

## PIC32MX570F512L 100-pin to 100-pin TQFP CAN-USB Plug-In Module (PIM) Information Sheet

### OVERVIEW

The PIC32MX570F512L PIM is designed to demonstrate the capabilities of the PIC32MX570F512L family of devices using development boards such as the Explorer 16 Development Board, which supports 100-pin PIM interfaces, in conjunction with CAN and USB PICtail™ Plus Daughter Boards.

The PIC32MX570F512L is a high performance 32-bit CAN-USB microcontroller in a 100-pin TQFP package.

[Table 1](#) shows the mapping between the 100-pin PIM interface board functions and the device pins.

[Figure 1](#) through [Figure 3](#) provide schematics for the device and the PIM.

**TABLE 1: 100-PIN TO 100-PIN PIM MAPPING**

| Device Pin # | PIC32MX570F512L Functional Description | PIM Pin # | Explorer 16 Development Board Signal Name |
|--------------|----------------------------------------|-----------|-------------------------------------------|
| 1            | AN28/RG15                              | 51        | RF3/U1TX                                  |
| 2            | VDD                                    | 2         | VDD                                       |
| 3            | AN22/RPE5/PMD5/RE5                     | 3         | RE5/PMD5                                  |
| 4            | AN23/PMD6/RE6                          | 4         | RE6/PMD6                                  |
| 5            | AN27/PMD7/RE7                          | 5         | RE7/PMD7                                  |
| 6            | AN29/RPC1/RC1                          | 6         | RC1                                       |
| 7            | AN30/RPC2/RC2                          | 7         | RC2                                       |
| 8            | AN31/RPC3/RC3                          | 8         | RC3                                       |
| 9            | RPC4/CTED7/RC4                         | 9         | RC4                                       |
| 10           | AN16/C1IND/RPG6/SCK2/PMA5/RG6          | 10        | RG6/PMA5/SCK2                             |
| 11           | AN17/C1INC/RPG7/PMA4/RG7               | 11        | RG7/PMA4/SDI2                             |
| 12           | AN18/C2IND/RPG8/PMA3/RG8               | 12        | RG8/PMA3/SDO2                             |
| 13           | MCLR                                   | 13        | MCLR                                      |
| 14           | AN19/C2INC/RPG9/PMA2/RG9               | 14        | RG9/PMA2/SS2                              |
| 15           | Vss                                    | 15        | Vss                                       |
| 16           | VDD                                    | 16        | VDD                                       |
| 17           | TMS/CTED1/RA0                          | 17        | RA0/TMS                                   |
| 18           | AN32/RPE8/RE8                          | 18        | RE8/INT1                                  |
| 19           | AN33/RPE9/RE9                          | 19        | RE9/INT2                                  |
| 20           | AN5/C1INA/RPB5/RB5/VBUSON              | 20        | RB5/AN5                                   |
| 21           | AN4/C1INB/USBOEN/RB4                   | 21        | RB4/AN4                                   |
| 22           | AN3/C2INA/RPB3/RB3/PGD3                | 22        | RB3/AN3                                   |
| 23           | AN2/CTCMP/C2INB/RPB2/CTED13/RB2/PGC3   | 23        | RB2/SS1/AN2                               |
| 24           | AN1/RPB1/CTED12/RB1/PGC1               | 24        | RB1/AN1                                   |
| 25           | AN0/RPB0/RB0/PGD1                      | 25        | RB0/AN0                                   |
| 26           | AN6/RPB6/RB6/PGC2                      | 26        | RB6/AN6                                   |
| 27           | AN7/RPB7/CTED3/RB7/PGD2                | 27        | RB7/AN7                                   |
| 28           | VREF-/PMA7/RA9                         | 28        | RA9/PMA7                                  |
| 29           | VREF+/PMA6/RA10                        | 29        | RA10/PMA6                                 |

