

S/M No. : OSHL720001

Service Manual

LCD MONITOR

Model: HL720S / HL720D

✓ **Caution**

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center

DAEWOO 
ELECTRONICS

OCT. 2006


Contents

HL720S/D	4
PRECAUTIONS	4
ITEMS	6
HOW TO CONNECT THE SEVERAL CABLES TO THE LCD MONITOR	7
▶ HL720S/D Cable Connections	7
ADJUSTING THE MONITOR.....	8
▶ HL720S/D The Function Control Buttons	8
▶ How to use the function Key.....	8
HL720S/D SPECIFICATIONS	9
▶ HL720S Specifications	9
DISPLAY MODES	10
PowerSaver.....	10
OSD MENU	11
▶ Menu Tree	11
FACTORY SET	12
BURN-IN MODE	12
TROUBLESHOOTING	13
▶ No operating at all	13
▶ Doesn't display on LCD	14
EXPLODE VIEW	16
▶ HL720S/D	16
PART LIST.....	17
▶ HL720S/D Mechanical Part List	17
▶ HL720S/D AD B/D Part List.....	18
▶ HL720S FUNCTION B/D Part List.....	21
▶ Inverter & POWER BD Part List(FLF1742-20A)	22
▶ Inverter & POWER BD Part List(FLF1742-20A)	23
BLOCK DIAGRAM.....	24
HL720S/D Schematic.....	25
▶ AD B/D(HL720S/D).....	25
▶ Inverter & POWER B/D(FLF1742-20A).....	30
PCB Layout	32
▶ AD B/D TOP SILK (HL720S/D)	32
▶ AD B/D TOP PATTERN (HL720S/D).....	33
▶ AD B/D BOTTOM SILK (HL720S/D)	34
▶ AD B/D MASK TOP (HL720S/D).....	35

- ▶ AD B/D MASK BOTTOM (HL720S/D).....36
- ▶ FUNC B/D TOP SILK (HL720S/D)37
- ▶ FUNC B/D TOP PATTERN (HL720S/D).....37

HL720S/D

PRECAUTIONS

 **Warning** : The following information will help you avoid the risk of electric shock, serious injury, and death.

- Plug the power cord into a properly grounded outlet.
There is the risk of electric shock.
- If you hear a noise or smell smoke from the computer or adaptor, unplug the power cord immediately, and call the service center.
There is the risk of electric shock or fire.
- Do not overload an electrical outlet with too many devices.
There is the risk of fire.
- Do not unplug from the outlet by pulling the power cord or when your hands are wet.
There is the risk of electric shock or fire.
- Do not bend the power cord excessively or place heavy objects on it. Keep children and pets away from the power cord as they may damage the power cord. There is the risk of electric shock or fire.
- Do not use a damaged power cord or plug. Make sure the plug fits snugly into the outlet.
There is the risk of electric shock or fire.
- Do not expose the monitor to the direct sun light.
- Do not block the fan louvers.
There is the risk of fire or damage to the monitor.
- Do not attempt to disassemble, fix, or modify the monitor.
There is the risk of electric shock or fire.
- Keep the monitor away from high temperature, humidity, and dust.
Operating environment = 0 ~ 40 Degrees Celsius
Operating environment = 30 ~ 80 Relative Humidity
- Do not allow any object or liquid to enter inside the monitor.
There is the risk of electric shock, fire, or damage to the monitor.

 **Caution** : The following information will help you avoid the risk of minor or moderate injury, or damage to the monitor.

- Use a proper voltage/current level indicated.
- Do not clean the LCD with abrasive chemicals.
There is the risk of damage to the LCD.
- Do not scratch and damage the LCD with sharp objects.
- Keep the monitor away from objects and electrical appliances that may generate electromagnetic fields.
- Place the monitor on a flat, stable surface.
The monitor may fall and there is the risk of damage or injury.
- Unplug the power cord when the monitor is not in use for a prolonged period of time.

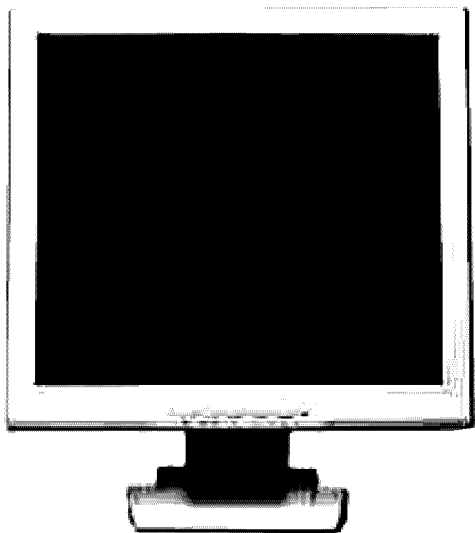
Instruction for Cleaning the Monitor

- Make sure the power cord is unplugged.
- Do not spill or pour liquid on the monitor.

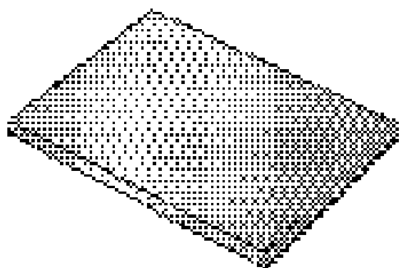
- Cleaning the LCD panel
 1. Use a clean, soft cloth to wipe off dust from the LCD.
 2. If still not clean, wipe the LCD with a clean soft cloth with a small amount of glass cleaner without alcohol or ammonia.

- Caution
Do not use alcohol or ammonia based cleaning products. Abrasive chemicals, such as alcohol or ammonia, may damage the monitor. The company is not responsible for the damages to the monitor caused by the use of alcohol or ammonia based cleaning products.

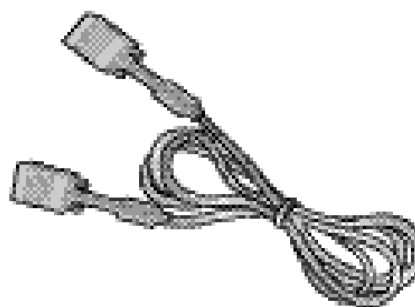
ITEMS



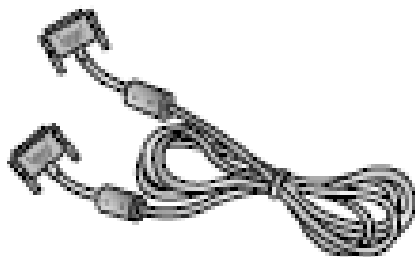
Power cord



User Manual



15-pin D-Sub Signal Cable

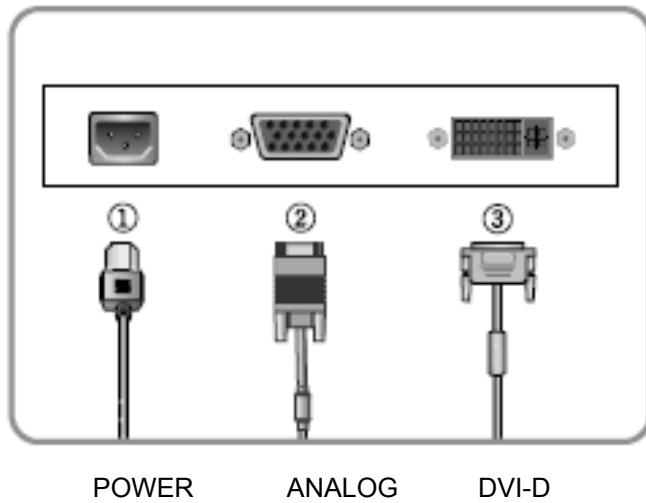


24-pin DVI Cable : *1

*1 : Only DVI Model

HOW TO CONNECT THE SEVERAL CABLES TO THE LCD MONITOR

▶ HL720S/D Cable Connections



Name	Cable connections
1	POWER CORD
2	15-PIN D-SUB SIGNAL CABLE
3	24-PIN DVI-D SIGNAL CABLE *1

*1 : Only DVI Model

ADJUSTING THE MONITOR

▶ HL720S/D The Function Control Buttons

MENU SELECT ▼ ▲ /AUTO MWE

▶ How to use the function Key.

