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January 2003

MON08 MULTILINK USER MANUAL

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Manual version 1.03

1 INTRODUCTION

The MON08 MULTILINK is an interface cable whose purpose is to allow debug and programming of 68HC08 devices via the MON08 debug port. The MON08 MULTILINK connects the target to the PC via a standard parallel port.

Some of the features that make the MON08 MULTILINK versatile are:

a. Software configurable port pin settings for Monitor ROM entrance.

b. Works with 2V, 3V, and 5V targets with internal bus frequency ranges from 1MHz to 8MHz.

c. Automatically detects target internal bus frequency and sets communications baud rate.

d. May optionally provide either 2,3, or 5V power @ 125mA to the target via Pin 15 of the MON08 header.

e. Provides 5V 4.9152 MHz oscillator signal to overdrive target crystal and RC clock circuitry.

2 MON08 MULTILINK HARDWARE

2.1 MON08 MULTILINK Power Supply

The MON08 MULTILINK requires a regulated 9V DC Center Positive power supply with 1.3/3.5mm female plug. The MON08 MULTILINK derives its power from the Power Jack located beside the MON08 connector. When the cable is powered up, the Green LED will be on. If the target is powered, the Yellow LED will be on.

2.2 Optional Oscillator

The MON08 MULTILINK provides a 5V 4.9152 MHz oscillator clock signal to Pin 13 of the MON08 Connector. If the target is a 5V system, the user may use this clock signal to overdrive the target RC or crystal circuitry. If this signal is not used, just leave Pin 13 of the target MON08 header unconnected.

Please note that if the target already uses an oscillator as its clock, the MON08 MULTILINK will NOT be able to overdrive it. The clock should have sufficient drive to be used with a target system even if the target system has an RC circuit or crystal connected.

2.3 Target MON08 Connector

The MON08 MULTILINK requires the target to have a standard 16-position 0.100-inch pitch dual row 0.025-inch square header. The mechanical drawing is shown in **Figure 2-1**.

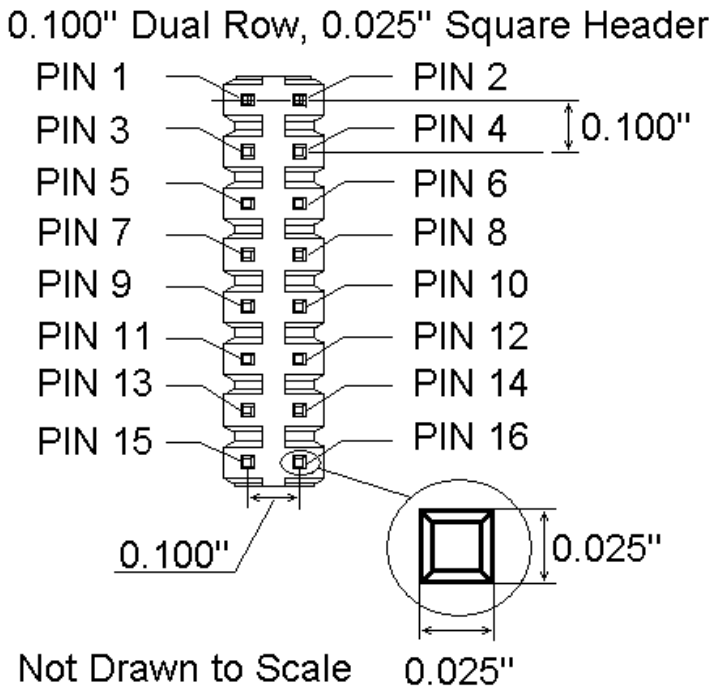

Figure 2-1: 16-Pin Header Mechanical Drawing

The MON08 Connector adopts the standard pin-out from MON08 debugging (as used on different ICS boards) with some modifications. The general pin-out is as follows:

PIN 1 -	**NC**	**GND**	**-** PIN 2
PIN 3 -	**NC**	**RST**	**-** PIN 4
PIN 5 -	**NC**	**IRQ**	**-** PIN 6
PIN 7 -	**NC**	**MON4**	**-** PIN 8
PIN 9 -	**NC**	**MON5**	**-** PIN10
PIN11 -	**NC**	**MON6**	**-** PIN12
PIN13 -	**OSC**	**MON7**	**-** PIN14
PIN15 -	**Vout**	**MON8**	**-** PIN16

If viewed right-side-up from the rear (open) end of the cable housing, the MON08 Multilink header looks like this:

Figure 2-2: MON08 Connector Pin Location

Please note that **NC** designates that these pins are reserved for future P&E use. **Make sure you do not connect any signal to these lines**.

