



FAQ / Application Note

Subject : How to enable dual display function on the board with SM721 VGA chip?

FAQ Document No: H08008

Date: 2002/10/17

Model No. ECM-5610

Rev.A1

Category: General H/W S/W Others, _____

Purpose :

step by step to enable two LCD panel on ECM-5610 under Windows XP professional.

SMI Lynx3DM4(SM721G4) or Lynx3DM8(SM721G8) can support two separate digital LCDs. Both LCDs need to be TFT interface.

FP1 has to be only 18-bit TFT interface and FP2 has to be 18/24 TFT interface.

DSTN panel can not be supported under dual digital LCD mode.

For Example, if we want to light up dual Sharp LQ121S1DG11 TFT LCD on ECM-5610 for dual display application, FP1 & FP2's LCD cable mapping shown in below :

FP1 LCD cable mapping table :

SHARP LQ121S1DG11 Connector		ECM-5610 CN3	
Pin Name	Pin #	Pin #	Pin Name
GND	1	3	GND
DCLK	2	35	SFLK
GND	3	3	GND
Hsync	4	38	LP
Vsync	5	36	FLM
GND	6	3	GND
GND	7	3	GND
GND	8	3	GND
R0	9	25	P16
R1	10	26	P17
R2	11	27	P18
GND	12	3	GND
R3	13	28	P19
R4	14	29	P20
R5	15	30	P21
GND	16	4	GND
GND	17	4	GND
GND	18	4	GND
G0	19	17	P8
G1	20	18	P9
G2	21	19	P10
GND	22	4	GND
G3	23	20	P11

G4	24	21	P12
G5	25	22	P13
GND	26	8	GND
GND	27	8	GND
GND	28	8	GND
B0	29	9	P0
B1	30	10	P1
B2	31	11	P2
GND	32	8	GND
B3	33	12	P3
B4	34	13	P4
B5	35	14	P5
GND	36	34	GND
DE	37	37	M
NC	38	-	-
VDD	39	5	VDDSAFE3
VDD	40	6	VDDSAFE3
NC	41	-	-

FP2 LCD cable mapping table :

SHARP LQ121S1DG11 Connector		ECM-5610 CN4	
Pin Name	Pin #	Pin #	Pin Name
GND	1	3	GND
DCLK	2	35	LVDSFLK
GND	3	3	GND
Hsync	4	38	P22
Vsync	5	36	P23
GND	6	3	GND
GND	7	3	GND
GND	8	3	GND
R0	9	27	P42
R1	10	28	P43
R2	11	29	P44
GND	12	3	GND
R3	13	30	P45
R4	14	31	P46
R5	15	32	P47
GND	16	4	GND
GND	17	4	GND
GND	18	4	GND
G0	19	19	P34
G1	20	20	P35
G2	21	21	P36
GND	22	4	GND
G3	23	22	P37
G4	24	23	P38
G5	25	24	P39
GND	26	8	GND
GND	27	8	GND
GND	28	8	GND
B0	29	11	P26
B1	30	12	P27
B2	31	13	P28
GND	32	8	GND
B3	33	14	P29
B4	34	15	P30
B5	35	16	P31
GND	36	34	GND