Button	Function
MEMU	<ol style="list-style-type: none"> 1. First click : The OSD main menu appears. 2. Second click : The OSD main menu disappears.
SELECT	<ol style="list-style-type: none"> 1. Select a command function.
DOWN	Down : <ol style="list-style-type: none"> 1. Move the on-screen highlighted command item to the next one. 2. Decrease the current value.
UP/AUTO	UP : <ol style="list-style-type: none"> 1. When you push Auto button, this will optimize quality automatically. 2. Move the on-screen highlighted command item to the Previous one. 3. Increase the current option value.
MWE	Media Window Enhancement

HL720S/D SPECIFICATIONS**► HL720S Specifications**

Panel Specification	
Panel Type	HT170EX1-101 or other
Panel Dimension	354.9 (H) x 290.3 (V) x 13.0(D) mm typ.
Screen diagonal	17.0 inches [337.92 (H) x 270.336 (V)mm
Pixel pitch	0.264mm x 0.264mm
Pixel format	1280(horizontal) x 1024 (Vertical) Pixels RGB stripe arrangement
Color depth	8bit (16,777,216 colors)
Viewing angle (Deg)	H
	Right 75(Typ.)
	Left 75(Typ.)
	V
	Up 75(Typ.)
	Down 60(Typ.)
Response Time	8 ms
Contrast ratio	700 : 1(typ.)
Average brightness	300 cd/m² (typ.)
Cross talk	Horizontal: 2.0%(Max.), Vertical:2.0%(Max.)
Vertical Sync (Frame rate)	60Hz(typ.), 75Hz(Max)
Horizontal Sync	31.5 ~ 80KHz
Dclk	54MHz(Typ.),68MHz(Max.)
Electrical Interface	LVDS
Monitor's specification	
Resolution	Recommend: 1280x1024@60Hz Max. : 1280x1024@75Hz
Frequency	Horizontal: 31.5 ~ 80 KHz Vertical : 56 ~ 75 Hz
Sync. Signal	TTL, P. or N.
OSD Control	Power,Menu,Select,Down,Up/Auto,MWE

DISPLAY MODES

Mode	Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)	Pixel Clock Frequency(MHz)	Sync Polarity(H/V)
VGA	720 X 400	31.468	70.087	28.322	-/+
	640 X 480	31.468	59.940	25.175	-/-
		35.000	66.670	30.240	-/-
		37.500	75.000	31.500	-/-
SVGA	800 X 600	37.879	60.300	40.000	+/+
		48.077	72.188	50.000	+/+
		46.875	75.000	49.500	+/+
XGA	1024 X 768	48.363	60.004	65.000	-/-
		56.476	70.000	75.000	-/-
		60.023	75.029	78.750	+/+
SXGA	1280 X 1024	63.981	60.020	108.000	+, -/+, -
		79.976	75.025	135.000	+/+

※ The optimal resolution is 1024 X 768@60Hz(HL510S)

※ The optimal resolution is 1280 X 1024@60Hz(HL720S)

PowerSaver

State	Power Consumption	Recovery Time	LED Color and Operating status
ON	Under 40 Watt		Green
OFF	Less than 5Watt	Within 2Sec	Amber

OSD MENU

▶ Menu Tree

Main Menu	Sub Menu	Function Description	
PICTURE	BRIGHTNESS	Control of brightness	
	CONTRAST	Control of contrast	
	H POSITION	Control of horizontal position	
	V POSITION	Control of vertical position	
	PHASE	Control of phase	
	CLOCK	Control of horizontal clock	
	AUTO ADJUST	Automatic adjust position	
COLOR	BLUISH	Color Temperature 9300k (some blue color)	
	REDISH	Color Temperature 6500k (some red color)	
	USER	RED : 0 ~ 100 GREEN : 0 ~ 100 BLUE : 0 ~ 100	
	AUTO BALANCE	Automatic adjust color	
	OSD	OSD H POSI	Moves the OSD Menu
	OSD V POSI	Moves the OSD Menu	
	OSD TIMER	OSD display time	
TRANSPARENCY	OSD Transparency		
MISC	LANGUAGE	Select OSD language	
	RECALL	Factory default values	
	INPUT SELECT	DVI, ANALOG Mode Change	

FACTORY SET

OSD Menu => Misc => Recall => Yes. Every value changes factory setting value.

After factory set executes, power OFF → power ON automatically.

You must push the auto button because of optimum image quality automatically.

When user want factory setting value, you must execute this function.

BURN-IN MODE

If you push the down button more than 5 seconds in disconnected signal cable status, you can see changed color.

Burn-In mode displays chaged color continually. (white, red, blue, green etc.)

We can check normal operating status of the monitor under mass production.

If you want to finish Burn-In mode, you can turn off the power by only push the power button.

TROUBLESHOOTING

► No operating at all

What you see	Suggested Actions
Is the power inserted correctly?	Insert the plug correctly referring to the User Manual.
Does the Power Adapter operate correctly?	Check the Power Adapter. The green LED is OK.
The Power Adapter operates correctly, but the LCD Monitor does not operate correctly.	Check the harness of the FUNC. B/D.
Does The Power On/Off and the LED Operate corretly?	If the program of the MICOM is error, then exchange the MICOM. If the AD B/D is error, then exchange the AD B/D.
The Power On/Off and the LED operate correctly, but the OSD menu doesn't display on screen.	First, operate the FACTORY SET. Second, check the Panel Harness that is connected to the AD B/D. Check the LAMP Harness of the Panel. Lastly, exchange the LIPS.
The OSD menu operates correctly but the image doesn't display on screen.	Insert the SIGNAL Cable correctly referring to the User Manual. Check the LAMP Harness of Panel and Inverter. Lastly, Check the LAMP of Panel.
The Power On/Off operates correctly, but the screen is 'ALL WHITE'.	The LAMP is OK. Check the Panel Harness that is connected to the AD B/D.
The Power On/Off operates correctly, but the screen is 'ALL BLACK'.	Check the LAMP Cable. Check or exchange the LIPS. Check the Panel Cable.

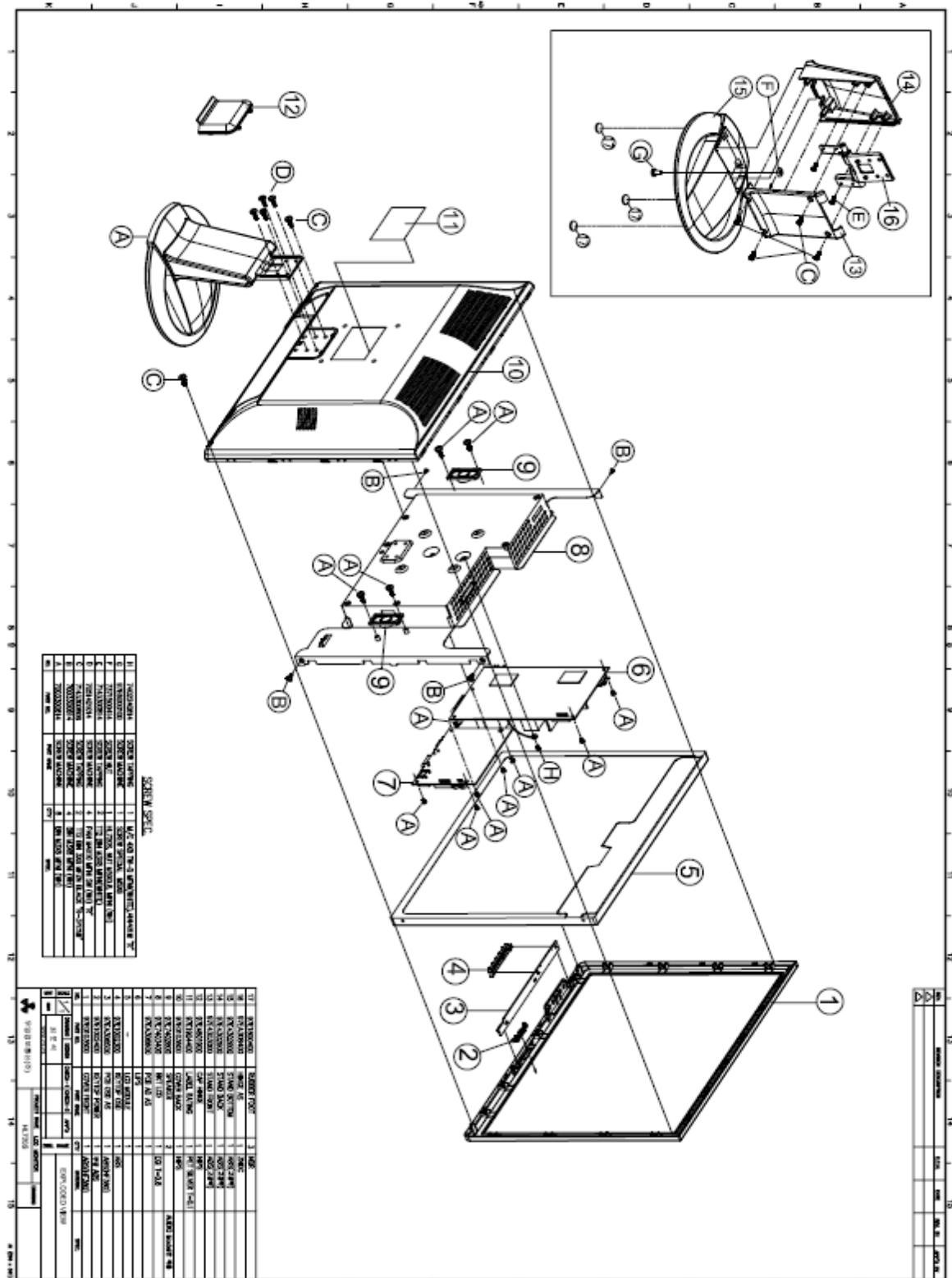
► Doesn't display on LCD

<p>"VIDEO MODE NOT SUPPORTED" message</p>	<p>[Window 98, 98 second, Me,2000] Reboot safe mode. (press the F8 key). Setting Resolution 1280*1024 in display properties menu and then setting 60Hz vertical frequency. → You can see resolution information the lower end of OSD menu when you push the menu button.</p> <p>[Window XP] After reboot a computer, display booting menu on screen by press the F8 key. Select VGA mode and then setting Resolution 1280*1024 in display properties menu and setting 60Hz vertical frequency.</p>
<p>"No signal" message</p>	<p>Check the signal cable. Check DPMS mode in PC. Check pins of the signal cable.</p>
<p>If PC keeps DPMS status Continually (No signal Input, LED color amber)</p>	<p>Check the signal cable. Check pins of the signal cable. Check HS_VGA and VS_VGA in schematics.</p>
<p>Doesn't display on screen Correctly include OSD menu</p>	<p>Check scaler output signal. Check panel harness between panel and AD B/D. Check solder status of the scaler.</p>
<p>Doesn't display on screen Correctly except OSD menu</p>	<p>Check the signal cable. Check scaler input signal (RGB,H-SYNC,V-SYNC)</p>
<p>Noise in vertical pattern.</p>	<p>Execute Auto Config. According to graphic card. Check 60Hz vertical frequency in display properties.</p>
<p>Display position error</p>	<p>Auto Config Display position error occurred on dark or moving picture.(like game) In this case, you must execute Auto Config in windows screen.</p>

Color error include OSD menu	Check the panel harness. Check scaler output signal.
Color error except OSD ment.	Check the signal cable. Check pins of the signal cable. Check input/output signal of the signal cable
Key button error	Check the function(key) harness. Check the function ass'y (mechanical).
Brightness differ between upper and lower on screen.	Because of viewing angle.

