

# 42LE5500 INTERCONNECT DIAGRAM

P204 "SMPS" To "The Panel"

Pin	Label	STBY	Run	Diode Check
12	02.A	0V	117.8V	Open
11	n/c	n/c	n/c	Open
10	02-1C	0V	1V~30V	Open
9	02-2C	0V	1V~30V	Open
8	02-3C	0V	1V~30V	Open
7-6	n/c	n/c	n/c	Open
5	01-3C	0V	1V~30V	Open
4	01-2C	0V	1V~30V	Open
3	02-1C	0V	1V~30V	Open
2	n/c	n/c	0V	Open
1	01.A	0V	117.8V	Open

P205 "SMPS" To "The Panel"

Pin	Label	STBY	Run	Diode Check
12	04.A	0V	120V	Open
11	n/c	n/c	n/c	Open
10	04-1C	0V	1V~30V	Open
9	04-2C	0V	1V~30V	Open
8	04-3C	0V	1V~30V	Open
7-6	n/c	n/c	n/c	Open
5	03-3C	0V	1V~30V	Open
4	03-2C	0V	1V~30V	Open
3	03-1C	0V	1V~30V	Open
2	n/c	n/c	0V	Open
1	03.A	0V	120V	Open

Note: If a particular area is exhibiting a dimmer backlight level than other areas or the overall brightness seems dim, be sure to first check the customer's Menu setting for Backlights. Raise the percentage and see if the overall brightness returns to normal. If not,  
**1<sup>st</sup>:** Check the P-DIM level, it should rise with the percentage shown on screen. 100%, 3.3V. Follow the P-DIM signal all the way to the Inverter.  
**2<sup>nd</sup>:** Turn off Local Dimming in the Customers Menu. If the brightness returns to normal, examine the signals required for Local Dimming. (SIN, V-SYNC and SCLK).

You can also check each of the 12 blocks functionality by grounding the driver output signals. See "Forcing on a Block of LEDs" on the right.

