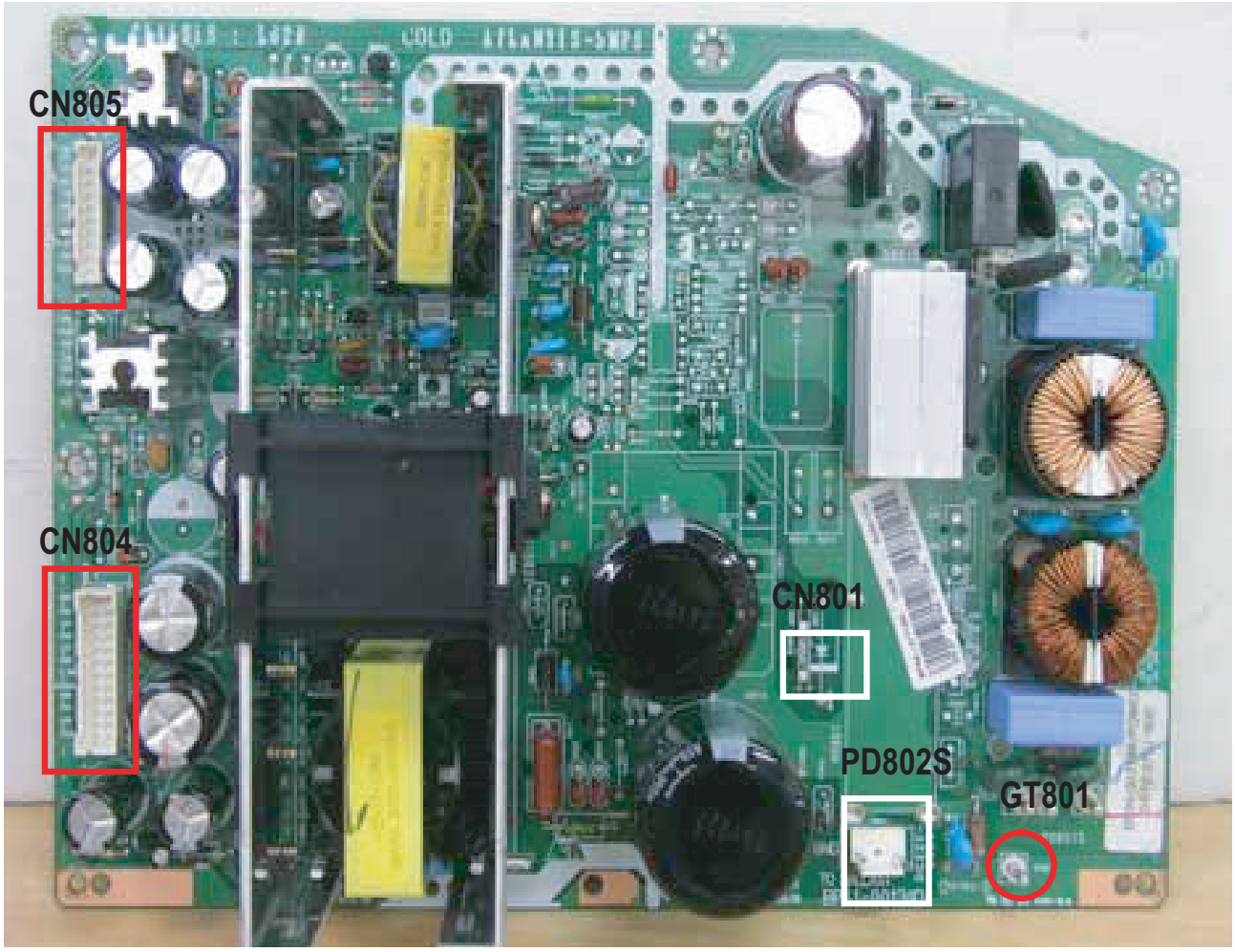
9. PCB Diagram

9-1 Power Board

9-1-1 Assy Power Board



■ DC Power Supply
(Supplies DC power to the analog PCB. The analog board is responsible for the power supply to the digital/DMD board.)