EXPLODE VIEW

▶ HL720S/D



SCHEM SPEC.

11	TRAY	TRAY	1	1
12	TRAY	TRAY	1	1
13	TRAY	TRAY	1	1
14	TRAY	TRAY	1	1
15	TRAY	TRAY	1	1
16	TRAY	TRAY	1	1

1	FRONT PANEL	FRONT PANEL	1	1
2	FRONT PANEL	FRONT PANEL	1	1
3	FRONT PANEL	FRONT PANEL	1	1
4	FRONT PANEL	FRONT PANEL	1	1
5	FRONT PANEL	FRONT PANEL	1	1
6	FRONT PANEL	FRONT PANEL	1	1
7	FRONT PANEL	FRONT PANEL	1	1
8	FRONT PANEL	FRONT PANEL	1	1
9	FRONT PANEL	FRONT PANEL	1	1
10	FRONT PANEL	FRONT PANEL	1	1
11	FRONT PANEL	FRONT PANEL	1	1
12	FRONT PANEL	FRONT PANEL	1	1
13	FRONT PANEL	FRONT PANEL	1	1
14	FRONT PANEL	FRONT PANEL	1	1
15	FRONT PANEL	FRONT PANEL	1	1
16	FRONT PANEL	FRONT PANEL	1	1

PART LIST**▶ HL720S/D Mechanical Part List**

17	97E1800400	RUBBER FOOT	3	NBR	
16	97EA308400	HINGE AS	1	ZNDC	
15	97E4302800	STAND BOTTOM	1	ABS(고광택)	
14	97E4302900	STAND BACK	1	ABS(고광택)	
13	97E4303000	STAND FRONT	1	ABS(고광택)	
12	97E4601900	CAP HINGE	1	HIPS	
11	97E1904400	LABEL RATING	1	PET SILVER T=0.1	
10	97E0103600	COVER BACK	1	HIPS	
9	97E7402800	SPEAKER	2		AUDIO Model만 적용
8	97E7403400	BKT LCD	1	EGI T=0.8	
7	97EA308600	PCB AD AS	1		
6		LIPS	1		
5	-	LCD MODULE	1		
4	97E1002300	KEYTOP OSD	1	ABS	
3	97EA308500	PCB OSD AS	1	ABS(HF380)	
2	97E1002400	KEYTOP POWER	1	투명 ABS	
1	97E0103500	COVER FRONT	1	ABS(HF380)	
NO.	PART NO.	PART NAME	Q'TY	MATERIAL	SPEC.

Screw SPEC

H	7402240814	SCREW TAPPING	1	M/C 4X8 TW-B MFNI(WHITE),치외서프함 "R"
G	97E6000100	SCREW MACHINE	1	SCREW SPECIAL M5X6
F	7371500414	SCREW NUT	1	HL720S, NUT M5X0.8, MFNI (WH)
E	7143300814	SCREW TAPPING	2	TT2 BIN M3X8 MFNI(WHITE)
D	7051401014	SCREW MACHINE	4	PAN M4X10 MFNI SW (WH) "R"
C	7143300806	SCREW TAPPING	2	TT2 BIN 3X8 MFZN BLACK "R- 3가크롬"
B	7003300614	SCREW MACHINE	4	BIN M3X6 MFNI (WH)
A	7003300614	SCREW MACHINE	8	BIN M3X6 MFNI (WH)
NO.	PART NO	PART NAME	Q'TY	SPEC.

▶ HL720S/D AD B/D Part List

Location	Parts Code	Parts Name	Parts Spec.	Remark
CE16	CEXF1C471A	C ELECTRO	16V 470uF 20% 10x12.5 TAP	
CE5,CE6,CE12, CE13,CE14, CE15	CEXF1C101A	C ELECTRO	16V 100uF 20% 6.3X11 TAP	
CE7, CE8, CE9, CE10, CE11	CEXF1C100A	C ELECTRO	16V 10uF 20% 5x11 TAP	
CON1	97E6200710	CONN WAFER	12507WR-30000 (30P LVDS)	
C6, C7, C8, C10, C11, C12, C18,C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C34, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49	HCCK104ZBA	C CHIP CERA	50V 100nF Z 1608	
C9	HCCH103KBA	C CHIP CERA	25V 10nF K 1608	
C13, C14, C15	HCCK200JBA	C CHIP CERA	50V 20pF J 1608	
	HCCK330JBA	C CHIP CERA	50V 33pF J 1608	
C17	HCCK221JBA	C CHIP CERA	50V 220pF J 1608	
C35, C36	HCCK101JBA	C CHIP CERA	50V 100pF J 1608	
C32, C33	HCCK220JBA	C CHIP CERA	50V 22pF J 1608	
DZ1, DZ2, DZ3 ,DZ4, DZ5, DZ6	DUDZS5.6B-	ZENOR DIODE	UDZS 5.6B(SOD-323), ROHS 적용품	
DZ7	DZMM55C5V6	ZENER DIODE	ZMM55C5V6	
D2, D3, D4, D5, D6, D7, D8, D9, D10D11, D12, D13, D14,D15, D16	DBAV99----	CHIP DIODE	BAV99 (SOT-23)	
FB4, FB5, FB7	HFA1608121	BEAD CHIP	CIM10J121NC(BEAD_120 ohm_1608)	

FB3, FB6, R60	HRFS000JBA	R CHIP	1/16W 0 ohm J 1608		
FB8	HFA3216121	BEAD CHIP	CIM31J121NE (BEAD_120ohm_3216)		
J4	97E6200110	15-PIN D-SUB	HDR10-15F-RL		
J5	97E6200734	CONN WAFER	IBP-07R-20T(GIL-S-7P-S2L2-EF) : Right angle		
J6	97E6200790	DVI_29PIN	361R02-0		
J7	99E6203095	CONN WAFER	IBP-09S-20T(GIL-S-9P-S2T2-EF) :		
Q4, Q5	TSBT3904-B	TR CHIP	SBT3904		
Q2, Q3	TSBT3906-B	TR CHIP	SBT3906		
R21, R24, R26, R41, R42, R43, R52, R53, R64, R65	HRFS103JBA	R CHIP	1/16W 10K J 1608		
R20	HRFS222JBA	R CHIP	1/16W 2.2K J 1608		
R27, R28, R45, R46, R50, R54, R55, R57, R58, R59, R61, R66, R100, R101	HRFS472JBA	R CHIP	1/16W 4.7K J 1608		
R7, R8, R9, R10, R11, R12, R13, R14 R15, R16, R22, R51	HRFS101JBA	R CHIP	1/16W 100 ohm J 1608		
R17, R18, R19	HRFS750JBA	R CHIP	1/16W 75 ohm J 1608		
R23, R25	HRFS201JBA	R CHIP	1/16W 200 ohm J 1608		
R29, R30, R31, R33, R35, R36, R37R38, R39, R40	HRFS100JBA	R CHIP	1/16W 10 ohm J 1608		
R32, R34	HRFS220JBA	R CHIP	1/16W 22 ohm J 1608		
R44	HRFS821JBA	R CHIP	1/16W 820 ohm J 1608		
R47, R48, R67, R68	HRFS330JBA	R CHIP	1/16W 33 ohm J 1608		
R49	HRFS391JBA	R CHIP	1/16W 390 ohm J 1608		
R56	HRFS223JBA	R CHIP	1/16W 22K J 1608		
R62	HRFS104JBA	R CHIP	1/16W 100K J 1608		
R63	HRFS122JBA	R CHIP	1/16W 1.2K J 1608		
U2	1A111733DC	IC REGULATOR	APL1117-33UC-TR(TO-252)		
U3	1AP1117E18	IC REGULATOR	AP1117E18A, SOT223-3L		
U4	1TSUM56AL-	IC SCALER	TSUM56AL-LF (MSTAR)		
U5	1AT24C02N-	IC EEPROM	AT24C02N-10SU-2.7 , LEAD FREE		
U6	1FDC6329L-	IC LOADSWITCH	FDC6329L SUPERSOT TM-6 , ROHS		

U7	1PS25LV512	IC FLASH MEMORY	PS25LV512 (MSTAR) , 512KBIT ,		
U8	1AT24C16--	IC EEPROM (ATMEL)	AT24C16N-10SU-2.7(SOIC 8P), ROHS 적용품		
X1	5XJ14R318E	CRYSTAL QUARTZ	14.3181MHz XTAL2 20pF DIP		
	97E030031	LIPS	FLF1742-20A, 17" LIPS,		
	97E8804024	POWER HARNESS	9P-TO-9P HARNESS(220mm)		
	97E8804044	PANEL HARNESS (HYDIS PANEL 적용)	30PIN-TO-30PIN HARNESS 170mm		
	97E8804200	OSD HARNESS	6PIN TO 7PIN , 240mm		
	97E6800310	SIGNAL CABLE	15PIN TO 15PIN , 1.5M , ROHS적용		
	99E6900300	CORD POWER	PHP-206+PHS-301(EU)		
	97E6800500	DVI-D CABLE	18PIN-TO-18PIN[1.5M], WIESON		
	97E0L02200	TFT-LCD (17")	HT170EX1-100 (HYDIS NARROW)		
	97E4100910	GASKET SHIELD	EMI GASKET[23(W)*1(H)*80(L)]		
	97E0800500	TAPE AL	알루미늄 테이프(70mm*60mm)		

