

dsPIC33FJ64GS610 100-pin TQFP to 100-pin Plug-In Module (PIM) Information Sheet

OVERVIEW

The dsPIC33FJ64GS610 PIM is designed to demonstrate the capabilities of the dsPIC33FJ64GS610 family of Switch Mode Power Supply (SMPS) devices using the Explorer 16 Development Board and the PICtail™ Plus Daughter Board.

The dsPIC33FJ64GS610 is a high-performance 16-bit Digital Signal Controller in a 100-pin TQFP package.

Table 1 shows the mapping between the 100-pin PIM interface board functions and the device pins.

TABLE 1: 100-PIN TQFP TO 100-PIN PIM PINOUT

| Device Pin Number | dsPIC33FJ64GS610 Pin | PIM Pin Number | Functional Description |
|-------------------|--------------------------------|----------------|------------------------|
| 1 | SYNCI1/RG15 | — | |
| 2 | VDD | 2 | |
| 3 | PWM3H/RE5 | 19 | PWM3H |
| 4 | PWM4L/RE6 | — | |
| 5 | PWM4H/RE7 | — | |
| 6 | AN16/T2CK/RC1 | 17 | LED3 |
| 7 | AN17/T3CK/RC2 | 38 | LED4 |
| 8 | AN18/T4CK/RC3 | 58 | LED5 |
| 9 | AN19/T5CK/RC4 | 59 | LED6 |
| 10 | SCK2/FLT12/CN8/RG6 | — | |
| 11 | SDI2/FLT11/CN9/RG7 | — | |
| 12 | SDO2/FLT10/CN10/RG8 | — | |
| 13 | MCLR | 13 | |
| 14 | SS2/FLT9/CN11/RG9 | — | |
| 15 | Vss | 15 | |
| 16 | VDD | 16 | |
| 17 | TMS/RA0 | — | |
| 18 | AN20/FLT13/INT1/RE8 | — | |
| 19 | AN21/FLT14/INT2/RE9 | — | |
| 20 | AN5/CMP3B/QEB1A/CN7/RB5 | 20 | Exp_ POT |
| 21 | AN4/CMP2C/CMP3A/QEA1A/CN6/RB4 | 66 | VIN_Feedback |
| 22 | AN3/CMP2B/INDX1A/CN5/RB3 | 57 | Voltage FB2 |
| 23 | AN2/CMP1C/CMP2A/SS1A/CN4/RB2 | 56 | Current Sense 2 |
| 24 | PGEC3/AN1/CMP1B/CN3/RB1 | 35 | Voltage FB1 |
| 25 | PGED3/AN0/CMP1A/CMP4C/CN2/RB0 | 34 | Current Sense 1 |
| 26 | PGEC1/AN6/CMP3C/CMP4A/OCFA/RB6 | 26 | PGEC1 |
| 27 | PGED1/AN7/CMP4B/RB7 | 27 | PGED1 |
| 28 | PWM8L/RA9 | — | |
| 29 | PWM8H/RA10 | — | |
| 30 | AVDD | 30 | |

dsPIC33FJ64GS610

TABLE 1: 100-PIN TQFP TO 100-PIN PIM PINOUT (CONTINUED)

