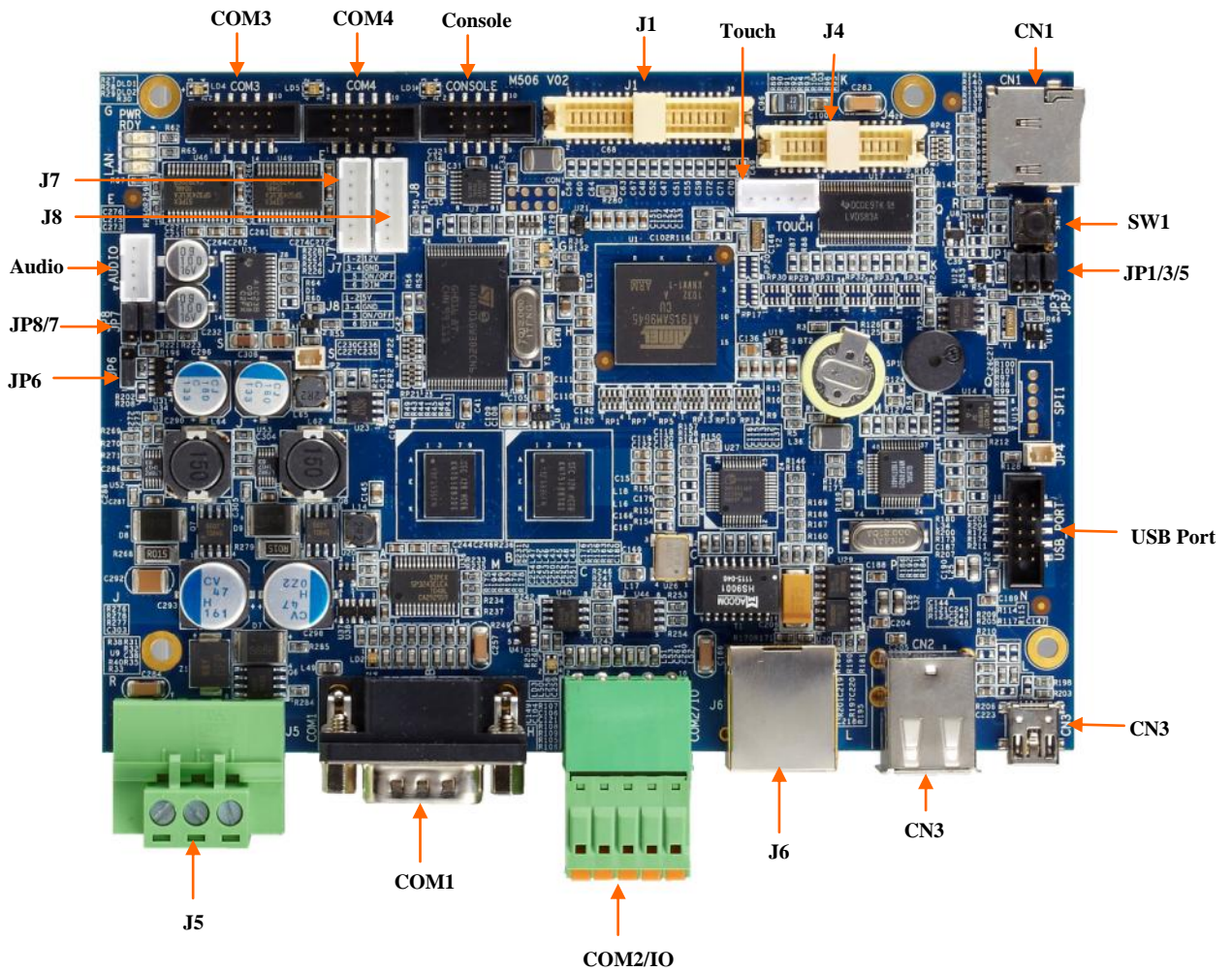


# M-506/606 Hardware Guide

## M-506 Layout



Power: 9~30VDC

LCD Panel default setting: 800x480

Ethernet IP address: 192.168.2.127

Serial Console: 115200, N81, VT100

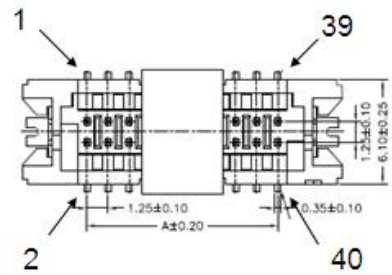
J1 Connector: Refer to CSI-4585-400R

J4 Connector: Refer to CSI-4585-300R

J2 Connector: Refer to CSF-2481-401R (On the back)