► HL720S/D FUNCTION B/D Part List

Location	Parts Code	Parts Name	Parts Spec.	A/J	Remark
OSD PCB	97E6501500	OSD PCB	HL720 S/D/A_KEY, 185*13*1.6T,		
C1, C2	HCKK104ZBA	C CHIP CERA	50V 100nF Z1608		
J1	97E6200940	CONN WAFER	12505WR-06A, SMDType,Angle,1.25mm,		
LED1	DLSAM3271-	LED	LED 3pai 3PIN(2.54-PITCH)		
R1, R3	HRFS182JBA	R CHIP	1/16W 1.8K J 1608		
R2, R4	HRFS392JBA	R CHIP	1/16W 3.9K J 1608		
SW1, SW2, SW3, SW4, SW5	5S50204Z00	TACK SWITCH	JTP 1127WEM , 1.5T , SMD Type,		

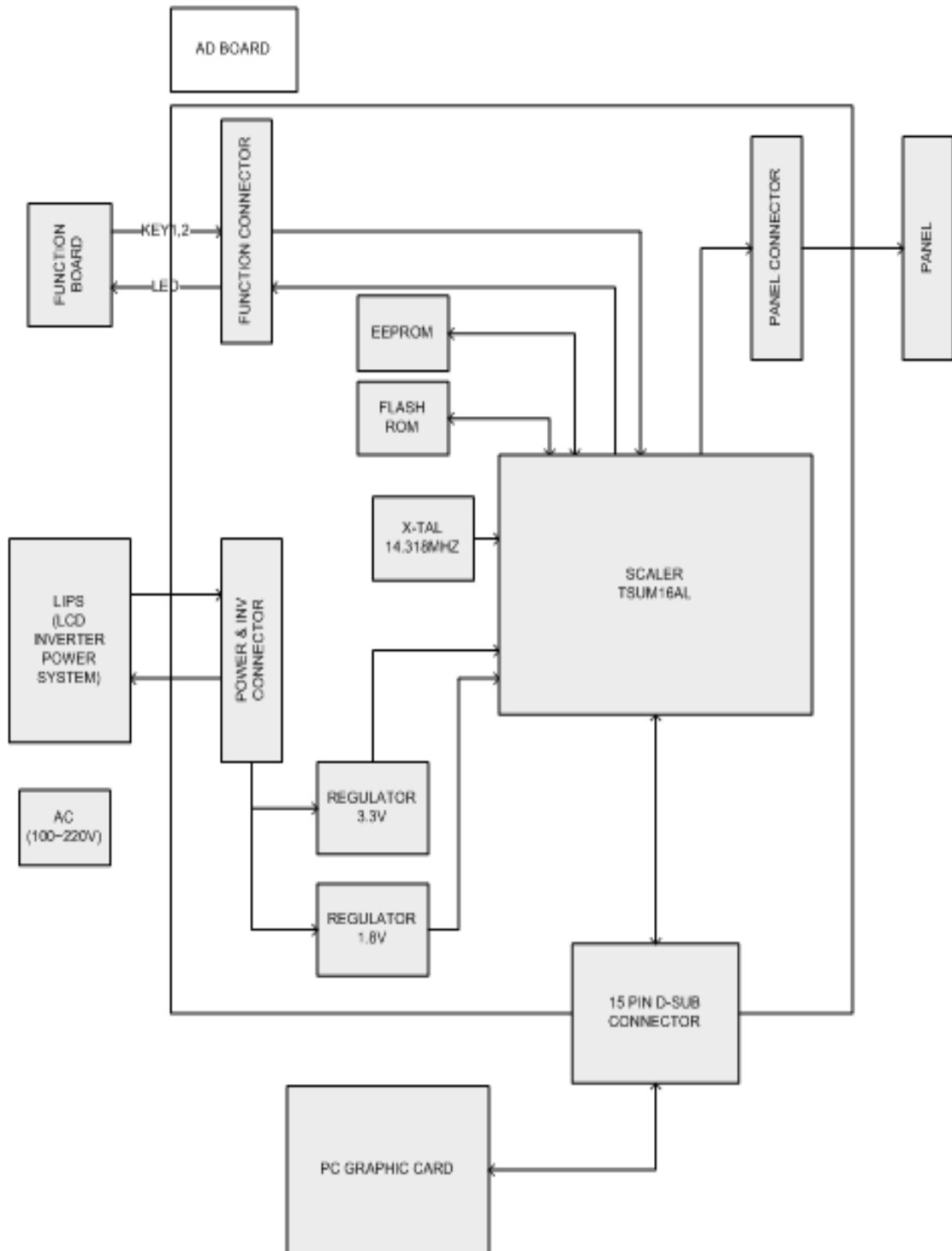
▶ Inverter & POWER BD Part List(FLF1742-20A)

NO.	Ref.	PART TYPE	1st. Vendor	2nd. Vendor	Q,t,y
1	LF101	LFL002A	동흥	GET	1
2	PC101	LTV-817B-M,TCET1103	LITON	Vishay	1
3	BD101	KBP206G	TSC		1
4	D104,105	SB560	VISHAY-GS	DIODES	2
5	D103	MBR10H150CT	VISHAY-GS		1
6	C105	CE82u400V85SD,SHL,GS	삼영,삼화,만유		1
7	C103,104	KNB1560MKP-334K	ISKRA	PILCO,선일	2
8	VS1	VARISTOR 7D471	ILJIN(AMOTECH)	CNR	1
9	C101,102	DG102Y1	두산, 동일		2
10	C106	DG222Y1	두산, 동일		1
11	C2	CE220U25V105LXZ,WL,RT	삼영,삼화,만유		1
12	CN100	SC-8R-F152P32R-GB	SUPERCOM		1
13	CN101	GIL-S-9P-S2T2-EF	LG전선		1
14	IC101	FSDM0565R	FAIRCHILD		1
15	CN1,2,3,4	35002WR-02, JE207-B1T-02	연호	JAEEUN	4
16	T101	TRSL014A	동흥	GET	1
17	T3	TRS1801U - DIP	경인,링보	다폰	1
18	U1,2	AP4511GD-DIP	APEC		2
19	U3	BIT3105 - DIP	BITEK		1
20	D101	RS1J, UF4007	TSC	SHS	1
21	ZD104	ZY160	SHS		1
22	D2,4	DAN217,BAV99	Rohm	DIODES	2
23	D5	DAP202U	Rohm		1
24	ZD1,2,3	UDZS5.6B,BZT52C5V6S-7	Rohm	DIODES	3
25	ZD102	UDZS10B,BZT52C10V0S	Rohm	DIODES	1
26	ZD101,103	UDZS20B,BZT52C20V0S	Rohm	DIODES	2
27	Q1	2N3904,MMBT3904	Rohm	DIODES	1
28	C1,17	CC106Z10V3216	삼성,TDK	태양유전	2
29	C8	CC473K50V2012	삼성,TDK	태양유전	1
30	C13	CC271K50V2012	삼성,TDK	태양유전	1
31	C6,7,9,12,20	CC103K50V2012	삼성,TDK	태양유전	5
32	C11,22,24,122	CC104K50V2012	삼성,TDK	태양유전	4
33	C3,4,14,19,119	CC105Z16V2012	삼성,TDK	태양유전	5
34	R116,117	CR2012J200	삼성	Rohm	2
35	R114,115	CR2012J181	삼성	Rohm	2
36	R28,29	CR2012J221	삼성	Rohm	2
37	R121	CR2012J122	삼성	Rohm	1
38	R119,122	CR2012J332	삼성	Rohm	2
39	R1,16,20,22,24	CR2012J103	삼성	Rohm	5
40	R2,3,10	CR2012J183	삼성	Rohm	3

▶ Inverter & POWER BD Part List(FLF1742-20A)