| Device Pin Number | dsPIC33FJ64GS610 Pin | PIM Pin Number | Functional Description |
|-------------------|------------------------------|----------------|------------------------|
| 31 | AVss | 31 | |
| 32 | AN8/RB8 | 69 | Current Sense Boost |
| 33 | AN9/DACOUT/RB9 | 78 | Voltage Feedback Boost |
| 34 | AN10/RB10 | 68 | POT |
| 35 | AN11/EXTREF/RB11 | — | |
| 36 | Vss | 36 | |
| 37 | VDD | 37 | |
| 38 | TCK/RA1 | — | |
| 39 | U2RTS/RF13 | — | |
| 40 | U2CTS/RF12 | — | |
| 41 | AN12/CMP1D/RB12 | — | |
| 42 | AN13/CMP2D/RB13 | — | |
| 43 | AN14/CMP3D/SS1/RB14 | — | |
| 44 | AN15/CMP4D/OCFB/CN12/RB15 | 44 | LCD (R/S) |
| 45 | Vss | 45 | |
| 46 | VDD | 46 | |
| 47 | U1CTS/FLT15/SYNCI3/CN20/RD14 | — | |
| 48 | U1RTS/FLT16/SYNCI2/CN21/RD15 | — | |
| 49 | U2RX/FLT17/CN17/RF4 | — | |
| 50 | U2TX/FLT18/CN18/RF5 | — | |
| 51 | U1TX/RF3 | 50 | UART TX |
| 52 | U1RX/RF2 | 49 | UART RX |
| 53 | SDO1/RF8 | — | |
| 54 | SDI1/RF7 | — | |
| 55 | SCK1/INT0/RF6 | — | |
| 56 | SDA1/RG3 | 96 | SDA/RX |
| 57 | SCL1/RG2 | 95 | SCL/TX |
| 58 | SCL2/FLT22/RA2 | 83 | Switch S3 |
| 59 | SDA2/FLT21/RA3 | 84 | Switch S6 |
| 60 | TDI/RA4 | — | |
| 61 | TDO/RA5 | — | |
| 62 | VDD | 62 | |
| 63 | OSC1/CLKIN/RC12 | 63 | OSC1 |
| 64 | OSC2/REFCLKO/CLKO/RC15 | 64 | OSC2 |
| 65 | Vss | 65 | |
| 66 | INT3/FLT20/RA14 | — | |
| 67 | INT4/FLT19/SYNCI4/RA15 | — | |
| 68 | IC1/FLT1/RD8 | 100 | LCD (DB4) |
| 69 | IC2/FLT2/RD9 | 3 | LCD (DB5) |
| 70 | IC3/INDX1/FLT3/RD10 | 4 | LCD (DB6) |
| 71 | IC4/QEA1/FLT4/RD11 | 5 | LCD (DB7) |
| 72 | OC1/QEB1/FLT5/RD0 | 93 | LCD (DB0) |
| 73 | PGED2/SOSCI/CN1/RC13 | — | |
| 74 | PGEC2/SOSCO/T1CK/CN0/RC14 | — | |

dsPIC33FJ64GS610

TABLE 1: 100-PIN TQFP TO 100-PIN PIM PINOUT (CONTINUED)

| Device Pin Number | dsPIC33FJ64GS610 Pin | PIM Pin Number | Functional Description |
|-------------------|----------------------|----------------|------------------------|
| 75 | Vss | 75 | |
| 76 | OC2/SYNCO2/FLT6/RD1 | 94 | LCD (DB1) |
| 77 | OC3/FLT7/RD2 | 98 | LCD (DB2) |
| 78 | PWM7H/OC4/FLT8/RD3 | 99 | LCD (DB3) |
| 79 | QEA2/RD12 | — | |
| 80 | PWM7L/CN19/RD13 | — | |
| 81 | PWM6L/CN13/RD4 | 81 | LCD (E) |
| 82 | PWM6H/CN14/RD5 | 82 | LCD (R/W) |
| 83 | PWM5L/CN15/RD6 | — | |
| 84 | PWM5H/UPDN1/CN16/RD7 | — | |
| 85 | VCAP/VDDCORE | — | |
| 86 | VDD | 86 | |
| 87 | C1RX/RF0 | 1 | PMBAUX1 |
| 88 | C1TX/RF1 | 97 | PMBAUX2 |
| 89 | QEB2/RG1 | — | |
| 90 | INDX2/RG0 | — | |
| 91 | AN22/CN22/RA6 | — | |
| 92 | AN23/CN23/RA7 | — | |
| 93 | PWM1L/RE0 | 29 | PWM1L |
| 94 | PWM1H/RE1 | 28 | PWM1H |
| 95 | FLT23/RG14 | — | |
| 96 | PWM9H/RG12 | — | |
| 97 | PWM9L/RG13 | — | |
| 98 | PWM2L/RE2 | 25 | PWM2L |
| 99 | PWM2H/RE3 | 24 | PWM2H |
| 100 | PWM3L/RE4 | 22 | LOAD |