The **MON4-MON8** signals are software configurable to support connections to different 68HC908 devices. Depending upon the device, either the MON4 or MON5 pin is the single-wire communications line (which usually corresponds to PORTA0 or PORTB0). The rest of the lines are either no connect or are port lines which must be driven to particular values upon reset. The MON08 MULTILINK software lists the target processor types and their corresponding pin-outs for user references. The software also selects the single-wire communications line according to the target processor type.

2.4 Ribbon Cable

The MON08 MULTILINK communicates with the target through a 16-pin ribbon cable with 0.100-inch centerline dual row socket IDC assembly (not keyed). The ribbon cable is designed such that the MON08 MULTILINK MON08 Connector and the target MON08 Header have the same pinout. i.e. The Pin 1 of the MON08 MULTILINK MON08 Connector is connected to the Pin 1 of the target MON08 Header. **Figure 2-3** sketches the connection mechanism (looking down into the sockets).

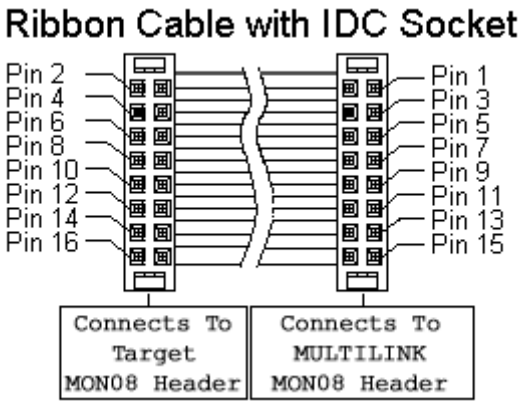

Figure 2-3: Ribbon Cable Diagram

2.5 Target Power Management

The PC software can be configured to have the MON08 MULTILINK drive 2V, 3V, or 5V power to the target on Pin 15 of the MON08 connector. The "device power" option on the connection dialog specifies the voltage level to source. **Figure 2-4** shows the device power settings.

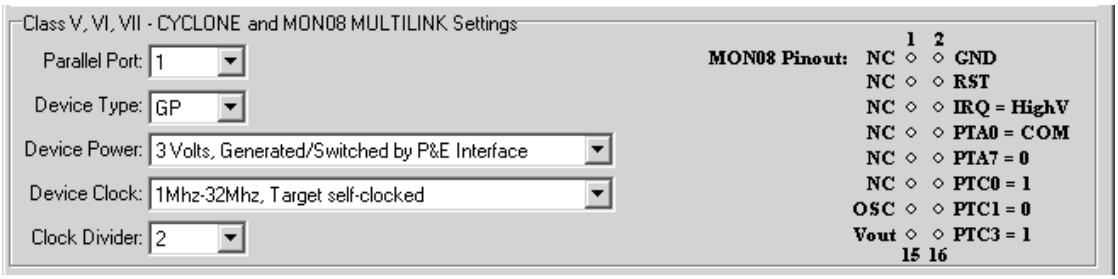

Figure 2-4: MON08 MULTILINK Pinout Example

2.6 Parallel Port

The MON08 MULTILINK connects to the PC via the 25-pin female parallel port connector. The BIOS settings for the parallel port should be one of the

following: SPP, Normal, Standard, Output Only, Unidirectional, AT. Try to avoid ECP, EPP, or PS/2 bi-directional.

If a parallel port extension cable is used, the parallel cable connecting the PC parallel port and the MON08 MULTILINK cable must be IEEE1284 compliant.

3 TARGET MON08 HEADER PINOUTS

This chapter details the MON08 connector signals according to the individual target MCU types.

3.1 68HC908AB

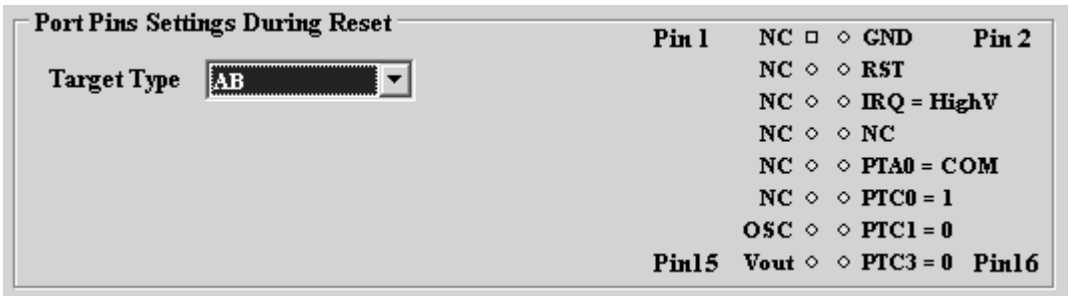

Figure 3-1: 68HC908AB Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.2 68HC908AP