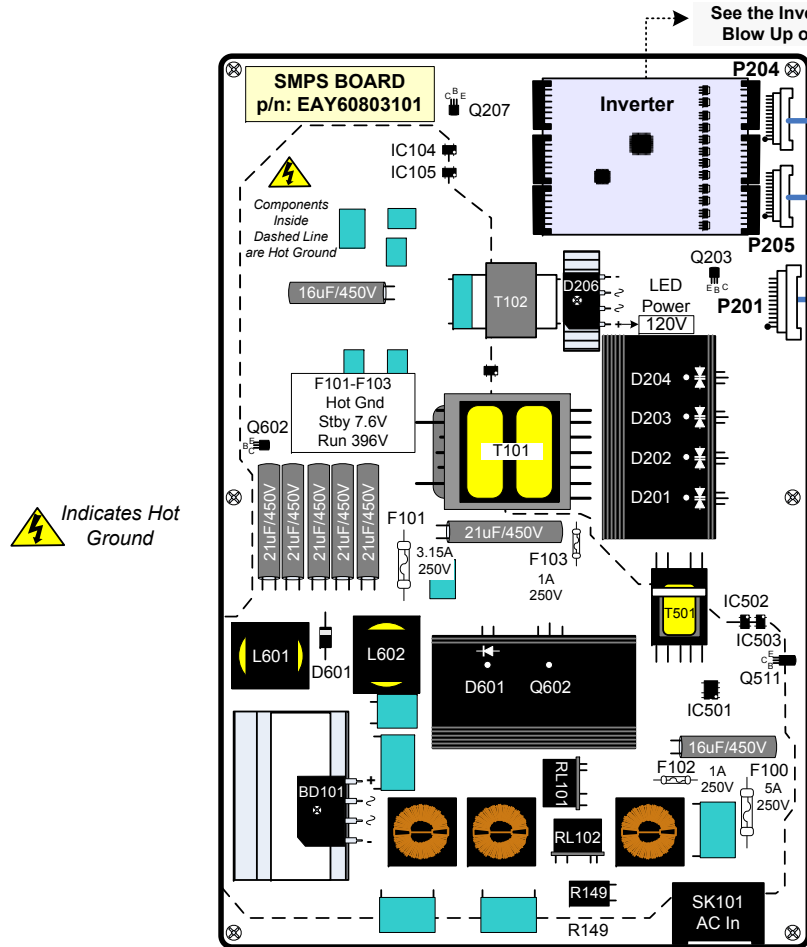
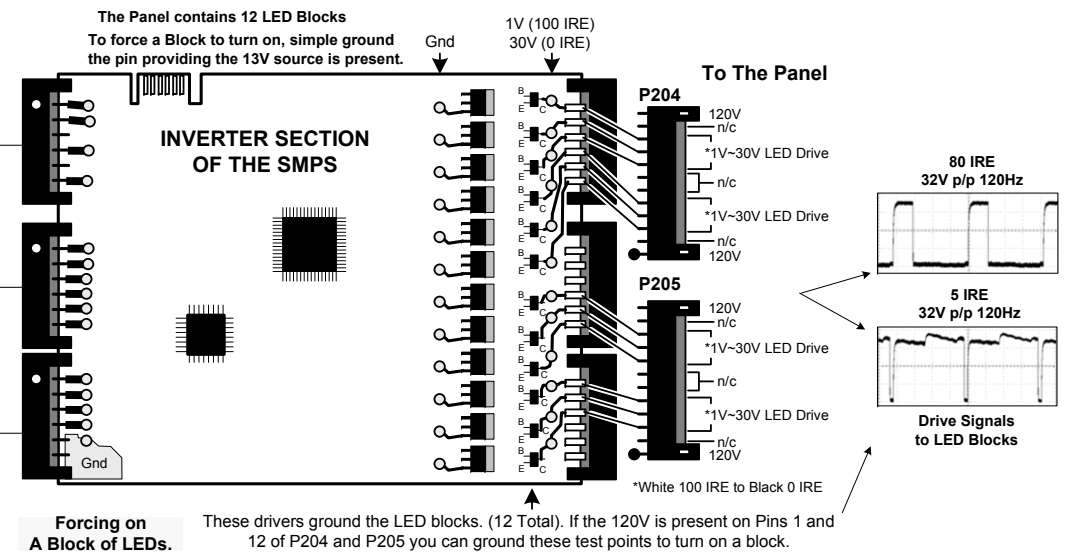
Pin	Label	STBY	Run	Diode Check
1	VDD-33	3.5V		
2	VLED-RANGE	0V		
3	Gnd	Gnd		
4	+12VS	12.44V		
5	Gnd	Gnd		
6	+3.5VS	3.57V		

Pin	Label	STBY	Run	Diode Check
1	INV_ON	3.28V		
2	Gnd	Gnd		
3	Gnd	Gnd		
4	SCLK	0.09V		
5	FB_STR_VF	1V		
6	P-DM1	1.9V		

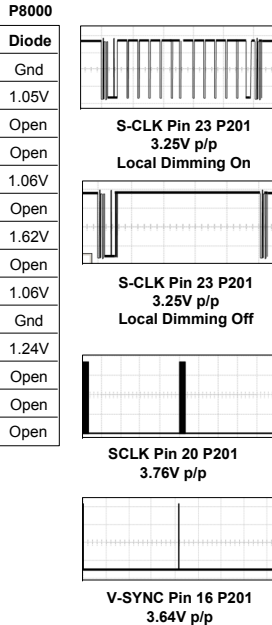
Pin	Label	STBY	Run	Diode Check
1	Error	0V		
2	(L-DIM) SIN	3.3V		
3	POWER_ON	3.35V		
4	VSYNC_IN	0V		
5	Gnd	Gnd		
6	Gnd	Gnd		



P201 "SMPS" To P8000 "MAIN Board"