9-1-2 Names & Roles of Key Parts

* CN801 : Supplies power (DC330V± 10%) to the ballast.
* GT801 : Anti-lightning wire connected to the digital board. The anti-lightning wire should be installed for safety purposes.
* PD802S : Inlet type of terminal that is connected to the AC power cable.

9-1-3 Power Board Connector Pin

CN805
Connecting Power to Analog Board

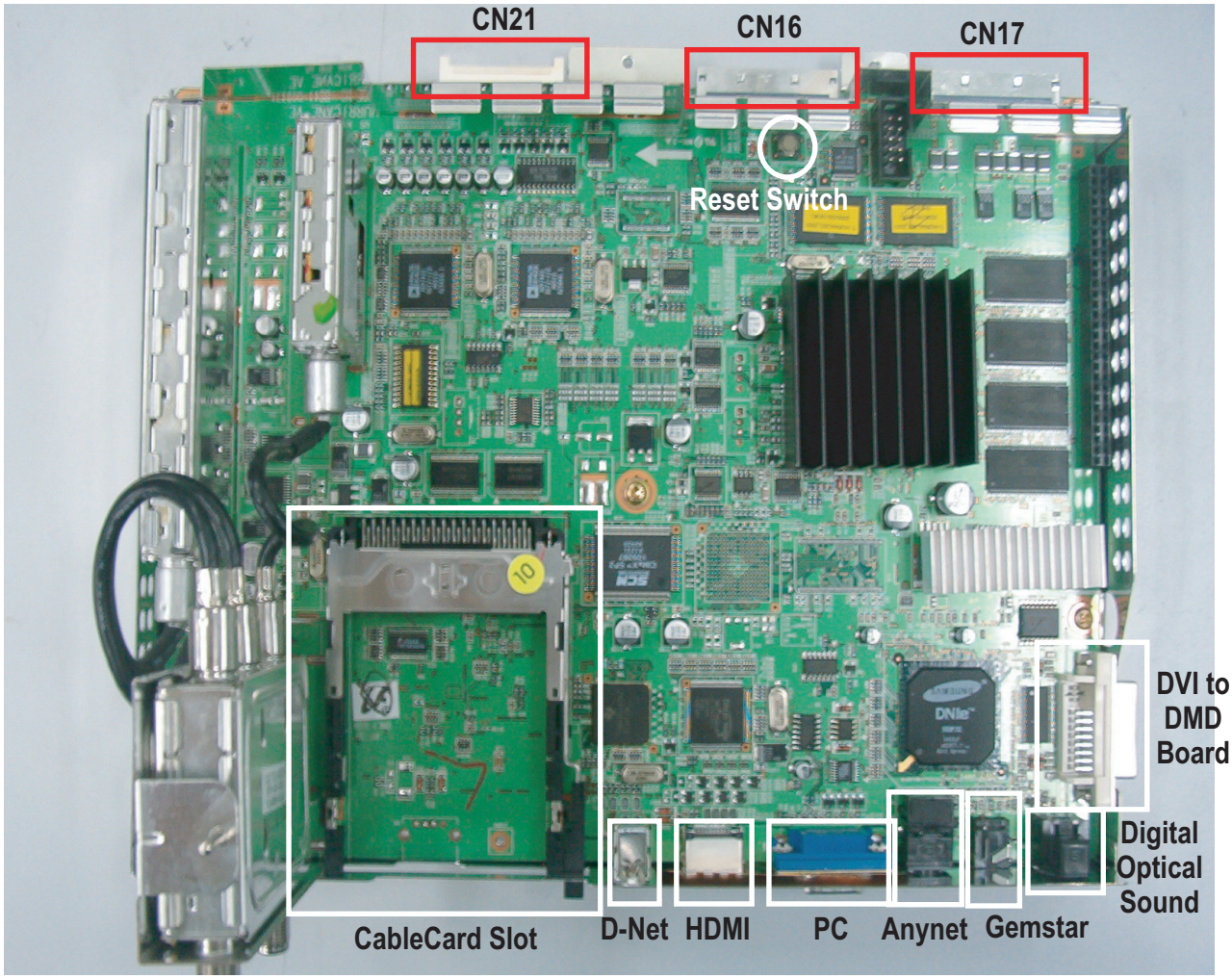
Pin No.	Pin Name
1	STD 5V
2	GND
3	STD 5V
4	GND
5	12VA
6	GND
7	12VA
8	GND
9	33VA
10	POD-SW