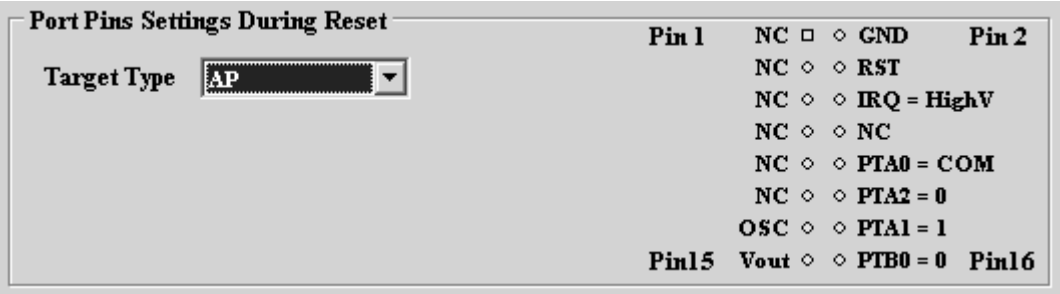

Figure 3-2: 68HC908AP Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA2, PORTA1 and PORTB0 are used for entering monitor mode. By default the user may bring these signals out to the target MON08 Header.

Alternatively, the user may pull down PORTA2 and pull up PORTA1, and pull up/down PORTB0 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.3 68HC908AS

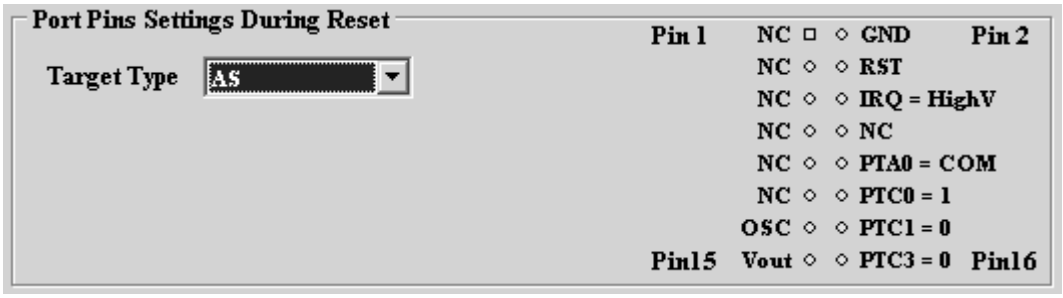

Figure 3-3: 68HC908AS Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.4 68HC908AT

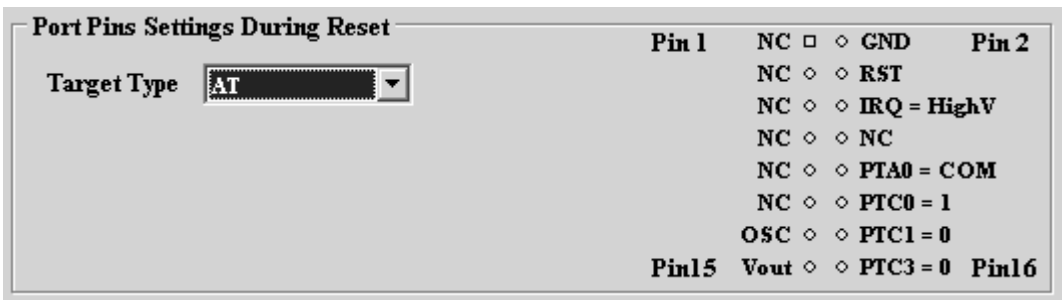

Figure 3-4: 68HC908AT Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.5 68HC908AZ

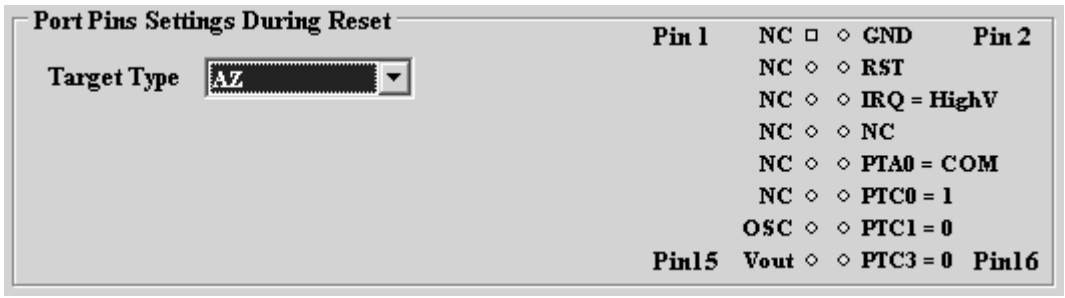

Figure 3-5: 68HC908AZ Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.6 68HC908BD

