

# ADAM-4019 Calibration Procedures

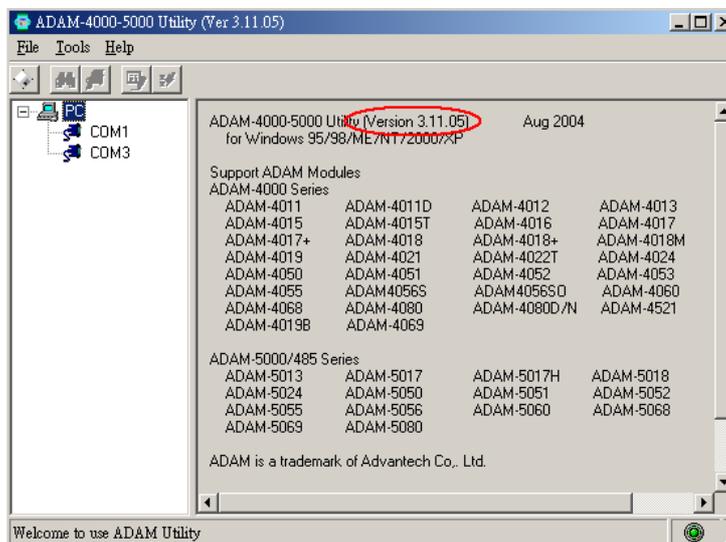
ADAM-4019 is 8-channel universal analog input module. It features 8 analog input channels with individual input range includes  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5V$ ,  $\pm 1V$ ,  $\pm 500mV$ ,  $\pm 100mV$ ,  $\pm 20mA$ , Thermocouple Type J, K, T, E, R, S and B. The calibration procedures will be demonstrated as below by following range settings.

