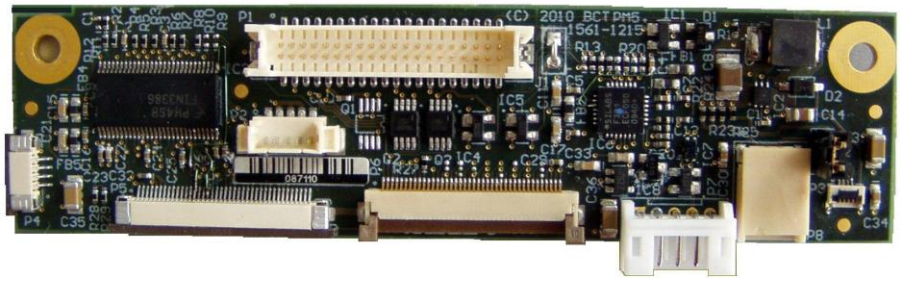
BlueChip Technology

Personality Module for Magnum N270

User Guide



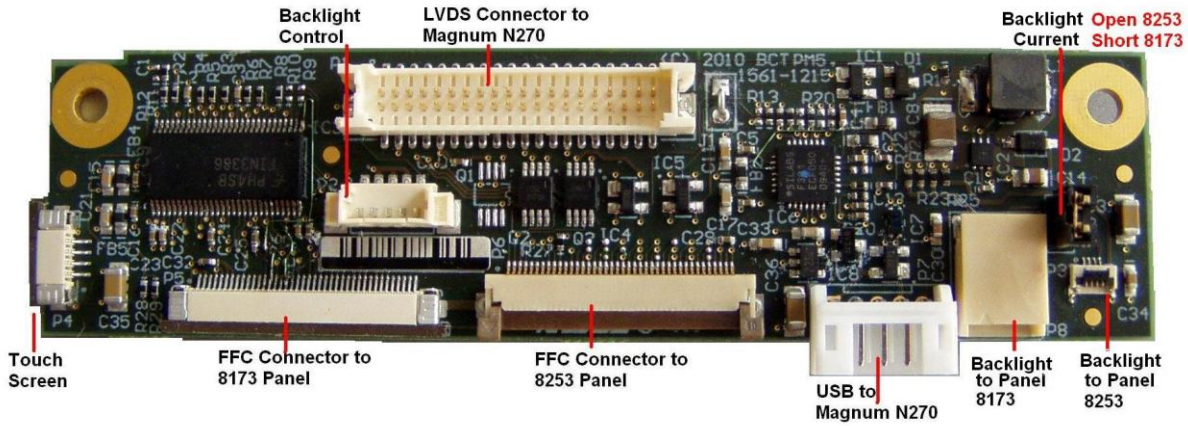
Product Outline

The Magnum N270 Personality Module is designed to allow small TTL based touch screen panels to connect to the LVDS output on the Magnum N270 processor board.

The Personality Module is designed primarily to support the following displays

- 7” UMSH-8173MD-1T, resolution 800 x 480
- 4.3” UMSH8253MD-T, resolution 480 x 272

Personality Module



The Personality Module has a number of connections as shown above. Altogether 5 cable connections are required and a jumper setup is required.

- Touch Screen and Backlight from the Panel
- LVDS Connector, Backlight Control and USB Touch Control to the Magnum N270

Caution: J2 selects the Backlight current. If this is set incorrectly for the 4.3” panel then it will damage the panel

Size	LCD	LCD Connector used	J2
4.3”	UMSH8253	P6	No Fit
7”	UMSH8173	P5	Fit

Note: Both Panels are 3.3V, so the voltage jumper on the Magnum N270 needs to be set appropriately.

