Understanding the TPS65010EVM Software

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ABSTRACT

The TPS65010 is an integrated, extremely versatile IC. It contains a Li-Ion battery charger, two switching regulators, two linear regulators, two LED drivers, a motor driver, 4 GPIOs, and an assortment of control and status bits. All outputs are configurable by an external processor via an I^2C bus. The TPS65010 contains sixteen 8-bit registers that both control the functions of the IC as well as report its status. To aid the user in evaluating this IC, TI provides an easy to use graphical based computer program that allows the user to easily interface to and control the TPS65010 EVM. This application note describes each function in the software and shows how each function is mapped to the TPS65010 registers.

Contents

List of Figures

Requirements

The basic PC requirements necessary to run the software are listed below:

- Windows 98, Windows 2000, or Windows XP
- Screen resolution: 800 x 600 or higher
- USB port

Setup

Installation of the software from the CD is simple. When the CD is inserted into the drive, the autorun program should start the program file Cdsetup.exe. This program is menu driven and gives the user various installation options, including the TPS65010EVM controller program and the USB driver installation program. The controller program should be installed first, followed by the driver installation. Follow the on-screen prompts and re-boot as required.

If the Cdsetup program does not start automatically, it can be run manually as long as the computer has a copy of the VB6 runtime library already installed.

If CDsetup does not run, the runtime library is probably not installed and the user must manually install the programs. This is done by starting SLVC020Vxxx.exe from the CD. After installation of the controller program, the user can install the drivers by running drivers\setup.exe on the CD. Additional information on the manual installation process is available on the CD in the ReadMe.txt file.

Follow the manual installation procedure to install the updated program files that have been downloaded from the web.

Basic Operation

When the software starts up, the first thing that happens is a check for the EV2300 USB-to-I^2C interface board. If the board is detected, then the software checks for the SLVP230 EVM board by attempting to read, or poll, register 12 (0Ch) and then register 13 (0Dh). If the program does not detect the EV2300 board or the EVM, the software asks if the user wants to continue to open the software program. When the software is opened without hardware, a label on the main screen reminds the user that no EVM is connected and all read and write commands to the EVM are ignored. Internally, the program operates normally allowing the user to setup register values and save them to the configuration registers.

If an EVM is detected, then the program reads all internal TPS65010 registers, sets up the main screen and register screen to match the current EVM configuration, and then enables the internal program timer to activate polling. The polling feature starts in the disable mode which means that only register 16 (10h) is read. The software polls the TPS65010 approximately every two seconds. When polling is enabled, registers 1, 2, and 16 are read every two seconds.

The program opens with the main control window in the default size. The main window has all of the major control functions for the TPS65010 in an easy-to-use graphical interface with dropdown selection (combo) boxes, radio buttons, slider controls, and pushbuttons to control the EVM configuration.

The internal register window (accessed from the toolbar via the *cash register* icon) displays the IC's internal registers in a more cryptic fashion showing the actual bit pattern for each internal register. An enlarged register at the bottom of the register window shows the register that the mouse is currently over. This enlarged register is only updated when the mouse travels over the desired register. Both windows are synchronized so the user can configure the EVM from either window with the updates showing on the other window. When using the internal register window, no updates to the main control window or to the EVM are performed until either the *Write* or *Write All* command buttons in the window are activated. The controls on the main control window also do not update the EVM until either the *Write* or *Write All* command button is activated. There is an exception to this with some of the enable command buttons. Some of these buttons instantaneously write to the EVM. These are explained in detail below.

The program can be configured for up to 4 different register configurations by setting the desired register values and clicking the configuration radio buttons at the bottom of the main control window. If the selected configuration does not currently have a stored setup, the program will ask if you want to save the current setting. If the selected configuration does have a stored setup, it will ask if you want to overwrite the current setup or load the current setup. The configuration buttons only save the configurations during the current operation of the program. To save the configurations for future use, click <File>, <Save> on the toolbar.

TPS65010 Main Control Window

The following sections provide a detailed description of each software function available in the TPS65010 controller program window along with the TPS65010 registers that the function accesses.