CH0:  $\pm 10V$

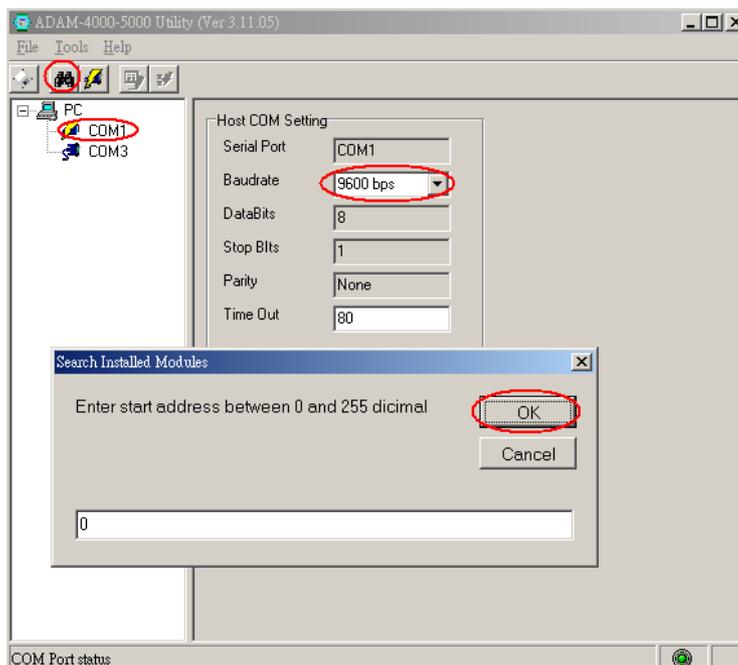
CH1:  $\pm 500mV$

CH2~CH7: K Type

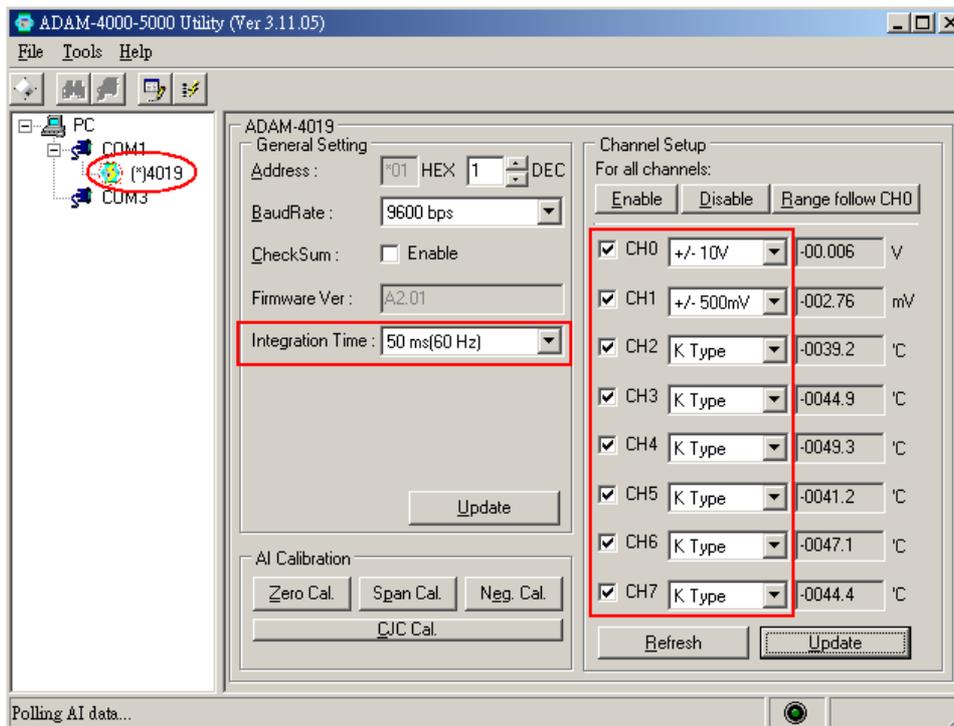
1. Short power GND pin to INIT\* pin. Power up the ADAM-4019 module. Run ADAM-4000-5000 Utility Version 3.11.05. Please note only ADAM-4000-5000 Utility Version 3.11.05 or later version support ADAM-4019 calibration function.



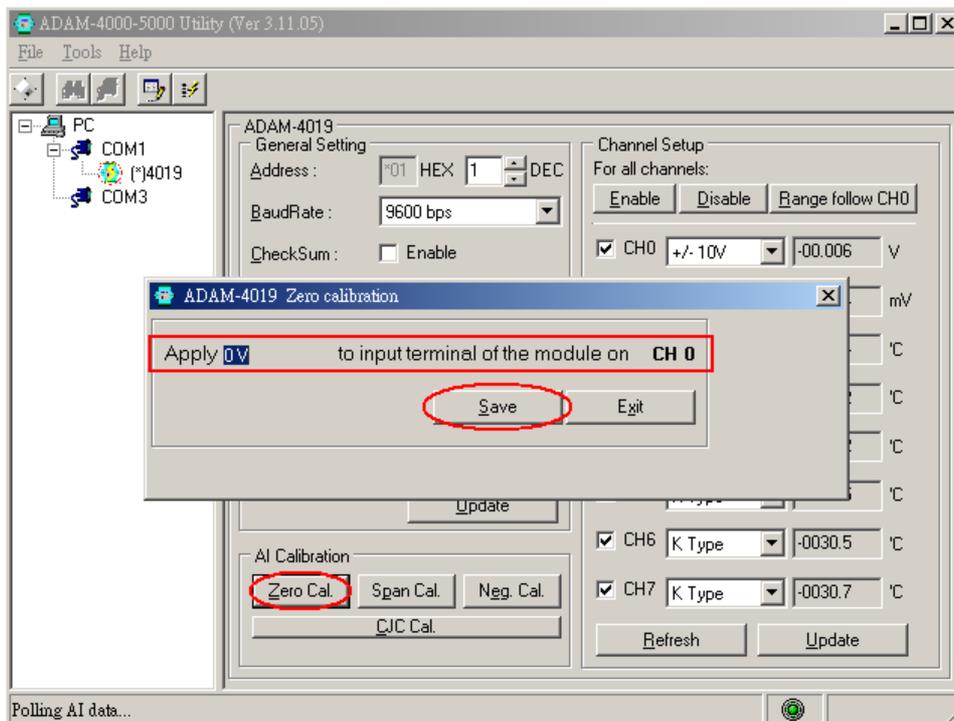
2. Click "COM1", select "9600 bps", click search icon and start to search the module.



