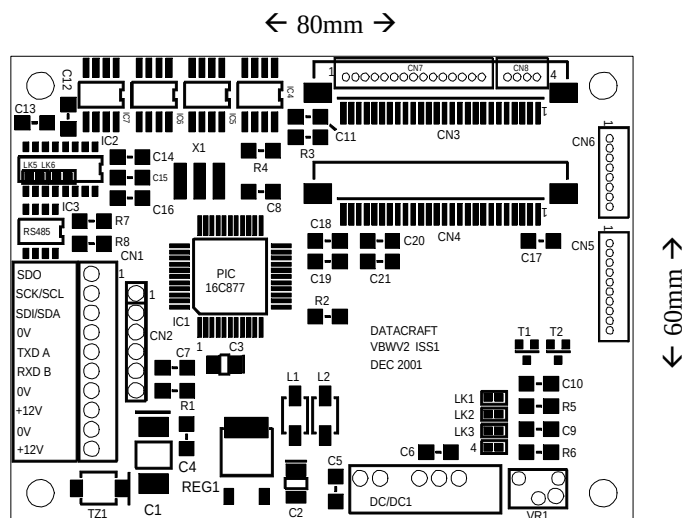


VBWV2 is part of the **VIEW BY WIRE™** range and is designed to drive displays with on board controllers from a low cost serial interface.

VBWV2Features ↩

- ★ Capable of driving character displays and graphic displays with Toshiba T6963C or Epson 1335 controllers.
- ★ Directly pin compatible with Hitachi SP14N001-ZZA 240 x 128 display including touch screen capability.
- ★ 12V only Supply.
- ★ Connection for CFL backlight inverter.
- ★ RS232 (Optional RS485, I²C and SPI) interfaces.
- ★ LCD VEE voltage generation on board with contrast adjustment.
- ★ Up to 128K byte of E²prom on board for message / picture storage. (32K Standard).
- ★ Based on the PIC16F877 microcontroller with Flash In Circuit Programmable memory for easy updates and customisation. (Interface directly to MPLAB® ICD via CN2).
- ★ Built in Boot loader for serial updates of program memory.
- ★ Windows Application software to enable message, picture and program modification via a PC serial port.



Interconnection details

CN1 Interface and power connection Molex 22-05-1102	
PIN	SIGNAL
1	SDO
2	SCK/SCL (I ² C)
3	SDI/SDA (I ² C)
4	0V
5	TXD (RS232 / RS485A)
6	RXD (RS232 / RS485B)
7	0V
8	+12V In
9	0V
10	+12V In

CN4 Hitachi SP14N001 connection. Molex 52207-2690	
PIN	SIGNAL
1	VSS (0V)
2	+5V
3	VO out
4	C/D
5	#WR
6	#RD
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	#CE
16	#RET
17	NC
18	#DOFF
19	F/S
20	P/N
21	RVR1
22	RVR2
23	Y2
24	X1
25	Y1
26	X2

CN2 Programming interface for firmware updates. 0.1" Header	
PIN	SIGNAL
1	PGM
2	PGC
3	PGD
4	0V
5	+5V
6	VPP

CN5 Backlight Inverter connection. Molex 53261-1090	
PIN	SIGNAL
1	1,+12V Out
2	1,0V
3	1,ON/OFF
4	1,DIM1
5	1,VR1
6	2,+12V Out
7	2,0V
8	2,ON/OFF
9	2,DIM
10	2,VR

CN6 Potentiometer connection. Molex 53261-0890	
PIN	SIGNAL
1	RVR1 SP14N 2
2	RVR2 SP14N 2
3	RVR1 SP14N 1
4	RVR2 SP14N 1
5	2,VR
6	2,DIM
7	1,VR
8	1,DIM

CN8 General purpose display connection. Molex 53261-0490	
PIN	SIGNAL
1	0V
2	VEE-
3	VEE+
4	VCON

CN3 Optional 2 nd Hitachi SP14N001 connection. Molex 52207-2690	
PIN	SIGNAL
1	VSS (0V)
2	+5V
3	VO out
4	C/D
5	#WR
6	#RD
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	#CE
16	#RET
17	NC
18	#DOFF
19	F/S
20	P/N
21	RVR1
22	RVR2
23	NC
24	NC
25	NC
26	NC

CN7 General purpose display connection. Molex 53261-1590	
PIN	SIGNAL
1	GPIO 1
2	GPIO 2
3	GPIO 3
4	GPIO 4
5	GPIO 5
6	DB7
7	DB6
8	DB5
9	DB4
10	DB3
11	DB2
12	DB1
13	DB0
14	0V
15	+5V

Link details

LK1-4 Solder Link <u>Use one only</u>	
LINK	SIGNAL
1	For +VEE 42V
2	For +VEE 30V
3	For -VEE -30V
4	For -VEE -25V

LK1-4 sets the LCD VEE voltage level. These affect the VEE+ VEE- and VEECON levels as shown in the table. Note: link only one if the DC/DC converter is fitted.

For displays with a contrast voltage between 0V and 5V remove the DC/DC converter and link LK2 and also link LK4. VR1 will then control the VEECON voltage between 0V and 5V. The swing can be further restricted by increasing R6 and R5.