# PIC32MX570F512L

**TABLE 1: 100-PIN TO 100-PIN PIM MAPPING (CONTINUED)**

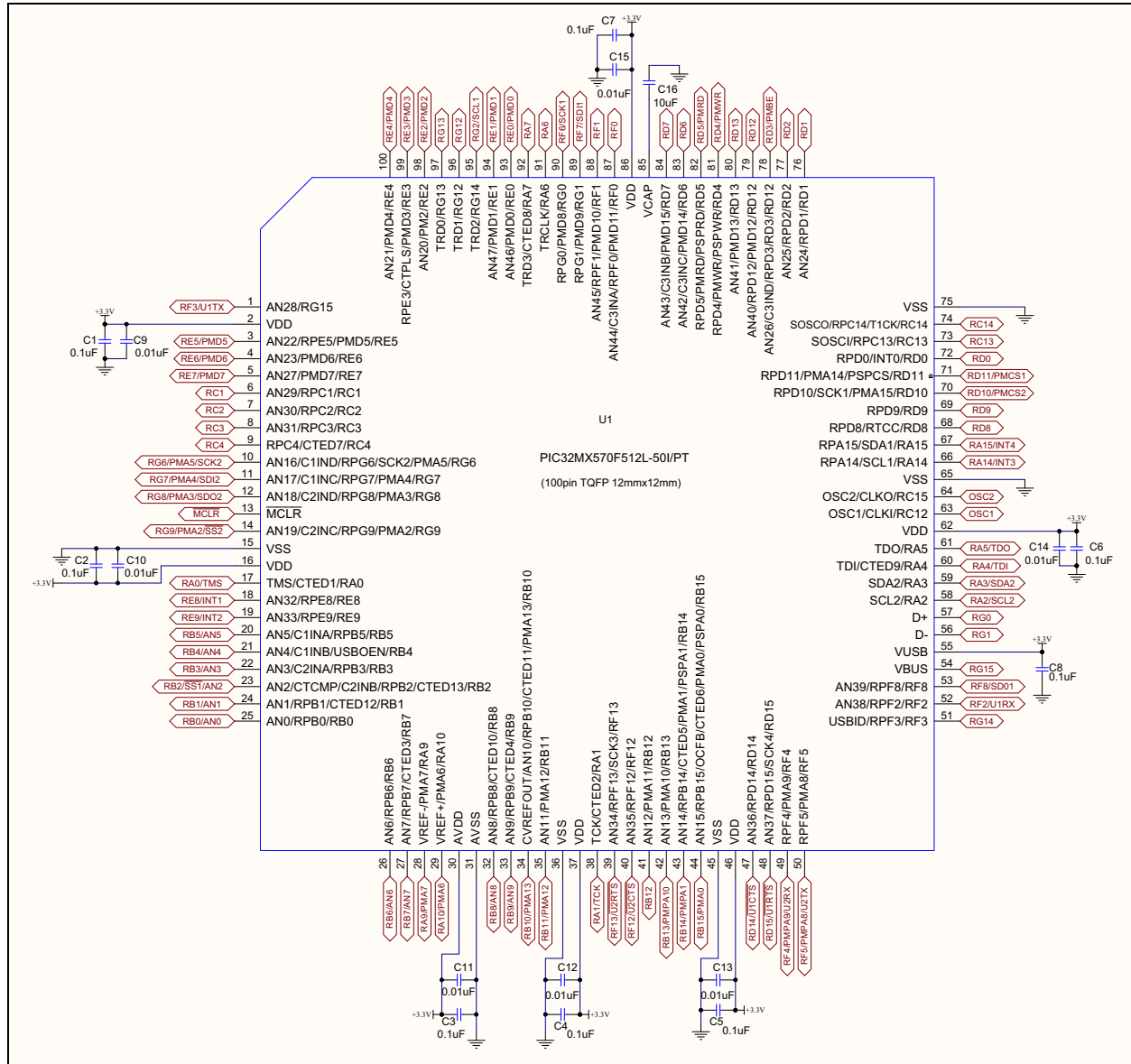
| Device Pin # | PIC32MX570F512L Functional Description | PIM Pin # | Explorer 16 Development Board Signal Name |
|--------------|----------------------------------------|-----------|-------------------------------------------|
| 30           | AVDD                                   | 30        | AVDD                                      |
| 31           | AVSS                                   | 31        | AVSS                                      |
| 32           | AN8/RPB8/CTED10/RB8                    | 32        | RB8/AN8                                   |
| 33           | AN9/RPB9/CTED4/RB9                     | 33        | RB9/AN9                                   |
| 34           | CVREFOUT/AN10/RPB10/CTED11/PMA13/RB10  | 34        | RB10/PMA13                                |
| 35           | AN11/PMA12/RB11                        | 35        | RB11/PMA12                                |
| 36           | VSS                                    | 36        | VSS                                       |
| 37           | VDD                                    | 37        | VDD                                       |
| 38           | TCK/CTED2/RA1                          | 38        | RA1/TCK                                   |
| 39           | AN34/RPF13/SCK3/RF13                   | 39        | RF13/U2RTS                                |
| 40           | AN35/RPF12/RF12                        | 40        | RF12/U2CTS                                |
| 41           | AN12/PMA11/RB12                        | 41        | RB12                                      |
| 42           | AN13/PMA10/RB13                        | 42        | RB13/PMPA10                               |
| 43           | AN14/RPB14/CTED5/PMA1/PSPA1/RB14       | 43        | RB14/PMPA1                                |
| 44           | AN15/RPB15/OCFB/CTED6/PMA0/PSPA0/RB15  | 44        | RB15/PMA0                                 |
| 45           | VSS                                    | 45        | VSS                                       |
| 46           | VDD                                    | 46        | VDD                                       |
| 47           | AN36/RPD14/RD14                        | 47        | RD14/U1CTS                                |
| 48           | AN37/RPD15/SCK4/RD15                   | 48        | RD15/U1RTS                                |
| 49           | RPF4/PMA9/RF4                          | 49        | RF4/PMPA9/U2RX                            |