Pin	Label	STBY	Run	Diode Check
24	ERROR	0V	0V	1.45V
23	L-DIM (SIN)	0V	3.3V	Open
22	P-DIM	0V	0.38V~3.3V	Open
21	12V	0V	11.43V	0.178V
20	SCLK	0V	0.09V	Open
19	12V	0V	11.43V	0.178V
18	INV-ON	0V	3.28V	Open
17	12V	0V	11.43V	0.178V
16	V-SYNC	0V	0.02V	Open
13-15	Gnd	Gnd	Gnd	Gnd
9-12	3.5V	3.57V	3.5V	Open
5-8	Gnd	Gnd	Gnd	Gnd
2-4	20V	0V	21.27V	1.10V
1	PWR-ON	0V	3.36V	1.02V

(1) PDIM Pin 22 can vary according to incoming video IRE level, OSD Backlight setting and then Intelligent Sensor (room light condition) Output from the Video Processor IC900. Range 0.37V to 3.3V.



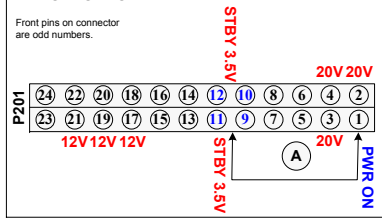
P8000 "Main" To "Speakers"

Pin	Label	SBY	Run	Diode
1	SPK-R(-)	0V	12.3V	Open
2	SPK-R(+)	0V	12.3V	Open
3	SPK-L(-)	0V	12.3V	Open
4	SPK-L(+)	0V	12.3V	Open

P8200 "MAIN Board" To J1 "IR Board"

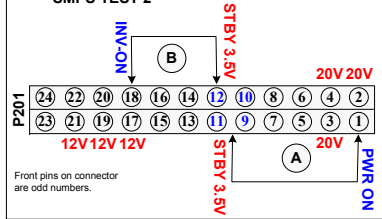
Pin	Label	STBY	Run	Diode Check	Pin	Label	STBY	Run	Diode Check
1	SCL	3.56V	3.5V	Open	7	Gnd	Gnd	Gnd	Gnd
2	SDA	3.56V	3.5V	Open	8	LED LOGO	0V	0V	Open
3	Gnd	Gnd	Gnd	Gnd	9	IR	1.63V	1.6V	Open
4	Key1	3.32V	3.3V	1.9V	10	Gnd	Gnd	Gnd	Gnd
5	Key2	3.29V	3.3V	1.9V	11	3.3V_Normal	0V	3.34V	0.59V
6	3.5V_ST	3.56V	3.47V	1.24V	12	LED_BUZZ	0V	0V	Open