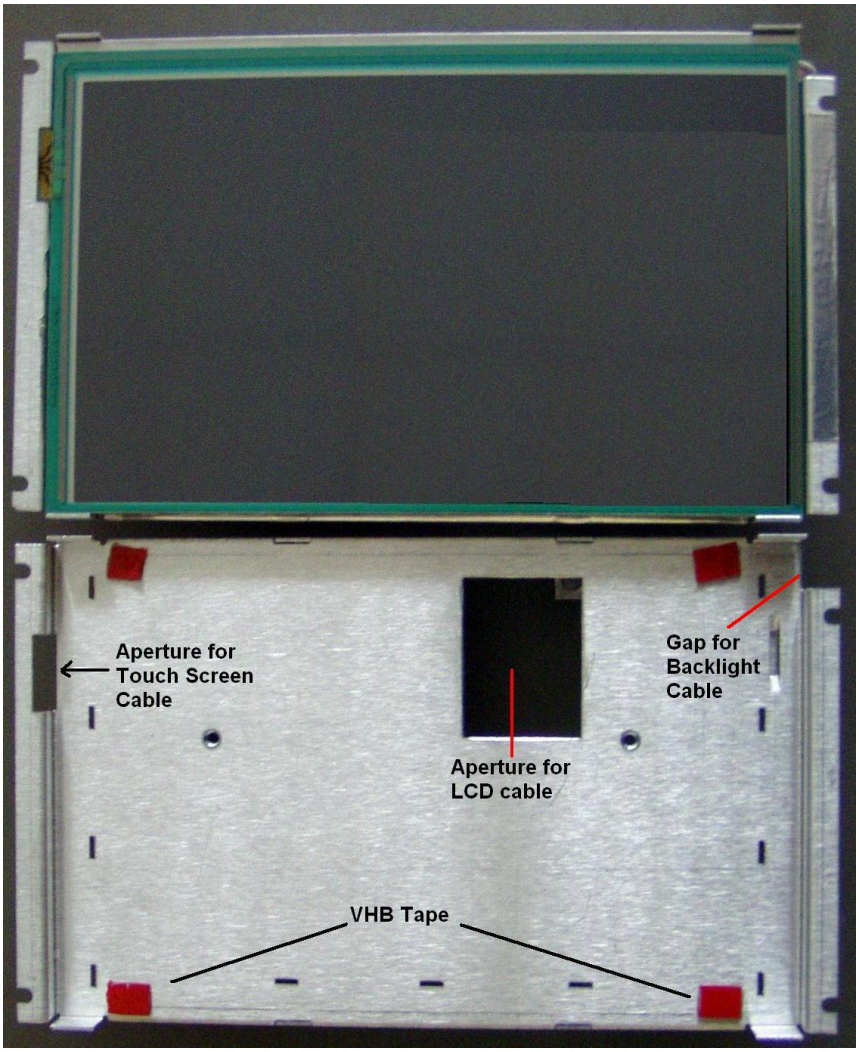
Assembly in Blue Chip Metalwork

The Personality Module can be supplied as a kit containing some or all of the following

- Personality Module
- 7” or 4.3” Touch Screen Display
- Cable set
- Metalwork

The following gives some advice on assembling these parts

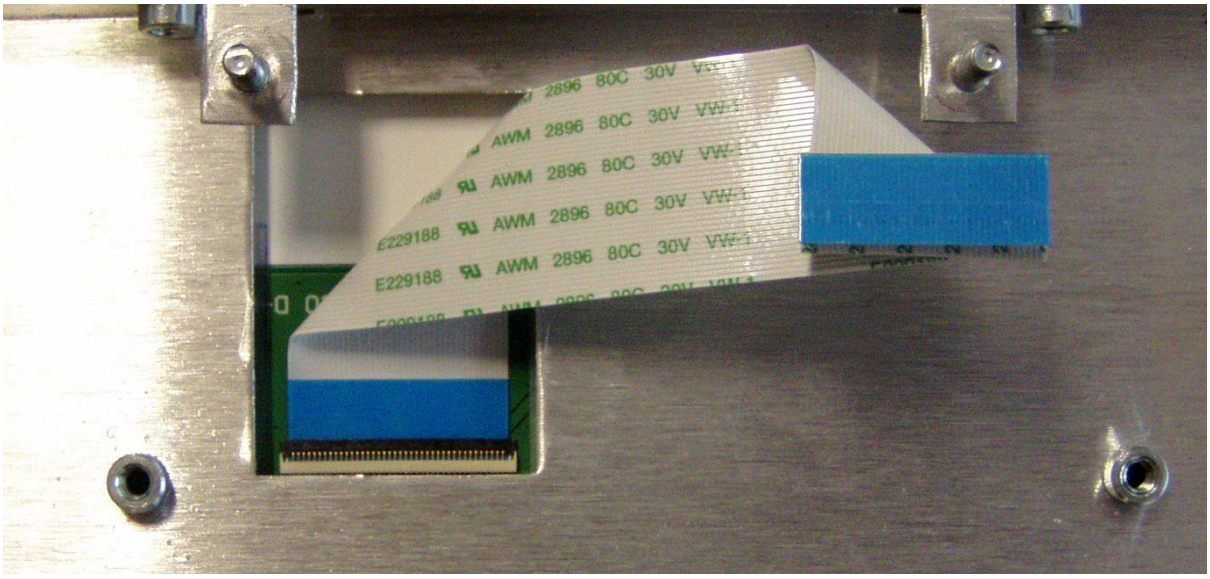
Step 1 – fit the panel to the metalwork



The above picture shows the metalwork for the 7” display. Remove the plastic cover from the VHB tape strips, and carefully position the panel into the metalwork, feeding the touch screen cable through the side aperture.