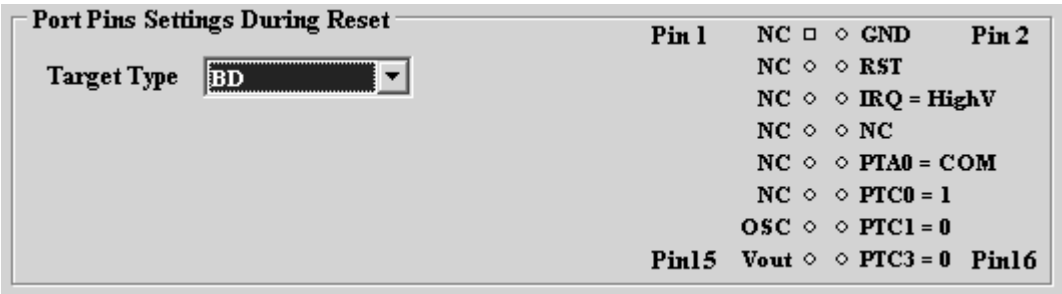

Figure 3-6: 68HC908BD Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.7 68HC908EY

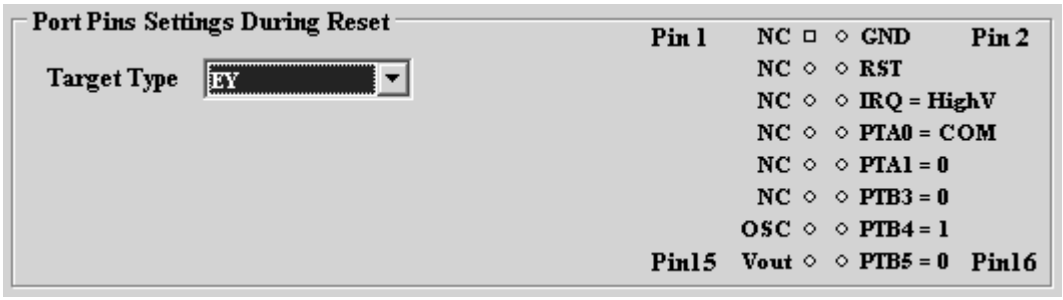

Figure 3-7: 68HC908EY Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTB3, PORTB4 and PORTB5 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull down PORTA1 and PORTB3, and pull up PORTB4, and pull up/down PORTB5 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.8 68HC908GP

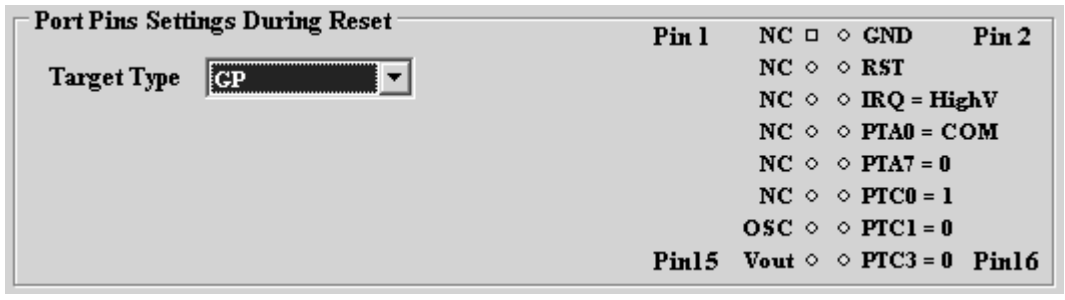

Figure 3-8: 68HC908GP Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA7, PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull down PORTA7 and PORTC1, pull up PORTC0, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.9 68HC908GR16

