LCD - AD-CONTROLLER BOARD
Model No. **AB1920L-7010AOE**

Release Date
25th Jun 2021

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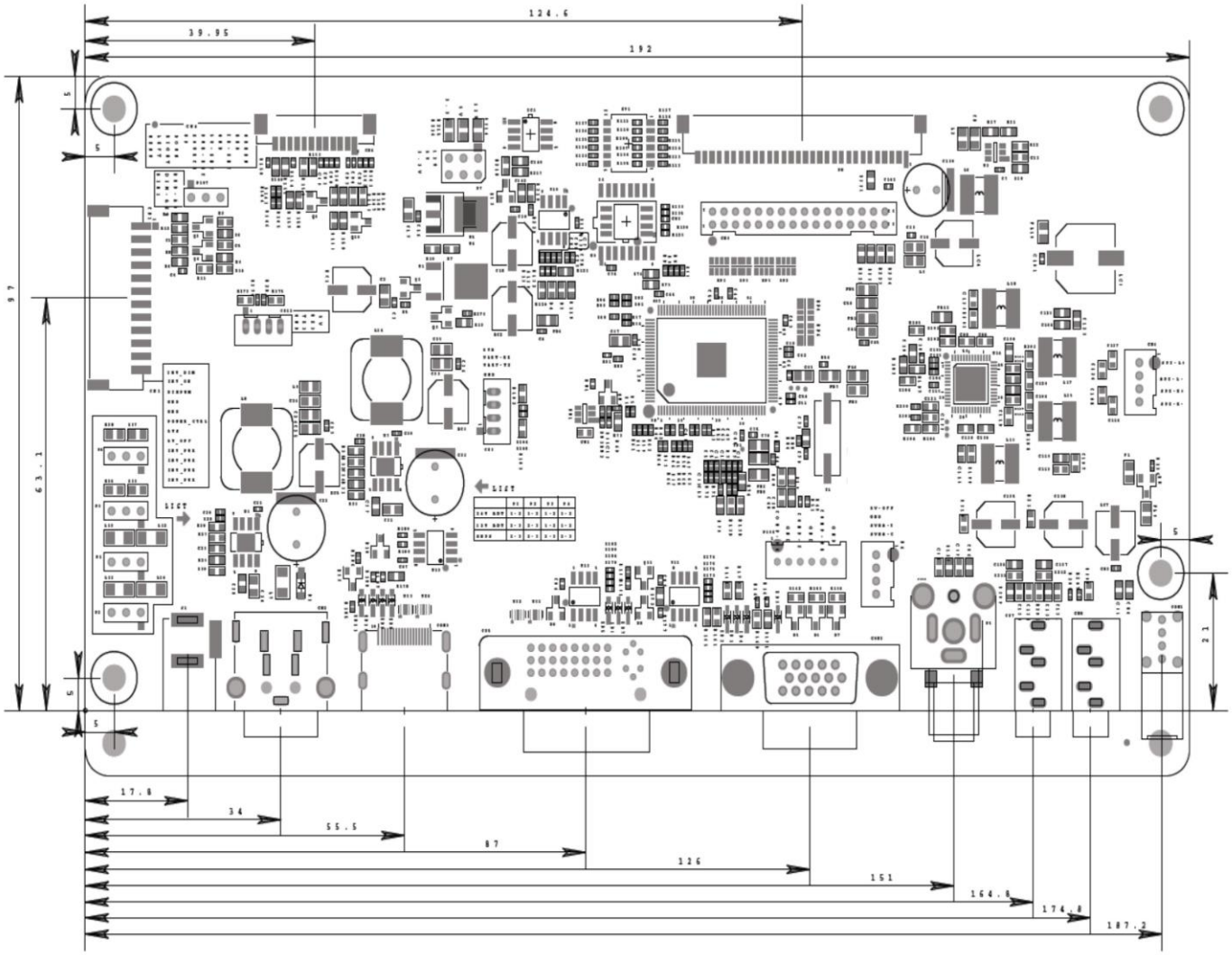
1. Specification:

