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PIC24FJ256GB210 Plug-in Module Manual

Overview

The PIC24FJ256GB210 PIM is designed to demonstrate the capabilities of the PIC24FJ256GB210 family using the Explorer 16 Demonstration Board and the PICtail™ Plus Daughter Board.

Features

- Enables designs for USB devices, embedded host and On-The-Go (OTG) when used in conjunction with the USB PICtail Plus Daughter Board (AC164131). Because a few pins on the device are dedicated to the USB module, several of the existing features of the Explorer 16 must be rerouted on the PIC24FJ256GB210 PIM. The Peripheral Pin Select (PPS) feature, available on this device, allows the existing peripherals to be remapped to the new I/O pins.
- Enables designs for graphics applications when used in conjunction with the Graphics LCD Controller PICtail™ Plus SSD1926 Board (AC164127-5). This device features the EPMP module which now supports a 16-bit parallel interface. To use the 16-Bit Interface mode, a few signals must be rerouted via jumpers: JP1, JP2, JP3, and JP4. The wider bus allows for faster transfer of data between the PIC® MCU and the LCD controller. When set to 16-Bit EPMP mode, the USB PICtail Plus Daughter Board is not supported.

	Compatible with USB PICtail™ Plus (Default)	16-Bit EPMP Setup
JP1	1-2 (RG0-PIM Pin 79)	2-3 (PIM Pin 79-RD12)
JP2	1-2 (RG3-PIM Pin 89)	2-3 (PIM Pin 89-RG1)
JP3	1-2 (RG2-PIM Pin 90)	2-3 (PIM Pin 90-RG0)
JP4	Closed (RG1-PIM Pin 77)	Open

Signal Interface when Jumpers are Set to USB PICtail™ Plus Compatible Mode

Below is a table of all the pins on the device that are remapped.

PIC24FJ256GB210		Explorer 16		
Pin #	Pin Function	U1A Pin #	Pin Function	PIC24FJ128GA010 Pin
54	Vbus	1	DC1	RG15
1	RG15	8	LCD	RC3
95	RG14	9	LCD	RC4
34	RB10 ⁽¹⁾	25	N/A	RB0
34	RB10 ⁽¹⁾	34	PMA13	RB10
52	RF2/RP30	51	UART1 TX	RF3
9	RC4/RPI41	52	UART RX	RF2
77	RD2/RP23	54	SDI	RF7
25	RB0/RP0	55	SCK	RF6
67	RA15/RPI35	56	SDA1	RG3
66	RA14/RPI36	57	SCL1	RG2
8	RC3/RPI40	66	INT3	RA14
79	RD12/RPI42	67	INT4	RA15
56	RG3/D-	89	N/A	RG1
57	RG2/D+	90	N/A	RG0
51	RF3/RP16	95	DCI	RG14

- Note 1:** The RB10 pin on the PIC24FJ256GB210 PIM is connected to two pins on the Explorer 16 board.
Note 2: The ENVREG pin should always be pulled up to VDD. This device does not support the option of disabling the internal core voltage regulator.

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Board Schematic