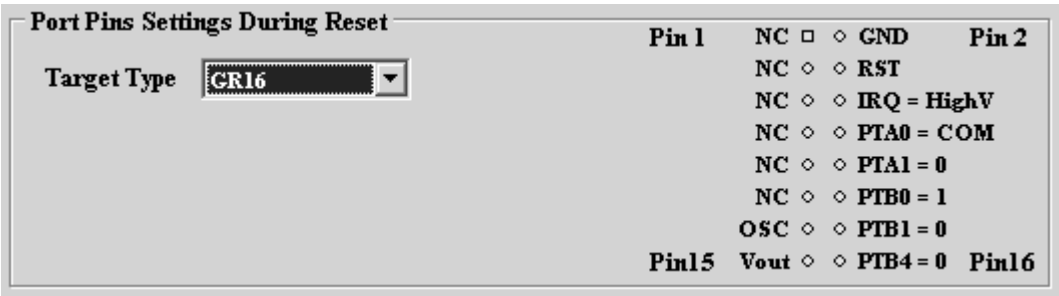

Figure 3-9: 68HC908GR16 MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTB0, PORTB1 and PORTB4 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB0, pull down PORTA1 and PORTB1, and pull up/down PORTB4 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.10 68HC908GR4/8

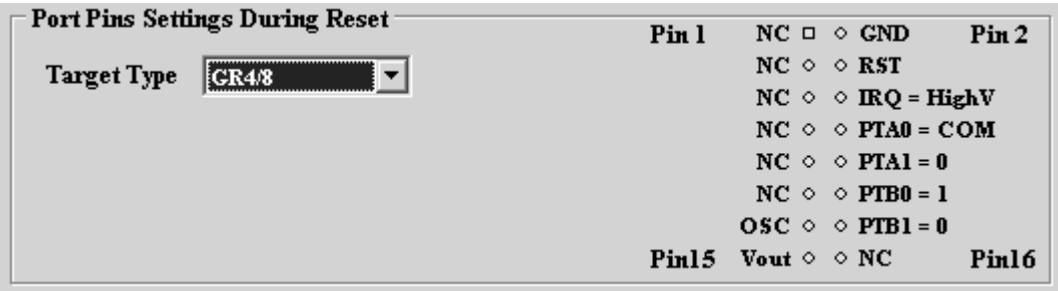

Figure 3-10: 68HC908GR4/8 MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTB0, and PORTB1 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB0, pull down PORTA1 and PORTB1. In which case the user does not need to connect these signals to the target MON08 Header. The clock division is fixed Div 4.

3.11 68HC908GT

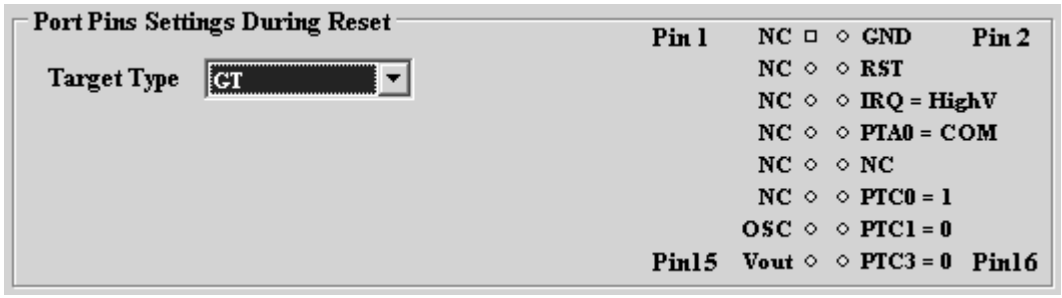

Figure 3-11: 68HC908GT Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0 and pull down PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.12 68HC908GZ

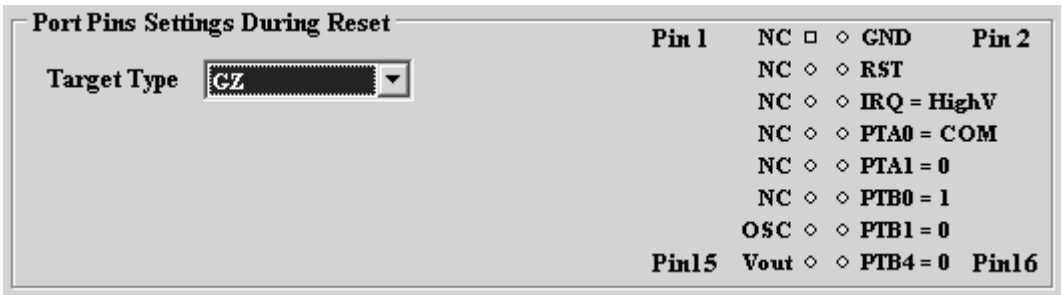

Figure 3-12: 68HC908GZ Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTB0, PORTB1 and PORTB4 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB0, pull down PORTA1 and PORTB1, and pull up/down PORTB4 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.13 68HC908JB1/8

