



IsoPod

IsoPod Users Manual Virtually Parallel Rev 2.0 Addendum

This addendum contains data on the IsoPod V2 hardware & software configuration and how they differ from the V1 hardware configuration.

This addendum supplements, and should be used in conjunction with, the IsoPod Users Manual. **Part 1** of this document covers the new hardware add-ons that are unavailable the version 1, while **Part 2** covers how some of the present hardware features in the version 1 have changed in version 2. **Part 3** covers how all of these hardware changes will affect your software development. At the end of the document a detailed layout of the pins and their respective locations of the board is available.

Part 1 Add-Ons

Size is smaller by .3 inch
Two Mounting Holes Added
Added 4 more timer lines
Optional 2 RS232 or 1 RS232 and 1 RS422

Part 2 Hardware Feature Changes

2.1 LED Changes

Do to changes in the address line locations the LED's where moved.

Table 1: LED Addressing Corrections

<i>LED Color</i>	<i>Moved to Port D line:</i>
Red	0
Yellow	1
Green	2

2.2 Junction 3 Changes

Junction 3 is now dedicated to Analog-to-Digital conversion functions on the version 2. Added filtering was also added to the ADC process to insure an even cleaner conversion.

Table B: Junction 3 Pin Locations

<i>Function</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>
VREF	1	VSSA	2
ANA0	3	ANA1	4
ANA2	5	ANA3	6
ANA4	7	ANA5	8
ANA6	9	ANA7	10

2.3 Junction 4 Changes

Junction 4 was reconfigured to support the CAN Bus and RS232 communication. The IsoPod V2 offers 2 RS232 port, one that is TTL and the other is CMOS. One of the RS232 ports can be changed at the manufacture to an optional RS-422/485 port.

Table C: Junction 4 Pin Locations

<i>RS-422/485(optional)</i>	<i>RS-232</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>
+XMT		1	+3.3V	2
B		3	GND	4
GND	GND	5	CANL	6
-RCV	SIN1	7	GND	8
+RCV	SOUT1	9	CANH	10

2.4 Junction 5 Changes

Since the CAN Bus was moved to Junction 4, Junction 5 is primarily used for SPI and access to Port E.

Table D: Junction 5 Pin Locations

<i>Function</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>
+5.0V	1	GND	2
+3.3V	3	PE4/SCLK	4
RSTO	5	PE5/MOSI	6
PE2/A6	7	PE6/MLSO	8
PE3/A7	9	PE7/SS	10

2.5 Junction 6 Changes

The redundant +V and GND pins were removed to make the board more compact. Junction 6 is now home to all of the PWM lines, Quadrature encoding, and IRQ A & B. There is a special breakout adapter available for this junction if the connections are to tight for the low end users.

Table E: Junction 6 Pin Locations

<i>Function</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>
PWMB5	1	+5V	2	+3.3V	3
PWMB4	4	GND	5	GND	6
PWMB3	7	PHASEA0	8	TC0	9
PWMB2	10	PHASEB0	11	TC1	12
PWMB1	13	INDEX0	14	IRQA	15
PWMB0	16	HOME0	17	IRQB	18
PWMA5	19	+5V	20	+3.3V	21
PWMA4	22	GND	23	GND	24
PWMA3	25	PHASEA1	26	TD0	27
PWMA2	28	PHASEB1	29	TD1	30
PWMA1	31	INDEX1	32	TD2	33
PWMA0	34	HOME1	35	TD3	36

2.6 Junction 7 Changes

Junction 7 changed radically, it is now unpopulated, but can be if it's requested. This junction consists of all of FAULT lines and the IS lines.

Table F: Junction 7 Pin Locations

<i>Function</i>	<i>Pin #</i>	<i>Function</i>	<i>Pin #</i>
FAULTB3	1	NC	2
FAULTB2	3	ISA0	4
FAULTB1	5	ISA1	6
FAULTB0	7	ISA2	8
FAULTA3	9	ISB0	10
FAULTA2	11	ISB1	12
FAULTA1	13	ISB2	14
FAULTA0	15	NC	16

Part 3 Affects on Software

The only hardware change that creates problems with the programming is the moving of the LED's to free up the Timer lines.

3.1 Using the LED's

The addressing lines for the LED's have changed, however the commands: REDLED, YELLED, and GRNLED, still function as they did before. You also still have the option to manually turn on and off the LED's by using their Pin locations as addresses.

Example:

PD0 ON (This would cause the Red LED to turn on.