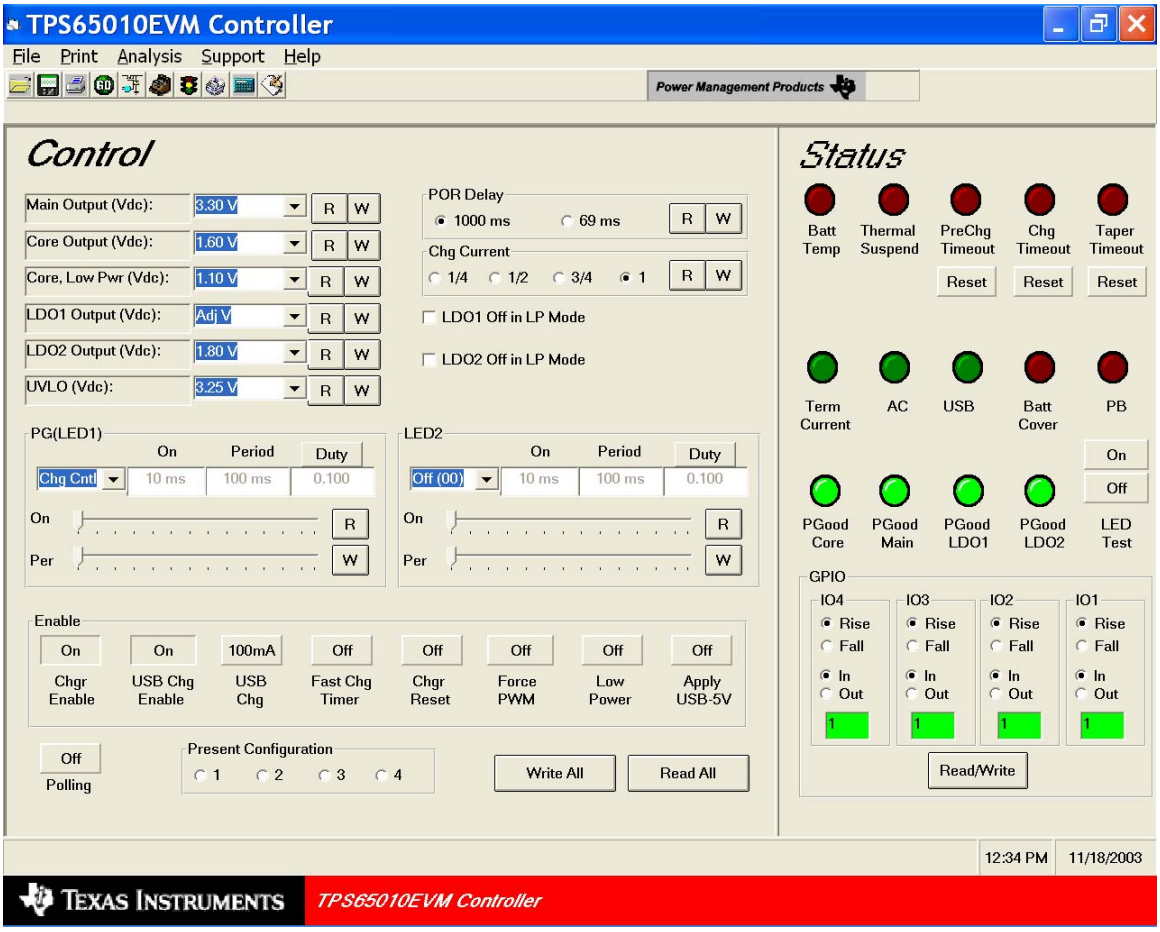

Figure 1. Main Control Window

Main Output (Vdc): Register 0Ch (VDCDC1) Bits B0, B1

This combo box sets the VMAIN output voltage by writing to register VDCDC1. When the software is started, it reads the VDCDC1 register and reports the contents in the combo box. After a write function, the EVM's VMAIN output voltage is set to the value in the combo box. After a read function, the combo box shows the voltage that corresponds to the bits in VDCDC1.

Core Output (Vdc): Register 0Dh (VDCDC2) Bits B4−B6

This combo box sets the VCORE output voltage in normal operation by writing to register VDCDC2. When the software is started, it reads the VDCDC2 register and reports the contents in the combo box. After a write function, the EVM's VCORE output voltage is set to the value in the combo box. After a read function, the combo box shows the voltage that corresponds to the bits in VDCDC2.

