



## HB3 Development Board Quick Start Guide

V2.0

## Introduction

The HB3 is a mini-ITX format development carrier board to be used with the RMx series of System on Modules from Blue Chip Technology.

The development board has been designed against v1.5 of the Blue Chip RMx System on Module Specification document. It has been designed to provide on-board examples of supported functionality and options. The HB3 can be used in conjunction with the following documents

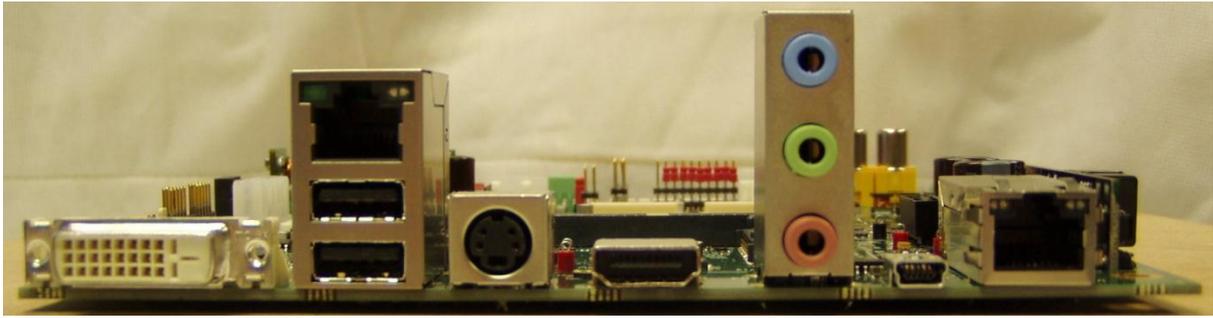
- HB3 Host Board Technical Manual
- System on Module Specification 1.7 (or later)
- 1981-1327C1\_HB3\_Baseboard Schematics

The following pages provide an overview of how to connect a RMx module to the development board and brief description of accessories provided and or available with the host board.

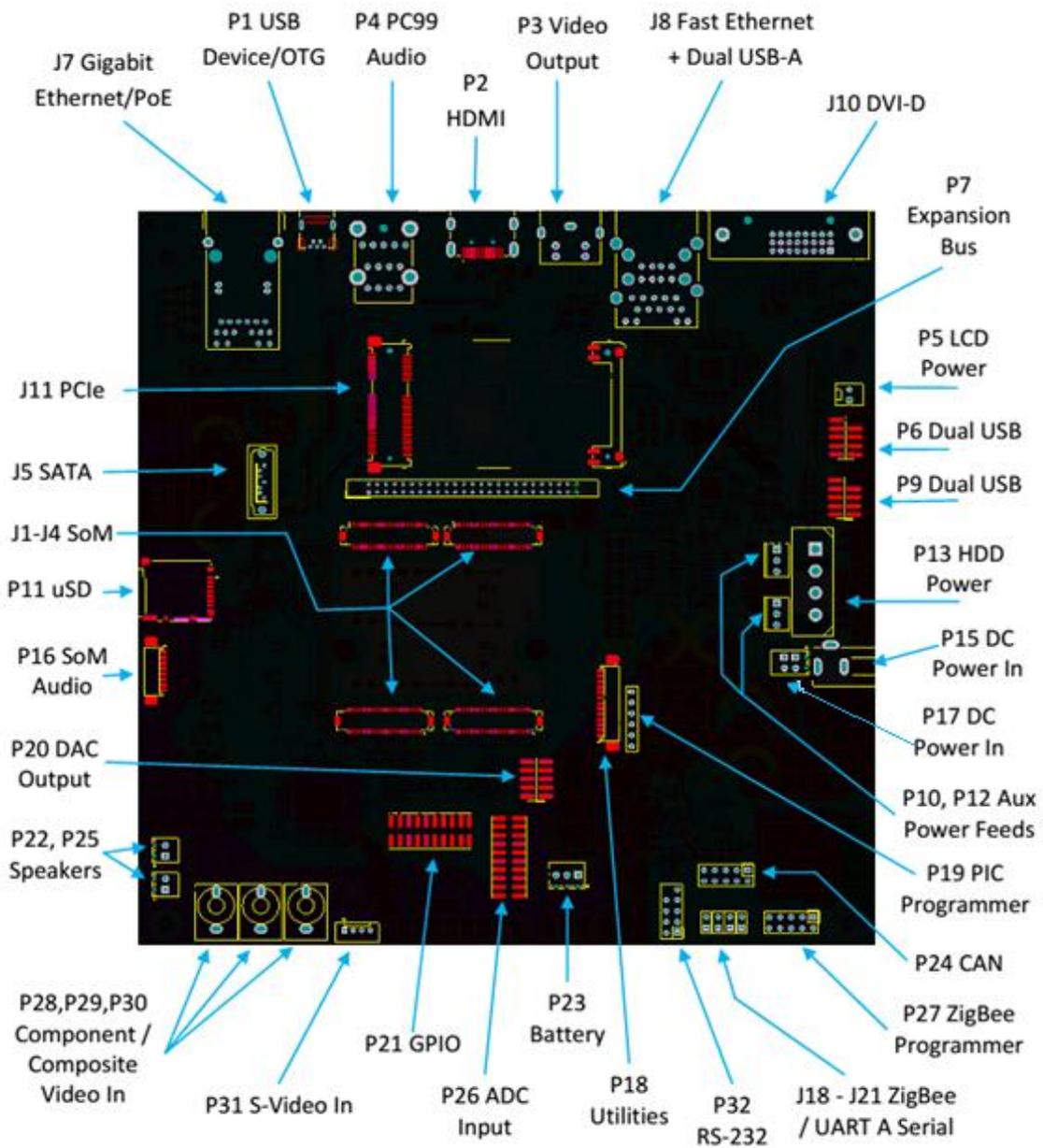
## HB3 Development Board and Connections