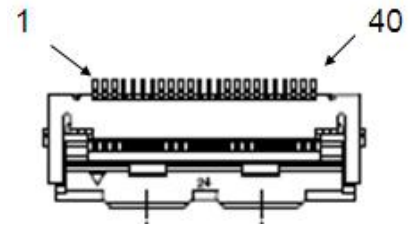
# M506/606 Connectors Pin Assignment

J1: LCD CMOS Signal		
Pin No.	Pin name	Function
1	LCD_VCC5	VCC_5V
2	LCD_VCC5	VCC_5V
3	GND	GND
4	GND	GND
5	LCD_VCC3	VCC_3.3V
6	LCD_VCC3	VCC_3.3V
7	GND	GND
8	GND	GND
9	B0	LCD_BLUE0
10	B1	LCD_BLUE1
11	B2	LCD_BLUE2
12	B3	LCD_BLUE3
13	B4	LCD_BLUE4
14	B5	LCD_BLUE5
15	B6	LCD_BLUE6
16	B7	LCD_BLUE7
17	G0	LCD_GREEN0
18	G1	LCD_GREEN1
19	G2	LCD_GREEN2
20	G3	LCD_GREEN3
21	G4	LCD_GREEN4
22	G5	LCD_GREEN5
23	G6	LCD_GREEN6
24	G7	LCD_GREEN7
25	R0	LCD_RED0
26	R1	LCD_RED1
27	R2	LCD_RED2
28	R3	LCD_RED3
29	R4	LCD_RED4
30	R5	LCD_RED5
31	R6	LCD_RED6
32	R7	LCD_RED7
33	GND	GND
34	GND	GND
35	LCDDOTCK	LCD Dot Clock
36	LCDVSYNC	LCD Vertical Sync
37	LCDDEN	LCD Data Enable
38	LCDHSYNC	LCD Horizontal Sync
39	LCDC	LCD Contrast Control
40	ON/OFF	LCD B/L ON/OFF Control



J1: DF13 2x20 Pitch 1.25mm

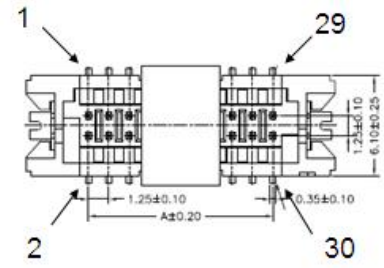
<b>J2: LCD CMOS and Touch Screen signal</b>		
<b>Pin No.</b>	<b>Pin name</b>	<b>Function</b>
1	GND	GND
2	GND	GND
3	PWM	LED Brightness Adj.
4	LCD_VCC5	VCC_5V
5	LCD_VCC5	VCC_5V
6	LCD_VCC5	VCC_5V
7	LCD_VCC3	VCC_3.3V
8	LCD_VCC3	VCC_3.3V
9	LCDDEN	Data Enable Timing Signal
10	SK/XL	Touch Screen Left channel
11	DO/XR	Touch Screen Right channel
12	DI/YB	Touch Screen Bottom channel
13	B7	LCD_BLUE7
14	B6	LCD_BLUE6
15	B5	LCD_BLUE5
16	GND	GND
17	B4	LCD_BLUE4
18	B3	LCD_BLUE3
19	B2	LCD_BLUE2
20	GND	GND
21	G7	LCD_GREEN7
22	G6	LCD_GREEN6
23	G5	LCD_GREEN5
24	GND	GND
25	G4	LCD_GREEN4
26	G3	LCD_GREEN3
27	G2	LCD_GREEN2
28	GND	GND
29	R7	LCD_RED7
30	R6	LCD_RED6
31	R5	LCD_RED5
32	GND	GND
33	R4	LCD_RED4
34	R3	LCD_RED3
35	R2	LCD_RED2
36	TPCS/YU	Touch Screen Top channel
37	N.C	N.C
38	LCDDOTCK	LCD Dot Clock
39	GND	GND
40	GND	GND



**J2: FFC 40-pin pitch 0.5mm**

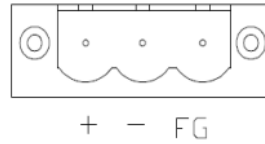
**Note: on the back of PCB**

<b>J4: LCD LVDS Signal</b>		
<b>Pin No.</b>	<b>Pin name</b>	<b>Function</b>
1	VCC3	VCC_3.3V
2	VCC3	VCC_3.3V
3	VCC3	VCC_3.3V
4	VCC3	VCC_3.3V
5	D5V	VCC_5V
6	D5V	VCC_5V
7	D5V	VCC_5V
8	D5V	VCC_5V
9	GND	GND
10	GND	GND
11	Y0P	LVDS channel 0 +
12	Y0M	LVDS channel 0 -
13	GND	GND
14	GND	GND
15	Y1P	LVDS channel 1 +
16	Y1M	LVDS channel 1 -
17	GND	GND
18	GND	GND
19	Y2P	LVDS channel 2 +
20	Y2M	LVDS channel 2 -
21	GND	GND
22	GND	GND
23	Y3P	LVDS channel 3 +
24	Y3M	LVDS channel 3 -
25	GND	GND
26	GND	GND
27	CLKOUTP	LVDS clock +
28	CLKOUTM	LVDS clock -
29	GND	GND
30	GND	GND