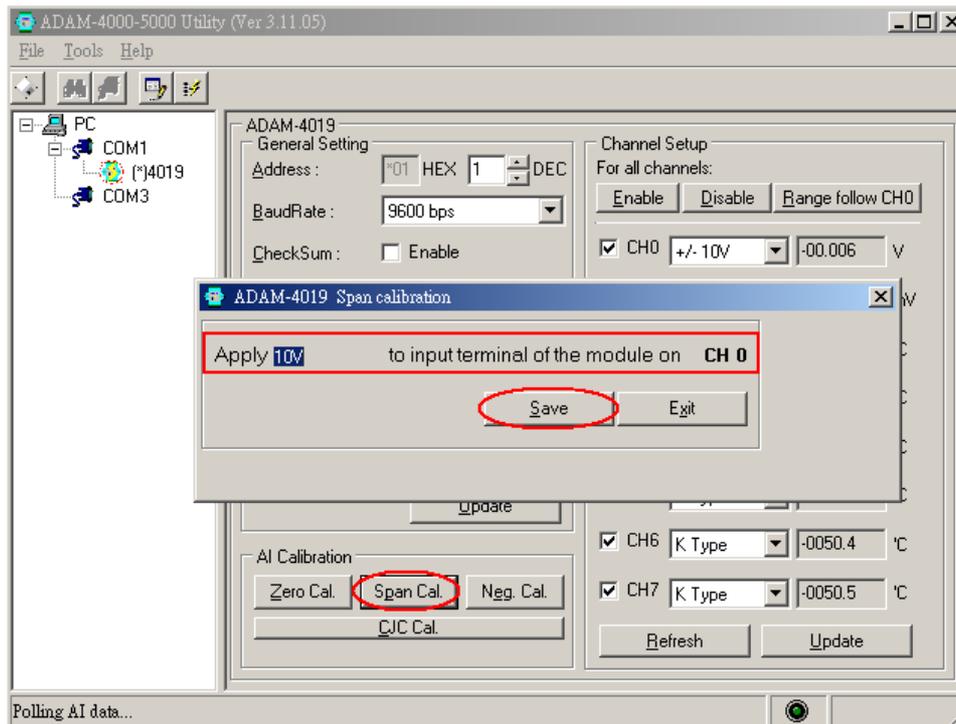
- Click “(\*)4019”. Select the integration time for “50 ms(60Hz)” in accordance with 110V/60Hz AC Power Input. In this example, we will configure CH0 as  $\pm 10V$ , CH1 as  $\pm 500mV$  and CH2~CH7 as K Type Thermocouple.



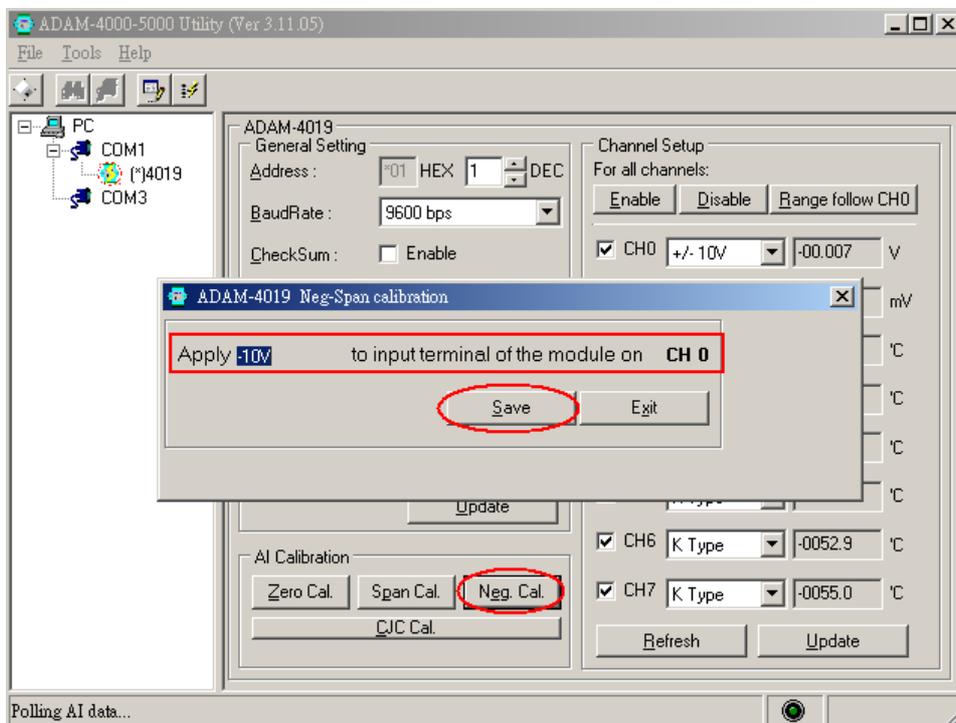
- Click “Zero Cal.” for zero calibration. Apply 0V to CH0 input terminals and then click “Save”.