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FIGURE 1: 100-PIN DEVICE SCHEMATIC

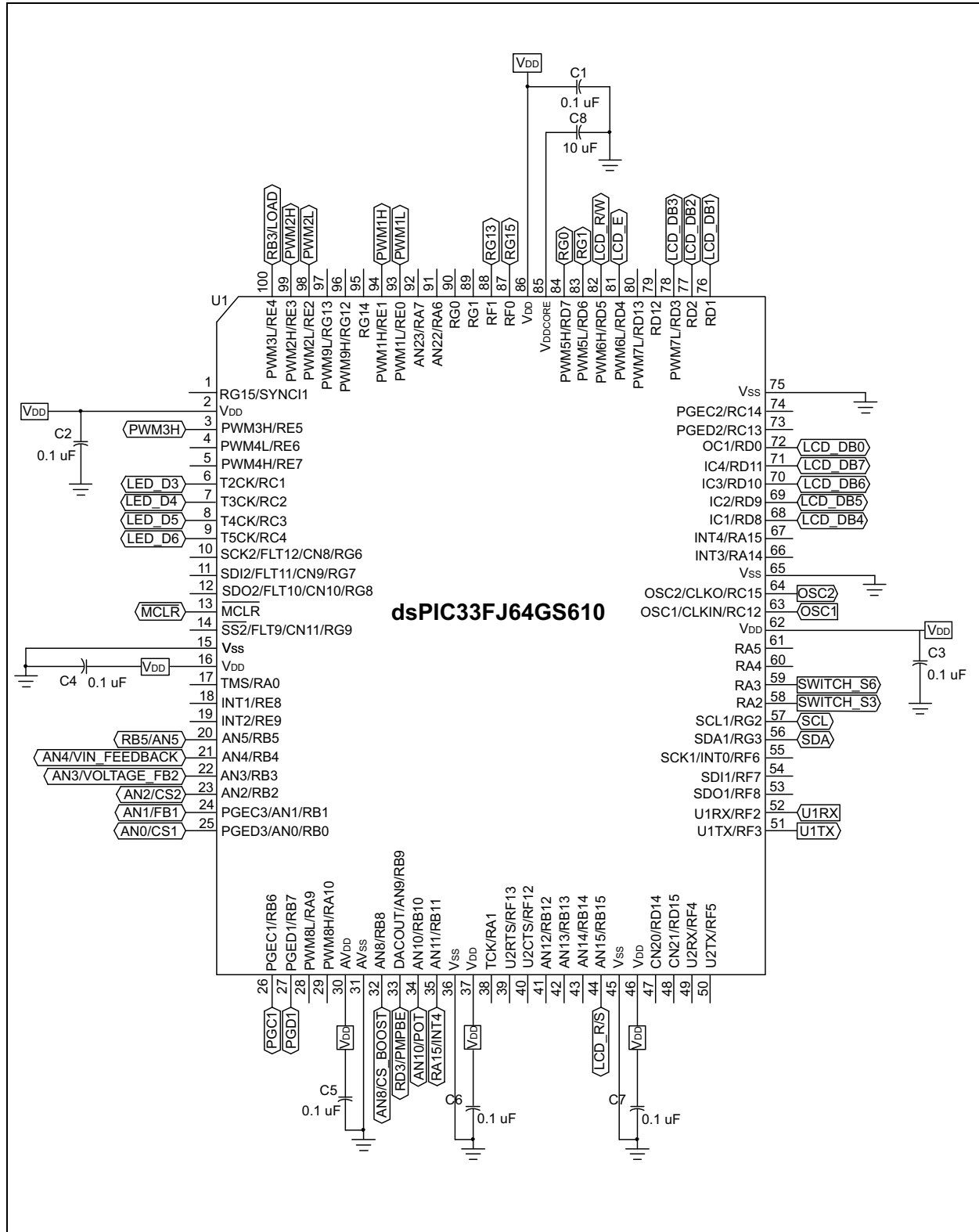