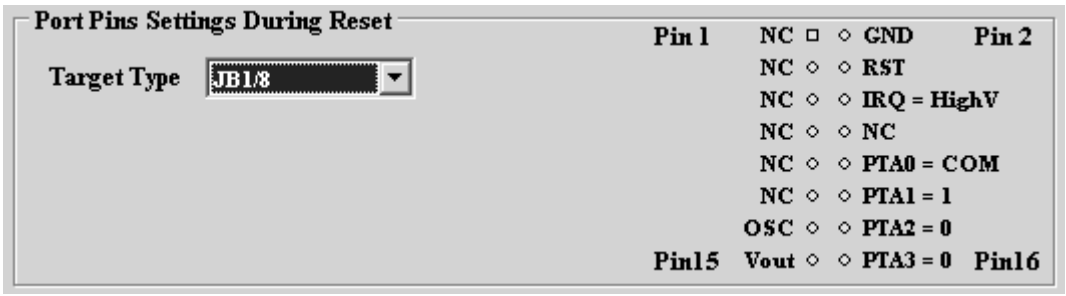

Figure 3-13: 68HC908JB1/8 MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTA2 and PORTA3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTA1 and pull down PORTA2, and pull up/down PORTA3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.14 68HC908JB16

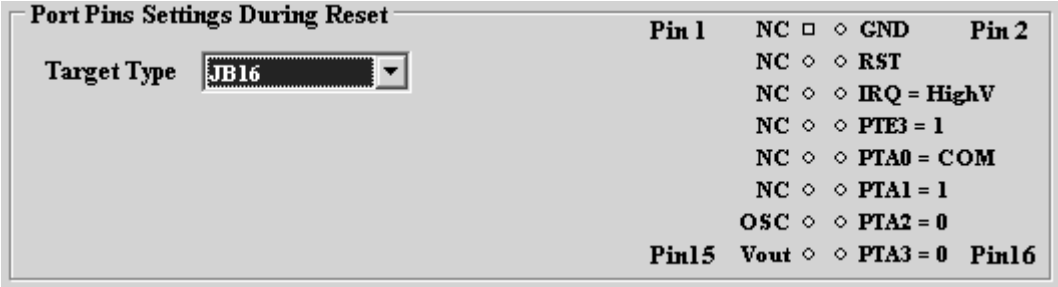

Figure 3-14: 68HC908JB16 MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTA2, PORTA3 and PORTE3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTA1 and PORTE3, pull down PORTA2, and pull up/down PORTA3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.15 68HC908JG

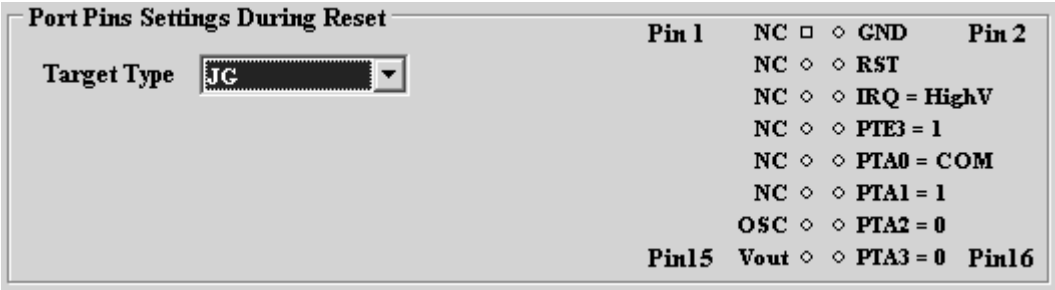

Figure 3-15: 68HC908JG Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTA2, PORTA3 and PORTE3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTA1 and PORTE3, pull down PORTA2, and pull up/down PORTA3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.16 68HC908JK

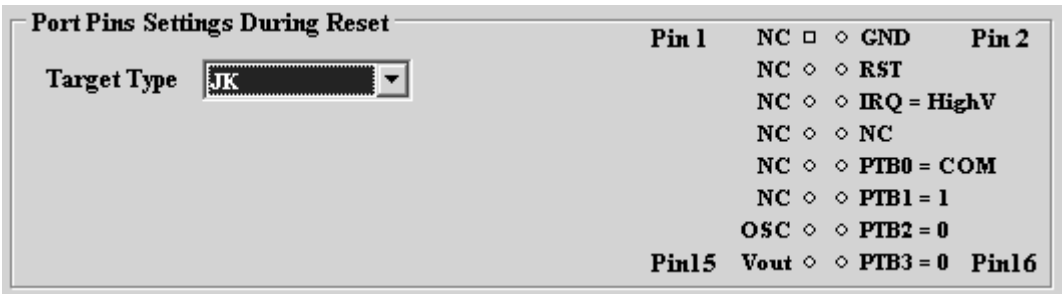

Figure 3-16: 68HC908JK Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTB0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTB1, PORTB2 and PORTB3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB1 and pull down PORTB2, and pull up/down PORTB3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.17 68HC908JL