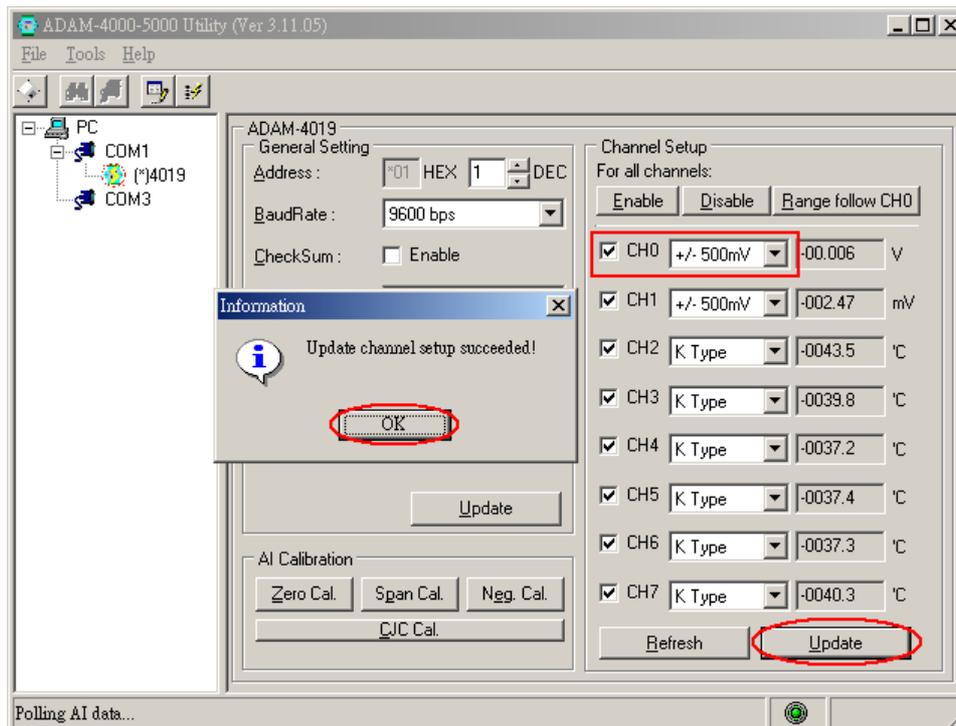
- Click "Span Cal." for positive span calibration. Apply 10V to CH0 input terminals and then click "Save".



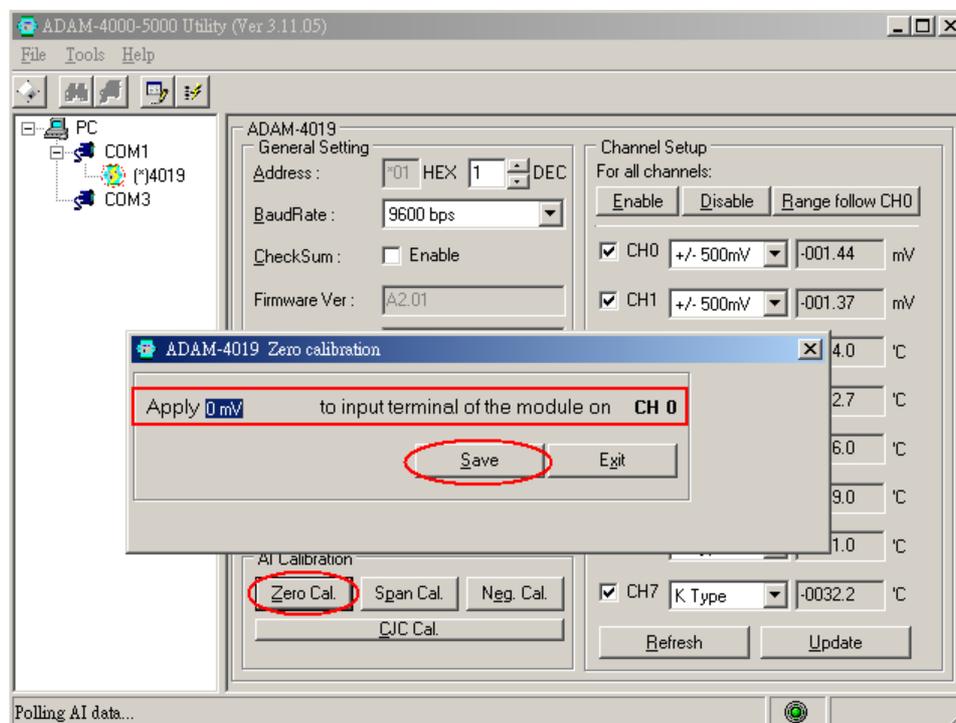
- Click "Neg. Cal." for negative span calibration. Apply -10V to CH0 input terminals and then click "Save".



