



Test Procedure for the ADT7481EBZEV Evaluation Board

OBJECTIVE

The evaluation board allows all the input and output functions of the ADT7481 to be demonstrated. The software allows control and monitoring of the ADT7481's internal registers. Using the evaluation board and its accompanying software, the ADT7481 can be interfaced to any personal computer running Windows XP or Windows 2000 via the USB port.

EVALUATION BOARD HARDWARE

The evaluation board contains:

- An ADT7481 device
- Remote transistors for temperature sensing
- Indicator LEDs
- USB interface circuitry (The ADT7481 device is powered from the USB port)

QUICK GUIDE TO SETTING UP AND USING THE ADT7481 EVALUATION KIT

- Install software before connecting the ADT7481 evaluation board to the USB port. Software is available on the enclosed CD.
- The ADT7481 evaluation board can be powered from the USB port.
- Open the ADT7481 software Start>All Programs> ON Semiconductor> ADT7481 Evaluation Software> ADT7481 Evaluation Software. The ADT7481 software, once started, opens a graphical window automatically.

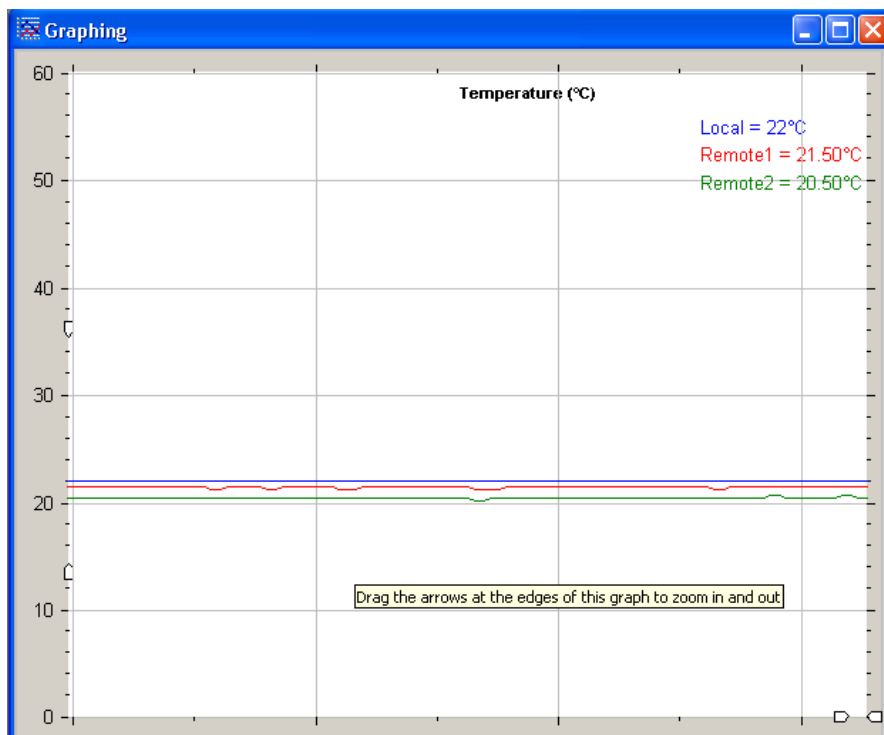



Figure 1. Graph Window

- The graphing window displays the temperature of the local and remote sensors.
- Limits for the Local and Remote temperature channels can be adjusted using the slider bars in the 'Limits and Interrupts' window. It can be opened by clicking the  icon just below the main toolbar or by clicking View>Limits, Interrupts. The upper limit (blue) and lower limit (grey) are adjusted by clicking and dragging the slider



up or down. The THERM limit (red) can be adjusted in the same manner as the upper and lower limits. The Status will change from green to red on an out of limit event for the corresponding channel.

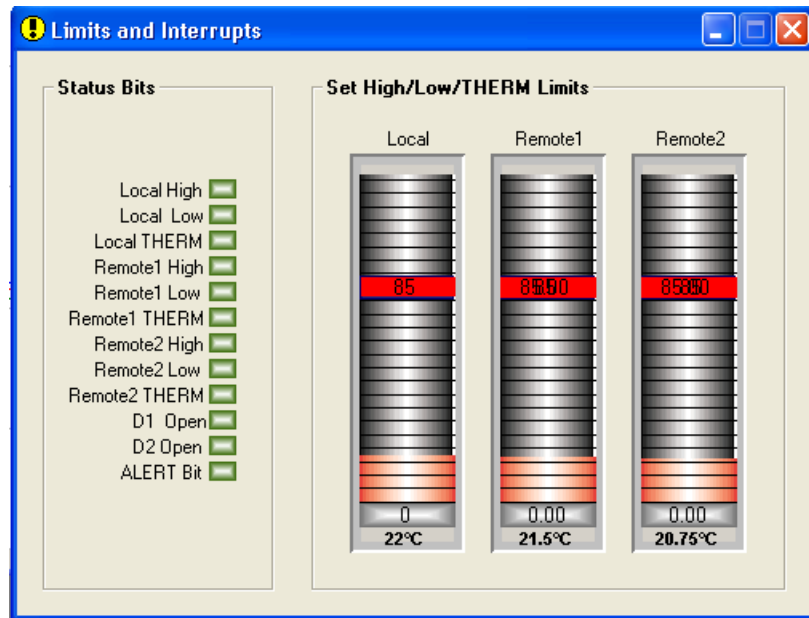


Figure 2. Limits and Interrupts

- One pin on the ADT7481 shares functionality (pin 8 – ALERT/THERM2) To change the function of this pin you need to open the Eval Board Configuration window. On the main toolbar click Configuration>General Configuration or by clicking the 'Configuration' button at the bottom of the graphing window.

