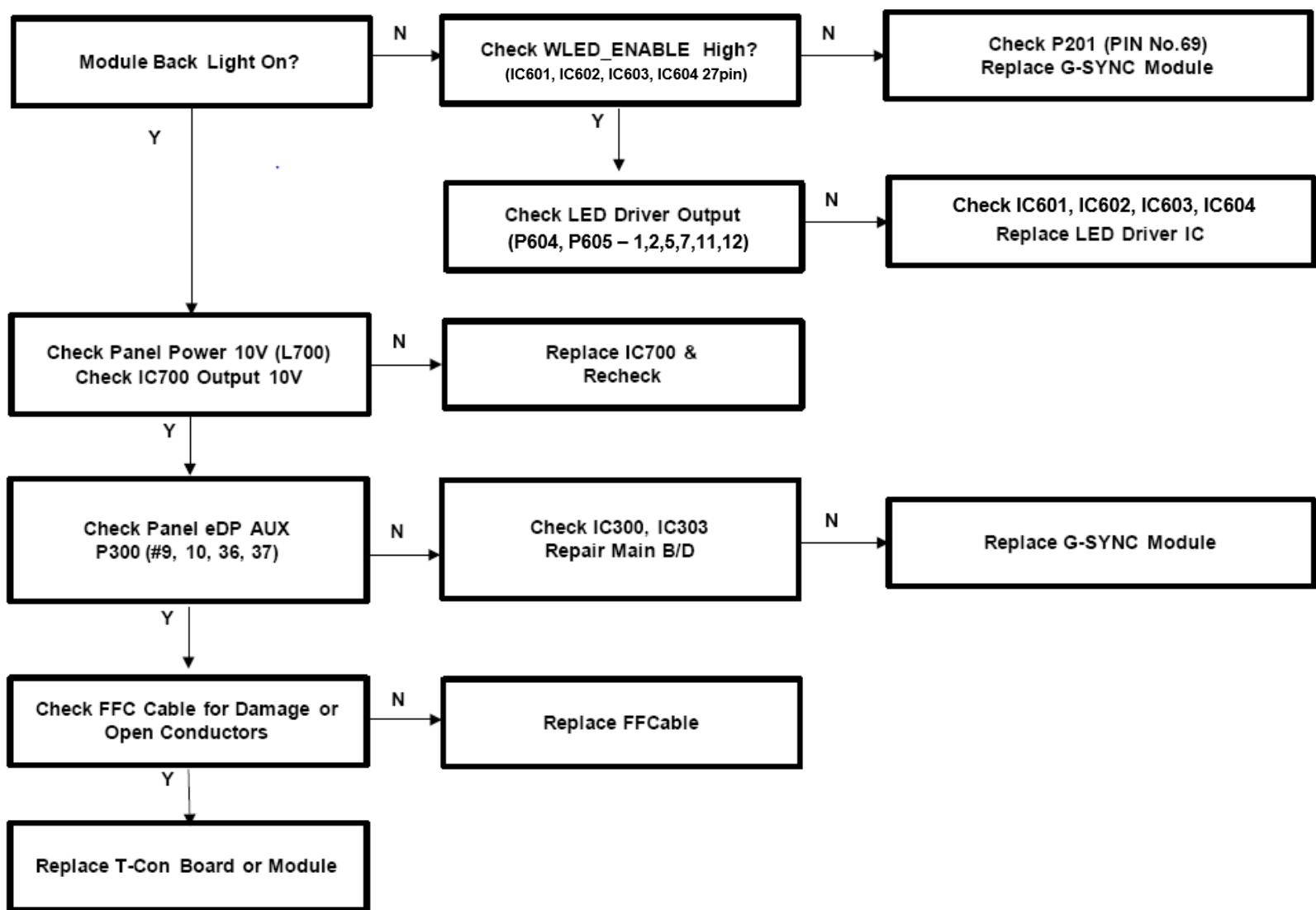


TROUBLE SHOOTING GUIDE

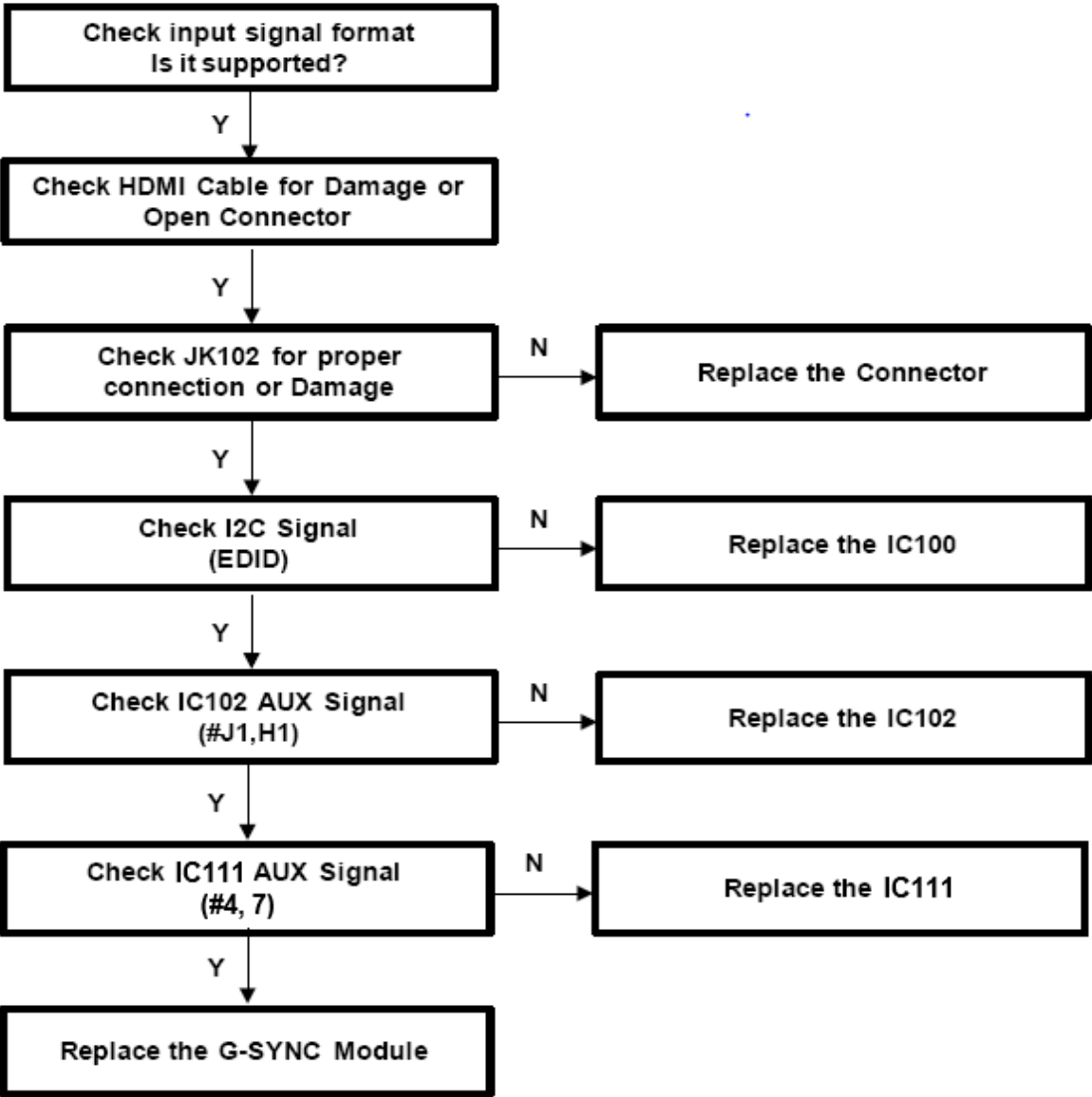
8.a. Trouble shooting Guide : No Power