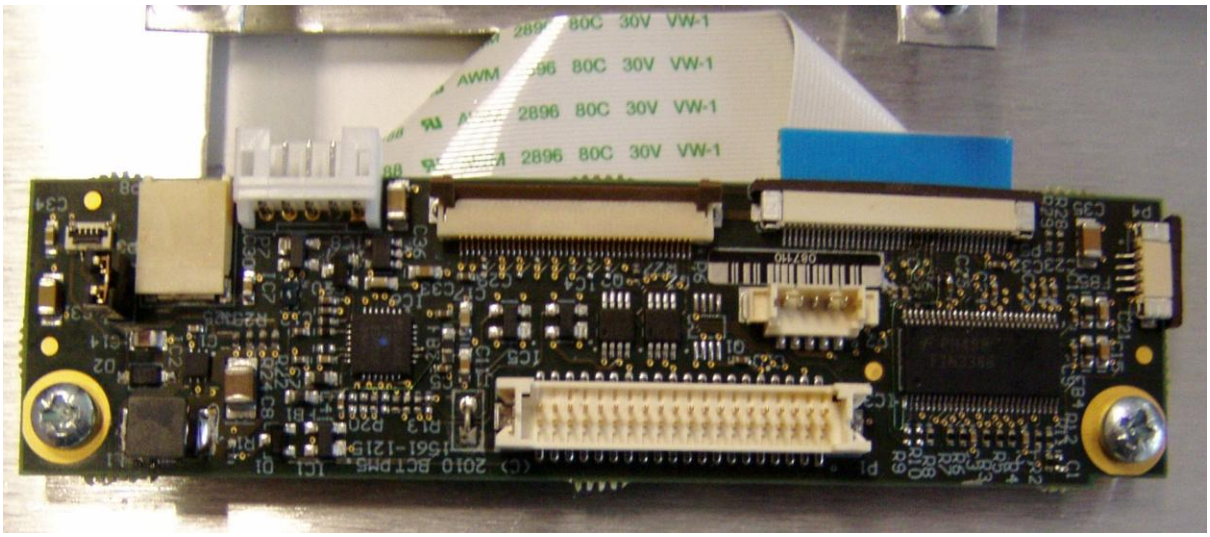
Once positioned correctly gently press the panel onto the VHB tape to bond the parts together

Step 2 – fit the display FFC cable



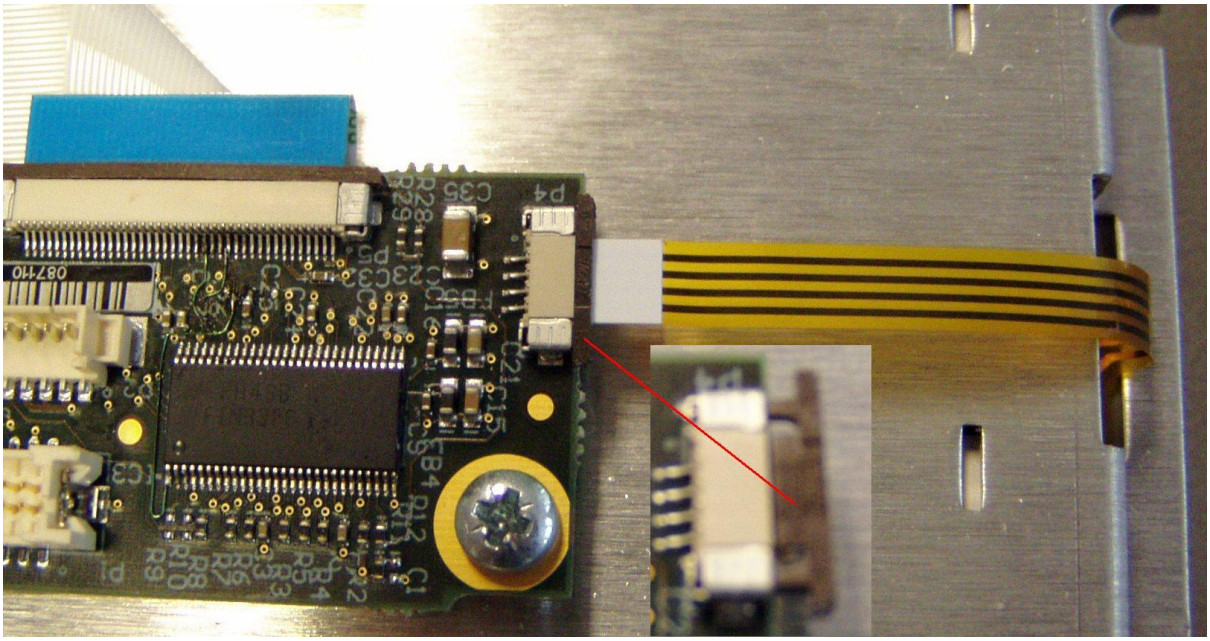
The 4.3” panel has a built in FFC cable. For the 7”, a 50 way FFC cable is required. It is connected to the panel as shown above. For routing, it is best to fold the cable as above before fitting.

