Dharma Jumper Header Descriptions

Circuit Board	Description
Main (Backplane)	
Memory Module Interface	
J157	Selects between PB7 and MMI_12 for the Memory Module interface. On the Memory (Dual-MMC) Module the I/O connected to this pin is used for Card Detect (J605) feature.
J158	Selects between PD3 and MMI_11 for the Memory Module interface. On the Memory (Dual-MMC) Module the I/O connected to this pin is used for Card Detect (J600) feature.
IDE Interface (7312)	
J139	This the 40 pin IDE connector.
J140	This the 10 pin JTAG header for the Cypress PLD.
AC-DC Supply	
J119	Place shorting bar on this header and the AC-DC supply 3.3V regulator will be connected to the 3.3V bus on Main (backplane) board. If this shorting bar is in place J125 & J150 must be open.
J120	Place shorting bar on this header and the AC-DC supply 2.5V regulator will be connected to the 2.5V bus on Main (backplane) board. If this shorting bar is in place J126 & J151 must be open.
J121	Place shorting bar on this header and the AC-DC supply 5V regulator will be connected to the 5V bus on Main (backplane) board.
SW100	This is the main power switch for the Dharma system.
"AA" Battery Supply	
J147	This header is used to connect a "AA" battery to the Dharma system. Pin 1 is the positive terminal and Pin 2 is the negative terminal.
J150	Place shorting bar on this header and the "AA" Battery supply 3.3V regulator will be connected to the 3.3V bus on Main (backplane) board. If this shorting bar is in place J119 & J125 must be open.
J151	Place shorting bar on this header and the "AA" Battery supply 2.5V regulator will be connected to the 2.5V bus on Main (backplane) board. If this shorting bar is in place J120 & J126 must be open.
Lithium Ion Battery Supply	
J125	Place shorting bar on this header and the Lithium Ion Battery supply 3.3V regulator will be connected to the 3.3V bus on Main (backplane) board. If this shorting bar is in place J119 & J150 must be open.
J126	Place shorting bar on this header and the Lithium Ion Battery supply 2.5V regulator will be connected to the 2.5V bus on Main (backplane) board. If this shorting bar is in place J120 & J151 must be open.
J127	This header is used to connect a "Lithium battery to the Dharma system. Pin 1 is the positive terminal and Pin 2 is the negative terminal.
J148	Place shorting bar on this header and the Lithium Ion Battery reset circuit will be connected to the nPOR (power-on-reset) circuit net. If the Lithium Ion battery supply is not being used the header should be open.
1.8V Supply	
J122	Place shorting bar on this header and the 1.8V regulator will be connected to the 1.8V bus. The 1.8V regulator is always connected to the 3.3V bus. If a 1.8V supply is not need leave this header open.
Keypad	
J155	Place shorting bar between pins 1 & 2 to configure keypad for use with EP7409 processor module. Shorting bar between pins 2 & 3 for EP73xx and EP9xxx processor modules
J156	Place shorting bar between pins 1 & 2 to configure keypad for use with EP7409 processor module. Shorting bar between pins 2 & 3 for EP73xx and EP9xxx processor modules
RS232 Interface	

Circuit Board	Description
J143	Place shorting bar on this header to disable RS232 Interface.
IDE Interface (9312)	
J1	Place shorting bar in this header when using EP9xxx processor module.