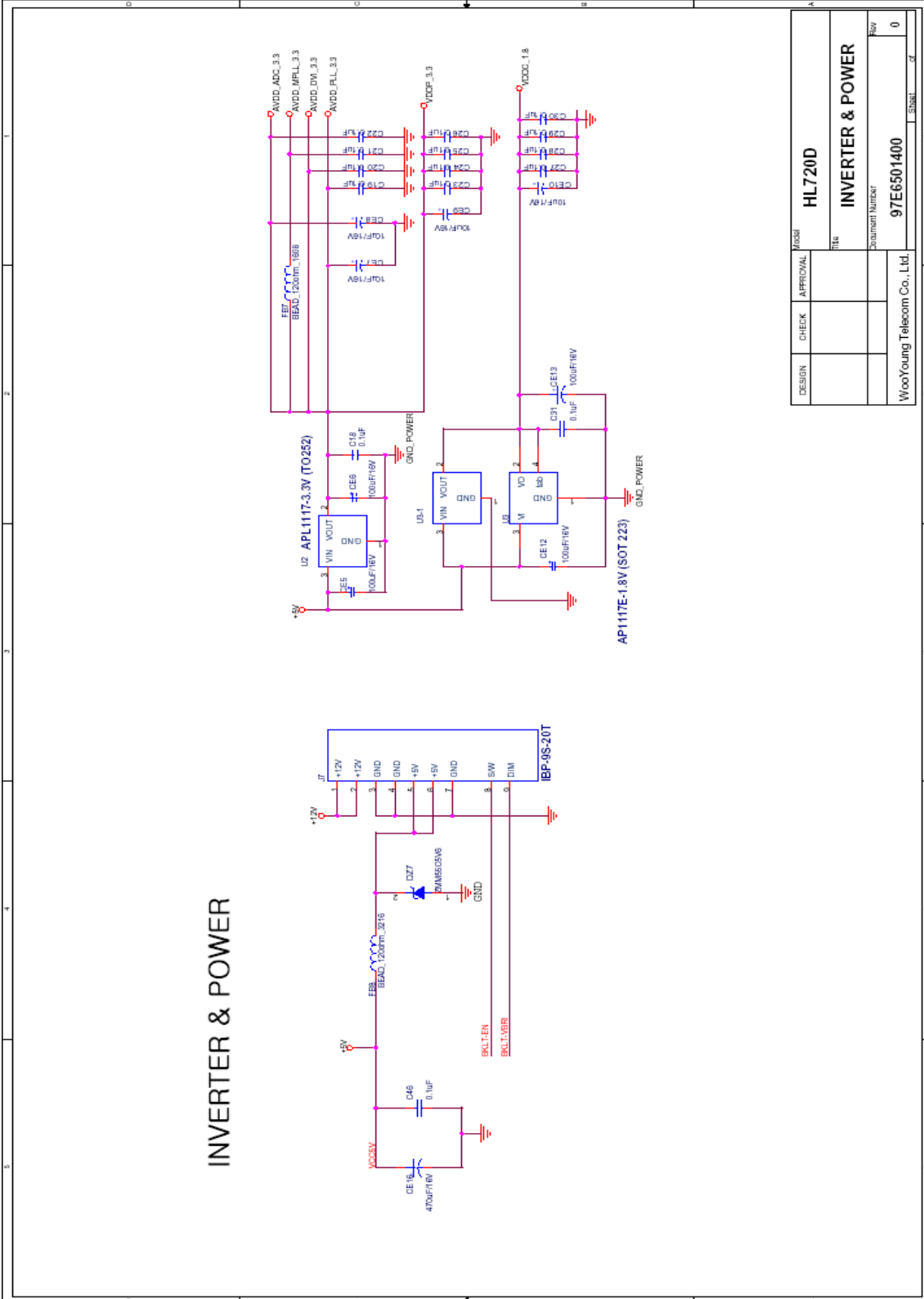
NO.	Ref.	PART TYPE	1st. Vendor	2nd. Vendor	Q.ty
41	R12	CR2012J433	삼성	Rohm	1
42	R26	CR2012J753	삼성	Rohm	1
43	R11	CR2012J134	삼성	Rohm	1
44	R5	CR2012J154	삼성	Rohm	1
45	R8,25	CR2012J224	삼성	Rohm	2
46	R9	CR2012J824	삼성	Rohm	1
47	R27	CR2012J105	삼성	Rohm	1
48	R15,19	CR2012F3600	삼성	Rohm	2
49	R126	CR2012F1431	삼성	Rohm	1
50	R123	CR2012F1801	삼성	Rohm	1
51	R124	CR2012F2702	삼성	Rohm	1
52	R101,102,103	CR3216J334	삼성	Rohm	3
53	R111	RD 1/4W J 3.9 OHM	제일전자	스마트전자	1
54	R105,106	RD 1/4W J 33K OHM	제일전자	스마트전자	2
55	C112	221K 1KV	동일	두산	1
56	C113	222K 1KV	동일	두산	1
57	C115	CE680u25V105RD,KM	삼영,삼화,만유		1
58	C117,118	CE1000u10V105RD,KM	삼영,삼화,만유		2
59	C110	CE47U50V 85/CE47U50V 105	삼영,삼화,만유		1
60	IC102	TL431A	Fair Child	우석	1
61	BC102	EBFL001A	동흥전자	GET	1
62	C5,10	CL100K3K	두산전자	동일	2
63	D102	PR1003, FR104	Diodes	성호반도체	1
64	TH101	SCK08053MS,NTC 5D-9	Thinking	삼경세라믹	1
65	F101	SR-5 3.15A	세이브퓨즈		1
66	P.W.B FR-1	PL1742C20	다산	동명	1

BLOCK DIAGRAM

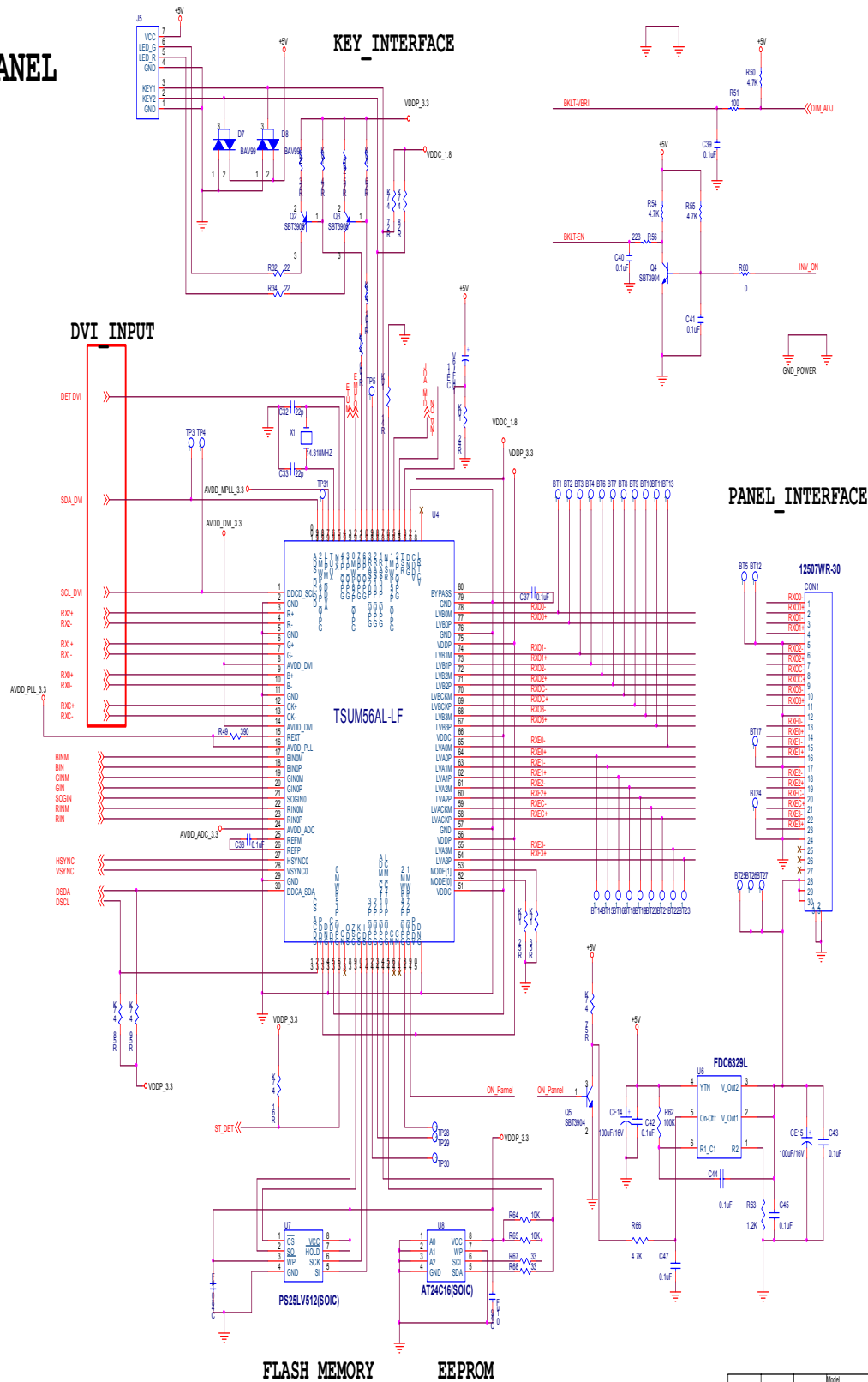


HL720S/D Schematic

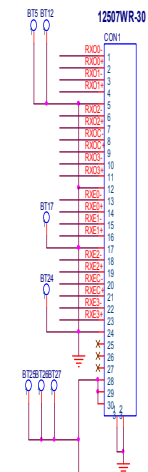
► AD B/D(HL720S/D)