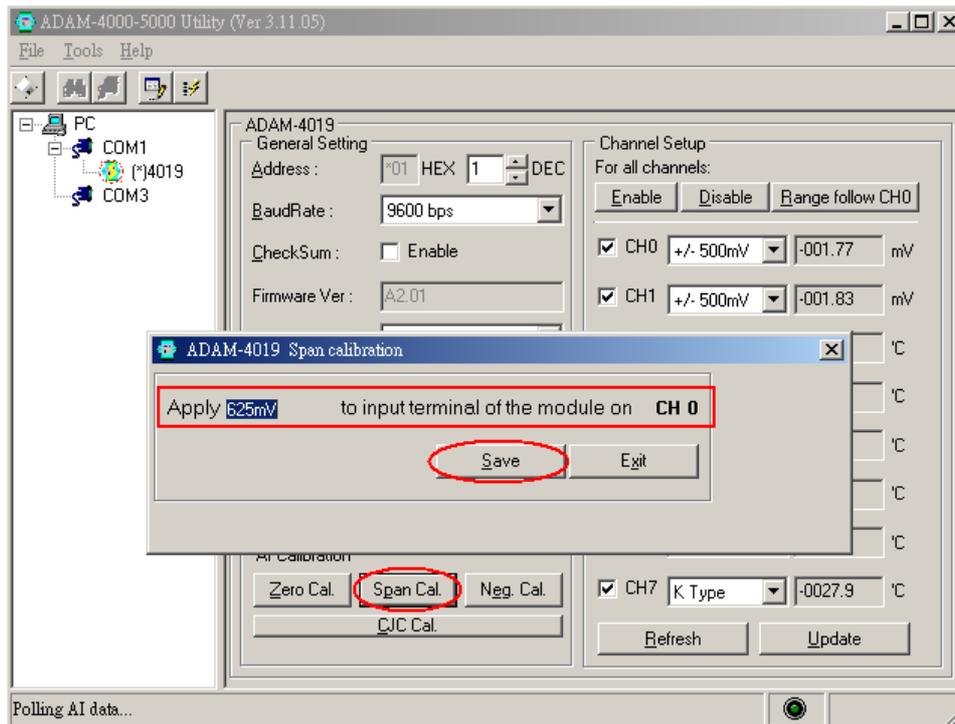
- As all of the input ranges need to be calibrated via CH0 input terminals, it is necessary to change the CH0 input range as  $\pm 500\text{mV}$ . Please select  $\pm 500\text{mV}$  and then click "Update".



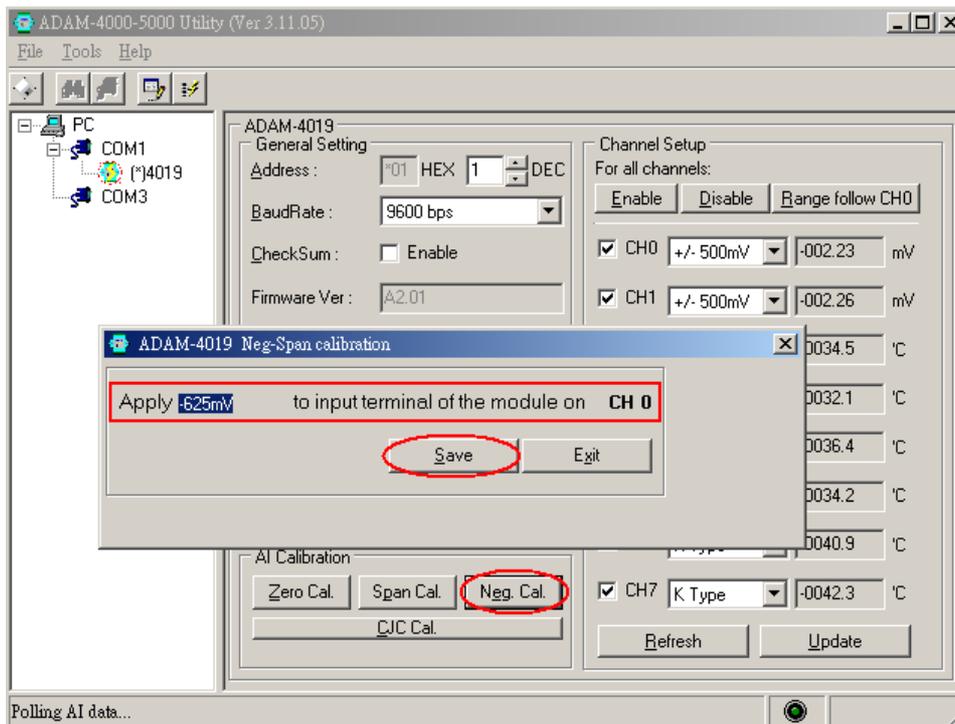
- Click "Zero Cal." for zero calibration. Apply 0mV to CH0 input terminals and then click "Save".