CN804
Connecting Power to Analog Board

Pin Name	PIN No.		Pin Name
STD 5V	1	2	S-MUTE
GND	3	4	S14.5V
33V	5	6	GND
GND	7	8	S14.5V
POWER-SW	9	10	GND
5.5VB	11	12	5.5VB
GND	13	14	GND
12VB	15	16	12VB
GND	17	18	GND
12VB	19	20	12VB
GND	21	22	GND
GND	23	24	80VB

9-2 Digital Board

9-2-1 Assy Digital Board



- Microprocessor (Generates turn-on signal to power board)
- All Digital Video Processing
- OSD / Menu
- Reset Switch

9-2-2 Names & Roles of Key Parts

* CableCard :
CableCARD is a nationwide standard system that allows your local cable TV provider to supply you with an access card customized to your account. This card allows the TV to receive, decode and unscramble the premium digital channels included in your cable TV subscription without the use of a cable box.

* High Definition Multimedia Interface :
The HDMI™ (High Definition Multimedia Interface) supports uncompressed standard and high definition digital video formats and existing digital multi-channel audio formats.

* G-Link :
This jack is used by the TV Guide On screen system of the TV to control external analog devices such as VCRs, DVDs, cable boxes, satellite receivers and audio receivers.

* D-Net(IEEE1394) :
These jacks allow the TV to connect to external IEEE 1394 digital products by means of a single cable.

9-2-3 Digital Board Connector Pin

CN16
Connecting the control signal between Digital & Analog Board

Pin Name	PIN No.		Pin Name
I2SWS_OUTA	1	2	TxDM
I2SSD_OUTA	3	4	RxDM
I2SCLK_OUTA	5	6	GND
GND	7	8	SDA_M5
SDA_PANNEL	9	10	SCL_M5
SCL_PANNEL	11	12	NT_I2S_SCLK
GND	13	14	NT_I2S_LRCLK
NT_I2S_DATA	15	16	USB_SW_UP_P
nMICOM_INIT	17	18	USB_SW_UP_N
nRESET	19	20	S_nRESET
ANALOG-nRST	21	22	DDP_READY
MD-nRESET	23	24	PWRGOOD
LAMP-ERROR	25	26	DTV_Lt
DLP-SYNCVAL	27	28	DTV_Rt
GND	29	30	GND

CN17
Connecting Power to the Digital Board

Pin Name	PIN No.		Pin Name
MD3.3V	1	2	MD3.3V
MD3.3V	3	4	D3.3V
GND	5	6	D3.3V
GND	7	8	GND
STB_6.5V	9	10	GND
GND	11	12	GND
STB_9V	13	14	D5.7V
GND	15	16	D5.7V
STB_30V	17	18	GND
STB_5V	19	20	GND
5VA	21	22	D12V
GND	23	24	GND
GND	25	26	D9V
33V	27	28	GND