| 50           | RPF5/PMA8/RF5                          | 50        | RF5/PMPA8/U2TX                            |
| 51           | USBID/RPF3/RF3                         | 95        | RG14                                      |
| 52           | AN38/RPF2/RF2                          | 52        | RF2/U1RX                                  |
| 53           | AN39/RPF8/RF8                          | 53        | RF8/SD01                                  |
| 54           | VBUS                                   | 1         | RG15                                      |
| 55           | VUSB                                   | 62        | VDD                                       |
| 56           | D-                                     | 89        | RG1                                       |
| 57           | D+                                     | 90        | RG0                                       |
| 58           | SCL2/RA2                               | 58        | RA2/SCL2                                  |
| 59           | SDA2/RA3                               | 59        | RA3/SDA2                                  |
| 60           | TDI/CTED9/RA4                          | 60        | RA4/TDI                                   |
| 61           | TDO/RA5                                | 61        | RA5/TDO                                   |
| 62           | VDD                                    | 62        | VDD                                       |
| 63           | OSC1/CLKI/RC12                         | 63        | OSC1                                      |
| 64           | OSC2/CLKO/RC15                         | 64        | OSC2                                      |
| 65           | VSS                                    | 65        | VSS                                       |
| 66           | RPA14/SCL1/RA14                        | 66        | RA14/INT3                                 |
| 67           | RPA15/SDA1/RA15                        | 67        | RA15/INT4                                 |
| 68           | RPD8/RTCC/RD8                          | 68        | RD8                                       |
| 69           | RPD9/RD9                               | 69        | RD9                                       |
| 70           | RPD10/SCK1/PMA15/RD10                  | 70        | RD10/PMCS2                                |
| 71           | RPD11/PMA14/PSPCS/RD11                 | 71        | RD11/PMCS1                                |
| 72           | RPD0/INT0/RD0                          | 72        | RD0                                       |
| 73           | SOSCI/IPC13/RC13                       | 73        | RC13                                      |