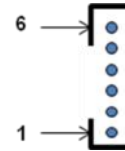
**J4: DF13 2x15 Pitch 1.25mm**

<b>J5: Power input</b>		
Pin No.	Pin name	Function
1	V+	VIN+
2	V-	VIN-
3	FG	Chassis GND



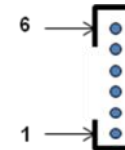
**J5: Terminal Block pitch 5.08mm**

<b>J7: 12VDC LCD backlight output and control</b>		
Pin No.	Pin name	Function
1	+12V	Voltage for LCD Backlight
2	+12V	Voltage for LCD Backlight
3	GND	Power Ground
4	GND	Power Ground
5	ON/OFF	LCD B/L ON/OFF Control
6	DIM	Adjust the LCD brightness



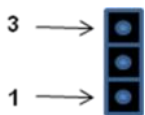
**J7: 6-pin pitch 2.0 mm box**

<b>J8: 5VDC LCD backlight output and control</b>		
Pin No.	Pin name	Function
1	+5V	Voltage for LCD Backlight
2	+5V	Voltage for LCD Backlight
3	GND	Power Ground
4	GND	Power Ground
5	ON/OFF	LCD B/L ON/OFF Control
6	DIM	Adjust the LCD brightness



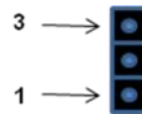
**J8: 6-pin pitch 2.0 mm box**

**JP1: Boot Select**



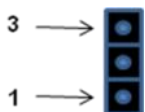
**Boot Device Select**  
 1-2 : NADN Flash Boot  
 2-3 Disable

**JP3: Boot Select**



**Boot Device Select**  
 1-2 : DATA Flash Boot  
 2-3 Disable

**JP5: Boot Select**



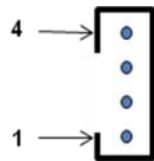
**Boot Mode Select**  
 1-2 : EMBEDDED ROM(D)  
 2-3 : EBI\_NCS0

**JP7 : Audio Output Select**  
**JP8: Audio Output Select**



	JP7	JP8
Line Out	1-2	1-2
Earphone Out	2-3	2-3

**AUDIO: Audio output**



**WAFER Box 2.0mm**

<b>AUDIO: Audio output</b>		
Pin No.	Pin name	Function
1	R_Out	Audio Out Right
2	L_Out	Audio Out Left
3	GND	Ground
4	MIC_In	Microphone In

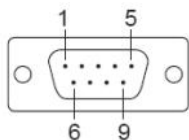
**Touch: Touch Screen**



**WAFER Box 2.0mm**

<b>TOUCH: Touch Screen control</b>		
Pin No.	Pin name	Function
1	TPCS/YU	Touch Screen Top channel
2	DI/YB	Touch Screen Bottom channel
3	DO/XR	Touch Screen Right channel
4	SK/XL	Touch Screen Left channel
5	GND	GND

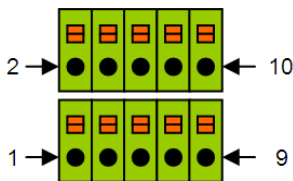
**COM1: RS-232**



**DB9 Male Connector**

Pin No.	RS-232
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	---

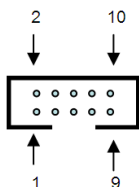
**COM2/IO: COM2 RS-422/485 and GPIO**



**Terminal Block 2x5 pitch 3.5mm**

Pin No.	RS-422	RS-485
1	TXD-	---
2	GPIO1	GPIO1
3	TXD+	---
4	GPIO2	GPIO2
5	RXD+	Data+
6	GPIO2	GPIO2
7	RXD-	Data-
8	GPIO3	GPIO3
9	GND	GND
10	GND	GND

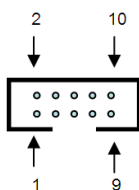
**COM3: RS-232  
COM4: RS-232**



**Box Header 2x5 2.0mm**

Pin No.	RS-232
1	---
2	---
3	RXD
4	RTS
5	TXD
6	CTS
7	---
8	---
9	GND
10	---

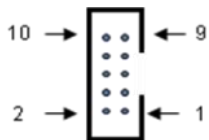
**Console: RS-232**



**Box Header 2x5 2.0mm**

Pin No.	RS-232
1	---
2	---
3	RXD
4	---
5	TXD
6	---
7	---
8	---
9	GND
10	---

**USB Port:  
USB port 3 and port 4**



**Box Header 2x5 2.0mm**

USB_Port: USB3 and USB4		
Pin No.	Pin name	Function
1	UVCC3	USB PORT3 BUS POWER 5V
2	UVCC4	USB PORT4 BUS POWER 5V
3	HDMA-3	USB HOST PORT3 Data-
4	HDMA-4	USB HOST PORT4 Data-
5	HDPB-3	USB HOST PORT3 Data+
6	HDPB-4	USB HOST PORT4 Data+
7	GND	GND
8	GND	GND
9	N.C	N.C
10	N.C	N.C