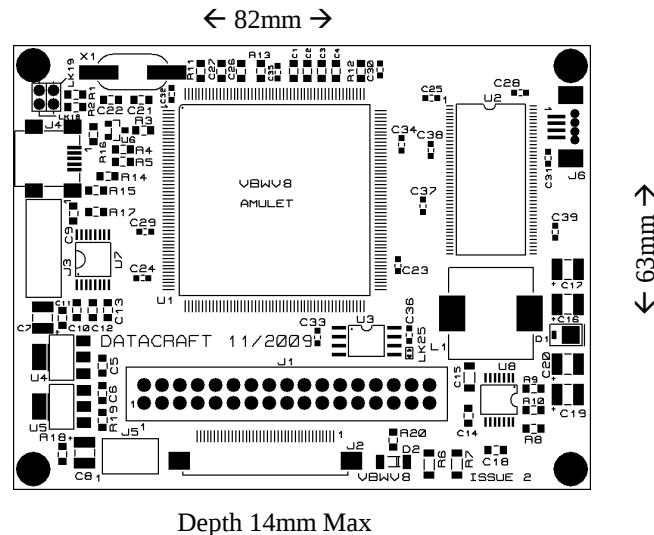


VBWV8

DATE	DESCRIPTION OF CHANGE
3/2/2012	First Draft

VBWV8 is part of the **VIEW BY WIRE™** range of display driver boards aimed at enabling small to medium monochrome and colour displays to be driven from low cost serial interfaces.

The board includes all of the hardware and software required to turn a colour LCD and touch panel into a graphical user interface. It supports alpha blending on passive and active displays of various sizes and includes a built-in royalty-FREE Graphical Operating System.



VBWV8 Features

- Amulet's GEM Graphical OS Chip™ for colour TFT displays.
- Supports passive and active displays up to 800x600 at 24 bits per pixel.
- Direct connection for 4 wire resistive touch screen.
- On board LED backlight driver with PWM brightness control via the Amulet chip.
- USB 2.0, RS232 and SPI interfaces.
- PNG, GIF and JPEG image files plus GIF animation support.
- Drag and drop GUI creation in Dynamic HTML.
- 64 Mbit SDRAM operating memory.
- 32 Mbit Flash image / program memory.

Interconnection details

J1 General purpose Display Interface connection 34 way 0.1" pitch dual pin header			
PIN	SIGNAL	PIN	SIGNAL
1	VCC (3.3v)	2	P0 (R0)
3	P1 (R1)	4	P2 (R2)
5	P3 (R3)	6	P4 (R4)
7	P5 (R5)	8	P6 (R6)
9	P7 (R7)	10	P8 (G0)
11	P9 (G1)	12	P10 (G2)
13	P11 (G3)	14	P12 (G4)
15	P13 (G5)	16	P14 (G6)
17	P15 (G7)	18	P16 (B0)
19	P17 (B1)	20	P18 (B2)
21	P19 (B3)	22	P20 (B4)
23	P21 (B5)	24	P22 (B6)
25	P23 (B7)	26	FLM (VSYNC)
27	LP (HSYNC)	28	OE (DISP ENAB)
29	DISP	30	0V
31	PCLK	32	0V
33	LED-	34	LED+

J2 Hitachi TX14Dxxx Display Interface connection. 40 way 0.5mm pitch FFC connector.			
PIN	SIGNAL	PIN	SIGNAL
1	VDD (3.3v)	21	P14 (G6)
2	VDD (3.3v)	22	P13 (G5)
3	VDD / UD	23	VSS
4	VDD / LR	24	P12 (G4)
5	NC	25	P11 (G3)
6	DTMG	26	P10 (G2)
7	VSS	27	VSS
8	DCLK	28	P7 (R7)
9	VSS	29	P6 (R6)
10	NC / VQ	30	P5 (R5)
11	VSS	31	VSS
12	P23 (B7)	32	P4 (R4)
13	P22 (B6)	33	P3 (R3)
14	P21 (B5)	34	P2 (R2)
15	VSS	35	NC / MODE / VSS
16	P20 (B4)	36	VSS / DIM
17	P19 (B3)	37	XR / VLED
18	P18 (B2)	38	YL / VLED
19	VSS	39	XL / VLED
20	P15 (G7)	40	YU / VLED

J3 Power and RS232 Serial Connection. 7 way 2 mm Pitch Header side entry. JST S7B-PH-KL	
PIN	SIGNAL
1	+5V (IN)
2	0V (IN)
3	RS232 TX (Out)
4	RS232 RX (IN)
5	0V (IN)
6	LED Driver Supply 0V
7	LED Driver Supply +V

