



Application Note

LCD Interface

MQ1100/1132

MQ1168

MQ1178/1188

MQ2100

MQ9000

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Proprietary

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1 Introduction

This document discusses support information that is helpful in interfacing different flat panels to the MediaQ products. Chapter 2, "*List of Panels Supported*", provides a look up table of the flat panels that a specified MediaQ product supports. Chapter 3, "*Signal Mappings*", provides detailed connectivity information between a MediaQ product and the panels that support are validated. You can also find Appendixes at the end of the document that list panels supported by each MediaQ line of products separately.

For additional reference information, readers can go to the Technical Manual, Datasheet, and OSIK document of the product of interest. The specifications from the manufacturer of the panel are also good references.

The information provided in this document is accurate to our best knowledge at the time of release of the document. Be sure to contact MediaQ for the latest version and/or to obtain additional assistance.

If the reader wishes to connect a flat panel of a type that is not currently listed in this document, please contact your MediaQ representative.

PLEASE NOTE: MediaQ has changed the format of the Flat Panel List and Application Note as follows:

- (1) The Flat Panel List and the Flat Panel Application Note have been combined into a single Flat Panel Application Note.
- (2) The new Flat Panel Application Note applies to multiple MediaQ products.
- (3) Signal mappings between the flat panel and the MediaQ product have been retained.
- (4) MediaQ flat panel interface register values have been removed. If the reader wishes to obtain these register values, please consult the OSIK document for the MediaQ product of interest.

1.1 How to use this Document

- (1) Locate the desired flat panel in Chapter 2, "*List of Panels Supported*".
- (2) Check that the flat panel is supported by the MediaQ product of interest.
- (3) If the flat panel is supported, find the connection information in Chapter 3, "*Signal Mappings*" (be sure to look for the signal mappings for the product of interest).
- (4) If the flat panel is not supported, contact your MediaQ representative.

2 List of Panels Supported

MediaQ products support various S-STN and TFT panels that are listed in Table 1. If possible, they are listed with manufacturer name, part number, and LCD driver.

For signal mapping information between a panel and a MediaQ product, go to chapter 3, “*Signal Mappings*”, under the product of interest, look up the panel item number found in Table 1 below.

Note that actual support in the software and connectivity can be done on the need basis. Contact your MediaQ representative if you need to make a support request.

Table 1 Panels supported by MediaQ products

Item No.	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported by MediaQ product				
					MQ9000	MQ2100	MQ1188 /1178	MQ1168	MQ1132 /1100
01	- Hitachi SX-16H003	Color S-STN 8-Bit	640x240	75Hz	X*		X	X	X
02	- Toshiba-37A777 (without interface module)	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
03	- Citizen K3240H-FR - Hitachi SC09Q001-AZA	Color S-STN 8-Bit	320x240	75Hz	X*		X	X	X
04	- Sharp LQ039Q2DS01/54	HR TFT 18-Bit	320x240	60Hz	X	X	X	X	X
05	- Sony ACX709AKM	Poly-Si TFT 18-Bit	320x320	60Hz	X		X	X	X
06	- Sharp LQ031B1DDXX	HR TFT 18-Bit	160x160	60Hz	X*		X	X	X
07	- Generic	TFT 18-Bit	320x240	60Hz	X*		X	X	X
08	- Sony L1160	SSTN 8-Bit	160x160	71Hz	X*		X	X	X
09	- Casio COM38T3103DPQ/04DPQ	HR TFT 18-Bit	320x240	60Hz	X*		X	X	X
10	- HP LFH8P4012A-1	SSTN 8-Bit	240x320	75Hz	X*		X	X	X
11	- Toshiba 37A777 (with interface module) - Toshiba LTM035A776C	TFT 18-Bit	240x320	54Hz	X*		X	X	X
12	- Casio COM35T3112DL	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
13	- Samsung LTSD35Q1-P01	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
14	- Citizen	SSTN 8-Bit	800x600	90Hz	X*		X	X	X
15	- NEC NL3224CR24-03	HR-TFT 18-Bit	320x240	60Hz	X*		X	X	X
16	- Sharp LQ035Q2DD52/54 - Sharp LQ0DAS0360	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X

* Note:

- X: indicates the software and connectivity support.

- X*: indicates the intended support. Software and connectivity support can be done if requested.