Core Low Pwr (Vdc): Register 0Dh (VDCDC2) Bits B2, B3

This combo box sets the VCORE output voltage when the EVM is in low power mode. This combo box writes to register VDCDC2. When the software is started, it reads the VDCDC2 register and reports the contents in the combo box. After a write function, the EVM's VCORE output voltage in low power mode is set to the value in the combo box. After a read function, the combo box shows the voltage that corresponds to the bits in VDCDC2.

LDO1 Output (Vdc): Register 0Eh (VREGS1) Bits B0, B1, B3

This combo box sets the LDO1 output voltage in normal operation by writing to register VREGS1. When the software is started, it reads the VREGS1 register and reports the contents in the combo box. After a write function, the EVM's LDO1 output voltage is set to the value in the combo box. After a read function, the combo box shows the voltage that corresponds to the bits in VREGS1. When an output voltage is selected in the combo box, the program writes a 1 into bit 3 (LDO1 enable) and writes the appropriate value into bits 0 and 1 to generate the desired output voltage. When the user selects *Off* in the combo box, the program writes a 0 into bit 3 and leaves bits 0 and 1 as they were.

LDO2 Output (Vdc): Register 0Eh (VREGS1) Bits B4, B5, B7

This combo box sets the LDO2 output voltage in normal operation by writing to register VREGS1. When the software is started, it reads the VREGS1 register and reports the contents in the combo box. After a write function, the EVM's LDO2 output voltage is set to the value in the combo box. After a read function, the combo box shows the voltage that corresponds to the bits in VREGS1. When an output voltage is selected in the combo box, the program writes a 1 into bit 7 (LDO2 enable) and writes the appropriate value into bits 0 and 1 to generate the desired output voltage. When the user selects *Off* in the combo box, the program writes a 0 into bit 3 and leaves bits 0 and 1 as they were.

UVLO (Vdc): Register 0Ch (VDCDC1) Bits B5, B6

This combo box sets the under voltage lockout trip point on the EVM by writing to register VDCDC1. When the software is started, it reads the VDCDC1 register and reports the contents in the combo box. After a write function, the EVM's UVLO trip point is set to the value in the combo box. After a read function, the combo box shows the EVM's UVLO trip point that corresponds to the bits in VDCDC1.

POR Delay: Register 07h (CHGCONFIG) Bit B7

This radial box sets the power-on reset delay time. A 0, the default value, programs a 1000-ms reset time while a 1 programs a 69-ms reset time.

Chg Current: Register 07h (CHGCONFIG) Bits B3, B4

These radial boxes set the actual EVM charge current as a ratio of the EVM's maximum possible charge current. The resistor connected to the ISET pin sets the maximum possible charge current, I_{max}. After a write function, these radial buttons program the appropriate bits in register CHGCONFIG. When the 1/4 radial button is set, bits B4B3 = 00, and the charge current is 1/4 I_{max}. When the 1/2 radial button is set, bits B4B3 = 01, and the charge current is 1/2 I_{max}. When the 3/4 radial button is set, bits B4B3 = 10, and the charge current is 1/4 I_{max}. When the 1 radial button is set, bits B4B3=11, and the charge current is I_{max}.

LDO1 Off in LP Mode: Register 0Eh (VREGS1) Bit B2

This check box determines the state of LDO1 in low power mode. When checked, LDO1 is off in low power mode. The software does not write to VREGS1 until either the user performs a main window *write all* function or a main window LDO1 output *write* function.

LDO2 Off in LP Mode: Register 0Eh (VREGS1) Bit B6

This check box determines the state of LDO2 in low power mode. When checked, LDO2 is off in low power mode. The software does not write to VREGS1 until either the user performs a main window *write all* function or a main window LDO2 output *write* function.