Model No.		**AB1920L-7010AOE**
Chipset		MST6849XP
Supported Resolution	RGB	VGA: 640 X 480 / 720 X 400
		SVGA: 800 X 600
		XGA: 1024 X 768
		SXGA: 1280 X 1024
		WXGA: 100 X 1200
		UXGA: 1600 X 1200
		WUXGA: 1920 X 1200
Power Supply	Power Requirement	Input Power 12V ~ 24V
	To Supply	3.3V, 5V, 12V, 15V, 18V
	Manage	Power Consumable mode: Standby<7.8 W
Key Functions		Auto, Menu, VOL -, VOL +, VGA/DVI, ON/OFF
Video Input Signals		1DB-15pin terminal blue color
		1DVI-29 pin terminal White color
		RCA Jack composite signal interface
		S-Video YC signal interface
		HDMI signal input interface
		Audio Input Jack
Output	To Panel	1 LVDS 2 x 15 (30pin Jack) 30/24/18-bit
		1 LVDS 2 x 16 (32pin Jack) 30/24/18-bit (Optional)
	To Speaker	Audio Output Jack
Remote Control		RS-232
Output Interface		Dual channels of 30/24/18-bit LVDS
VESA Standard		VESA DPMS standards
Humidity		≤85% (non-Condensing)
Size		192 (L) x 97 (W) mm

2. Dimension:

(i) Ad-Board:



3. Ad-Board Picture:

(i) Top View:

4. Connector& Pin assignment:

4.1 Output Connection:

(I) (LVDS Connector 30): P8

Pin	Function	Pin	Function	Pin	Function
1	MOD_PWR	11	YCM-EVEN	21	Y3M-ODD
2	MOD_PWR	12	Y2P-EVEN	22	YCP-ODD
3	MOD_PWR	13	Y2M-EVEN	23	YCM-ODD
4	MOD_PWR	14	GND	24	Y2P-ODD
5	DIM	15	Y1P-EVEN	25	Y2M-ODD
6	SELLDS	16	Y1M-EVEN	26	GND
7	GND	17	YOP-EVEN	27	Y1P-ODD
8	Y3P-EVEN	18	Y0M-EVEN	28	Y1M-ODD
9	Y3M-EVEN	19	GND	29	YOP-ODD
10	YCP-EVEN	20	Y3P-ODD	30	Y0M-ODD

(II) (LVDS Connector 32): CN9

Pin	Function	Pin	Function	Pin	Function
1	Y0M-ODD	12	Y4P-ODD	23	Y3M-EVEN
2	YOP-ODD	13	GND	24	Y3P-EVEN
3	Y1M-ODD	14	GND	25	Y4M-EVEN
4	Y1P-ODD	15	Y0M-EVEN	26	Y4P-EVEN
5	Y2M-ODD	16	YOP-EVEN	27	GND
6	Y2P-ODD	17	Y1M-EVEN	28	GND
7	YCM-ODD	18	Y1P-EVEN	29	OPTION
8	YCP-ODD	19	Y2M-EVEN	30	OPTION
9	Y3M-ODD	20	Y2P-EVEN	31	LCD_VDD
10	Y3P-ODD	21	YCM-EVEN	32	LCD_VDD
11	Y4M-ODD	22	YCP-EVEN		

4.2 Input Interface Details:

(I) VGA Interface Details (DB-15 pin VGA Connector): CON2

Pin	Function	Pin	Function
1	Red1	9	NC
2	Green1	10	GND
3	Blue1	11	GND
4	GND	12	DSDA
5	GND	13	HSYNC
6	GND	14	VSYNC
7	GND	15	DSCL
8	GND		

(II) DVI-D Connection (24 pin DVI Connector): CN5

Pin	Function	Pin	Function	Pin	Function
1	TMDS DATA2-	9	TMDS DATA1-	17	TMDS DATA0-
2	TMDS DATA2+	10	TMDS DATA1+	18	TMDS DATA0+
3	TMDS DATA2 Shield	11	TMDS DATA1 Shield	19	TMDS DATA0 Shield
4	NC	12	NC	20	NC
5	NC	13	NC	21	NC
6	DDC Clock	14	+5V Power	22	TMDS CLOCK Shield
7	DDC Data	15	GND(for +5V)	23	TMDS CLOCK+
8	NC	16	HPD	24	TMDS CLOCK-

(III) HDMI Connection (19 pin HDMI Connector): CON3

Pin	Function	Pin	Function
1	HDMI_DDC5V	8	RX0-
2	HDMI_HOT_PLUG	9	RX1+
3	HDMI_SCL	10	RX1-
4	HDMI_SDA	11	RX2+
5	GND	12	RX2-
6	GND	13	RXC+
7	RX0+	14	RXC-