Step 3 – fit the Personality Module

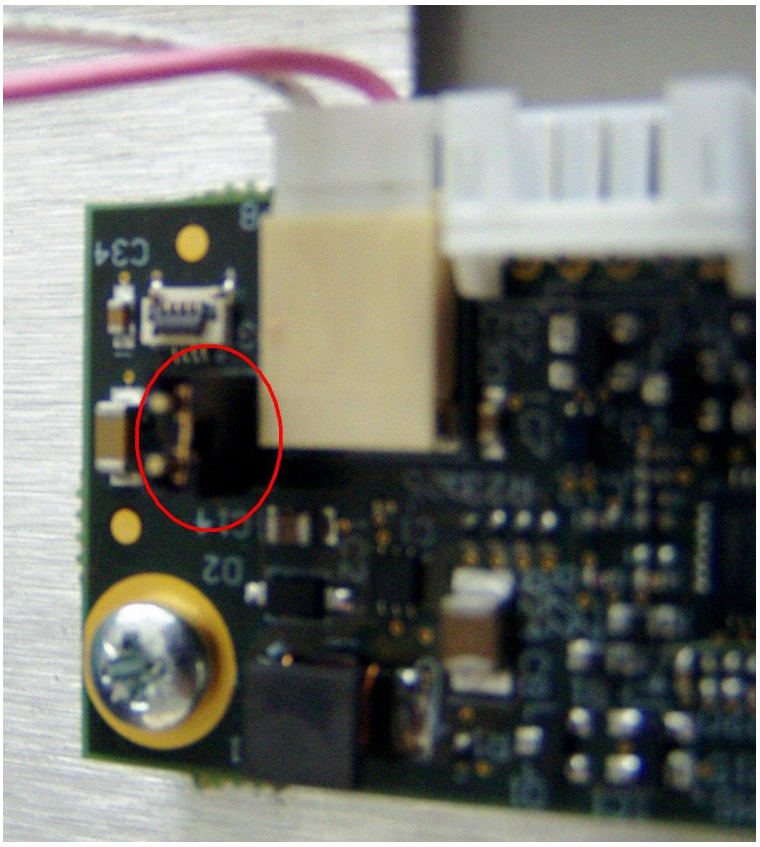


The personality module attaches to the metal work as shown above. It is held in place by two M3x4 Pozi screws. It can be easier to fit the FFC cable to the module before screwing in place