SCALER & PANEL



PANEL_INTERFACE

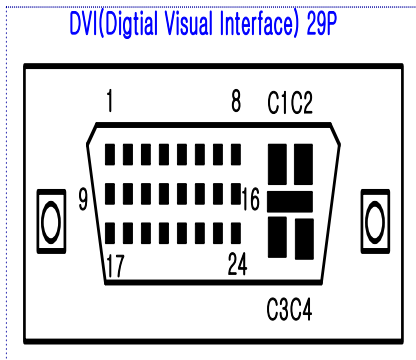
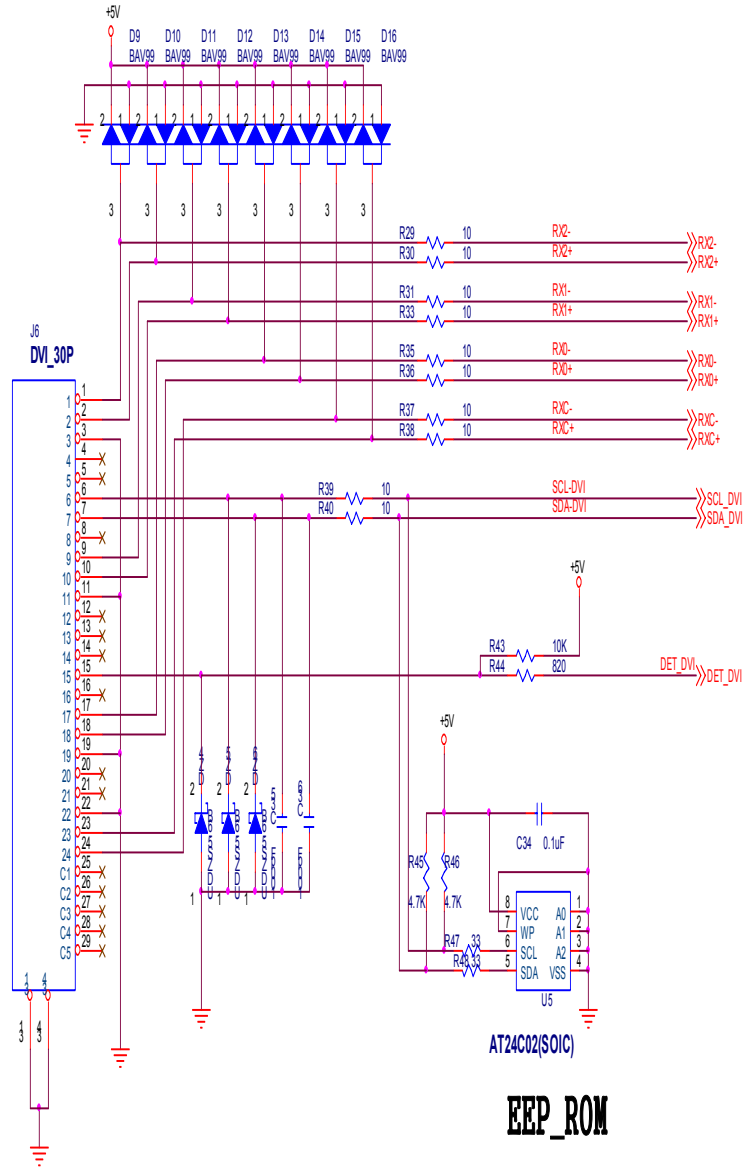


FLASH_MEMORY

EEPROM

DESIGN	CHECK	APPROVAL	Model
			HL720D
			Title
			SCALER & PANEL
			Document Number
			Rev
			0
WooYoung Telecom Co., Ltd.			Sheet of

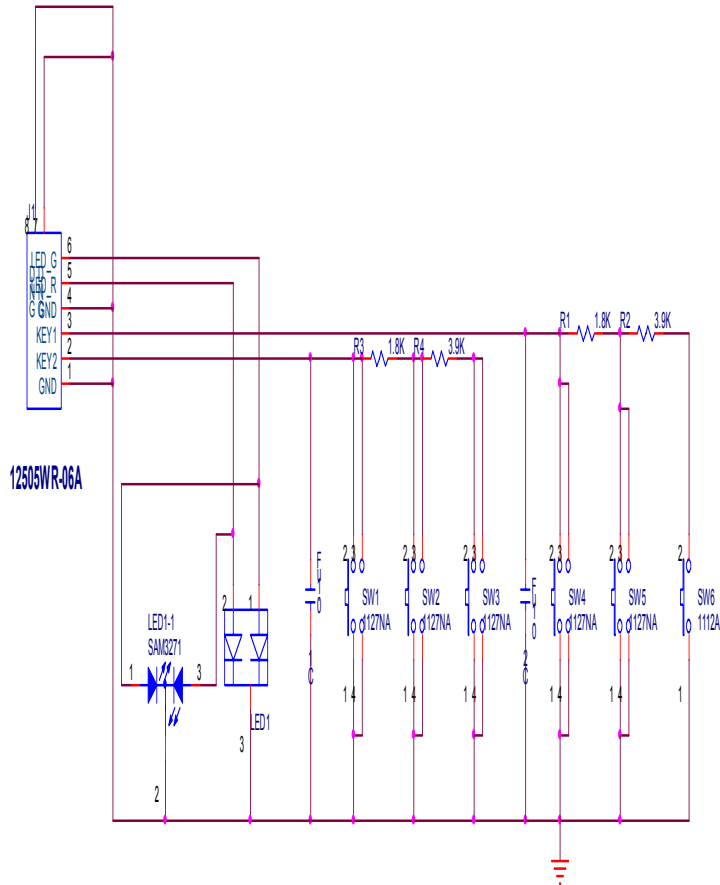
DVI_INPUT



DESIGN	CHECK	APPROVAL	Model
			HL720D
			Title
			DVI INPUT
			Document Number
			Rev
			0
WooYoung Telecom Co., Ltd.			Sheet of

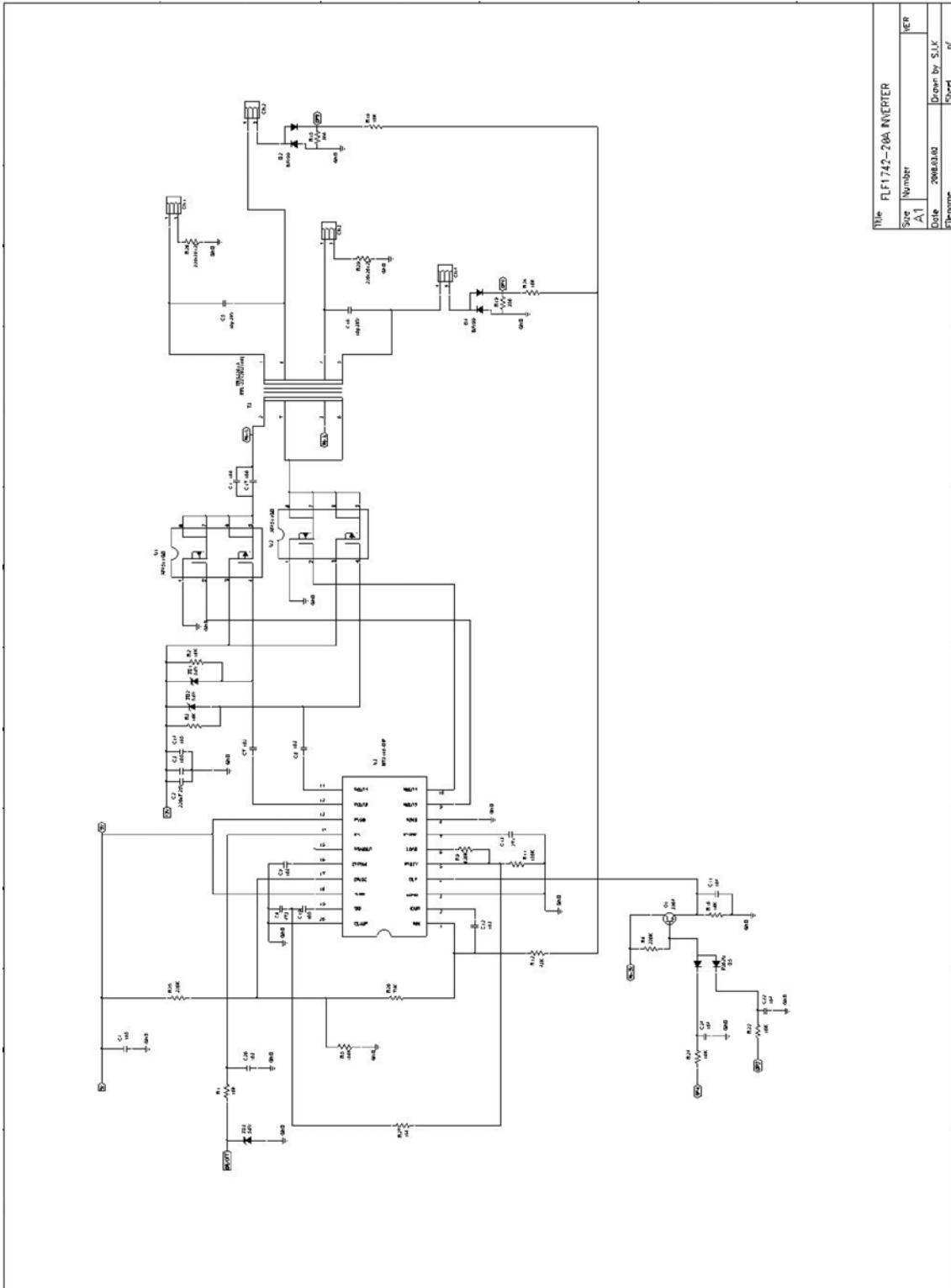
HL720 KEY FUNCTION

- SW1 : MENU
- SW2 : SELECT
- SW3 : DOWN
- SW4 : UP/AUTO
- SW5 : MWE
- SW6 : POWER



DESIGN	CHECK	APPROVAL	Model HL720
			Title KEY_FUNCTION
			Document Number
WooYoung Telecom Co., Ltd.			97E6501500
			Rev 0
		Sheet	of