J4 USB Connection. Mini USB type B	
PIN	SIGNAL
1	+V (Not used for supply)
2	USB-
3	USB+
4	NC
5/6/7	GND
8/9	GND

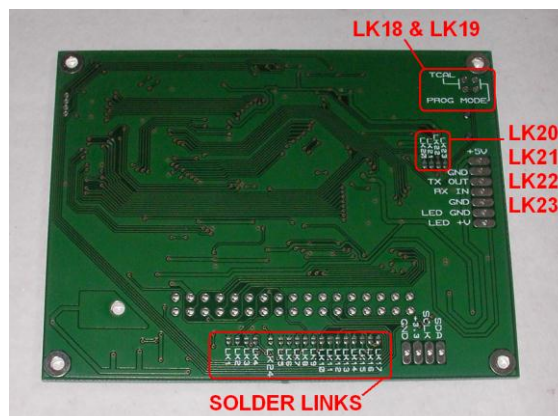
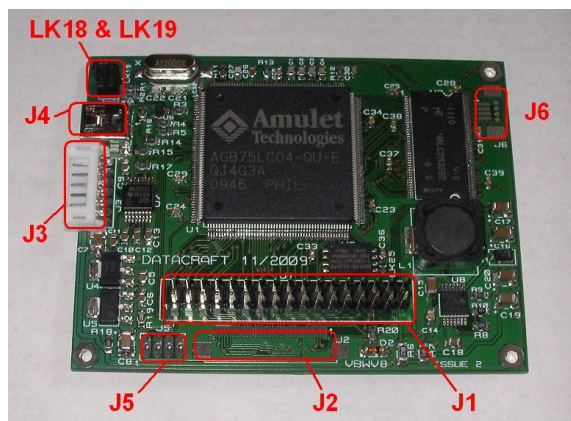
J5 SPI Serial Connection. 4 way 2 mm Pitch Header side entry. JST S4B-PH-KL	
PIN	SIGNAL
1	SDA / GPIO 0
2	SCLK / GPIO 1
3	3.3V (OUT)
4	GND (OUT)

J6 Touch screen Connection. 4 way 1 mm Pitch FFC Connector.	
PIN	SIGNAL
1	X+
2	Y-
3	X-
4	Y+

Jumper Link details

Jumper Links 2mm Jumper Link.	
LINK	OPERATION
LK18	Programming Mode = Not Linked, Run Mode = Linked (Default).
LK19	Touch screen Calibration = Not Linked, Normal operation = Linked (Default).

Solder Links For configuration.	
LINK	SIGNAL
LK1	Solder link for connecting J2 Pin3 to VDD.
LK2	Solder link for connecting J2 Pin3 to GPIO 2.
LK3	Solder link for connecting J2 Pin4 to VDD.
LK4	Solder link for connecting J2 Pin4 to GPIO 3.
LK5	Solder link for connecting J2 Pin10 to VDD.
LK6	Solder link for connecting J2 Pin35 to VDD.
LK7	Solder link for connecting J2 Pin35 to GND.
LK8	Solder link for connecting J2 Pin36 to VDD.
LK9	Solder link for connecting J2 Pin36 to GND.
LK10	Solder link for connecting J2 Pin37 to TOUCH Y-.
LK11	Solder link for connecting J2 Pin37 to VLED.
LK12	Solder link for connecting J2 Pin38 to TOUCH X-.
LK13	Solder link for connecting J2 Pin38 to VLED.
LK14	Solder link for connecting J2 Pin39 to TOUCH Y+.
LK15	Solder link for connecting J2 Pin39 to VLED.
LK16	Solder link for connecting J2 Pin40 to TOUCH X+.
LK17	Solder link for connecting J2 Pin40 to VLED.
LK20	Solder link for connecting UTXD TO RS232 OUTPUT. (DEFAULT)
LK21	Solder link for connecting PTXD TO RS232 OUTPUT.
LK22	Solder link for connecting URXD TO RS232 OUTPUT. (DEFAULT)
LK23	Solder link for connecting PRXD TO RS232 OUTPUT.
LK24	Solder link for connecting J2 Pin38 to PCLK.



Electrical specification

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT
+5V (IN)	Board Supply voltage	4.5	5.0	5.5	V
LED Driver Supply +V	Back light LED driver supply voltage	3.0	5.0	15.0	V
Supply Current			TBA		mA
Top	Operating temperature	-20		+85	°C
Tstg	Storage temperature	-40		+125	°C

Further information

Please refer to the Amulet Technologies web site for more information and applications.
<http://www.amulettechnologies.com/>