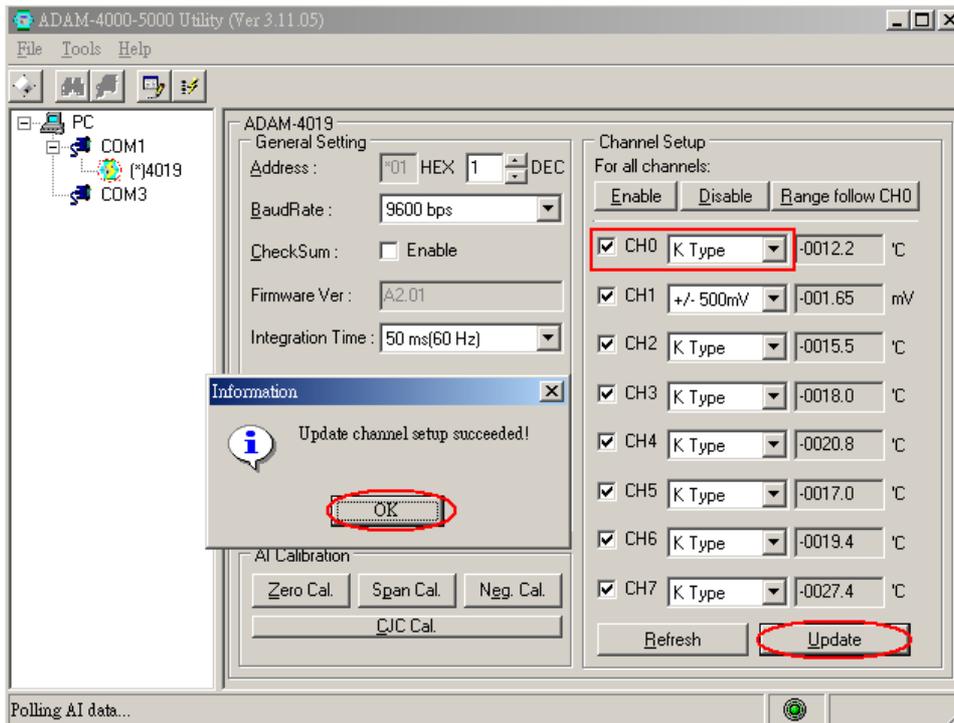
- Click "Span Cal." for positive span calibration. Apply +625mV to CH0 input terminals and then click "Save".



- Click "Neg. Cal." for negative span calibration. Apply -625mV to CH0 input terminals and then click "Save".



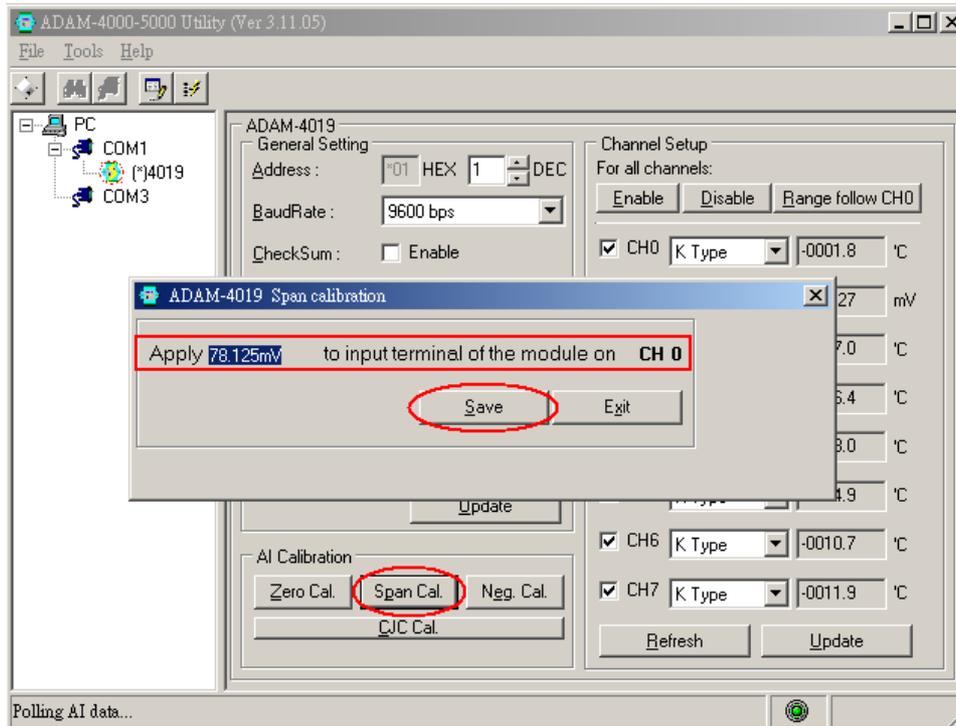
11. Change the CH0 input range as K Type and then click “Update”.