Item No.	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported by MediaQ product				
					MQ9000	MQ2100	MQ1188 /1178	MQ1168	MQ1132 /1100
17	- Hitachi SC07N001-ZZA	SSTN 8-Bit	160x160	100Hz	X*		X	X	X
18	- Sharp	HR-TFT 18-Bit	320x320	60Hz	X*		X	X	X
19	- Samsung LTS350Q1-PD1	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
20	- Generic	TFT 18-Bit	160x160	60Hz	X*		X	X	X
21	- Sanyo TM038QV-67A02 (Totori Sanyo)	HR-TFT 18-Bit	320x240	60Hz	X*		X	X	X
22	- Casio	HR-TFT 18-Bit	320x320	60Hz	X*		X	X	X
23	- NEC NL2432DR22-02B/-11B	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
24	- Unipac UR038Q01	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
25	- Sony ACX704AKM (with interface module)	TFT 18-Bit	320x240	60Hz	X*		X	X	X
26	- Hitachi	HR-TFT 18-Bit	240x320	60Hz	X*		X	X	X
27	- Philips LP-7123-A - Philips LP-8658-B	HR-TFT 18-Bit	240x320	60Hz	X	X	X	X	X
28	name not to be listed (required interface module)	TFT 18-Bit	320x480	60Hz	X*		X	X	
29	- NEC 6448AC33-13 (window 320x480)	TFT 18-Bit	640x480	60Hz	X*		X	X	
30	- National/Panasonic EDTCB33	HR-TFT 18-Bit	240x320	88Hz	X*		X	X	X
31	- Toshiba	TFT 18-Bit	240x320	68Hz	X*		X	X	
32	- Hitachi 3284LTD-1394-7 (HD66772) - Hitachi TX06D12VM1CAA	TFT 18-Bit	176x220	75Hz	X*	X	X	X	
33	- Sony ACX502AKM (with interface module)	TFT 18-Bit	240x320	60Hz	X*		X	X	
34	- Toshiba LTM04C380S (with interface module)	TFT 18-Bit	640x480	60Hz	X*		X	X	
35	- Epson L2F50032T00	TFT 18-Bit	176x220	60Hz	X*	X	X		
36	- Hitachi SP08Q001-TZA	Mono SSTN 8-Bit	320x240	75Hz	X*		X	X	X
37	- Hitachi TX05D19VM1CAA (with HD66773 driver)	TFT 18-Bit	128x160	60Hz	X*	X	X		
38	- Sanyo LC13005 (with ALR241 interface module)	TFT 18-Bit	176x220	30Hz	X*	X	X		

* Note:

- X: indicates the software and connectivity support.

- X*: indicates the intended support. Software and connectivity support can be added as requested.

Item No.	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported by MediaQ product				
					MQ9000	MQ2100	MQ1188 /1178	MQ1168	MQ1132 /1100
39	Emerging Display - EW32F90FLW - EW50143FLWU	Mono SSTN 4-Bit	320x240	75Hz	X*		X		
40	- Generic TFT	TFT 18-Bit	640x240	60Hz	X*		X		
41	- Samsung LH158003 (with HD66773 driver)	SSTN 8-Bit	160x240	72Hz	X*		X		
42	- Samsung LTS350Q2	HR-TFT 18-Bit	240x320	64Hz	X*		X		
43	- Toppoly TD035RTEA2 (with built in timing controller)	HR-TFT 18-Bit	240x320	64Hz	X*		X		
44	- Toshiba MD060 type H	TFT 18-Bit	240x320	60Hz	X*		X		
45	- Samsung LTS180S3-HF1 (with HD66773 driver)	TFT 16-Bit	128x160	60Hz		X			
46	- Samsung LTS232Q1-PE1	TFT 18-Bit	160x174	60Hz		X			
47	- Toshiba-Matsushita LTM020A03A	TFT 18-Bit	128x160	60Hz		X			
48	- Sanyo LC13502	TFT 18-Bit	176x220	60Hz		X			
59	- Samsung LH158003 (with HD66137 driver)	SSTN 8-Bit	160x240	72Hz		X			
50	- Samsung LTS212Q1-HF1 (with S6D0115 driver)	TFT 18-Bit	176x208	64Hz		X			
51	- Samsung LTS220Q2-HE1 (with HD667P00 and HD66775)	TFT 18-Bit	176x220	60Hz		X			
52	- Optrex F-51468GNCJ-MLW-AA (with Hitachi HD66776)	F-STN 16-Bit	120x160	60Hz		X			
53	- Toshiba LTM024P339	p-Si TFT 18-Bit	240x320	60Hz		X			
54	- HYeLCD CG128040-S401D (with NJU6820 driver)	Color STN 12-Bit	128x40	60Hz		X			
55	- Philips PFC322061 (with HD66772 driver)	a-Si AMLCD TFT	176x220	75Hz		X			
56	- Citizen K3249H	Color STN 8-Bit	320x240	75Hz		X			
57	- Sharp LQ035Q7DB02	AD-TFT 18-Bit	240x320	60Hz		X			

* Note:

- X: indicates the software and connectivity support.

- X*: indicates the intended support. Software and connectivity support can be added as requested.

3 Signal Mappings

3.1 MQ1188/1178 Signal Mappings

The signal mappings for the MQ1188/1178 can be used as the reference signal mappings for the MQ1132/1100, the MQ1168 or the MQ9000. Actual verification can also be done if requested. For the actual verifications for the MQ9000 connections, go to section 3.3, 'MQ9000 Signal Mappings'.

3.1.1 Panel Item 1. Color SSTN 8-Bit 640x240 - 75Hz

Table 2 provides the signal mapping between the MQ1188/1178 pins and panel 'Item 1' pins. Item 1 panel interface is listed in Table 1 with the Hitachi SX-16H003.