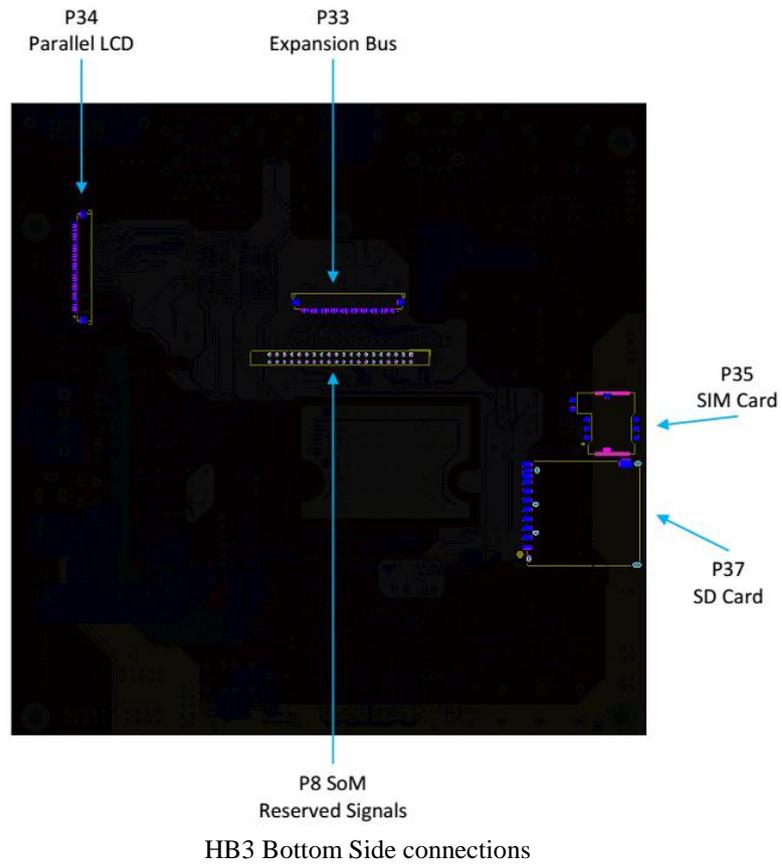
HB3 Host Board



HB3 Rear Panel I/O



HB3 Top side connections

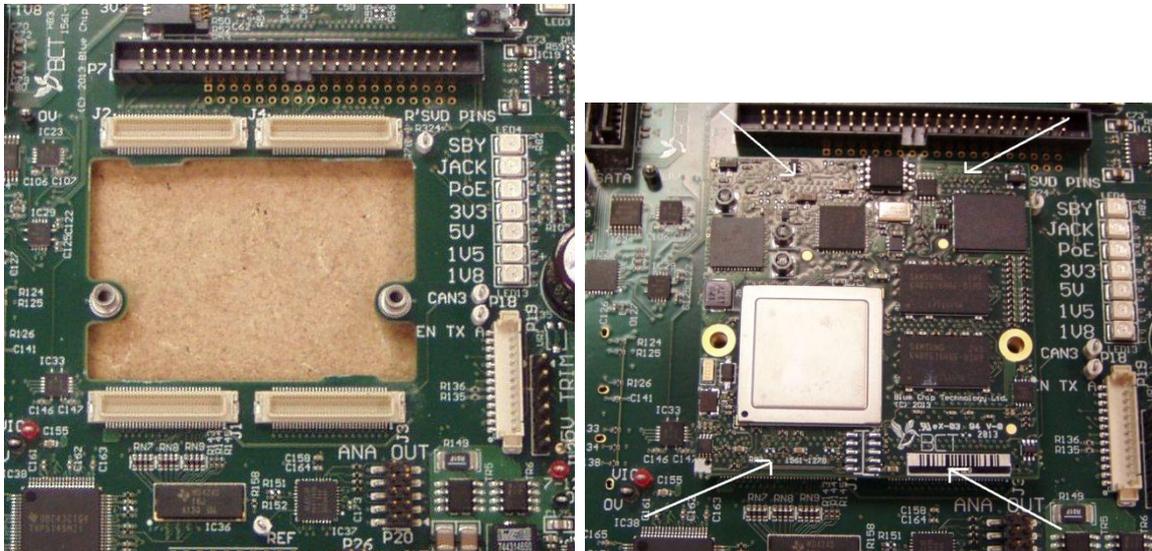


For details of all connectors, please refer to the HB3 Host Board Technical Manual.

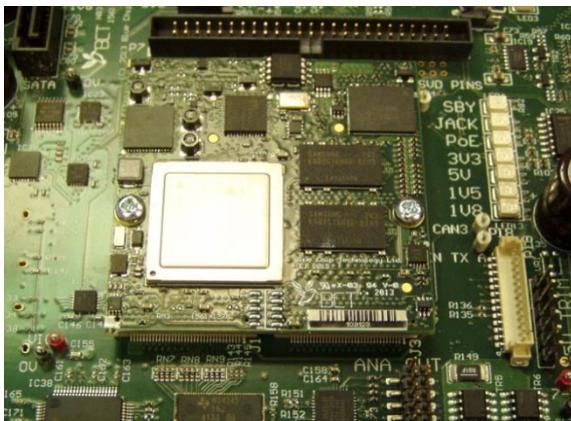
## Connecting RMx Module

To connect an RMx module to the HB3 host board is fairly straightforward. First thing is to place the Hostboard on a flat surface (do not fit any feet or stand offs to the board yet).