**TABLE 1: 100-PIN TO 100-PIN PIM MAPPING (CONTINUED)**

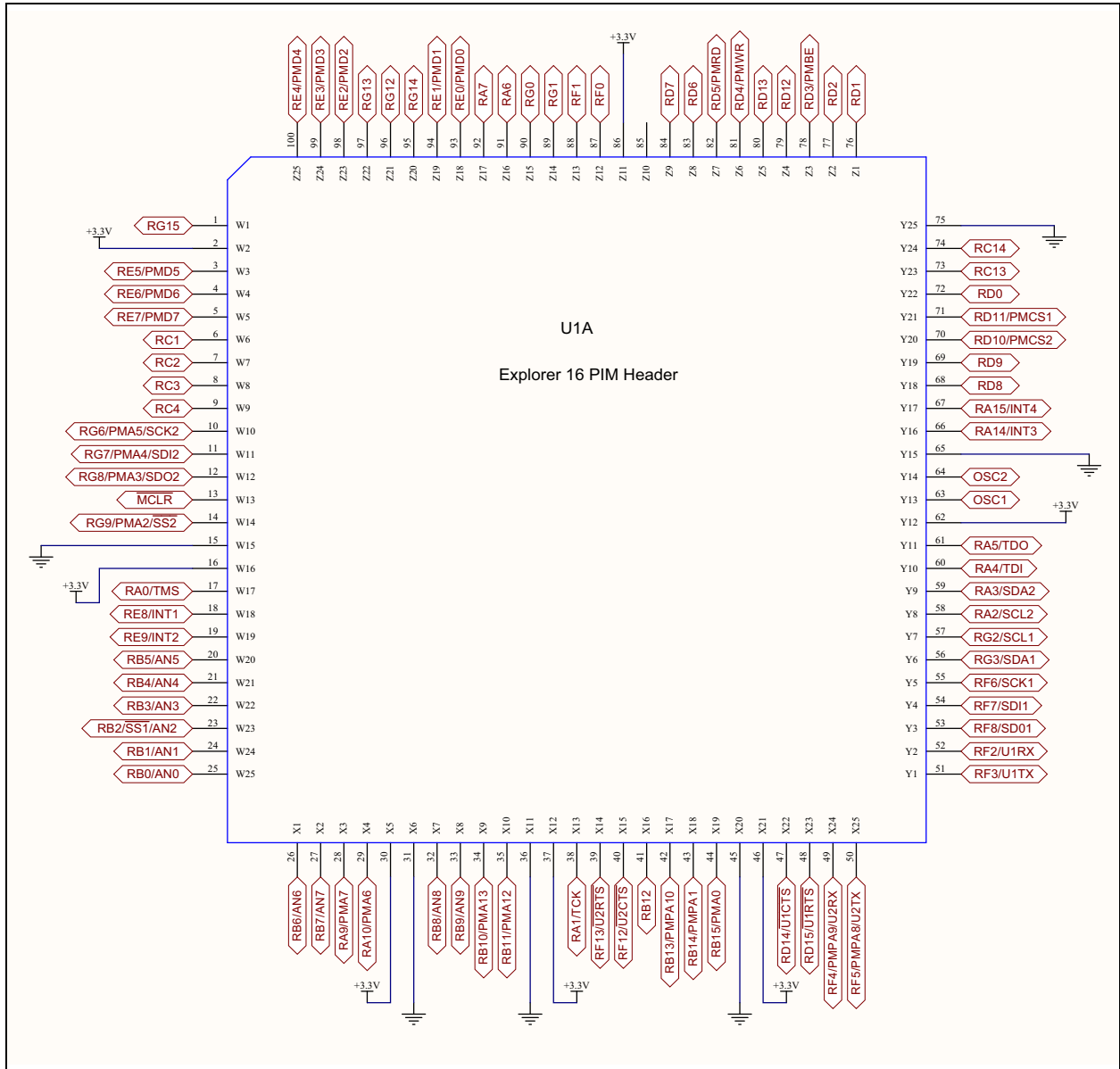
| Device Pin # | PIC32MX570F512L Functional Description | PIM Pin # | Explorer 16 Development Board Signal Name |
|--------------|----------------------------------------|-----------|-------------------------------------------|
| 74           | SOSCO/RPC14/T1CK/RC14                  | 74        | RC14                                      |
| 75           | Vss                                    | 75        | Vss                                       |
| 76           | AN24/RPD1/RD1                          | 76        | RD1                                       |
| 77           | AN25/RPD2/RD2                          | 77        | RD2                                       |
| 78           | AN26/C3IND/RPD3/RD3                    | 78        | RD3/PMBE                                  |
| 79           | AN40/RPD12/PMD12/RD12                  | 79        | RD12                                      |
| 80           | AN41/PMD13/RD13                        | 80        | RD13                                      |
| 81           | RPD4/PMWR/PSPWR/RD4                    | 81        | RD4/PMWR                                  |
| 82           | RPD5/PMRD/PSPRD/RD5                    | 82        | RD5/PMRD                                  |
| 83           | AN42/C3INC/PMD14/RD6                   | 83        | RD6                                       |
| 84           | AN43/C3INB/PMD15/RD7                   | 84        | RD7                                       |
| 85           | V <sub>CAP</sub>                       | 85        | No Connection                             |
| 86           | V <sub>DD</sub>                        | 86        | V <sub>DD</sub>                           |
| 87           | AN44/C3INA/RPF0/PMD11/RF0              | 87        | RF0                                       |
| 88           | AN45/RPF1/PMD10/RF1                    | 88        | RF1                                       |
| 89           | RPG1/PMD9/RG1                          | 54        | RF7/SDI1                                  |
| 90           | RPG0/PMD8/RG0                          | 55        | RF6/SCK1                                  |
| 91           | TRCLK/RA6                              | 91        | RA6                                       |
| 92           | TRD3/CTED8/RA7                         | 92        | RA7                                       |
| 93           | AN46/PMD0/RE0                          | 93        | RE0/PMD0                                  |
| 94           | AN47/PMD1/RE1                          | 94        | RE1/PMD1                                  |
| 95           | TRD2/RG14                              | 57        | RG2/SCL1                                  |
| 96           | TRD1/RG12                              | 96        | RG12                                      |
| 97           | TRD0/RG13                              | 97        | RG13                                      |
| 98           | AN20/PMD2/RE2                          | 98        | RE2/PMD2                                  |
| 99           | RPE3/CTPLS/PMD3/RE3                    | 99        | RE3/PMD3                                  |
| 100          | AN21/PMD4/RE4                          | 100       | RE4/PMD4                                  |
| —            | No Connection                          | 56        | RG3/SDA1                                  |

