Tang Nano 9K Board Setup basics-graphics-music

Where to Download the Project and Instructions

Download Github Project here:
https://github.com/yuri-panchul/basics-graphics-music
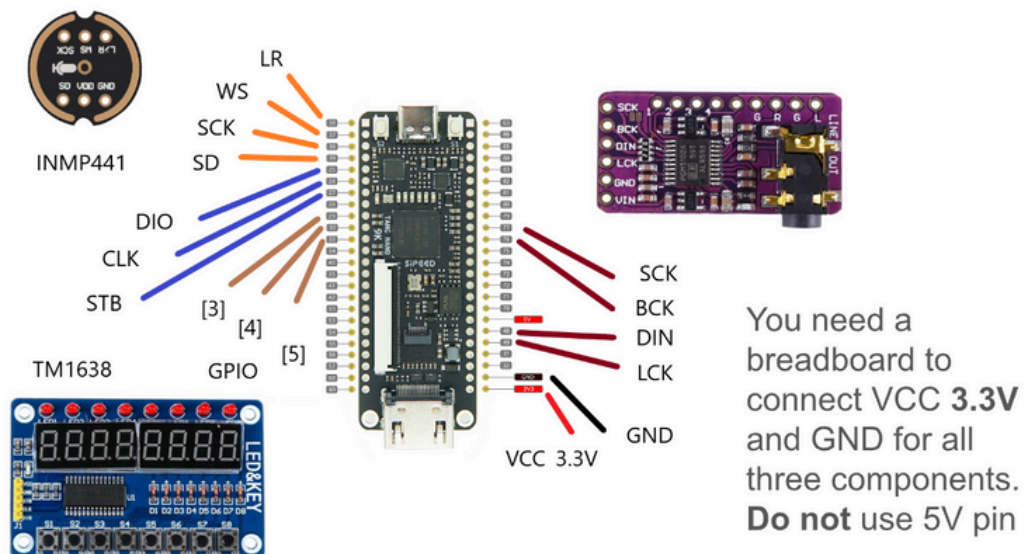
Follow Detailed Instructions on Running Examples:
https://verilog-meetup.com/2024/06/21/a-new-platform-for-fpga-seminars-based-on-gowin-tang-nano-9k-adding-sound-graphics-and-microarchitecture-labs/
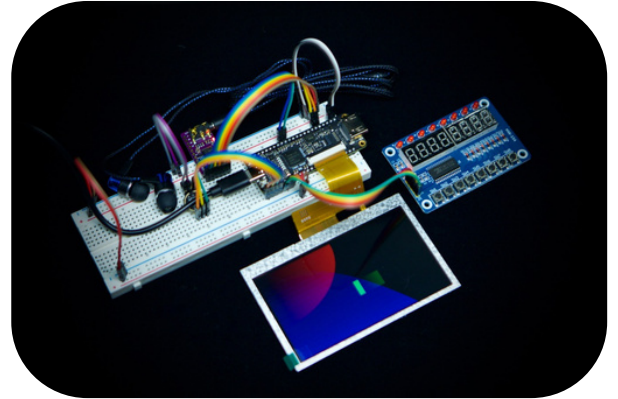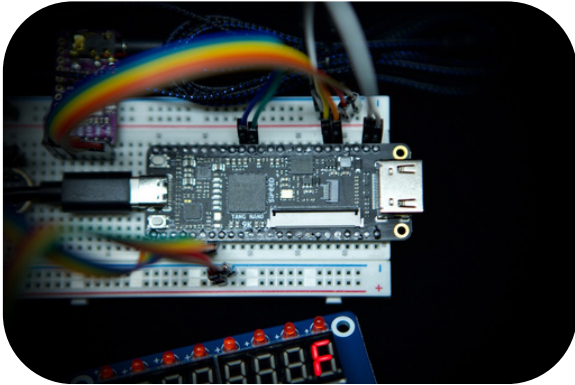
What is Included in the Setup

1. Sipeed Tang Nano 9K FPGA board.
2. TM1638-based interface board with 8 LED, 8 keys and 8-digit seven-segment display.
3. 4.3-inch 480x272 TFT LCD display with 40-pin interface.
4. INMP441 microphone.
5. PCM5102A audio decoding module.
6. Earbuds with a 3.5mm jack and no microphone.
7. 830-point breadboard.
8. Jumper 10cm Male-Male: 6 for the microphone, 6 for the audio decoder, 4 for connecting 3.3V power and ground, and 4 for extra peripherals - a total of 20.
9. Jumper 10cm Male-Female: 5 for TM1638-based interface board and 5 for extra peripherals - a total of 10.
10. Some extra peripherals, such as an ultrasonic sensor and a rotary encoder.

How to Connect the Wires: The Full Setup

You need a breadboard to connect VCC **3.3V** and GND for all three components. **Do not** use 5V pin

See how to latch LCD display Here: https://www.youtube.com/watch?v=C9PwK9eGrCY