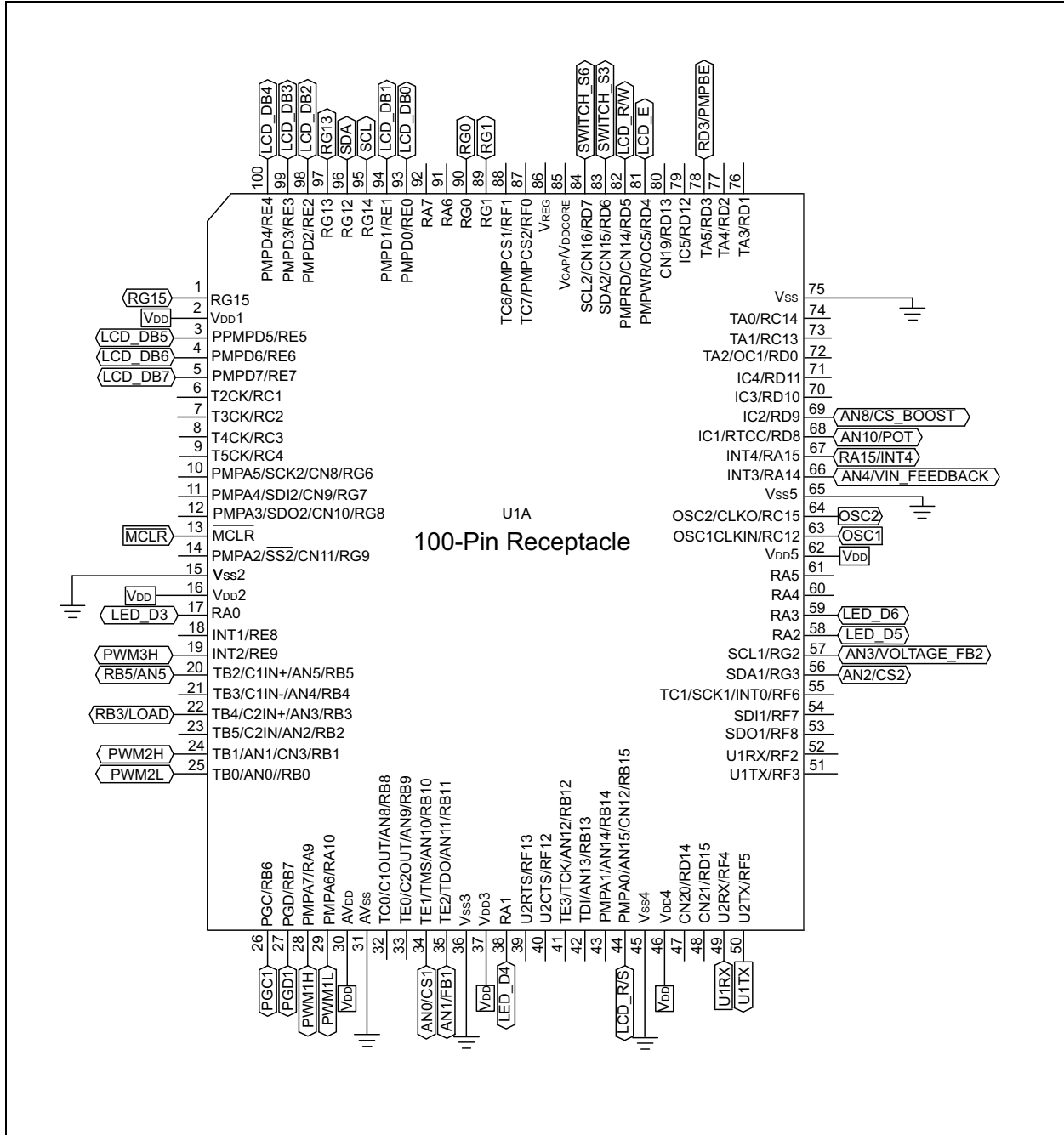


FIGURE 2: 100-PIN SOCKET SCHEMATIC



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