PG(LED1): Register 08h (LED1_ON) Bits B0−B7 and Register 09h (LED1_PER) Bits B0−B7

The combo box determines whether the $\overline{PG}$ output is on, off, blinking, or controlled by the state of the charger. When the software is started, it reads registers LED1_ON bit 7 and LED1_PER bit 7 and reports the contents in the combo box. After a write function, the software programs these two registers so the $\overline{PG}$ output is controlled by the function chosen in the combo box. When *Blink* is selected in the combo box, the program unlocks the On and Per sliding bar. The On sliding bar allows the user to select an on time between 10 ms and 128 ms. The software writes the appropriate code to register LED1_ON bits 0−6. The Per sliding bar allows the user to select a period between 100 ms and 12,800 ms. The software writes the appropriate code to register LED1_PER bits 0−6. If the on time selected is greater than the period, the software automatically increases the period to its next higher setting. The *On* and the *Period* windows reflect the number chosen from the sliding bar. The software takes the information from the two sliding bars and calculates both the duty cycle and the rate (Hz). The user may select the desired format to display the information.

LED2: Register 0Ah (LED2_ON) Bits B0−B7 and Register 0Bh (LED2_PER) Bits B0−B7

The combo box determines whether the LED2 output is on, off, or blinking. When the software is started, it reads registers LED2_ON bit 7 and LED2_PER bit 7 and reports the contents in the combo box. After a write function, the software programs these two registers so the LED2 output is controlled by the function chosen in the combo box. When *Blink* is selected in the combo box, the program unlocks the On and Per sliding bar. The On sliding bar allows the user to select an on time between 10 ms and 128 ms. The software writes the appropriate code to register LED2_ON bits 0−6. The Per sliding bar allows the user to select a period between 100 ms and 12,800 ms. The software writes the appropriate code to register LED2_PER bits 0−6. If the on time selected is greater than the period, the software automatically increases the period to its next higher setting. The *On* and the *Period* windows reflect the number chosen from the sliding bar. The software takes the information from the two sliding bars and calculates both the duty cycle and the rate (Hz). The user may select the desired format to display the information.

Chgr Enable: Register 07h (CHGCONFIG) Bit B0

This button enables the TPS65010 charger. When *On*, the software writes a 1 into register CHGCONFIG bit B0 which allows the charger to charge the battery when a valid input voltage is present on either of the two charger inputs. When *Off*, the software writes a 0 to the register and all charging is disabled. When the software starts and an EVM is present, the default value is *On*. When the software starts and an EVM is not present, the default value is *Off*. When the user changes the state of this button, the software automatically writes the new value to the register.

USB Chg Enable: Register 07h (CHGCONFIG) Bit B1

This button enables the TPS65010 USB charger. When *On*, the software writes a 1 into register CHGCONFIG bit B1 which allows the USB charger to charge the battery when a valid input voltage is present. When *Off*, the software writes a 0 to the register and USB charging is disabled. When the software starts and an EVM is present, the default value is *On*. When the software starts and an EVM is not present, the default value is *Off*. When the user changes the state of this button, the software automatically writes the new value to the register.

USB Chg: Register 07h (CHGCONFIG) Bit B2

This button allows the user to switch between 100-mA and 500-mA USB charging. When *100mA*, the software writes a 0 into register CHGCONFIG bit B2, which sets the maximum USB charge current to 100 mA. When *500mA*, the software writes a 1 to the register and sets the maximum USB charge current to 500 mA. When the software starts, the default value is 100 mA. When the user changes the state of this button, the software automatically writes the new value to the register.

Fast Chg Timer: Register 07h (CHGCONFIG) Bit B5

This button allows the user to enable or disable the fast charger timer. When *Off*, the software writes a 0 to register CHGCONFIG bit 5 and the TPS65010 fast charger timer is disabled so there is no charging time limit. When *On*, the software writes a 1 to register CHGCONFIG bit 5 and the TPS65010 fast charger timer is enabled. If the charging taper current is not reached before the timer times out, the TPS65010 disables the charger and reports a fault by writing a 1 in register CHGSTATUS bit 2. When the user changes the state of this button, the software automatically writes the new value to the register.

Chgr Reset: Register 07h (CHGCONFIG) Bit B6

This button allows the user to reset all charger timers and restart the charging algorithm. The default value is 0. When this button is pressed, the software immediately writes a 1 and then a 0 into register CHGCONFIG bit 6.

Force PWM: Register 0Ch (VDCDC1) Bit B7

This button allows the user to switch between forced PWM mode and PWM/PFM mode. When *Off*, the software writes a 0 into register VDCDC1 bit 7. When *On*, the software writes a 1 into the register. When the user changes the state of this button, the software automatically writes the new value to the register.