SMPS TEST 1



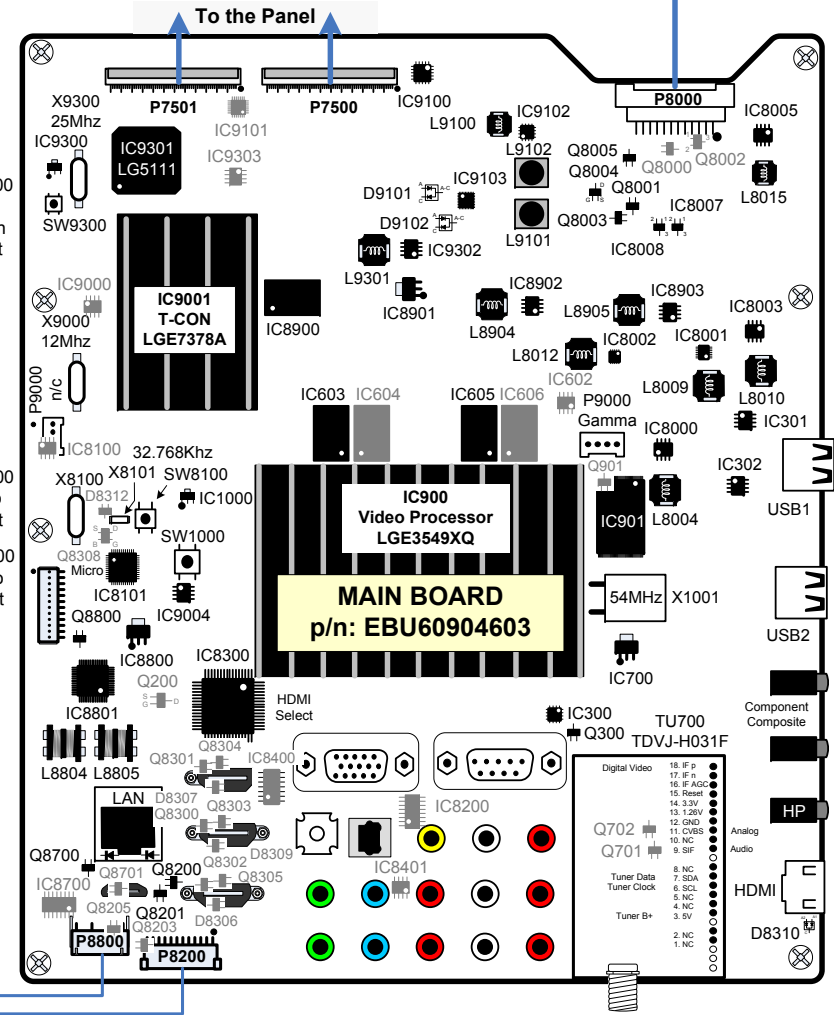
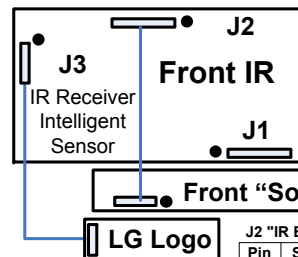
SMPS TEST 1: To Force Power Supply On. Disconnect P8000 on Main board. (A) Jump pins 9, 10, 11 or 12 (3.5V) to pin 1. (Test Voltage Outputs 12V, 20V to Main and 120V to the Inverter). Remove AC power. Leave the jumper in place.

SMPS TEST 2



SMPS TEST 2: (B) Jump pins 9, 10, 11 or 12 (3.5V) to pin 18 (INV-ON). Apply AC power, the Backlights should turn on.

Note: If there is a problem with a load on the Inverter you can Remove AC and Disconnect P205 or P204. When AC is reapplied, the Backlight LEDs should turn on for about 4 seconds and then shut off.