Table 2 Signal Mapping for Panel Item 1

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R0-R2	FD23-21
G0-G2	FD15-13
B0-B1	FD7-6
FLM	FVSYNC
LP	FHSYNC
SHIFT CLOCK	FSCLK
PWM0	FPWM0

3.1.2 Panel Item 2. HR-TFT 18-Bit 240x320 - 60Hz

Table 3 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 2' pins. Item 2 panel interface is listed in Table 1 with the Toshiba 37A777.

Table 3 Signal Mapping for Panel Item 2

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
STV	FVSYNC
LOAD1	FHSYNC
STH	FDE
CPH	FSCLK
CPV	FLCLK (Line Clock)
PPOL	FMOD

3.1.3 Panel Item 3. Color S-STN 8-Bit 320x240 - 75Hz

Table 4 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 3' pins. Item 3 panel interface is listed in Table 1 with the Citizen K3240H-FR and the Hitachi SC09Q001-AZA.

Table 4 Signal Mapping for Panel Item 3

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R0-R2	FD23-21
G0-G2	FD15-13
B0-B1	FD7-6
FLM	FVSYNC
LP	FHSYNC
SHIFT CLOCK	FSCLK
PWM0	FPWM0

3.1.4 Panel Item 4. HR-TFT 18-Bit 320x240 - 60Hz

Table 5 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 4' pins. Item 4 panel interface is listed in Table 1 with the Sharp LM039Q2DS01 and the Sharp LQ039Q2DS54.

Table 5 Signal Mapping for Panel Item 4

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
LP	FHSYNC
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.1.5 Panel Item 5. Poly Si TFT 18-Bit 320x320 - 60Hz

Table 6 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 5' pins. Item 5 panel interface is listed in Table 1 with the Sony ACX709AKM.

Table 6 Signal Mapping for Panel Item 5

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10

Panel Signal	MQ1188/1178 Pin Name
B5-B0	FD7-2
VST	FVSYNC
LS	FHSYNC
SPIO	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
VCK	FPWM1
ENB	FPWM0
FRP	FMOD

3.1.6 Panel Item 6. HR-TFT 18-Bit 160x160 – 60Hz

Table 7 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 6' pins. Item 6 panel interface is listed in Table 1 with the Sharp LQ031B1DDxx.

Table 7 Signal Mapping for Panel Item 6

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
FRAME (SPS)	FVSYNC
LP (FPLINE)	FHSYNC
SPL	FDE
FPSHIFT	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt Line Clock)
REV	FMOD

3.1.7 Panel Item 7. TFT 18-Bit 210x240 – 60Hz

Table 8 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 7' pins. Item 7 panel interface is listed in Table 1 with the HAPD.

Table 8 Signal Mapping for Panel Item 7

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
HSYNC	FHSYNC
FDE	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)

Panel Signal	MQ1188/1178 Pin Name
PS	FPWM1 (FLCLKA-Alt Line Clock)
REV	FMOD

3.1.8 Panel Item 8. SSTN 8-Bit 160x160 – 71Hz

Table 9 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 8' pins. Item 8 panel interface is listed in Table 1 with the Sony L1160.

Table 9 Signal Mapping for Panel Item 8

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R0-R2	FD23-21
G0-G2	FD15-13
B0-B1	FD7-6
FLM	FVSYNC
LP	FHSYNC
SHIFT CLOCK	FSCLK
PWM0	FPWM0

3.1.9 Panel Item 9. HR-TFT 18-Bit 320x240 – 60Hz

Table 10 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 9' pins. Item 9 panel interface is listed in Table 1 with the Casio COM38T3103DPQ/04DPQ.

Table 10 Signal Mapping for Panel Item 9

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
GSRT	FVSYNC
STB	FHSYNC
STHL	FDE
CLK (SHIFT CLOCK)	FSCLK
GRES	FLCLK (Line Clock)
GPKK	FPWM1 (HSE3)
FRP & POL	FMOD

3.1.10 Panel Item 10. SSTN 8-Bit 240x320 - 75Hz

Table 11 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 10' pins. Item 10 panel interface is listed in Table 1 with the Hitachi HP LFH8P4012A-1.

Table 11 Signal Mapping for Panel Item 10

Panel Signal	MQ1188/1178 Pin Name
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Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R0-R2	FD23-21
G0-G2	FD15-13
B0-B1	FD7-6
FLM	FVSYNC
LP	FHSYNC
SHIFT CLOCK	FSCLK
PWM0	FPWM0

3.1.11 Panel Item 11. TFT 18-Bit 240x320 - 54Hz

Table 12 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 11' pins. Item 11 panel interface is listed in Table 1 with the Toshiba 37A777 (with Interface Module) and the Toshiba LTM 035A776C.

Table 12 Signal Mapping for Panel Item 11

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
ENAB	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
CLK	FSCLK

3.1.12 Panel Item 12. HR-TFT 18-Bit 240x320 - 60Hz

Table 13 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 12' pins. Panel Item 12 is listed in Table 1 with the Casio COM35T3112DL.