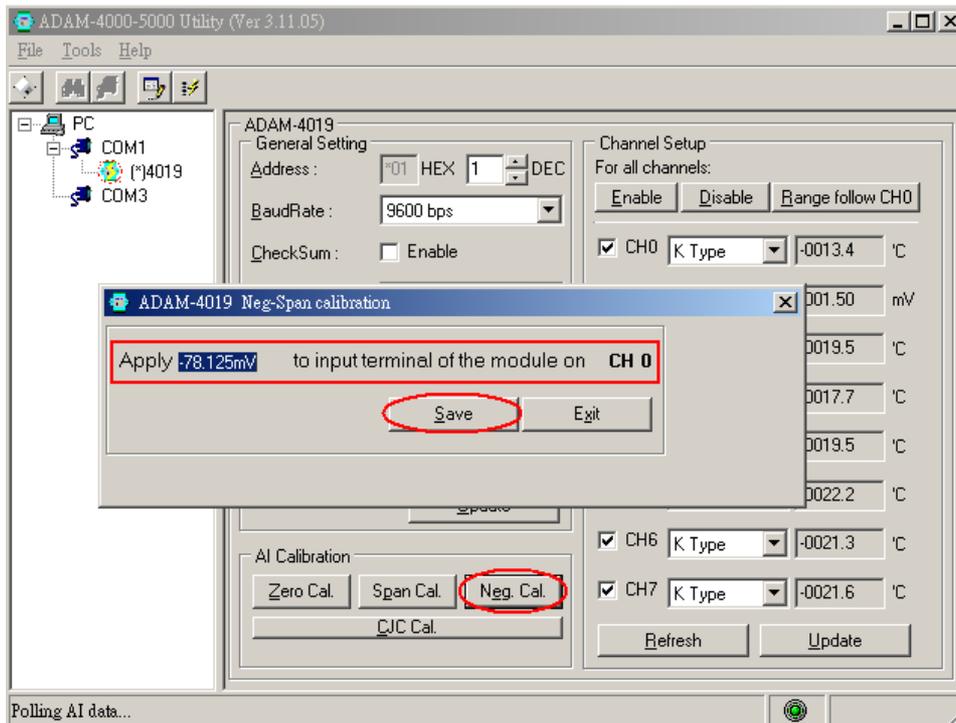
12. Click “Zero Cal.” for zero calibration. Apply 0mV to CH0 input terminals and then click “Save”.