Low Power: Register 0Ch (VDCDC1) Bit B3

This button allows the user to either enable or disable the LOW_PWR input to the TPS65010. When *On*, the software writes a 1 into register VDCDC1 bit 3 and allows low power mode. When *Off*, the software writes a 0 into the register and disables inputs from the LOW_PWR pin. When the user changes the state of this button, the software automatically writes the new value to the register.

Apply USB−5V:

This button allows the user to apply the USB 5-V bus from the computer to the EVM. When *Off*, the USB cable carries the 5-V USB bus from the computer to the EV2300 (USB to I^2C interface board), but this voltage is not allowed to reach the EVM. When *On*, the software sends a signal to the EV2300, which allows the 5 V to reach the EVM. Toggling this button does not read or write to any TPS65010 registers. The user can use the USB 5 V to charge the battery or power the system connected to the EVM. Before the USB 5-V bus is useable on the EVM, the user must install a 0-Ω resistor in R6 on the TPS65010 EVM.

Polling:

This button determines which registers the software accesses during its standard 2 second polling period. When *Off*, the software only accesses register 16 (10h). When *On*, the software accesses registers 1 (01h), 2 (02h), and 16 (10h). When *Off*, the software status buttons are not continuously synchronized to the TPS65010 registers, therefore, any changes to the state of the EVM do not show up in the software windows. When polling is enabled, the software windows are continuously updated every 2 seconds. If the EVM asserts the $\overline{\text{INT}}$ signal when polling is on, the $\overline{\text{INT}}$ signal immediately goes low, but the change that created the interrupt does not show up in the software window until the next polling period. Since this next polling period reads registers CHGSTATUS and REGSTATUS, the $\overline{\text{INT}}$ signal is deasserted (goes high) after this polling cycle. Because of this, a fault condition can come and go without being noticed by the user. Turning polling off allows the user to detect the $\overline{\text{INT}}$ signal and then perform a manual read function to determine the cause of the interrupt signal. The user has two options for monitoring the $\overline{\text{INT}}$ signal. The first is to monitor it directly with a multimeter or scope. The second is to connect the $\overline{\text{INT}}$ signal to a GPIO pin that has been programmed as an input. With polling turned off, the software still polls the GPIO inputs (register 16 or 10h), so the software shows the state of the $\overline{\text{INT}}$ signal on the GPIO input. Polling is immediately turned on or off when the Polling button is pressed. When no EVM is present, the polling timer is disabled and no registers are polled.

Present Configuration:

Up to four register configurations can be temporarily saved in internal configuration registers for use during the current program run. Each configuration can be saved and recalled by selecting the desired configuration radio button. To permanently save all current configurations, click <File>, <Save> on the toolbar.

Batt Temp: Register 01h (CHGSTATUS) Bit B0

This status light shows the status of the battery temperature as measured by the EVM. When the battery temperature is within the allowed range, register CHGSTATUS bit 0 contains a 0 and this light is off. When the battery temperature is outside the allowed range, the register contains a 1 and all charging is suspended.

Thermal Suspend: Register 01h (CHGSTATUS) Bit B5

This status light shows whether or not charging is suspended due to excessive die temperature of the charger. Under normal operation, register CHGSTATUS bit 5 contains a 0 and this light is off. When the TPS65010 suspends charging due to excessive temperature, the register contains a 1 and charging is momentarily suspended until the die cools down.

PreChg Timeout: Register 01h (CHGSTATUS) Bit B1

This status light shows whether or not charging is suspended because the precharge timeout timer has expired. Under normal operation, register CHGSTATUS bit 1 contains a 0 and this light is off. When the TPS65010 suspends charging because the precharge timer has expired, the register contains a 1 and the charge current is reduced to the $I_{(detect)}$ current. A 1 in this register typically indicates that the battery is damaged or that the load current is too large to allow the battery to be charged above the preconditioning voltage.

PreChg Timeout Reset: Register 01h (CHGSTATUS) Bit B1

This button writes a 0 into register CHGSTATUS bit 1 to clear a precharge timeout condition. When this button is pressed, the software immediately writes a 0 to the register, the PreChg Timeout status light is turned off and the timer is reset.