Table 13 Signal Mapping for Panel Item 12

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
GSRT	FVSYNC
STB	FHSYNC
STHL	FDE
CLK (SHIFT CLOCK)	FSCLK
GPCK	FLCLK (Line Clock)
PWM1	FPWM1 (HSE3)
POL	FMOD

3.1.13 Panel Item 13. HR-TFT 18-Bit 240x320 - 60Hz

Table 14 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 13' pins. Panel item 13 is listed in Table 1 with the Samsung LTSD35Q1-P01.

Table 14 Signal Mapping for Panel Item 13

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
TP	FHSYNC
STH	FDE
CLK (SHIFT CLOCK)	FSCLK
CPV	FLCLK (Line Clock)
REVB	FMOD

3.1.14 Panel Item 14. SSTN 8-Bit 800x600 - 90Hz

Table 15 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 14' pins. Panel item 14 is listed in Table 1 with the Citizen eBook.

Table 15 Signal Mapping for Panel Item 14

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
D6-D7	FD23-22
D0-D5	FD15-10
FRAME	FVSYNC
LOAD	FHSYNC
CP	FSCLK
DF	FMOD

3.1.15 Panel Item 15. HR-TFT 18-Bit 320x240 - 60Hz

Table 16 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 15' pins. Panel item 15 is listed in Table 1 with the NEC HR-TFT NL3224CR24-03.

Table 16 Signal Mapping for Panel Item 15

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
LP	FHSYNC

Panel Signal	MQ1188/1178 Pin Name
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.1.16 Panel Item 16. HR-TFT 18-Bit 240x320 – 60Hz

Table 17 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 16' pins. Panel item 16 is listed in Table 1 with the Sharp LQ035Q2DD52/54 and the Sharp LQ0DAS0360.

Table 17 Signal Mapping for Panel Item 16

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
LP	FHSYNC
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.1.17 Panel Item 17. SSTN 8-Bit 160x160 – 100Hz

Table 18 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 17' pins. Panel item 17 is listed in Table 1 with the Hitachi SC07N001-ZZA.

Table 18 Signal Mapping for Panel Item 17

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R0-R2	FD23-21
G0-G2	FD15-13
B0-B1	FD7-6
FLM	FVSYNC
CL1	FHSYNC
CL2	FSCLK

3.1.18 Panel Item 18. HR-TFT 18-Bit 320x320 – 60Hz

Table 19 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 18' pins. Panel item 18 is listed in Table 1 as a Sharp.

Table 19 Signal Mapping for Panel Item 18

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
LP	FHSYNC
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.1.19 Panel Item 19. HR-TFT 18-Bit 240x320 - 60Hz

Table 20 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 19' pins. Panel item 19 is listed in Table 1 with the Samsung LTS350Q1-PD1.

Table 20 Signal Mapping for Panel Item 19

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
TP	FHSYNC
STH	FDE
CLK (SHIFT CLOCK)	FSCLK
CPV	FLCLK (Line Clock)
REVB	FMOD

3.1.20 Panel Item 20. TFT 18-Bit 160x160 - 60Hz

Table 21 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 20' pins. Panel item 20 is listed in Table 1 as a generic.

Table 21 Signal Mapping for Panel Item 20

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
HSYNC	FHSYNC

Panel Signal	MQ1188/1178 Pin Name
FDE	FDE
SHIFT CLOCK	FSCLK

3.1.21 Panel Item 21. HR-TFT 18-Bit 320x240 - 60Hz

Table 22 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 22' pin interface. Panel Item 22 is listed in Table 1 with the Sanyo TM038QV-67A02 (Totori Sanyo).

Table 22 Signal Mapping for Panel Item 21

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
FLMF	FVSYNC
EISB	FDE
CLK (SHIFT CLOCK)	FSCLK
CPV	FLCLK (Line Clock)
STRB (HSYNC)	FPWM1 (HSE3)
INH	FPWMCLK
POLGMA	FMOD

3.1.22 Panel Item 22. HR-TFT 18-Bit 320x320 - 60Hz

Table 23 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 23' pin interface. Panel item 23 is listed in Table 1 as a Casio.

Table 23 Signal Mapping for Panel Item 22

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
GSRT	FVSYNC
STB	FHSYNC
STHL	FDE
CLK (SHIFT CLOCK)	FSCLK
GRES	FLCLK (Line Clock)
GPKC	FPWM1 (HSE3)
FRP & POL	FMOD

3.1.23 Panel Item 23. HR-TFT 18-Bit 240x320 - 60Hz

Table 24 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 23' pin interface. Panel item 23 is listed in Table 1 with the NEC NL2432DR22-02B/-11B.

Table 24 Signal Mapping for Panel Item 23

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSP	FVSYNC
STB	PWM1 (HS3)
STHR	FDE
SHIFT CLOCK	FSCLK
AP	FPWM1 (FLCLKA-Alt. Line Clock)
GPKK	FPWM1 (HSE3)
FRP & POL	FMOD

3.1.24 Panel Item 24. HR-TFT 18-Bit 240x320 - 60Hz

Table 25 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 24' pin interface. Panel item 24 is listed in Table 1 with the Unipac UR038Q01.