42LE5500 MAIN (FRONT SIDE) SIMICONDUCTORS

<b>IC700</b> (+1.26V_TU) Regulator Pin [1] 0V (Gnd) [2] 1.26V (Out) [3] 3.3V (In)	<b>IC8002</b> (D1.8V) Regulator Pin [1] 5V [2] 3.34V (In) [3] 1.8V (Out) [4] Gnd [5] Gnd [6] 0.9V [7] 0.9V [8] 1V [9] 2.38V [10] 3.36V (PWR On/Off1 Ctl)	<b>IC8005</b> (+3.3V_NORMAL) Regulator Pin [1] 0V (Gnd) [2] 11.8V (In) [3] 0V (Gnd) [4] 0.8V [5] 0.86V [6] 3.36V (PWR On/Off2 Ctl) [7] 3.36V (Out) [8] 3.36V (Out)	<b>IC8902</b> (+1.26V_MEMC) Regulator Pin [1] 0V (Gnd) [2] 11.8V (In) [3] 0V (Gnd) [4] 0.8V [5] 0.7V [6] 3.36V (PWR On/Off2 Ctl) [7] 1.3V (Out) [8] 1.3V (Out)	<b>IC9102</b> DC to DC HVDD T-CON Pin [1] 0V (Gnd) [2] 11.72V (In) [3] 11.72V (In) [4] 3.25V [5] 3.2V [6] 0V [7] 0V [8] 11.7V [9] 0V (Gnd) [10] 1.13V [11] 0V (Gnd) [12] 0V (Gnd) [13] 0V (Gnd) [14] 7.7V [15] 7.7V (HVDD) [16] 0V (Gnd)	<b>Q8003</b> PANEL_VCC Control 2nd Driver Pin B 0.679V C 0V E Gnd	<b>Q8700</b> Wireless PWR Turns on Q8701 Dongle Out Pin EB IC	<b>Q8004</b> PANEL_VCC Switch Pin S 11.8V (In) G 1.8V (Enable) D 11.8V (Out)	<b>Q8700</b> Wireless PWR Turns on Q8701 Dongle In Pin EB IC	<b>Q8005</b> INV_ON Driver Pin B 0V (INV ON) En C 3.1V (Out) E Gnd	<b>Q8800</b> AMP_MUTE Pin 25 IC8801 Pin B 0V C 3.336V E Gnd	<b>Q8200</b> IR Buffer 2nd Pin B 0.02V C 3.4V E Gnd	<b>D9101</b> VGH/VDD Rectifier Pin A 15.4V AC 22.2V C 27.4V (VGH)	<b>Q8201</b> IR Buffer 1st Pin B 0V C 3.3V E Gnd	<b>D9102</b> VGL/VCC Rectifier Pin A (-5V VGL) AC (-1.9V) C 0V	<b>Q8306</b> HDMI Det Pin B 0V C 3.3V E Gnd	<b>Q8307</b> HDMI Det Pin B 0V C 4.18V E Gnd	<b>Q8001</b> PANEL_VCC Control 1st Driver Pin B 0V C 0.68V E Gnd	<b>IC8000</b> 5V Regulator for USB Pin [1] 11.79V (In) [2] 5V (Out) [3] 5V (Out) [4] 10.5V [5] 3.3V [6] 0.8V [7] 4.99V [8] 0V (Gnd)	<b>IC8003</b> (+5V_NORMAL) Regulator Pin [1] 0V (Gnd) [2] 11.8V (In) [3] 0V (Gnd) [4] 0.8V [5] 0.86V [6] 3.37V (PWR On/Off2 Ctl) [7] 5V (In) [8] 5V (In)	<b>IC8007</b> Power Det Gen (+12V and +3.5V) Pin [1] 0V (Gnd) [2] 3.6V (In) [3] 3.5V (Out)	<b>IC8008</b> Power Det Gen (+24V) Pin [1] 0V (Gnd) [2] 3.6V (In) [3] 3.7V (Out)	<b>IC8800</b> (+1.8V_AMP) Regulator Pin [1] 0V (Gnd) [2] 1.8V (Out) [3] 3.295V (In)	<b>IC8901</b> (+1.5V_MEMC) Regulator Pin [1] 0V (Gnd) [2] 1.5V (Out) [3] 3.3V (In)	<b>IC8004</b> A2.5V Regulator for USB Pin [1] n/c [2] 3.26V (In) [3] 3.26V (In) [4] n/c [5] n/c [6] 2.55V (Out) [7] 0.8V [8] 0V (Gnd)	<b>IC8001</b> D1.2V and A1.2V Regulator Pin [1] 0V (Gnd) [2] 3.3V [3] 0V (Gnd) [4] 1.2V [5] 3.3V [6] n/c [7] 4.46V [8] 3.3V [9] 3.3V [10] 3.3V [11] 1.2V [12] Gnd [13] 3.3V [14] 0.8V	<b>IC8903</b> (+3.3V_MEMC) Regulator Pin [1] 0V (Gnd) [2] 11.8V (In) [3] 0V (Gnd) [4] 0.8V [5] 0.8V [6] 3.36V (PWR On/Off2 Ctl) [7] 3.3V (Out) [8] 3.3V (Out)	<b>IC9100</b> P-GAMMA Chip Pin [1] 3.3V [2] 0V (Gnd) [3] 3.3V (In) [4] 0V (Gnd) [5] 6.8V [6] 6.8V [7] 15.3V [8] 15.3V [9] n/c [10] 13.47V [11] 12.75V [12] 11.8V [13] 10V [14] 5.96V [15] 4.06V [16] 15.3V [17] 0V [18] 2.96V [19] 2.33V [20] 3.3V (In)	<b>IC9300</b> Reset for LG5111 Pin [1] 3.32V (In) [2] 0V (Gnd) [3] 3.34V (Out)	<b>IC9302</b> (1.8V_L/Dimming) Regulator Pin [1] 0V (Gnd) [2] 11.8V (In) [3] 0V (Gnd) [4] 0.8V [5] 0.76V [6] 3.34V (PWR On/Off2 Ctl) [7] 1.8V (In) [8] 1.8V (In)
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42LE5500 MAIN (BACK SIDE) SIMICONDUCTORS