Circuit Board	Description
EP-7312 Processor Module	
JP200, JP201	These headers select the memory width that the EP7312 will use to read from the boot code storage device. For 8-bit wide boot memory place shorting bar on JP201 only. For 16-bit wide boot memory place shorting bar on JP200 only. For 32-bit wide boot memory place shorting bar on both JP200 & JP201.
JP202 , JP203	These headers select various test modes, see the EP-7312 data sheet for more details. For normal operation the headers should be left open.
J201	This 20-pin header is used to interface to the JTAG port of the EP7312.
J207	This header selects between 16-bit and 32-bit wide flash memory. To select 16-bit (linear addressing) flash memory place shorting bar on this header.
J218	This 8-pin header is used to interface to the serial port on the EP-7312.
SW200	This 2-position switch selects either the RUN or PROGRAM modes for EP-7312. The mode is latched on the rising edge if nPOR.
S201	This momentary switch allows the user to manually hold nPOR "low".
S202	This momentary switch allows the user to "wake-up" the EP-7312.
Audio Module	
J302	This 3-pin header selects the Master clock for the ADC and DAC ICs. With the shorting bar across pins 1 & 2, the 11.2896MHz (on the Audio Module) oscillator will be selected. With the shorting bar across pins 2 & 3, the output of the processor audio clock will be selected.
J309	This 3-pin header selects the LRCK clock for the ADC IC. The shorting bar should be placed across pins 1 & 2 when a EP-72xx processor module is used. For all other Cirrus processor modules the shorting bar should be across pins 2 & 3.
J307	This 6-pin header allows easy access to SCLK, SDTX, SDRX, SYNC signals as well as the 3.3V supply and circuit ground.
J308	This 10-pin header allows easy access to the left and right audio out signals as well as PB1, PD4, PD5, +5V supply and circuit ground.
J300	This is a dual RCA plug assembly for inputting audio signals to the ADC
J301	This is a 3.5mm stereo jack for inputting audio signals to the ADC.
J303	This is a dual RCA plug assembly which is connected to the left and right audio output channels of the DAC.
J305	This is a 3.5mm stereo jack which is connected to the left and right audio output channels of the DAC.
Memory (Dual MMC)	
J601,J602, J606, J607	These 3-pin header's provide the option of having each MMC socket controlled by a dedicated I/O interface or by having both sockets on a common bus, where nCS1 is used as the card clock. Place a shorting bar on pins 1 & 2 of each header for the common bus. Place a shorting bar on pins 2 & 3 of each header for dedicated interfaces for each socket.
J608	This 2-pin header should be shorted if control of the MMC supply by the microprocessor is desired.
PCMCIA Module	
J704	This 3-pin header allows the use of the Apple Airport Card. With the shorting bar connected between pins 1 & 2 the module is configured for the Airport card. With the shorting bar connected between pins 2 & 3 the module is configured for standard PC-Cards.

Circuit Board	Description
EP-7409 Processor Module	
J1	This 3-pin header selects the "core" voltage connected to the processor. With the shorting bar connected between pins 1 & 2 the 1.8V supply bus is selected. With the shorting bar connected between pins 2 & 3 the 2.5V supply bus is selected.
J202	This 2-pin header should have a shorting bar inserted if you wish to connect the nSTBY lead of the processor to circuit ground.
J203	This 3-pin header selects the input to the A-D converter input VIN0. With the shorting bar connected between pins 1 & 2 the wiper lead of potentiometer R251 is selected. With the shorting bar connected between pins 2 & 3 the USB_SENSE feature is selected.
J219	This 2-pin header allows the SPIFRM pin (3) of the EP-7409 to be connected to the EXPRDY pin (19) of J216.
J218	This 8-pin header is used to interface to the serial port on the EP-7409.
J201	This 20-pin header is used to interface to the JTAG port of the EP7409.
SW1	This 4 position DIP switch package determines the hardware mode of the EP-7409. See the Hardware Mode Table in the EP 7409 CPU Module schematic.
SW2	This 4 position DIP switch package determines the boot mode of the EP-7409. See the Boot Mode Table in the EP 7409 CPU Module schematic.
EP-9312 Processor Module	
J218	This 3-pin header selects the output of the supply monitor IC (U213) that is connected to the nPOR (Power On Reset) net.
J211, J212, J220, J221	These 3-pin header's select the boot mode of the EP-9312. Placing a shorting bar across pins 1 & 2 pulls the selected input to +3.3V through a 10 Kohm resistor. Placing a shorting bar across pins 2 & 3 pull the selected input to circuit ground. J211 = TEST1, J212 = TEST0, J220 = TMS, J221 = TDI. See boot table in EP 9312 CPU Module schematic.
J207	This 2-pin selects the data bus width of the boot flash. Install a shorting bar in this header to configure the processor board as a 16-bit data bus.
J222	This 8-pin header is used to interface to the serial port on the EP-9312.
J219	This 20-pin header is used to interface to the JTAG port of the EP-9312.