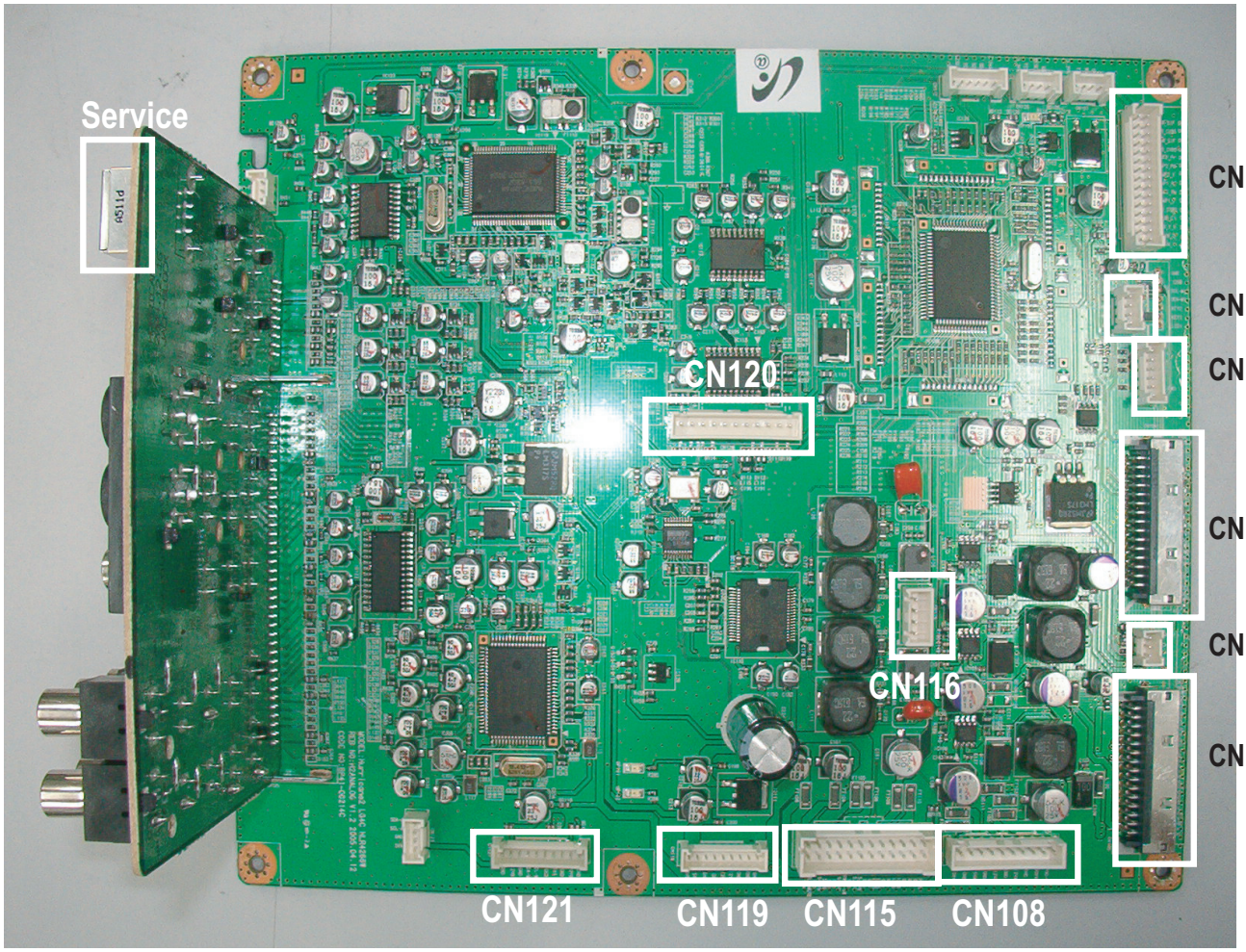
CN21

Connecting the Aduio/Video signal from the rear input terminal

Pin Name	PIN No.		Pin Name
MAIN_Y	1	2	GND
MAIN_C	3	4	GND
SUB_Y	5	6	GND
SUB_C	7	8	GND
DTV_CVBS	9	10	GND
COMP1_Y	11	12	GND
COMP1_Pb	13	14	GND
COMP1_Pr	15	16	GND
COMP2_Y	17	18	GND
COMP2_Pb	19	20	GND
COMP2_Pr	21	22	GND
M-CVBS	23	24	GND
M-SIF	25	26	GND
S-CVBS	27	28	GND
S-SIF	29	30	GND

9-3 Analog Board

9-3-1 Assy Analog Board



- Distributes supply voltage from the Power Board to Digital Board and DMD Board.
- Transfers Turn-on Command to Digital and Power Board.
- Encompasses the majority of the Audio Circuit
- Analog Video Switching / Processing
- Analog Audio Switching / Processing

9-3-2 Names & Roles of Key Parts

* CN121 : Connected to the actuator board
* CN119 : Connected to the DMD board
* CN115 : Connected to the power board - receives the second power source generated on the power board.
* CN105 : Sends the power source from the analog to the digital board.
* CN104 : This is a control signal terminal that connects between the analog and digital boards.
* CN103 : This is an AV signal terminal that connects between the analog and digital boards.

