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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

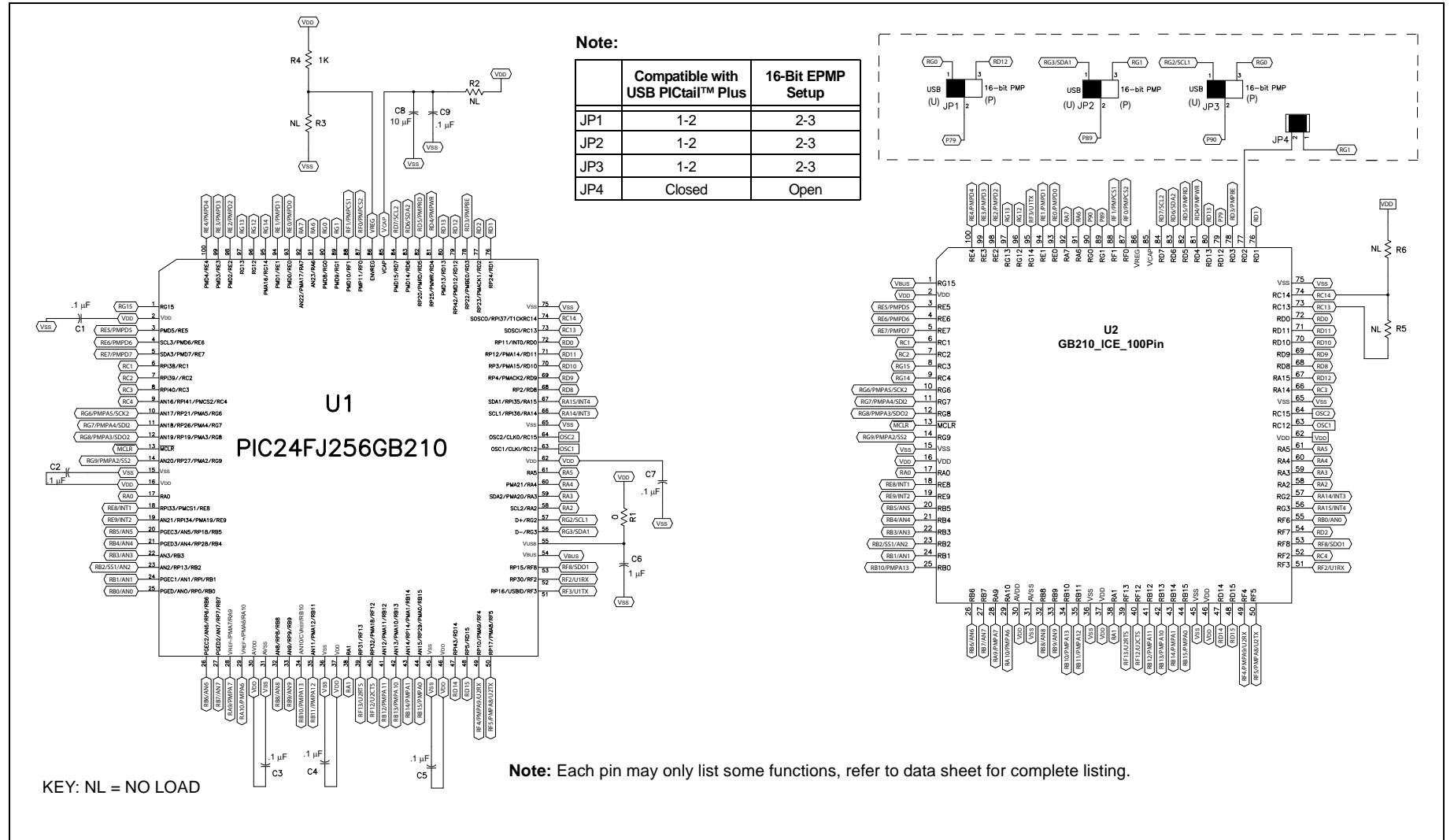
Below is a table of all the pins on the device that are remapped.

| 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



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