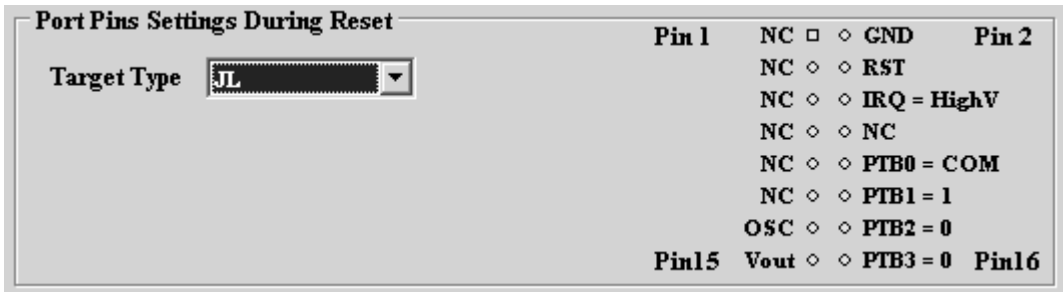

Figure 3-17: 68HC908JL Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTB0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTB1, PORTB2 and PORTB3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB1 and pull down PORTB2, and pull up/down PORTB3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.18 68HC908KX

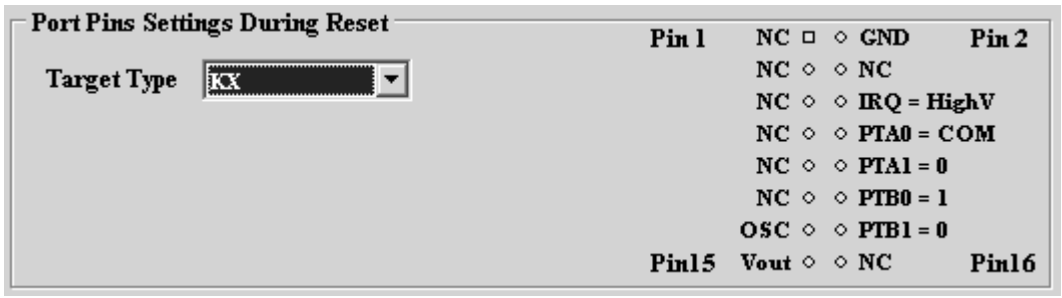

Figure 3-18: 68HC908KX Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The user must pull up the RESET line to target VDD with an external resistor.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTB0 and PORTB1 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTB0 and pull down PORTA1 and PORTB1. In which case the user does not need to connect these signals to the target MON08 Header. The clock division is fixed Div 4.

3.19 68HC908LD

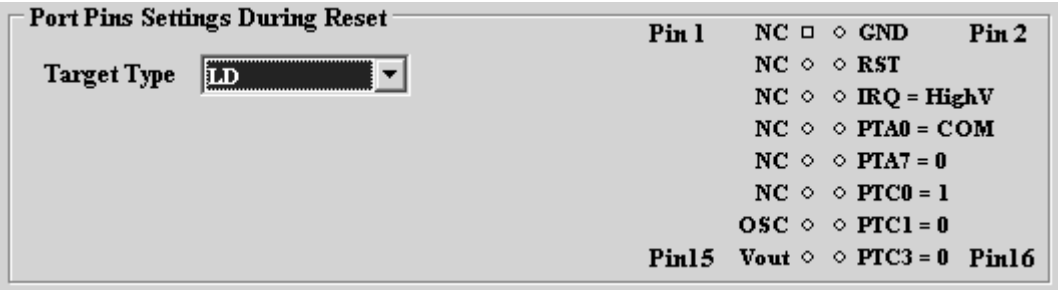

Figure 3-19: 68HC908LD Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA7, PORTC0, PORTC1 and PORTC3 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC0, pull down PORTA7 and PORTC1, and pull up/down PORTC3 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.20 68HC908LJ