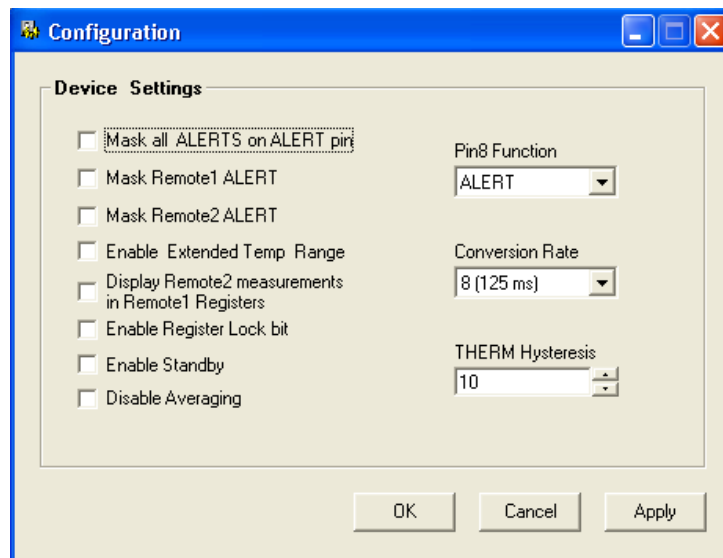


Figure 3. Configuration Window

- From the configuration window you can also change the conversion rate, change the temperature measurement range, change the THERM hysteresis level as well as masking ALERTs etc.
- The ADT7481 registers can be accessed via the Register Map. This can be opened by clicking View>Register Map.

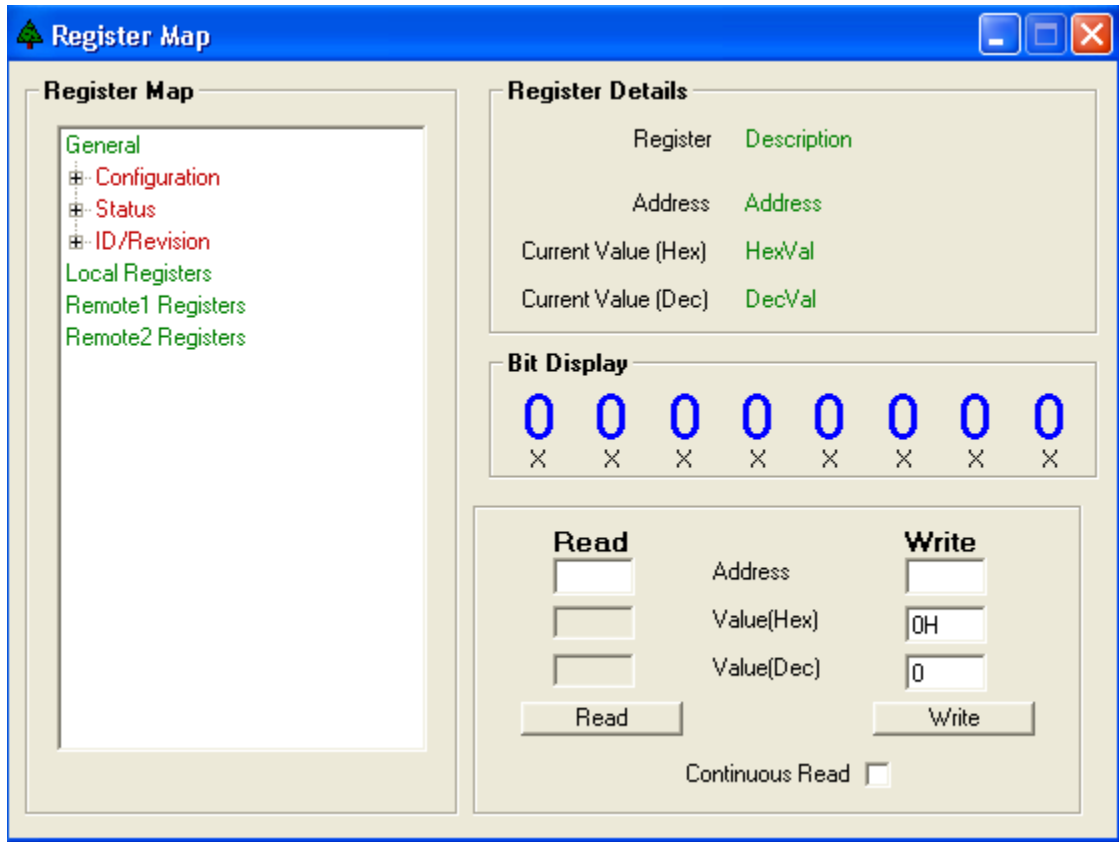


Figure 4. Register Map

- From this window the status registers can be checked (show what alerts have occurred), adjust the temperature limits, and check the manufacturer ID etc.

For more information on the ADT7481 device, see the product datasheet.