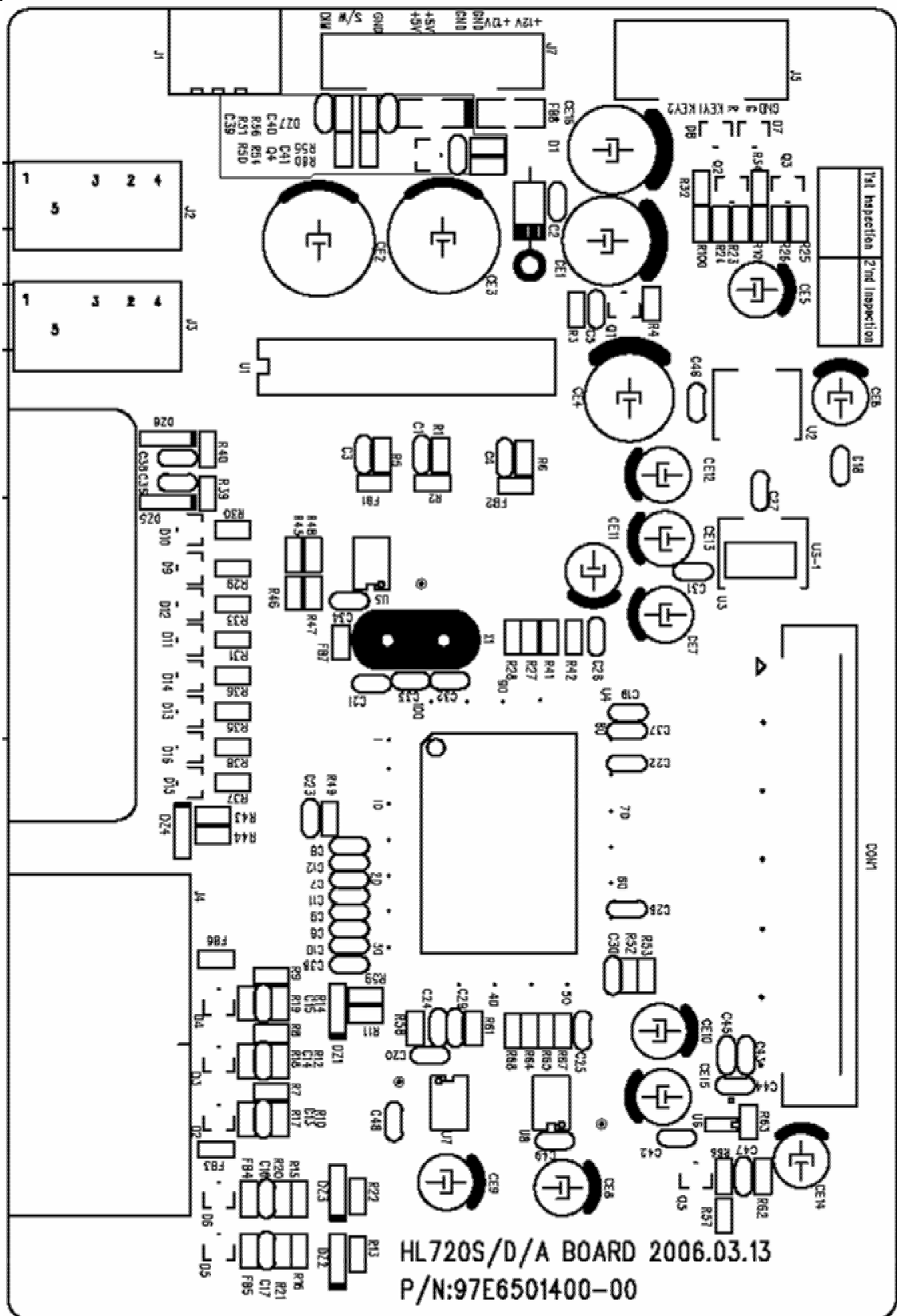
-Inverter Circuit



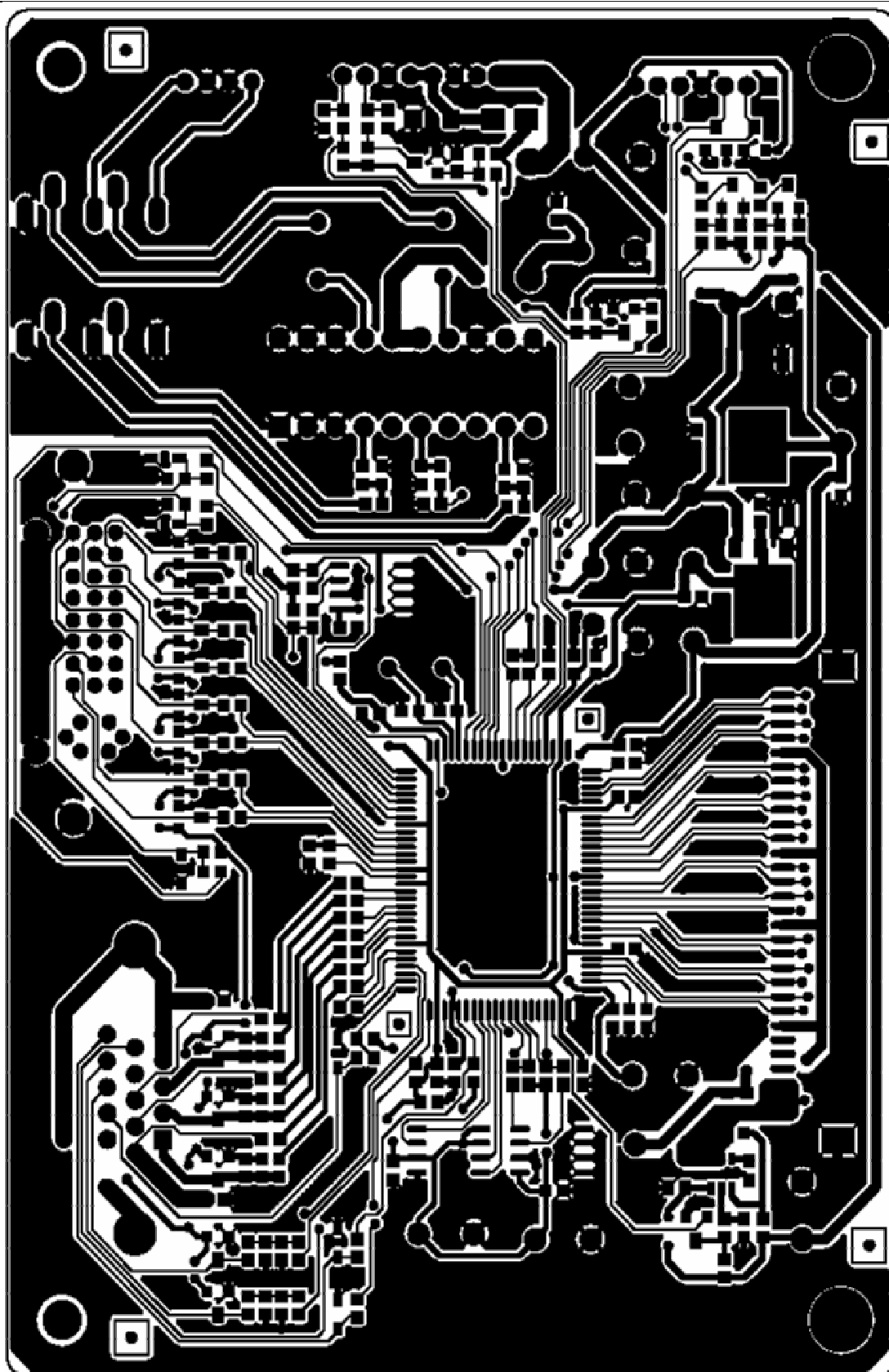
Title		FL742-20A INVERTER	
Size	Number	REV	
A1			
Date	2008.03.00	Drawn by: S.I.K	
Page		Sheet	of

PCB Layout

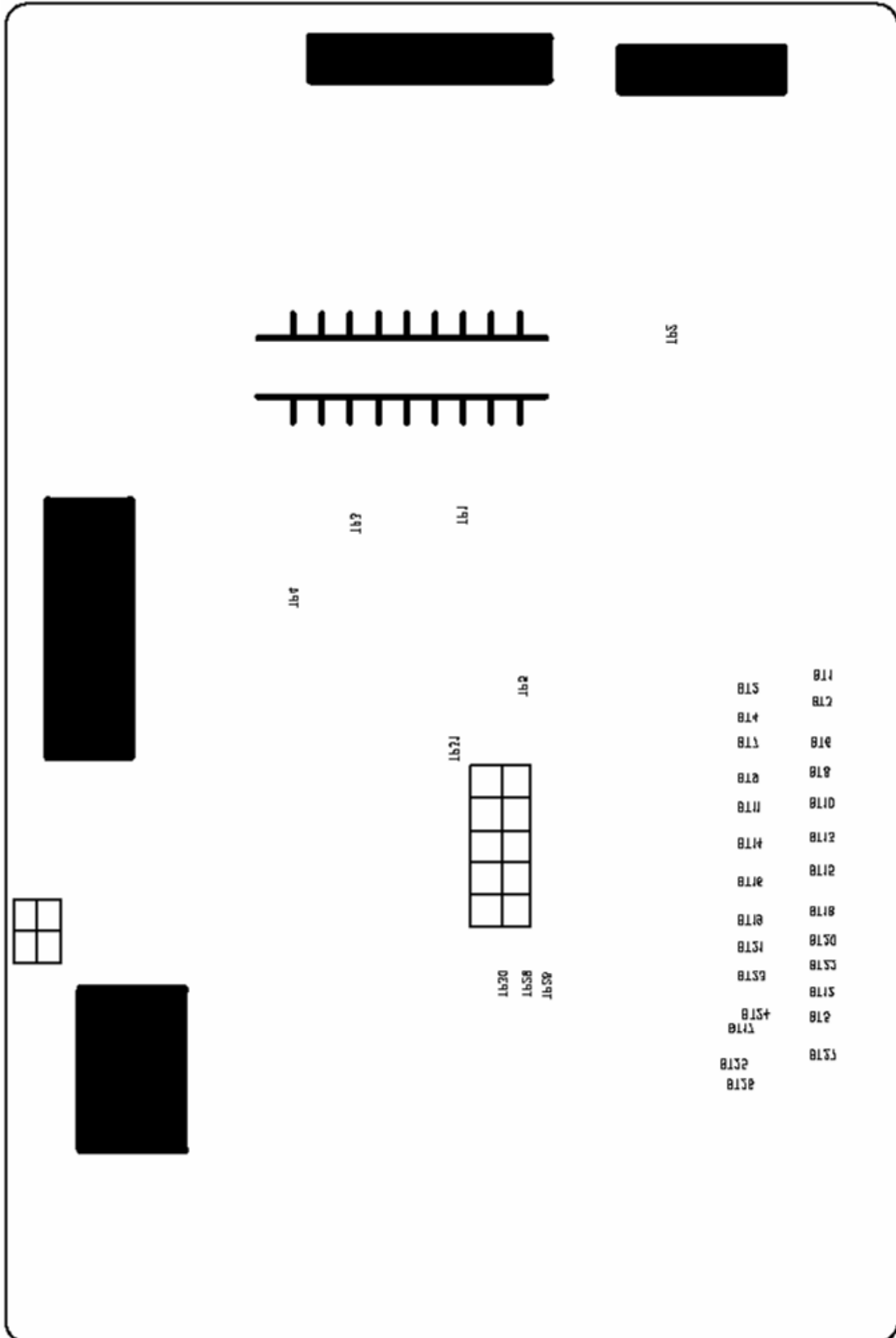
▶ AD B/D TOP SILK (HL720S/D)