Table 25 Signal Mapping for Panel Item 24

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
STV	FVSYNC
LD	FHSYNC
STH	FDE
FS	FSCLK
FG	FLCLK
POL/VCOM	FMOD
XDOFF	GPIO1

3.1.25 Panel Item 25. TFT 18-Bit 240x320 - 60Hz

Table 26 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 25' pin interface. Panel item 25 is listed in Table 1 as interface module is required.

Table 26 Signal Mapping for Panel Item 25

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2

Panel Signal	MQ1188/1178 Pin Name
VSYNC	FVSYNC
HSYNC	FHSYNC
DENB	FDE
MCK	FSCLK

3.1.26 Panel Item 26. HR-TFT 18-Bit 240x320 – 60Hz

Table 27 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 26' pin interface. Panel item 26 is listed in Table 1 as a Hitachi.

Table 27 Signal Mapping for Panel Item 26

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
CL3	FHSYNC
FLM	FVSYNC
FDE	FDE
SHIFT CLOCK	FSCLK
CL1	FLCLK
M	FMOD

3.1.27 Panel Item 27. HR-TFT 240x320 – 60Hz

Table 28 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 27' pin interface. Panel item 27 is listed in Table 1 with the Philips LP-7123-A and LP-8658-B.

Table 28 Signal Mapping for Panel Item 27

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
LD	FHSYNC
STVIN	FVSYNC
CLK	FLCLK
FY	FSCLK
STHIN	FDE
COM	FMOD
PS	PWM1

3.1.28 Panel Item 28. TFT 18-Bit 320x480 – 60Hz

Table 29 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 28' pin interface. Panel item 28 is listed in Table 1 with interface module required.

Table 29 Signal Mapping for Panel Item 28

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
ENAB	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
CLK	FSCLK

3.1.29 Panel Item 29. HR-TFT 18-Bit 240x320 – 60Hz

Table 30 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 29' pin interface. Panel item 29 is listed in Table 1 with the NEC 6448AC33-13.

Table 30 Signal Mapping for Panel Item 29

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R2-0	FD23-21
G2-0	FD15-13
B1-0	FD7-6
ENAB	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
CLK	FSCLK

3.1.30 Panel Item 30. HR-TFT 18-Bit 240x320 – 60Hz

Table 31 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 30' pin interface. Panel item 30 is listed in Table 1 with the National/Panasonic EDTCB33.

Table 31 Signal Mapping for Panel Item 30

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
SS	FDE
SG	FVSYNC

Panel Signal	MQ1188/1178 Pin Name
LP	FHSYNC
FS	FSCLK
FG	FLCLK (PWMCLK)
XDOFF	PWM1 (FLCLK)

3.1.31 Panel Item 31. TFT 18-Bit 240x320 – 68Hz

Table 32 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 31' pin interface. Panel item 31 is listed in Table 1 as a Toshiba.

Table 32 Signal Mapping for Panel Item 31

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
ENAB	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
NCLK	FSCLK

3.1.32 Panel Item 32. TFT 18-Bit 176x220 – 75Hz

Table 33 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 32' pin interface. Panel item 32 is listed in Table 1 with the Hitachi (HD66775) 3284LTD-1394-7 and the Hitachi TX06D12VM1CAA.

Table 33 Signal Mapping for Panel Item 32

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
ENABLE/VLD	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
DOTCLK	FSCLK
CS	GPIO43
SCL	GPIO41
SDI	GPIO45
RST	GPIO40

3.1.33 Panel Item 33. TFT 18-Bit 240x320 – 60Hz

Table 34 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 33' pin interface. Panel item 33 is listed in Table 1 with Sony ACX502AKM (with interface module).

Table 34 Signal Mapping for Panel Item 33

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
DENB	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
MCLK	FSCLK

3.1.34 Panel Item 36. SSTN 8-Bit Monochrome 320x240 – 75Hz

Table 35 provides the signal mapping between the MQ1188/1178 pins and the panel 'Item 36' pin interface.

Table 35 Signal Mapping for Panel Item 36

Panel Signal	MQ1188/1178 Pin Name
ENVDD	ENVDD
DISPOFF	ENVEE
D0-D1	FD22-FD23
D2-D7	FD10-FD15
DF	FMOD
CP	FSCLK
FRAME	FVSYNC
LOAD	FHSYNC

3.2 MQ2100 Signal Mappings

3.2.1 Panel Item 4. HR-TFT 18-Bit 320x240 - 60Hz

Table 36 provides the signal mapping between the MQ2100 pins and the panel 'Item 4' pins. Item 4 panel interface is listed in Table 1 with the Sharp LM039Q2DS01 and the Sharp LQ039Q2DS54.

Table 36 Signal Mapping for Panel Item 4

Panel Signal	MQ2100 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-0	FD17-12
G5-0	FD11-6
B5-0	FD5-0
VSYNC	FVSYNC
LP	FHSYNC
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.2.2 Panel Item 27. HR-TFT 240x320 - 60Hz

Table 37 provides the signal mapping between the MQ2100 pins and the panel 'Item 27' pins. Panel item 27 is listed in Table 1 with the Philips LP-7123-A and LP-8658-B.