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FIGURE 1: 100-PIN DEVICE SCHEMATIC

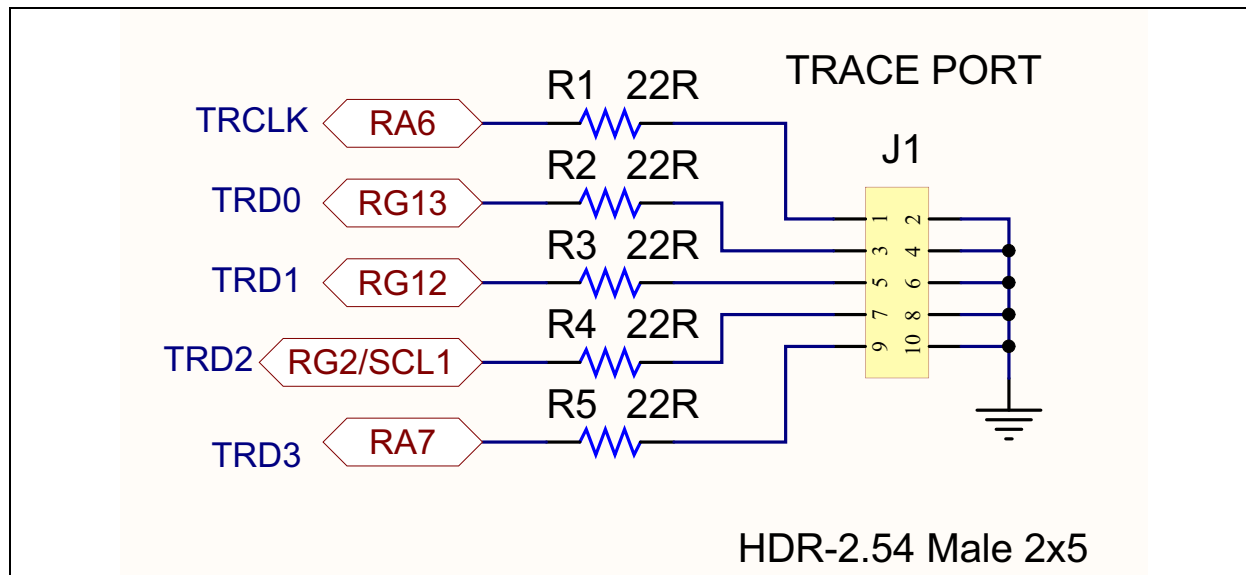


**FIGURE 2: 100-PIN PIM SOCKET SCHEMATIC**



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FIGURE 3: TRACE PORT SCHEMATIC



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