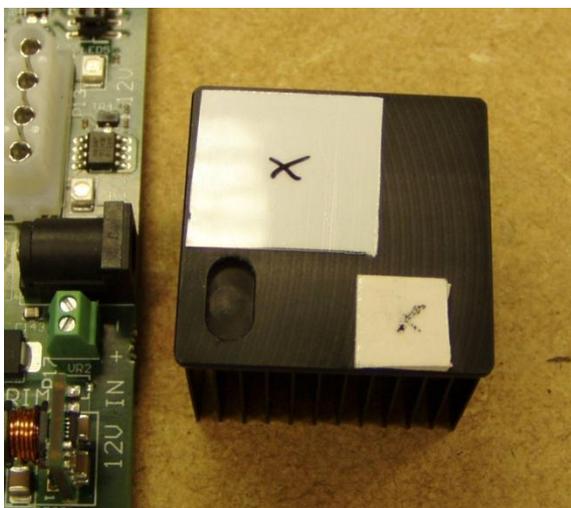
Align the RMx module with the host board connections as shown below



Press the edges of the RMx module firmly above each connector to ensure a good connection. Note that if the host board is not supported under this area then the connectors may not mate correctly.

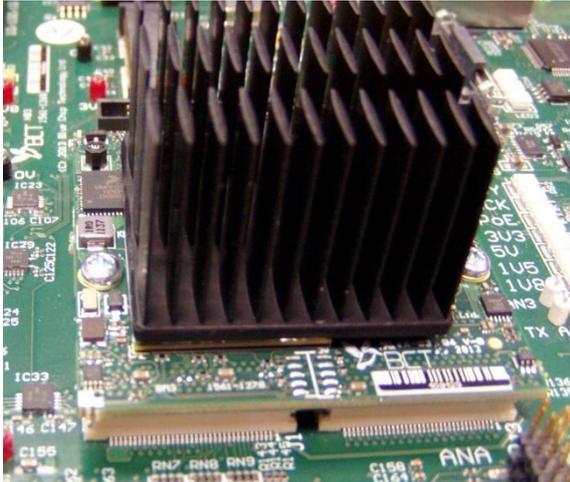


Once securely attached, insert and tighten the two M2.5 x 4mm screws.