Table 37 Signal Mapping for Panel Item 27

Panel Signal	MQ2100 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-0	FD17-12
G5-0	FD15-10
B5-0	FD7-2
LD	FHSYNC
STVIN	FVSYNC
CLK	FLCLK
FY	FSCLK
STHIN	FDE
COM	FMOD
PS	PWM1

3.2.3 Panel Item 32. TFT 18-Bit 176x220 – 75Hz

Table 38 provides the signal mapping between the MQ2100 pins and the panel 'Item 32' pins. Panel item 32 is listed in Table 1 with the Hitachi (HD66775) 3284LTD-1394-7 and the Hitachi TX06D12VM1CAA.

Table 38 Signal Mapping for Panel Item 32

Panel Signal	MQ2100 Pin Name
R5-0	FD17-12
G5-0	FD11-6
B5-0	FD5-0
ENABLE/VLD	FDE
VSYNC	FVSYNC
HSYNC	FHSYNC
DOTCLK	FSCLK
CS	FGP3
SCL	FGP5
SDI	FGP4
RST	FGP11
ENVDD	ENVDD
ENVEE	ENVEE

3.2.4 Panel Item 51. TFT 18-Bit 176x220 – 60Hz

Table 39 provides the signal mapping between the MQ2100 pins and the panel 'Item 51' pins. Panel item 51 is listed in Table 1 with the Samsung LTS220Q2-HE1.

Table 39 Signal Mapping for Panel Item 51

Panel Signal	MQ2100 Pin Name
Data10-0	FD11-1
Data15-11	FD17-13
LCD_ENABLE	FDE
LCD_VSYNC	FVSYNC_YD_FLM
LCD_HSYNC	FHSYNC_LP
LCD_PCLK	FSCLK
SPI_LCD_CS _n	FGP3
SPI_SDI	FGP4
SPI_SCLK	FGP5
LCD_RESET	FGP11

3.2.5 Panel Item 52. TFT 16-Bit 120x160 – 60Hz

Table 40 provides the signal mapping between the MQ2100 pins and the panel 'Item 52' pins. Panel item 52 is listed in Table 1 with the Optrex F-51468GNCJ-MLW-AA with HD66776 driver.

Table 40 Signal Mapping for Panel Item 52

Panel Signal	MQ2100 Pin Name
D10-0	FD11-1
D15-11	FD17-13

Panel Signal	MQ2100 Pin Name
RS	FGP7
NWR	FSCLK
CS	FVSYNC
LEDK, GND	GND

3.2.6 Panel Item 53. TFT 18-Bit 240x320 – 60Hz

Table 41 provides the signal mapping between the MQ2100 pins and the panel 'Item 53' pins. Panel item 53 is listed in Table 1 with the Toshiba LTM024P339.

Table 41 Signal Mapping for Panel Item 54

Panel Signal	MQ2100 Pin Name
R3-0	FD15-12
G3-0	FD9-6
B3-0	FD3-0
VCC	FVDD
ENAB	FHSYNC
SCLK	FSCLK
LP	LP
FLM	FLM
GND	GND

3.2.7 Panel Item 54. Color STN 12-Bit 128x40

Table 42 provides the signal mapping between the MQ2100 pins and the panel 'Item 54' pins. Panel item 54 is listed in Table 1 with the HYeLCD CG128040-S401D (with NJU6820 driver).

Table 42 Signal Mapping for Panel Item 54

Panel Signal	MQ2100 Pin Name
D1-0	FD5-4
D4-2	FD11-9
D7-5	FD17-15
CSB	FVSYNC
RS	FGP7
WRB	FDE_FSCLK2
RDB, VDD, VEE	3.3V
RESB	ENVDD
VSS, VLCC, V4-1, VREG, VREF, VBA, VOUT	GND

3.2.8 Panel Item 55. a-Si AM LCD TFT 176x220

Table 43 provides the signal mapping between the MQ2100 pins and the panel 'Item 55' pins. Panel item 55 is listed in Table 1 with the Philips PFC322061 (with Hitachi HD66772 driver).

Table 43 Signal Mapping for Panel Item 55

Panel Signal	MQ2100 Pin Name
VD17-0	FD17-0

Panel Signal	MQ2100 Pin Name
MD8-1	FD7-0
DOTCLK, WR#	FSCLK
HSYNC	HSYNC
VSYNC	VSYNC
ENABLE	FDE
RS	FFCLK
CS#	FGP1
VLD	FGP10
RD#, VCC, VCI	FVDD
RESET	ENVDD
MD0, GND	GND

3.2.9 Panel Item 56. Color STN 320x240

Table 44 provides the signal mapping between the MQ2100 pins and the panel 'Item 56' pins. Panel item 56 is listed in Table 1 with the Citizen K3249H.