Step 4 – connect the touch screen and backlight



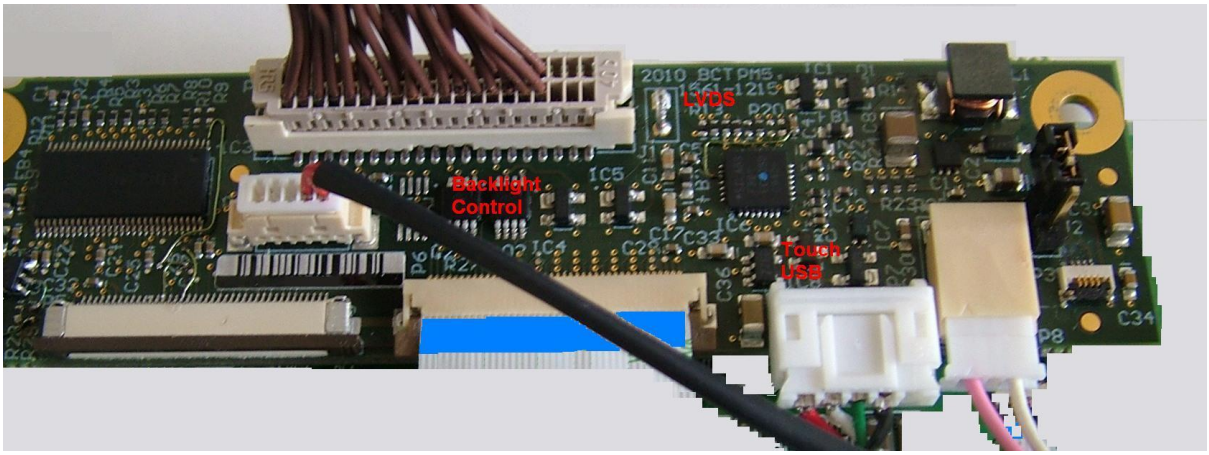
To attach the touch screen cable, gently pull out the brown tab, slide the cable into the connector and push the tab back to lock the cable in place



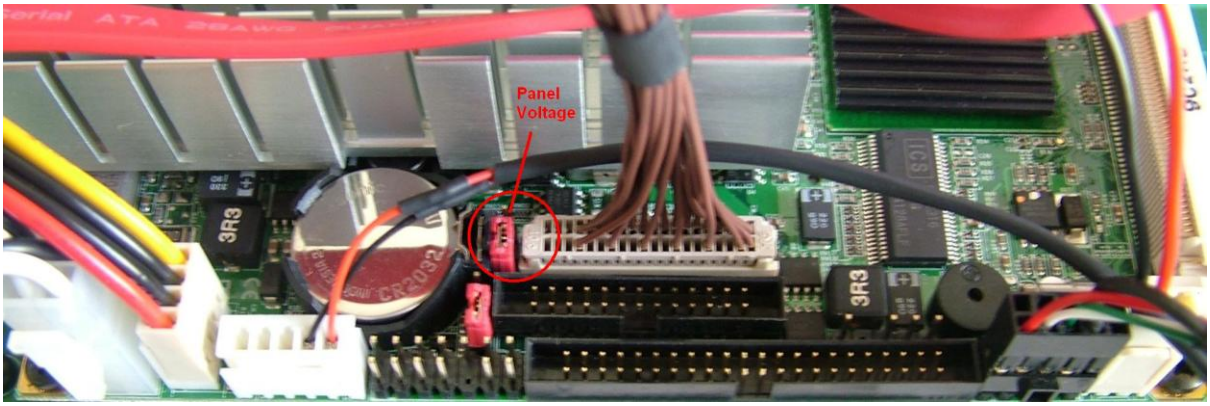
The backlight control is plugged into module as shown on the left.

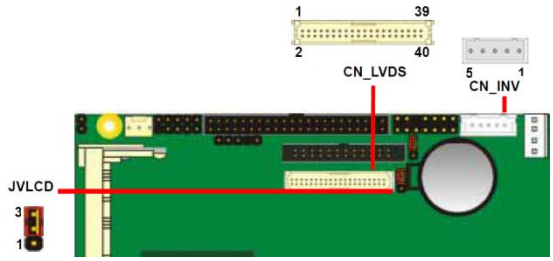
Note that in this instance the jumper J2 is being shorted to supply the necessary backlight current for the 7” display

Step 5 – connect the Magnum N270 cables



The three cables from the Magnum N270 connect to the module as shown above, and into the Magnum N270 as shown below