If being fitted, the supplied heatsink will have two thermal gap pads on the underside. Each pad will have a clear cover on to protect the adhesive. These will be marked with an X. Carefully remove each cover.

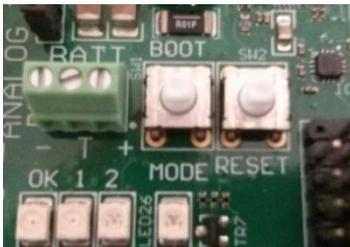
Note that depending on the RMx module, the thermal pads may differ slightly



Next, carefully align the Heatsink over the main processor as shown on the left and press firmly to ensure the adhesive pads stick to the RMx module.

The heatsink shown above is for use in prototyping and is not designed as an end solution. Even with the heatsink attached, airflow is required across the heatsink to prevent the RMx module from overheating. A small fan providing around 15CFM should be sufficient for prototyping and bench top development.

Once the RMx module is secured, connections can be made to the HB3 Host Board as required. The HB3 is powered by a 12V adapter of inner/outer diameter 2.5/5.5mm



At the edge of the HB3 there are three switches as shown on the left.

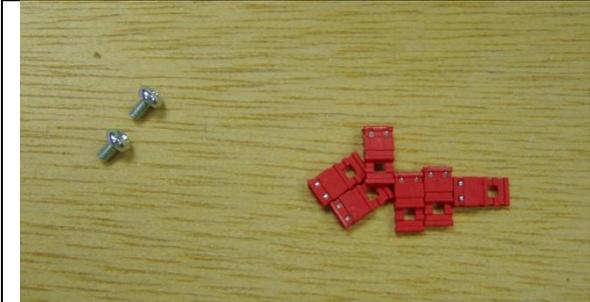
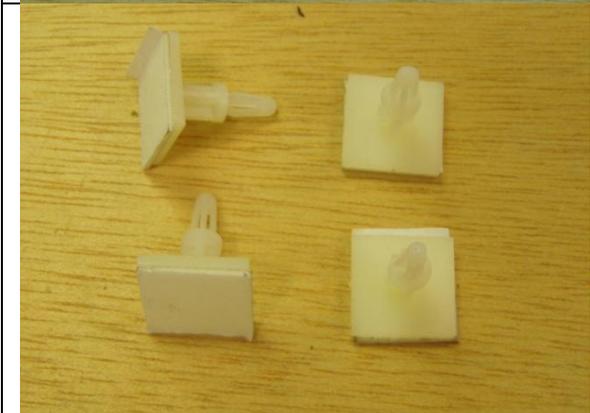
The Mode Switch acts to change the RMx boot mode to an alternative such as USB

The Reset switch does as it says



The Slider switch acts as the On/Off button. Slide the switch to the edge of the board to power on.

## HB3 Option Parts

		Two M2.5 by 4mm screws 6 Jumpers
		4 plastic feet

		MicroSD Adapter and uSD card with OS
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		PS/2 cable
		AV Cable
		Heatsink with Thermal Adhesive pads



7.5V Battery Pack



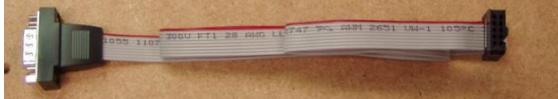
Dual USB Cable

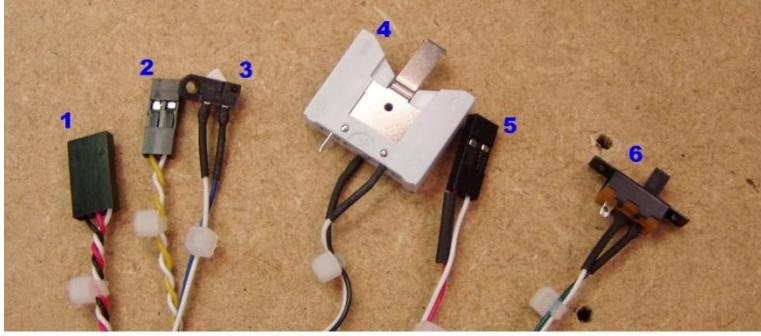


12V 2.5/5.5 Power Adapter



5.25" to SATA power Cable

	<p>RS232 Cable</p>
	<p>SATA Data Cable</p>
	<p>Audio Cable</p>
	<p>IEC Mains adapter</p>

	<p>Utility Cable</p>
 <p>1 I2C 2 Wake 3 Reset 4 battery 5 Engineering 6 On/ Off</p>	<p>1 I2C 2 Wake 3 Reset 4 Battery 5 Engineering 6 Power On/Off</p>