3.2 Using the Timer lines

Now that 4 of the Timer lines were liberated from the LED's they can be used in your projects. The 4 new timer lines work exactly the same as the 2 original Timer lines.

New Micros reserves the right to make changes without further notice to any products herein. New Micros makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does New Micros assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages.

NEW MICROS and its logo are registered in the US Patent & Trademark Office. All other product or services names are the property of their respective owners. ©New Micros, Inc. 2002.

How to reach us:

USA: New Micros, Inc.
1601 Chalk Hill Rd.
Dallas, TX 75212

Tel: (214) 339-2204

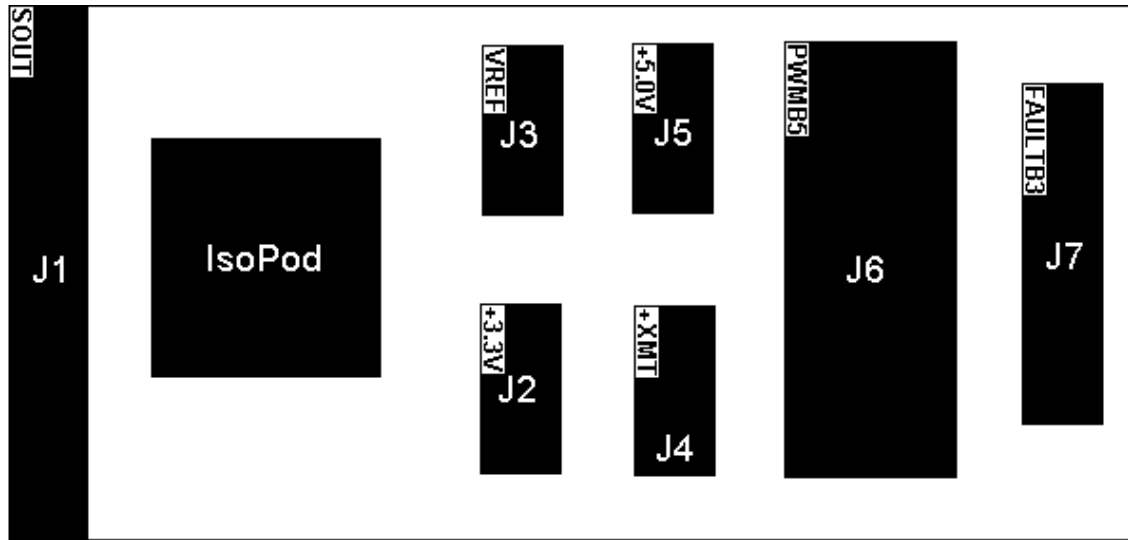
Fax: (214) 339-1585

Email Technical Questions: nmitech@newmicros.com

HOME PAGE: <http://www.newmicros.com>

Or <http://www.isopod.net>

IsoPod V 2.0 Layout



<u>J1</u>	
<i>Top Side</i>	<i>Back Side</i>
SOUT	VIN
SIN	GND
ATN	RESET
GND	+5V
PB0	PA0
PB1	PA1
PB2	PA2
PB3	PA3
PB4	PA4
PB5	PA5
PB6	PA6
PB7	PA7

<u>J2</u>	
+3.3V	GND
TD1	GND
TD0	TMS
TCK	DF
RESET	TRST

<u>J3</u>	
VREF	VSSA
ANA0	ANA1
ANA2	ANA3
ANA4	ANA5
ANA6	ANA7

<u>J4</u>	
+XMT	+3.3V
B	GND
GND	CANL
-RCV	GND
+RCV	CANH

<u>J5</u>	
+5.0V	GND
+3.3V	PE4/SCLK
RSTO	PE5/MOSI
PE2/A6	PE6/MLSO
PE3/A7	PE7/SS

<u>J6</u>		
PWMB5	+5V	+3.3V
PWMB4	GND	GND
PWMB3	PHASEA0	TC0
PWMB2	PHASEB0	TC1
PWMB1	INDEX0	IRQA
PWMB0	HOME0	IRQB
PWMA5	+5V	+3.3V
PWMA4	GND	GND
PWMA3	PHASEA1	TD0
PWMA2	PHASEB1	TD1
PWMA1	INDEX1	TD2
PWMA0	HOME1	TD3

<u>J7 Not Populated</u>	
FAULTB3	NC
FAULTB2	ISA0
FAULTB1	ISA1
FAULTB0	ISA2
FAULTA3	ISB0
FAULTA2	ISB1
FAULTA1	ISB2
FAULTA0	NC