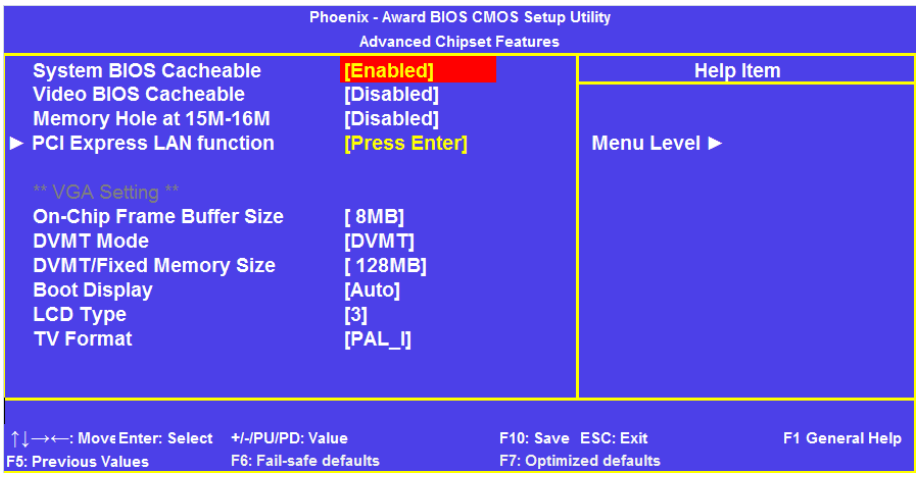




Note: the panel voltage is selected using the jumper shown above and on the left

For the 3V panels, the jumper should be across pins 2 and 3 as shown

Step 6 – set the Magnum N270 BIOS for the correct Panel Type



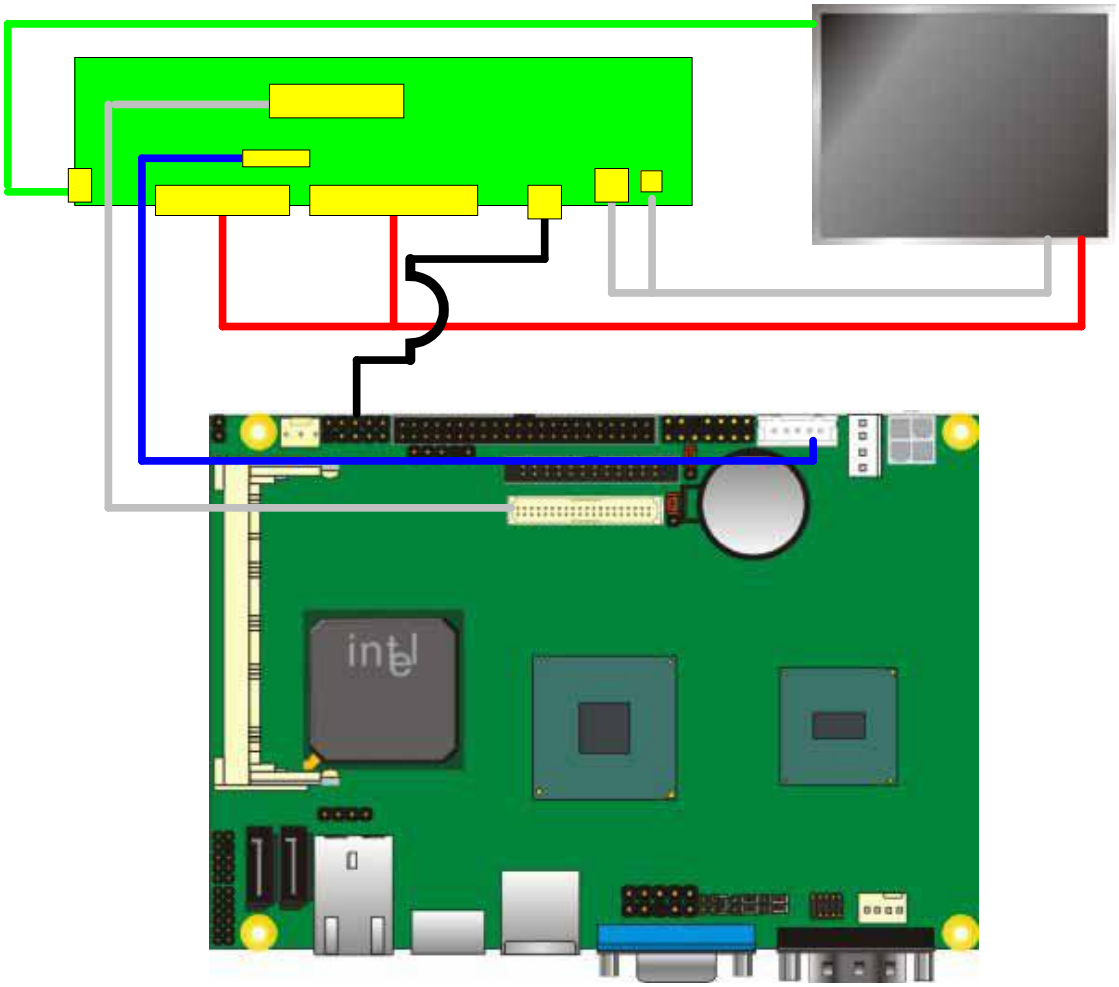
The Panel type is on the Advanced Chipset Features page within BIOS.