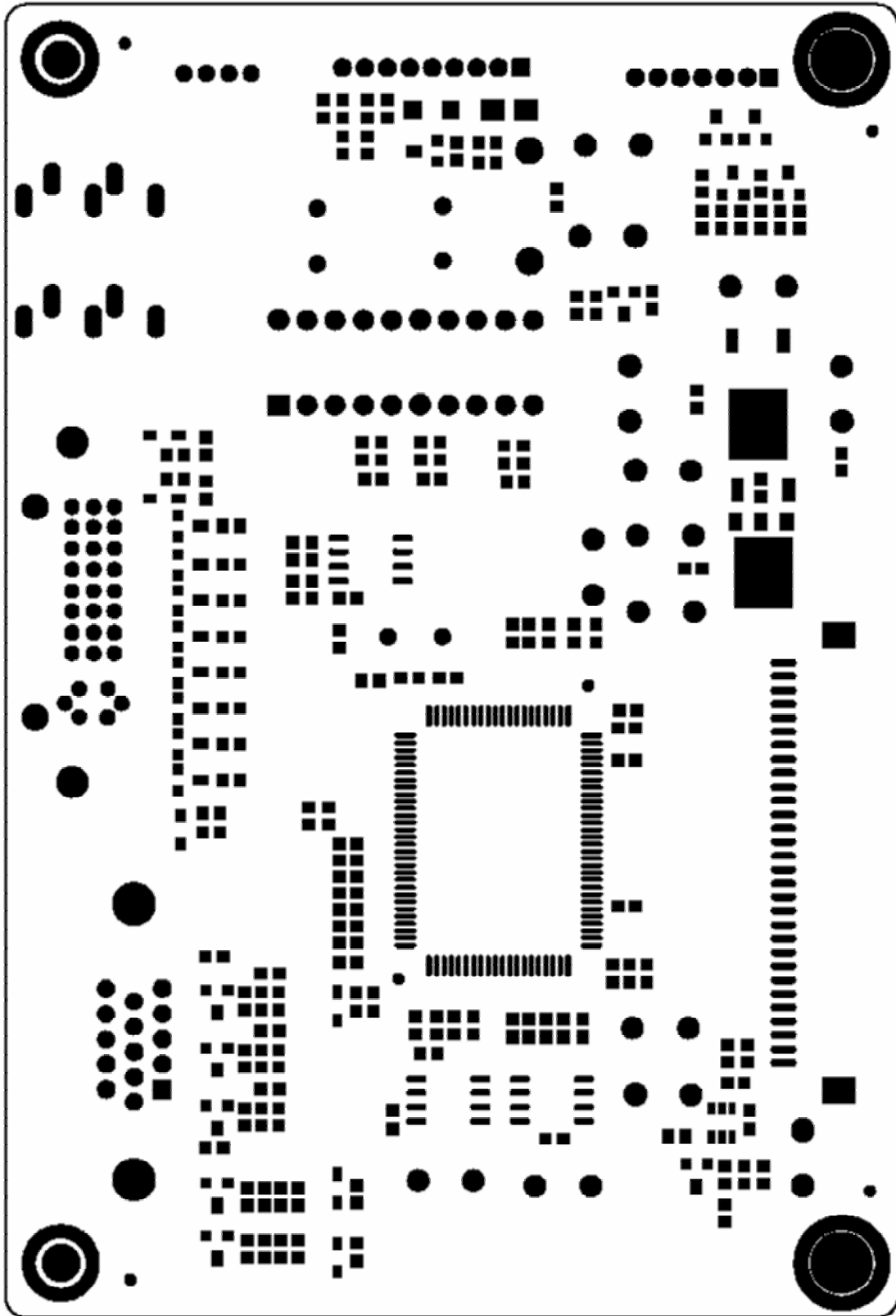
▶ AD B/D TOP PATTERN(HL720S/D)



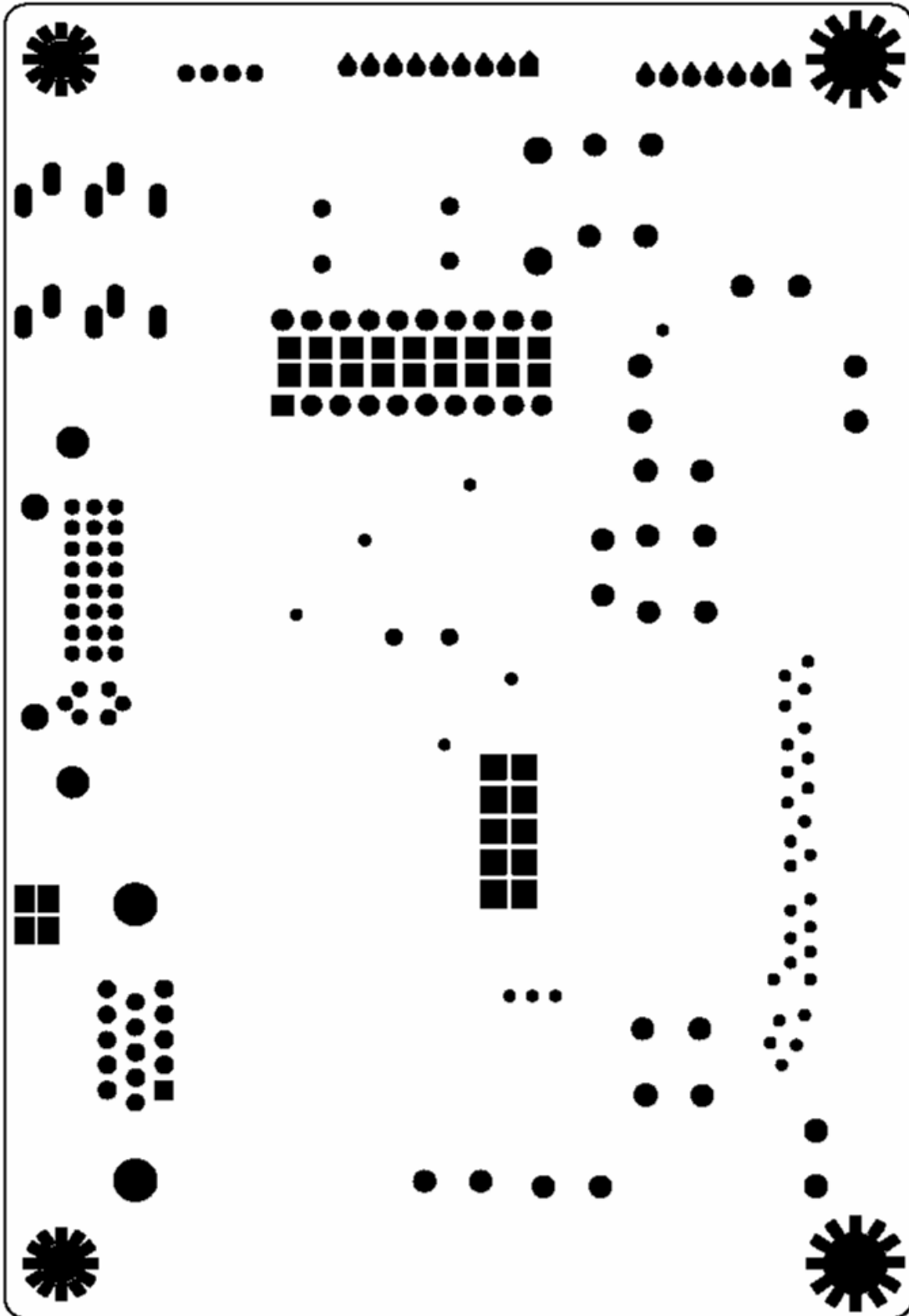
► AD B/D BOTTOM SILK (HL720S/D)



▶ AD B/D MASK TOP (HL720S/D)



▶ AD B/D MASK BOTTOM (HL720S/D)



▶ FUNC B/D TOP SILK (HL720S/D)



▶ FUNC B/D TOP PATTERN (HL720S/D)