Table 44 Signal Mapping for Panel Item 56

Panel Signal	MQ2100 Pin Name
VD3	VDD
CP	FSCLK
LOAD	FHSYNC
FRAME	FVSYNC
D7-0	FP7-0
DISP	ENVEE
GND	GND

3.3 MQ9000 Signal Mappings

The signal mappings for the MQ1188/1178 are closely associated to those for the MQ9000. Therefore, section 3.1, 'MQ1188/1178 Signal Mappings', can be used as the reference signal mappings for the MQ9000. Actual verification can also be done if requested.

The following subsections describe the MQ9000 signal mappings on several actual brought-ups.

3.3.1 Panel Item 4. HR-TFT 18-Bit 320x240 - 60Hz

Table 45 provides the signal mapping between the MQ9000 pins and the panel 'Item 4' pins. Item 4 panel interface is listed in Table 1 with the Sharp LM039Q2DS01 and the Sharp LQ039Q2DS54.

Table 45 Signal Mapping for Panel Item 4

Panel Signal	MQ9000 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VSYNC	FVSYNC
LP	FHSYNC
SPR/SPL	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
PS	FPWM1 (FLCLKA-Alt. Line Clock)
REV	FMOD

3.3.2 Panel Item 5. Poly Si TFT 18-Bit 320x320 - 60Hz

Table 46 provides the signal mapping between the MQ9000 pins and the panel 'Item 5' pins. Item 5 panel interface is listed in Table 1 with the Sony ACX709AKM.

Table 46 Signal Mapping for Panel Item 5

Panel Signal	MQ9000 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
VST	FVSYNC
LS	FHSYNC
SPIO	FDE
SHIFT CLOCK	FSCLK
CLS	FLCLK (Line Clock)
VCK	FPWM1

Panel Signal	MQ9000 Pin Name
ENB	FPWMO
FRP	FMOD

3.3.3 Panel Item 27. HR-TFT 240x320 – 60Hz

Table 47 provides the signal mapping between the MQ9000 pins and the panel 'Item 27' pins. Panel item 27 is listed in Table 1 with the Philips LP-7123-A and LP-8658-B.

Table 47 Signal Mapping for Panel Item 27

Panel Signal	MQ9000 Pin Name
ENVDD	ENVDD
ENVEE	ENVEE
R5-R0	FD23-18
G5-G0	FD15-10
B5-B0	FD7-2
LD	FHSYNC
STVIN	FVSYNC
CLK	FLCLK
FY	FSCLK
STHIN	FDE
COM	FMOD
PS	PWM1

Appendix A. MQ1100/1132/1168/1178/1188/9000 Panel and Driver Compatibility List

Software Panel Index	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported by MediaQ Product			
					MQ9000	MQ1188 /1178	MQ1168	MQ1132 /1100
1	- Hitachi SX-16H003	Color S-STN 8-Bit	640x240	75Hz	X*	X	X	X
2	- Toshiba 37A777 (without interface module)	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
3	- Citizen K3240H-FR - Hitachi SC09Q001-AZA	Color S-STN 8-Bit	320x240	75Hz	X*	X	X	X
4	- Sharp LQ039Q2DS01 - Sharp LQ039Q2DS54	HR TFT 18-Bit	320x240	60Hz	X	X	X	X
5	- Sony ACX709AKM	Poly-Si TFT 18-Bit	320x320	60Hz	X	X	X	X
6	- Sharp LQ031B1DDxx	HR TFT 18-Bit	160x160	60Hz	X*	X	X	X
7	- Generic	TFT 18-Bit	320x240	60Hz	X*	X	X	X
8	- Sony L1160	SSTN 8-Bit	160x160	71Hz	X*	X	X	X
9	- Casio - COM38T3103DPQ/04DPQ	HR TFT 18-Bit	320x240	60Hz	X*	X	X	X
10	- HP LFH8P4012A-1	SSTN 8-Bit	240x320	75Hz	X*	X	X	X
11	- Toshiba 37A777 (with interface module) - Toshiba LTM035A776C	TFT 18-Bit	240x320	54Hz	X*	X	X	X
12	- Casio COM35T3112DL	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
13	- Samsung LTSD35Q1-P01	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
14	- Citizen	SSTN 8-Bit	800x600	90Hz	X*	X	X	X
15	- NEC NL3224CR24-03	HR-TFT 18-bit	320x240	60Hz	X*	X	X	X
16	- Sharp LQ035Q2DD52/54 - Sharp LQ0DAS0360	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
17	- Hitachi SC07N001-ZZA	SSTN 8-Bit	160x160	100Hz	X*	X	X	X
18	- Sharp	HR-TFT 18-Bit	320x320	60Hz	X	X	X	X
19	- Samsung LTS350Q1-PD1	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
20	- Generic	TFT 18-Bit	320x320	60Hz	X*	X	X	X
22	- Sanyo TM038QV-67A02 (Totori Sanyo)	HR-TFT 18-Bit	320x240	60Hz	X*	X	X	X
23	- Casio	HR-TFT 18-Bit	320x320	60Hz	X*	X	X	X
24	- NEC NL2432DR22-02B - NEC NL2432DR22-11B	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
25	- Unipac UR038Q01	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X
26	- Sony ACX704AKM (with interface module)	TFT 18-Bit	320x240	60Hz	X*	X	X	X
27	- Hitachi	HR-TFT 18-Bit	240x320	60Hz	X*	X	X	X

* Note:

- X: indicates the software and connectivity support.