9-3-3 Analog Board Connector Pin

CN122
For Debugging

Pin No.	Pin Name
1	SDA-DMD
2	SCL-DMD
3	GND
4	5VA

CN123
For Debugging

Pin No.	Pin Name
1	SDA-A
2	SCL-A
3	GND
4	5VA

CN119
Connecting Power to the DMD

Pin No.	Pin Name
1	5VB
2	5VB
3	GND
4	GND
5	12VB
6	12VB
7	GND
8	GND
9	GND

CN121
Connecting Power and the Control Signal to the Actuator Protection Board

Pin No.	Pin Name
1	GND
2	12VB
3	GND
4	SDA-M1
5	SCL-M1
6	GND
7	5VA
8	GND
9	70VB
10	GND

CN105
Connecting Power to the Digital Board

Pin Name	PIN No.		Pin Name
3.3V-ATI	1	2	3.3V-ATI
3.3VB-D	3	4	3.3V-ATI
3.3VB-D	5	6	GND
GND	7	8	GND
GND	9	10	6.5VA-D
GND	11	12	GND
5.7VB	13	14	9VA
5.7VB	15	16	GND
GND	17	18	30VA
GND	19	20	5VA
12VB	21	22	5VA
GND	23	24	GND
9VB	25	26	GND
GND	27	28	33VB
GND	29	30	GND

CN102
Connecting the IR signal

Pin No.	Pin Name
1	IR
2	GND
3	5VA

CN101
Connecting front LED indicators

Pin No.	Pin Name
1	5VA
2	KEY-PWR
3	GND
4	LED1
5	LED2
6	LED3

CN116
Connecting and transmitting Audio signal to Speaker

Pin No.	Pin Name
1	-L-OUT
2	+L-OUT
3	-R-OUT
4	+R-OUT

CN124
Connecting the Power and Control Signal to the POD Fan

Pin No.	Pin Name
1	FAN-ERROR
2	GND
3	8VA-FNA

CN106
Connecting Side Buttons

Pin No.	Pin Name
1	GND
2	KEY1
3	KEY2
4	GND

CN120
Transmitting Video Signal from Side Terminal

Pin No.	Pin Name
1	SIDE-Y
2	SIDE-C
3	GND
4	SIDE-V
5	GND
6	SIDE-L
7	GND
8	SIDE-R
9	GND
10	SIDE-SDET
11	SIDE-VDET

CN103
Connecting the Audio/Video signal from the rear input terminal

Pin Name	PIN No.		Pin Name
MAIN_Y	1	2	GND
MAIN_C	3	4	GND
SUB_Y_V	5	6	GND
SUB_C	7	8	GND
DTV_CVBS	9	10	GND
COMP1_Y	11	12	GND
COMP1_Pb	13	14	GND
COMP1_Pr	15	16	GND
COMP2_Y	17	18	GND
COMP2_Pb	19	20	GND
COMP2_Pr	21	22	GND
MTNR_CVBS	23	24	GND
MTNR_SIF	25	26	GND
STNR_CVBS	27	28	GND
STNR_SIF	29	30	GND

CN104
Connecting the control signal between Digital and Analog

Pin Name	PIN No.		Pin Name
TxDM	1	2	ATI-I2S-WS
RxDM	3	4	ATI-I2S-DATA
GND	5	6	STI-I2S-CLK
SDA_A	7	8	GND
SCL_A	9	10	SDA_DMD
I2SCLK	11	12	SCL_DMD
I2S_WS	13	14	GND
USB_POS	15	16	I2S_DATA
USB_NEG	17	18	CPU_INIT
SOUND_RESET	19	20	CPU_RESET
DDP_READY	21	22	RESET_D
PWRGOOD	23	24	MD_nRESET
DTV_L	25	26	LAMP_ERROR
DTV_R	27	28	DLP_SYNCVAL
GND	29	30	GND