Chg Timeout: Register 01h (CHGSTATUS) Bit B2

This status light shows whether or not charging is terminated because the charge timeout timer has expired. Under normal operation, register CHGSTATUS bit 2 contains a 0 and this light is off. When the TPS65010 terminates charging because the charge timer has expired, the register contains a 1 and the charge current is reduced to the $I_{(detect)}$ current. A 1 in this register typically indicates that the battery is damaged or that the load current is too large to allow the battery to be fully charged in the allowed amount of time.

Chg Timeout Reset: Register 01h (CHGSTATUS) Bit B2

This button writes a 0 into register CHGSTATUS bit 2 to clear a charge timeout condition. When this button is pressed, the software immediately writes a 0 to the register, the Chg Timeout status light is turned off and the timer is reset.

Taper Timeout: Register 01h (CHGSTATUS) Bit B3

This status light shows whether or not charging has been terminated because the taper timeout timer has expired. Under normal operation, register CHGSTATUS bit 3 contains a 0 and this light is off. When the TPS65010 terminates charging because the taper timer has expired, the register contains a 1 and the charge current is reduced to the $I_{(detect)}$ current. A 1 in this register typically indicates that the battery is fully charged.

Taper Timeout Reset: Register 01h (CHGSTATUS) Bit B3

This button writes a 0 into register CHGSTATUS bit 3 to clear a taper timeout condition. When this button is pressed, the software immediately writes a 0 to the register, the Taper Timeout status light is turned off, and the timer is reset.

Term Current: Register 01h (CHGSTATUS) Bit B4

This status light shows whether or not charging has been terminated because the charging current has dropped below the $I_{(term)}$ current. Under normal operation, register CHGSTATUS bit 4 contains a 0 and this light is off. When the TPS65010 terminates charging because the charging current drops below the $I_{(term)}$ current, the register contains a 1 and the charge current is reduced to the $I_{(detect)}$ current. A 1 in this register typically indicates that the battery is fully charged or that the battery has been removed.

AC: Register 01h (CHGSTATUS) Bit B6

This status light shows whether or not a valid AC charging voltage is applied to the TPS65010. When a valid voltage is present, register CHGSTATUS bit 6 contains a 1 and the light is on. When a valid voltage is not present, the register contains a 0 and the light is off.

USB: Register 01h (CHGSTATUS) Bit B7

This status light shows whether or not a valid USB charging voltage is applied to the TPS65010. When a valid voltage is present, register CHGSTATUS bit 7 contains a 1 and the light is on. When a valid voltage is not present, the register contains a 0 and the light is off.

Batt Cover: Register 02h (REGSTATUS) Bit B6

This status light shows whether or not the BATT_COVER pin is pulled high or low. When BATT_COVER is pulled high, register REGSTATUS bit 6 is 0 and the light is off. When it is pulled low, the register contains a 1 and the light is on.

PB: Register 02h (REGSTATUS) Bit B7

This status light shows whether or not the PB_ONOFF pin has been pulled high. When PB_ONOFF has not been pulled high, register REGSTATUS bit 7 is 0 and the light is off. When it is pulled high, the register contains a 1 and the light is on.

PGood Core: Register 02h (REGSTATUS) Bit B0

This status light shows whether or not the VCORE output voltage is above the power good threshold. When the output is above the threshold, register REGSTATUS bit 0 is 0 and the light is on. When the output is below the threshold, the register contains a 1 and the light is off.

PGood Main: Register 02h (REGSTATUS) Bit B1

This status light shows whether or not the VMAIN output voltage is above the power good threshold. When the output is above the threshold, register REGSTATUS bit 1 is 0 and the light is on. When the output is below the threshold, the register contains a 1 and the light is off.

PGood LDO1: Register 02h (REGSTATUS) Bit B2

This status light shows whether or not the LDO1 output voltage is above the power good threshold. When the output is above the threshold, register REGSTATUS bit 2 is 0 and the light is on. When the output is below the threshold, the register contains a 1 and the light is off.

PGood LDO2: Register 02h (REGSTATUS) Bit B3

This status light shows whether or not the LDO2 output voltage is above the power good threshold. When the output is above the threshold, register REGSTATUS bit 3 is 0 and the light is on. When the output is below the threshold, the register contains a 1 and the light is off.