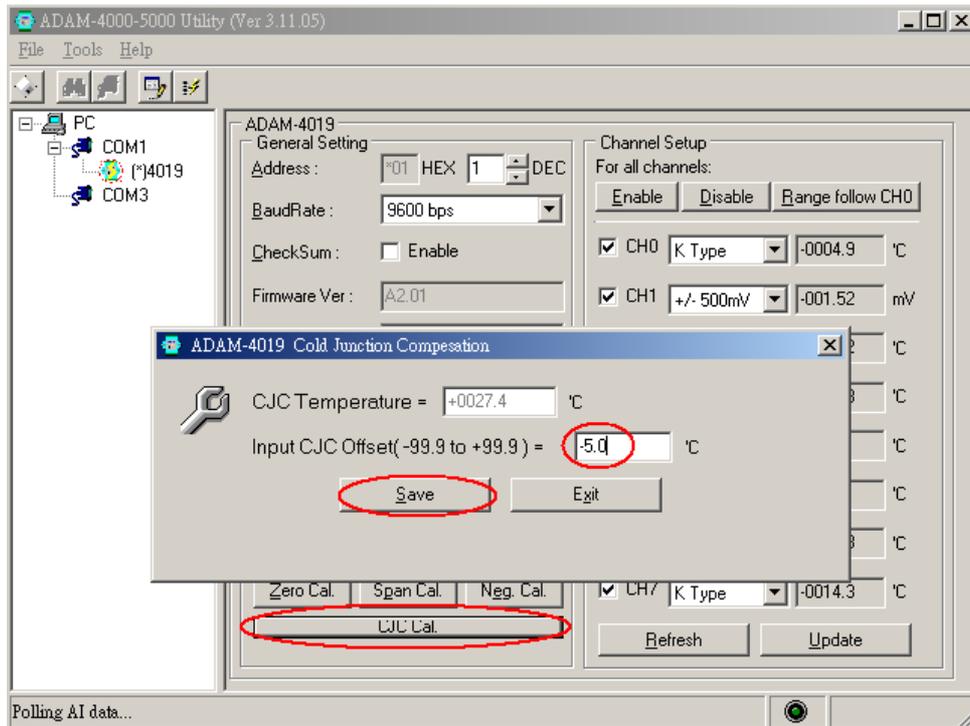
13. Click “Span Cal.” for positive span calibration. Apply +78.125mV to CH0 input terminals and then click “Save”. Please do use stable and accurate voltage source for getting the proper calibration result.



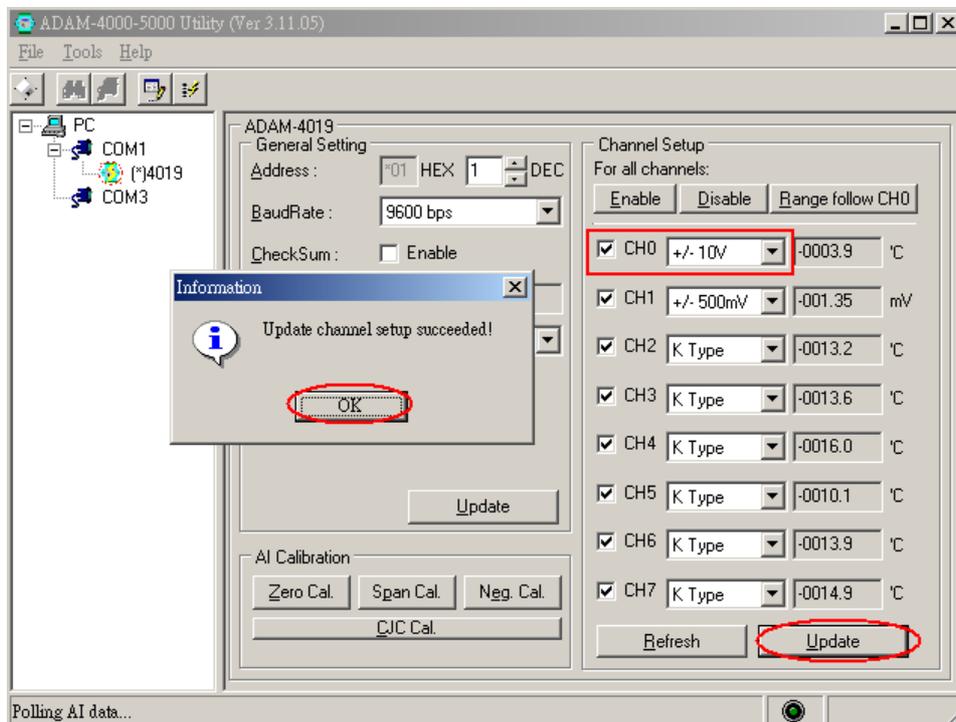
14. Click “Neg. Cal.” for negative span calibration. Apply –78.125mV to CH0 input terminals and then click “Save”. Please do use stable and accurate voltage source for getting the proper calibration result.



15. For thermocouple input range, it is necessary to adjust CJC temperature by typing in correct CJC offset temperature. Please click “CJC Cal.” and type in proper offset of CJC temperature.



16. Change the CH0 input range to  $\pm 10V$  and then click “Update”.



17. Power off the calibrated ADAM-4019 module. Remove the grounded INIT\* pin and then power on the module. Now you have finished the calibration procedures.