Press the <DEL> key during POST to enter BIOS.

Change the LCD type as follows

For 7” 800 x 480 select Type 2

Connection Overview

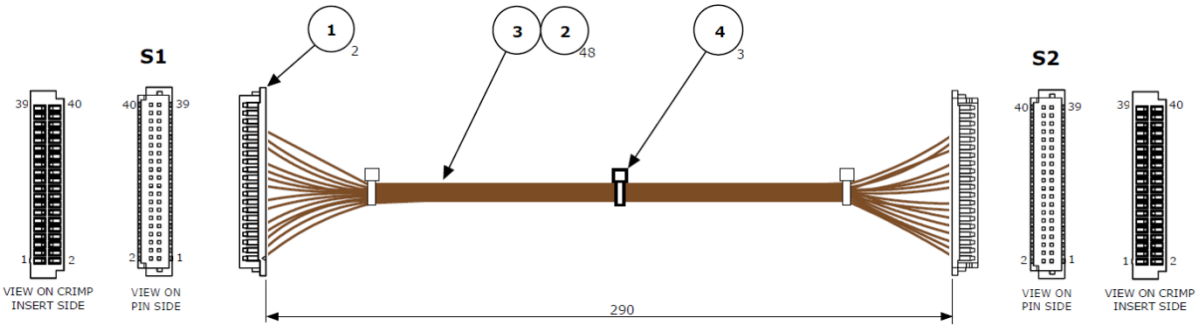


Sample Cables

The Personality Module can be supplied with cable sets. The following diagrams provide a quick reference if customers wish to design custom cables to suit their own application

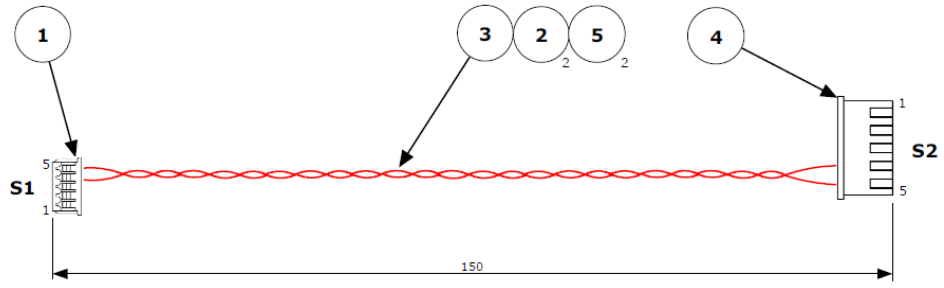
Display Cable

Item:	Code:	Qty:	Description:	Distributor:
1	Hirose DF13-40DS-1.25C	2	Housing 2x20 pin 1.25mm pitch	Farnell 132-4940
2	Hirose DF13-2630 SCF	48	Crimp 26-30AWG	Farnell 132-4944
3	-	as reqd.	Wire, UL1007, 28AWG, stranded	--
4	Hellerman T18RV0	3	Cable Tie	Farnell 116-9064



Inverter Cable

Item:	Description:	Qty:
1	Con Crimp Housing 1.25mm 5way Molex 510210500	1
2	Crimp Terminal Female Molex 500588100	2
3	Wire 28AWG 7X0.127 (Alternative Molex 6660013)	A/R
4	Con Crimp Housing 2.5mm 5way JST XHP-5	1
5	Crimp Terminal Female JST SXH-001T-P0.6	2



USB Cable

Item:	Description:	Qty:
1	Con Crimp Housing 2mm 10 way Harwin M20-1071000	1
2	Crimp terminal Harwin M20-1180046	5
3	Con crimp Housing 2mm 5 way JST PHR-5	1
4	Crimp Terminal JST SPH-002T-0.5S	5
5	Pin Polarizing	1
6	Cable USB2.0	A/R
7	Heat-shrink sleeving Farnell 496-7148	A/R
8	Heat-shrink sleeving Farnell 496-7185	A/R