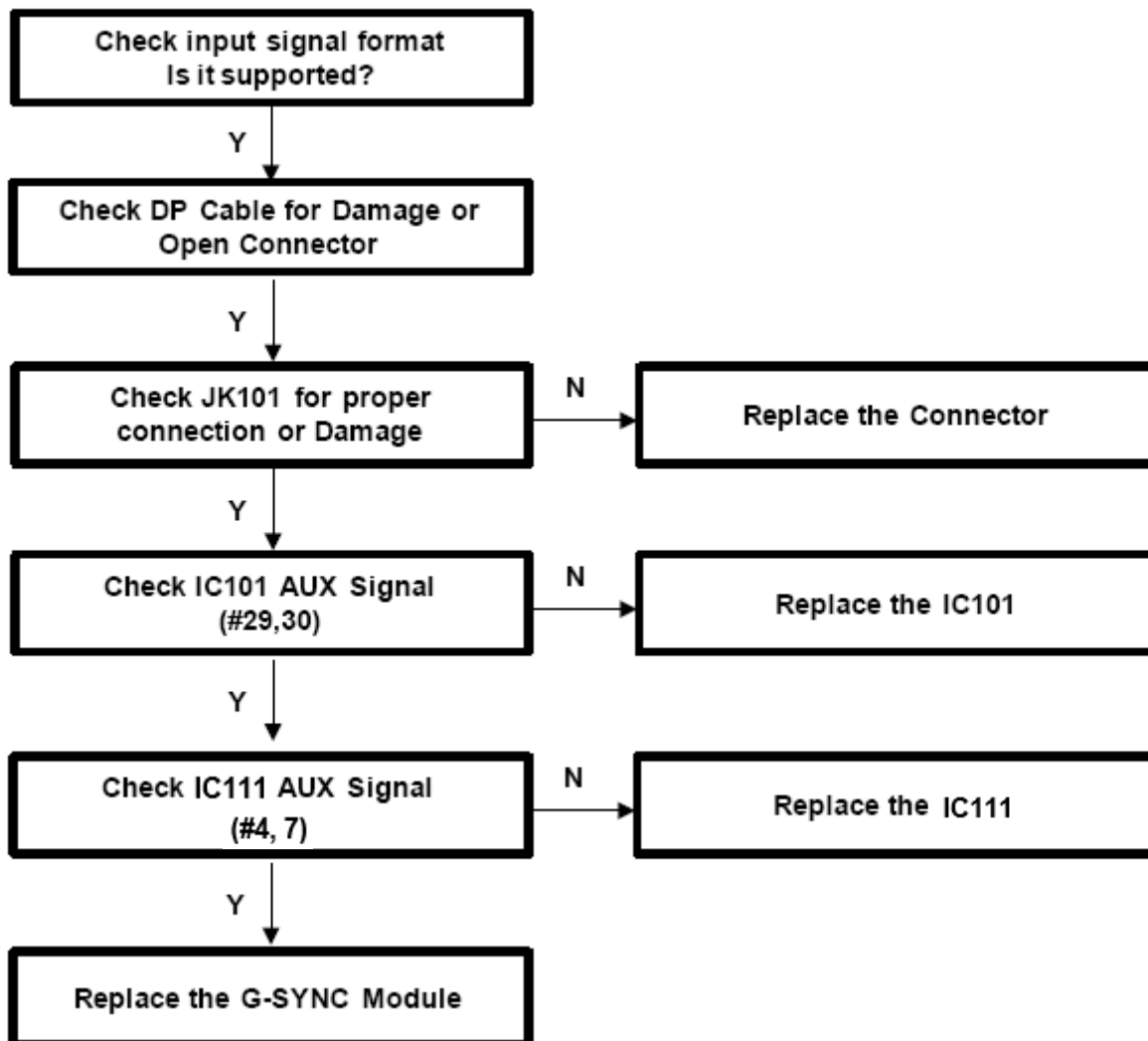
8.b. Trouble shooting Guide : No Screen on



8.c. Trouble shooting Guide : No video – HDMI



8.c. Trouble shooting Guide: No video – DP



8.c. Trouble shooting Guide: No LED Lighting or No LED Color Change