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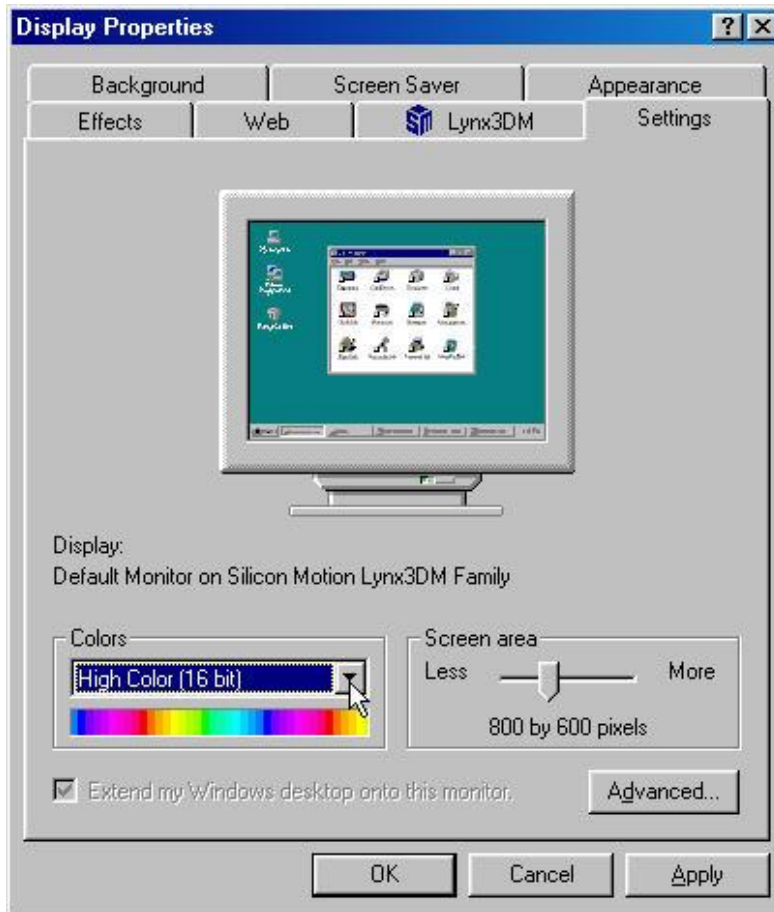
DE	37	37	P15
NC	38	-	-
VDD	39	5	VDDSAFE3
VDD	40	6	VDDSAFE3
NC	41	-	-

P.S. The display resolution of FP1 & FP2 must be the same.

For SM721 dual display application, you have to replace BIOS, device driver and VGA control panel. You can download them from www.avalu.com.tw Service & Support web page.

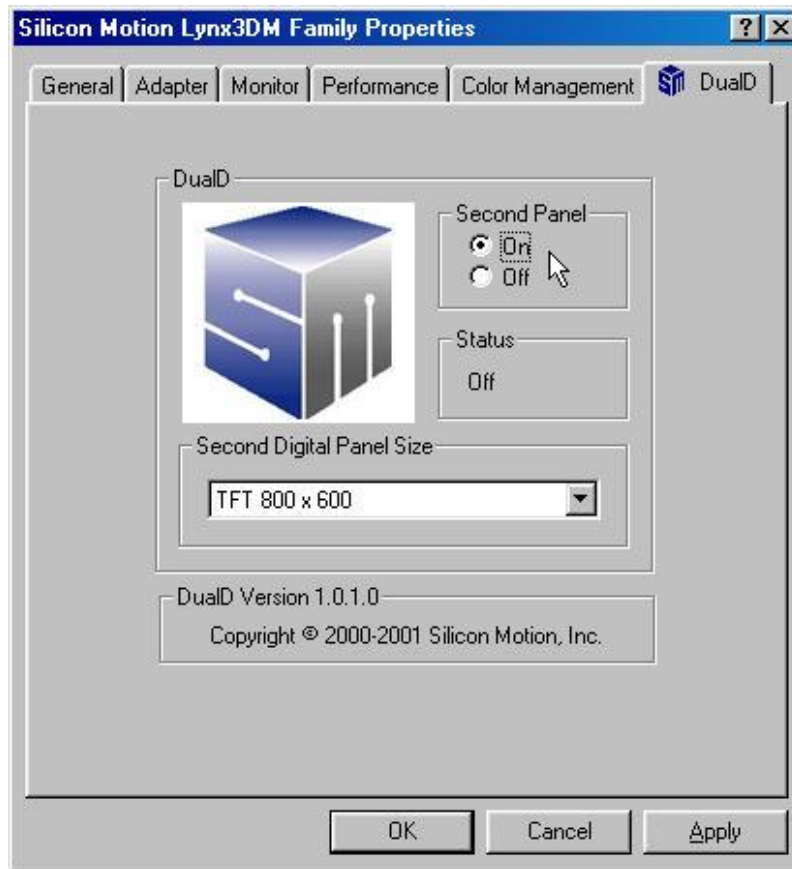
reflash BIOS for dual display, update display driver and install VGA control panel for dual display. Then you have to enable FP2 on Windows "Display Properties" Window.

Right click on Windows desktop, then press "properties"



Change display color to 16bit, then press "Advanced" button.

Select "DualD" window, then change "Second Digital Panel Size" to your Flat Panel 2's resolution.



Enable "Second Panel" and then press "Apply" button.

At this time you will see Flat Panel 2 has been turned on, but the display is same as Flat Panel 1. You can turn on “extension mode” in “Display Properties”.

