

Discriminator Control App

RPC topics

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Completed work

- Python base GUI application has been 80% completed.
The 20% is bugs and board-base modification
- Single-discriminator channel by channel threshold setting has been test and successfully

The screenshot shows a GUI application with three main sections: 'Device Connection', 'Initialization', and 'Integrated Control Panel'. The 'Device Connection' section has 'Connect' and 'Disconnect' buttons. The 'Initialization' section has a 'Run 8-Step Initialization & Testing' button. The 'Integrated Control Panel' section includes input fields for 'Target Board ID (1-127):' (value 1) and 'Threshold (0-255):' (value 0), a 'Select All / Deselect All' checkbox, checkboxes for 'Left Channels (1-8):' (Ch 1 to Ch 8) and 'Right Channels (9-16):' (Ch 9 to Ch 16), and two large buttons at the bottom: 'Apply Settings to Hardware' and 'Read Back DAC Values (Target Board)'.

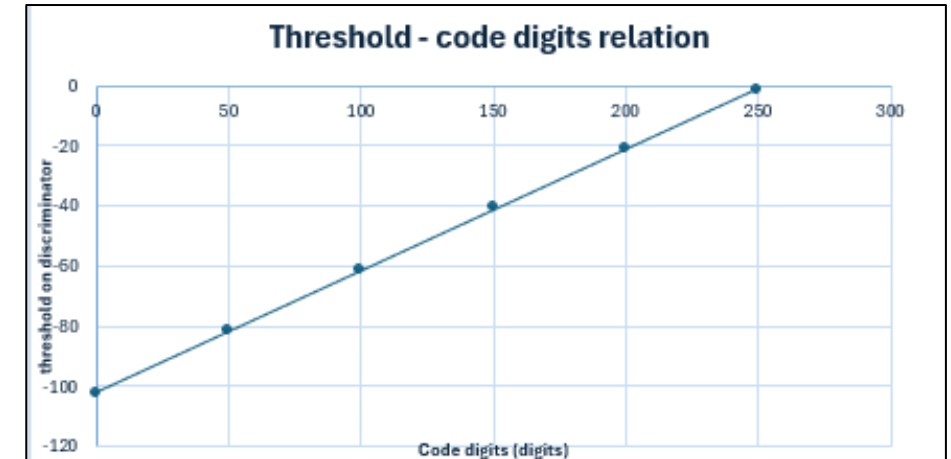


Fig.1 (top) is the python base GUI app, (bottom) is the relation between code digits and real threshold, which is 0~100 and -100mV~0mV respectively.

Problems and to-do

- Problem
 - Unable to set threshold board by board, possibly due to programming of FPGA.
- To-do
 - Modification of the control code after Dr. Chu check the FPGA programming.
 - Optimization of my control code.