(IV) Composite Video Connector: P5

Pin	Function	Pin	Function
1	Composite	3	Composite
2	GND		

(V) Audio Input Connector: CN7

Pin	Function	Pin	Function
1	GND	4	L
2	R	5	L
3	R		

(VI) Headphone Connector: CN8

Pin	Function	Pin	Function
1	GND	4	DET
2	DET	5	L
3	R		

(VII) USB Input Connector: CON1

Pin	Function	Pin	Function
1	5V	3	D+
2	D-	4	GND

(VIII) S-VIDEO Connector (Connector 4 pin): P6

Pin	Function	Pin	Function
1	+5V	4	Y-in
2	GND	5	C-in

(IX) Power Interface Details (Connector 5 pin): CN10

Pin	Function	Pin	Function
1	GND	4	OWER
2	GND	5	OWER
3	POWER		

(X) OSD Interface Details (Connector 12pin):CN4

Pin	Function	Pin	Function	Pin	Function
1	LED GREEN_KEY	5	5V_KEY	9	DOWN_KEY
2	LED RED_KEY	6	PWR_KEY	10	RIGHT_KEY
3	IR_KEY	7	Select	11	LEFT_KEY
4	GND	8	UP_KEY	12	MENU_KEY

(XI) Speaker Connector (Connector 4 pin): CN6

Pin	Function	Pin	Function
1	SP_L+	4	SP_R+
2	SP_L-	5	SP_R-

(XII) RS232 (Connector 4 pin): CN12

Pin	Function	Pin	Function
1	5VS	4	TX
2	RX	5	GND

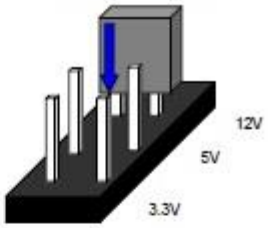
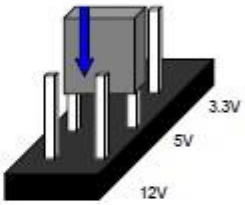
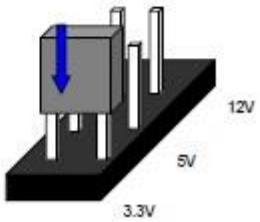
5. Inverter Interface Details (Connector 12 pin): CN1

Pin	Function	Pin	Function	Pin	Function
1	DIM-ADJ	5	GND	9	12V / 24V
2	INVON	6	PWR_CTRL	10	12V / 24V
3	PWM	7	5VS	11	12V / 24V
4	GND	8	5V	12	12V / 24V

6. Frequency Details:

Resolutions	Pixel Freq.	Horizontal Timing				Vertical Timing			
		Sync Polar	Freq.	Total	Active	Sync Polar	Freq.	Total	Active
	MHz		KHz	Pixel	Pixel		Hz	Line	Lind
640*350@70Hz	25.175	P	31.468	800	640	N	70.085	449	350
640*400@70Hz	25.175	N	31.468	800	640	P	70.085	449	400
720*400@ 70Hz	28.321	N	31.468	900	720	P	70.085	449	400
640*480@60Hz	23.875	N	29.844	800	640	N	60.048	497	480
640*480@72Hz	31.500	N	37.861	832	640	N	72.810	520	480
640*480@75Hz	31.500	N	37.500	840	640	N	75.000	500	480
800*600@56Hz	36.000	P	35.156	1024	800	P	56.250	625	600
800*600@60Hz	40.000	P	37.879	1056	800	P	60.317	628	600
800*600@72Hz	50.000	P	48.077	1040	800	P	72.188	666	600
800*600@75Hz	49.500	P	46.875	1056	800	P	75.000	625	600
1024*768@60Hz	65.000	N	48.363	1344	1024	N	60.005	806	768
1024*768@70Hz	75.000	N	56.476	1328	1024	P	70.070	806	768
1024*768@75Hz	78.750	P	60.023	1312	1024	P	75.030	800	768
1280*720@60Hz	74.375	P	44.697	1664	1280	P	59.915	746	720
1280*768@60Hz	68.250	P	47.396	1440	1280	N	59.995	790	768
1360*768@60Hz	84.750	P	47.720	1776	1360	P	59.799	798	768
1280*1024@60Hz	108.000	P	63.981	1688	1280	P	60.020	1066	1024
1280*1024@75Hz	135.000	P	79.976	1688	1280	P	75.025	1066	1024
1440*1050@60Hz	101.000	P	64.744	1560	1400	N	59.948	1080	1050
1680*1050@60Hz	147.000	P	65.160	2256	1680	N	59.944	1087	1050
1600*1200@60Hz	160.875	P	74.479	2160	1600	P	59.967	1242	1200
1920*1080@60Hz	148.500	P	67.500	2200	1920	N	60.000	1125	1080
1920*1200@60Hz	154.125	P	74.099	2080	1920	N	59.999	1235	1200

7. Power Selection Jumpers: P7

Reference	Description	Connector Type
P7	12V(15/18V) panel power **CAUTION**: Incorrect setting can damage panel	
	5V panel power **CAUTION**: Incorrect setting can damage panel	
	3.3V panel power **CAUTION**: Incorrect setting can damage panel