CN105
Connecting Power

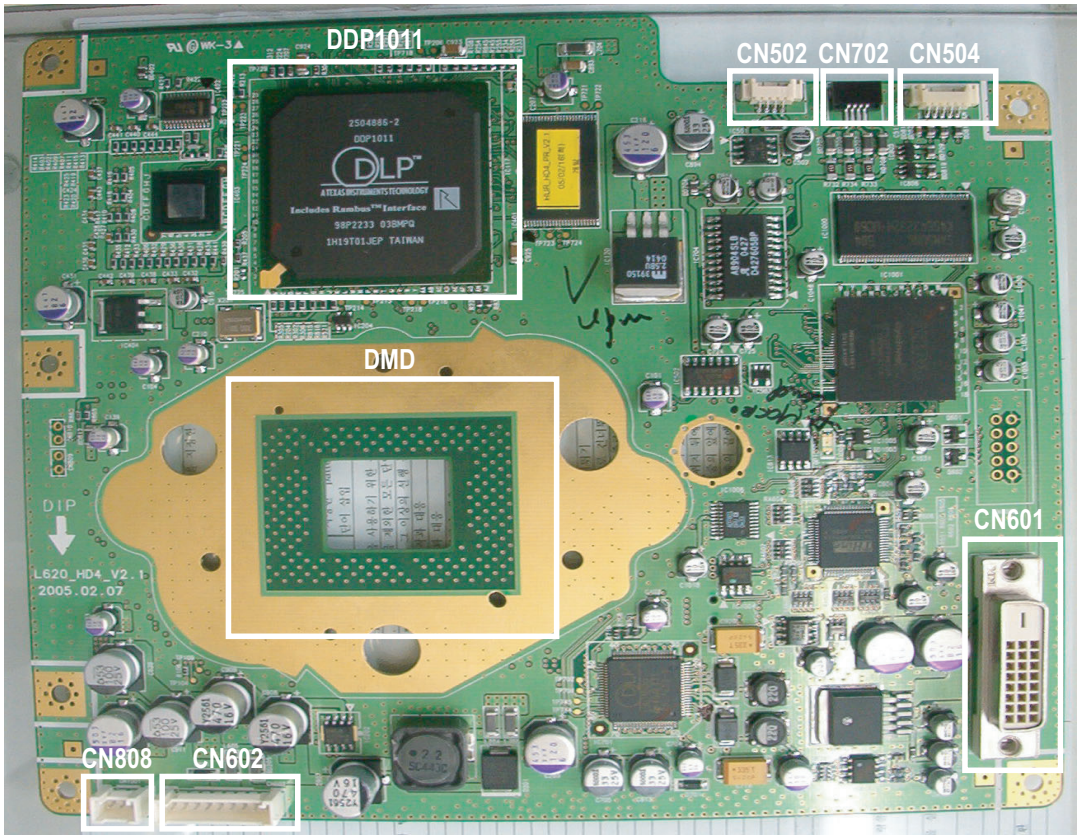
Pin Name	PIN No.		Pin Name
5VA	1	2	POWER-MUTE
GND	3	4	S16VB
33VB	5	6	GND
GND	7	8	S16VB
POWER-SW	9	10	GND
5.7VB	11	12	5.7VB
GND	13	14	GND
12VB	15	16	12VB
GND	17	18	GND
12VB	19	20	12VB
GND	21	22	GND
GND	23	24	70VB

CN108
Connecting Power

Pin No.	Pin Name
1	5VA
2	GND
3	5VA
4	GND
5	12VA
6	GND
7	12VA
8	GND
9	30VA
10	POD-SW

9-4 DMD Board

9-4-1 Assy DMD Board



- Controls the lamp (ON/OFF)
- Drives the color wheel motor
- Drives the panel
- Controls the sensors

9-4-2 Names & Roles of Key Parts

* CN602 : This receives the power source from the analog board and communicates with the I2C.
* CN808 : This sends a 60Hz signal to the actuator board. The actuator board sends the signal to the actuator module.
* CN702 : This supplies the power to drive the color wheel.
* CN502 : This receives the color wheel rotating signals.
* CN504 : This sends signals to the ballast.
* CN601 : The DVD cable terminal. This receives the image data from the digital board.
* DMD PANEL : This is protected with a heat sink and fixtures.
* DDP1011 : This processes the DMD drive and the signals.