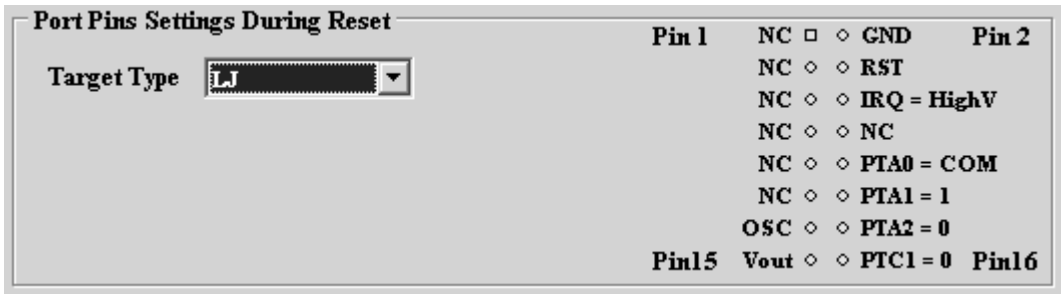

Figure 3-20: 68HC908LJ Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 10, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA1, PORTA2 and PORTC1 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTA1 and pull down PORTA2, and pull up/down PORTC1 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.

3.21 68HC908MR4/8

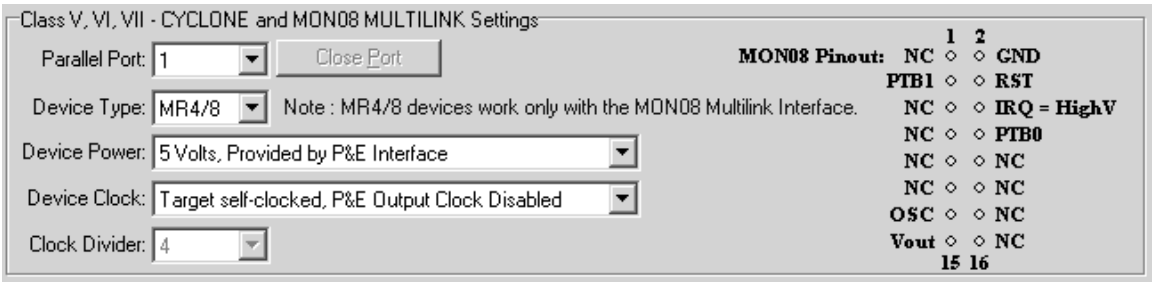

Figure 3-21: 68HC908MR4/8 Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTB0 from the target processor is connected to Pin 8 of the target MON08 Header. PORTB1 of the target processor is connected to Pin 3 of the target MON08 header. Together they serve as the data communication lines. The user

should pull down PORTB1 with a 4.7K Ohm resistor.

Please note that the MR4/8 is not currently supported by the MON08 CYCLONE.

3.22 68HC908MR16/32

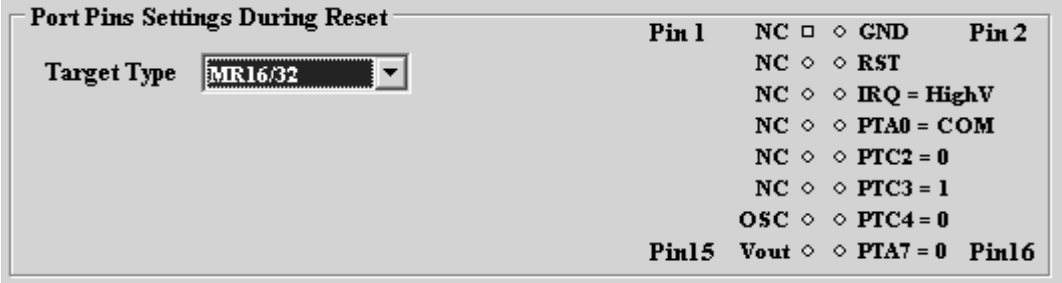

Figure 3-22: 68HC908MR16/32 Family MON08 Pinout

The target GND is connected to the Pin 2 of the target MON08 Header.

The target RESET line is directly connected to the Pin 4 of the target MON08 Header.

Alternatively, the user may pull up the RESET line to target VDD. In which case the user does not need to connect this signal to the target MON08 Header.

The target IRQ line is directly connected to the Pin 6 of the target MON08 Header.

PORTA0 from the target processor is connected to the target MON08 Header Pin 8, acting as the communications line. The MON08 MULTILINK pulls up this signal with a 10K Ohm resistor to the target VDD.

PORTA7, PORTC2, PORTC3 and PORTC4 are used for entering monitor mode. By default the user may directly bring these signals out to the target MON08 Header.

Alternatively, the user may pull up PORTC3, pull down PORTA7 and PORTC4, and pull up/down PORTC2 for clock division. In which case the user does not need to connect these signals to the target MON08 Header.