<b>IC602</b> D1.8V Regulator Pin [1] 0V (Gnd) [2] 3.29V (PWR On/Off1 Ctl) [3] 0.9V (DDR_VTT) [4] 0.93V [5] 1.83V [6] 3.38V (In) [7] 1.8V (Out) [8] 0.91V (DDR_VTT)	<b>IC8200</b> RS232 Routing Pin [1] 0V [2] 0V [3] 0V [4] 0V [5] 0V [6] (-5.47V) [7] n/c (5.59V) [8] n/c (0V) [9] n/c (3.3V) [10] n/c (0.2V) [11] n/c (3.3V) [12] 3.35V [13] 0V [14] (-5.47V) [15] 0V (Gnd) [16] 3.37V	<b>IC8401</b> EDID Data PC Pin [1] 0V (Gnd) [2] 0V (Gnd) [3] 0V (Gnd) [4] 0V (Gnd) [5] 0.7V [6] 4.1V [7] 4.5V [8] 4.5V (In)	<b>IC9303</b> EEPROM for LG5111 Pin [1] 0V (Gnd) [2] 0V (Gnd) [3] 0V (Gnd) [4] 0V (Gnd) [5] 3.37V [6] 3.37V [7] 3.34V [8] 3.37V (In)	<b>Q8000</b> RL_ON (PWR_On) 1st Driver Pin B 0.66V C 0V E Gnd	<b>Q8303, 4, 5</b> HDMI 3 Det Pin B 0V C 4.2V E Gnd	<b>Q8002</b> PWR_ON Switch Pin [1] 3.36V (In) [2] 0V [3] 3.3V (Out)	<b>Q8308</b> CEC Remote HDMI CEC Pin [B] 2.72V [G] 2.73V [S] 3.27V [D] 3.37V	<b>Q8203</b> IR Wireless Pass 2nd Driver Pin B 0V C 3.3V E Gnd	<b>D8312</b> 3.5V Pull Up HDMI CEC Pin A1 0V C 3.26V A2 3.2V	<b>Q8205</b> IR Wireless Pass 1st Driver Pin B 0.6V C 0V E Gnd	<b>D8306, 7, 9</b> 5V Pull Up Routing HDMI SCL/SDA Pin A1 5.04V C 4.58V A2 0V	<b>Q8701</b> Tuner SIF (Sound) Buffer Pin B 0.16V C Gnd E 0.83V	<b>Q701</b> Tuner Video (Analog) Buffer Pin B 2.05V C 2.75V E Gnd	<b>Q8200, 2</b> HDMI 2 Det Pin B 4.2V C 0V E Gnd	<b>Q901</b> FLASH_WP for IC901 Pin B 0V (Flash_WP) C 3.36V E Gnd	<b>IC8700</b> Wireless Buffer Pin [1] 0V (3.3V Dongle In) [2] 3.3V (0.3V Dongle In) [3] n/c [4] n/c [5] n/c [6] Gnd [7] Gnd [8] Gnd [9] n/c [10] 0.02V [11] 0V [12] 3.3V [13] 0V (3.3V Dongle In) [14] 3.3V [15] 3.3V [16] 3.3V	<b>IC9000</b> Serial Flash T-CON Pin [1] 0.06V [2] 0.67V [3] 3.3V (In) [4] 0V (Gnd) [5] 0V [6] 0.34V [7] 3.31V (In) [8] 3.34V (In)	<b>IC8400</b> RGB H/V Sync Pin [1] 1.9V [2] 1.9V [3] 4.4V [4] 0V [5] 0.9V [6] n/c (4.5V) [7] 0V (Gnd) [8] n/c (4.5V) [9] n/c (1.9V) [10] n/c (1.9V) [11] n/c (4.5V) [12] 0.9V [13] 0.9V
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