LED Test:

These pushbuttons allow the user to turn all status lights on or off. When pressed, all lights immediately turn on or off. All lights return to their correct status when the button is no longer pressed. These buttons have no effect on any registers.

GPIO Rise: Register 0Fh (MASK3) Bits B4−B7

These radial buttons set the GPIO inputs to generate an interrupt signal on a rising edge. GPIOs 1, 2, 3, and 4 correspond to register MASK3 bits 4, 5, 6, and 7. When this radial button is set, the software writes a 1 into the register. The software writes the new value to the EVM during the next polling cycle.

GPIO Fall: Register 0Fh (MASK3) Bits B4−B7

These radial buttons set the GPIO inputs to generate an interrupt signal on a falling edge. GPIOs 1, 2, 3, and 4 correspond to register MASK3 bits 4, 5, 6, and 7. When this radial button is set, the software writes a 0 into the register. The software writes the new value to the EVM during the next polling cycle.

GPIO In: Register 10h (DEFGPIO) Bits B4−B7

These radial buttons set the GPIOs to be inputs. GPIOs 1, 2, 3, and 4 correspond to register DEFGPIO bits 4, 5, 6, and 7. When this radial button is set, the software writes a 0 into the register. The software writes the new value to the EVM during the next polling cycle.

GPIO Out: Register 10h (DEFGPIO) Bits B4−B7

These radial buttons set the GPIOs to be outputs. GPIOs 1, 2, 3, and 4 correspond to register DEFGPIO bits 4, 5, 6, and 7. When this radial button is set, the software writes a 1 into the register. The software writes the new value to the EVM during the next polling cycle.

GPIO Input Window: Register 10h (DEFGPIO) Bits B0−B4

When a GPIO is programmed as an output, these windows allow the user to program the GPIO output voltage. GPIOs 1, 2, 3, and 4 correspond to register DEFGPIO bits 4, 5, 6, and 7. When the user writes a 1 into the input box, the software writes a 1 into the appropriate bit. When the user writes a 0 into the input box, the software writes a 0 into the appropriate bit. The software writes the contents of the input boxes to the EVM during the next polling cycle. If the GPIO is programmed as an input, the software ignores any user initiated changes to the box and updates the box with the correct value during the next polling cycle. Note that a 1 in the register programs the GPIO as a logic 0 and that a 0 in the register programs the GPIO as a logic 1.

TPS65010 Internal Registers Window

The following sections provide a detailed description of each software function available in the TPS65010 Internal Registers Window.

Figure 2. Internal Registers Window

Individual Register Read Buttons

Each individual Read button allows the user to read the contents of a specific register. When the read button is pressed, the software immediately reads the contents of that register in the TPS65010 and displays the contents. Any changes to the registers are immediately reflected in both the Main Program Window and the Register Program Window.

Individual Register Write Buttons

Each individual Write button allows the user to write the contents of a specific register. When the user changes the contents of a register, the Write button turns red to indicate that the individual register contents are not synchronized with the TPS65010 register contents. When the write button is pressed, the software immediately writes the contents of the register, as shown the program, to the TPS65010. Both the Main Program Window and the Register Program Window are automatically updated.

Individual Register Display

The individual register display provides two functions. The first is to display the contents of each bit in the TPS65010 registers. This provides an easy means of troubleshooting the EVM when it's integrated in a system. The second function is to allow the user to program the registers and write the contents to the EVM. When the user changes the contents of a register, the Write button turns red to indicate that the individual register contents are not synchronized with the TPS65010 register contents.

Read Out in Hex/Decimal

These radial buttons allow the user to choose how the numerical content of the registers is displayed. The user may choose between base 10 (decimal) or base 16 (hexadecimal).

Read All Button

When pressed, the Read All button immediately reads all TPS65010 register contents and displays them in the program windows.

Write All Button

When pressed, the Write All button immediately writes the contents of all sixteen of the individual registers to the TPS65010. Both program windows are immediately updated.

Register Detail Window

This window provides the user with greater detail of the register under the mouse cursor. It shows the name of each individual bit as defined in the datasheet. The user can not modify the contents of this register; they are always mapped to the register that was under the mouse cursor last.

References

1. *TPS65010 Data sheet* (SLVS149)
2. *TPS65010EVM−230 Users Guide (SLVU095A)*

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