- X*: indicates the intended support. Software and connectivity support can be added as requested.

Software Panel Index	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported by MediaQ Product			
					MQ9000	MQ1188 /1178	MQ1168	MQ1132 /1100
28	- Philips LP-7123-A - Philips LP-8658-B	HR-TFT 18-Bit	240x320	60Hz	X	X	X	X
29	- Name not to be listed (required interface module)	TFT 18-Bit	320x480	60Hz	X*	X	X	
30	- NEC 6448AC33-13	TFT 18-Bit	640x480	60Hz	X*	X	X	
31	- National/Panasonic EDTCB33	HR-TFT 18-Bit	240x320	88Hz	X*	X	X	X
32	- Toshiba	TFT 18-Bit	240x320	68Hz	X*	X	X	
33	- Hitachi 3284LTD-1394-7 (with HD66772 driver) - Hitachi TX06D12VM1CAA	TFT 18-Bit	176x220	75Hz	X*	X	X	
34	- Sony ACX502AKM (with Interface Module)	TFT 18-Bit	240x320	60Hz	X*	X	X	
35	- Toshiba LTM04C380S (with Interface Module)	TFT 18-Bit	640x480	60Hz	X*	X	X	
36	- Epson L2F50032T00	TFT 18-Bit	176x220	60Hz	X*	X		
37	- Hitachi SP08Q001-TZA	Mono SSTN 8-Bit	320x240	75Hz	X*	X	X	X
38	- Hitachi TX05D19VM1CAA (with HD66773 driver)	TFT 18-Bit	128x160	60Hz	X*	X		
39	- Sanyo LC13005 (with ALR241 interface module)	TFT 18-Bit	176x220	30Hz	X*	X		
40	- Emerging Display EW32F90FLW - Emerging Display EW50143FLWU	Mono SSTN 4-Bit	320x240	75Hz	X*	X		
42	- Generic	TFT 18-Bit	640x240	60Hz	X*	X		
43	- Samsung LH158003 (with HD66137 driver)	SSTN 8-Bit	160x240	72Hz	X*	X		
44	- Samsung LTS350Q2	HR-TFT 18-Bit	240x320	64Hz	X*			
45	- Toppoly TD035RTEA2 (with built in timing controller)	TFT 18-Bit	240x320	64Hz	X*	X		
46	- Toshiba MD060 H type	TFT 18-Bit	240x320	60Hz	X*	X		

* Note:

- X: indicates the software and connectivity support.

- X*: indicates the intended support. Software and connectivity support can be added as requested.

Appendix B. MQ2100 Panel and Driver Compatibility List

Software Panel Index	Panel Manufacturer	Panel Type	Resolution	Refresh	Supported*
1	- Sharp LQ039Q2DS01/S54	HR TFT 18-Bit	320x240	60Hz	X
2	- Philips LP-7123-A - Philips LP-8658-B	HR-TFT 18-Bit	240x320	60Hz	X
4	- Hitachi HD66773	TFT 18-Bit	128x160	60Hz	X
5	- Hitachi 3284LTD-1394-7 (with HD66772 driver) - Hitachi TX06D12VM1CAA	TFT 18-Bit	176x220	75Hz	X
6	- Epson L2F50032T00	TFT 18-Bit	176x220	60Hz	X
7	- Samsung LTS180S3-HF1 (with HD66773 driver)	TFT 16-Bit	128x160	60Hz	X
9	- Samsung LTS23Q1-PE1	TFT 18-Bit	160x174	60Hz	X
10	- Toshiba/Matsushita LTM020A03A	TFT 18-Bit	128x160	60Hz	X
11	- Sanyo LC13502	TFT 18-Bit	176x220	60Hz	X
12	- Samsung LH158003 (with HD66137 driver)	SSTN 8-Bit	160x240	72Hz	X
13	- Samsung LTS212Q1-HF1 (with S6D0115 driver)	TFT 18-Bit	176x208	64Hz	X
14	- Samsung LTS220Q2-HE1 (with HD667P00 & HD66775 driver)	TFT 18-Bit	176x220	60Hz	X
16	- Optrex F-51468GNCJ-MLW-AA (with Hitachi HD66776)	TFT 16-Bit	120x160	60Hz	X
17	- Toshiba LTM024P339	TFT 18-Bit	240x320	60Hz	X
18	- HyeLCD CG128040-S401D	Color STN 12-Bit	128x40	60Hz	X
19	- Philips PFC322061 (with HD66772 driver)	a-Si TFT 18-Bit	176x220	75Hz	X
20	- Citizen K3249H	Color STN 8-Bit	320x240	75Hz	X
21	- Sharp LQ035Q7DB02	AD-TFT 18-Bit	240x320	60Hz	X

* Note:

- X: indicates the software and connectivity support.

Revision History

Date	Rev	Description
April 28, 2003	0	Original version.
May 7, 2003	0.1	Minor table formatting changes.

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