A robot performance system based on FPGA -- Shadow Art

As a traditional Chinese culture, the shadow play has a rich historical and cultural heritage. With the change of the times, the culture of shadow play has been continuously developed and introduced. As a new era of college students, we should contribute to the inheritance and development of Chinese traditional culture.So we thought of robots performing shadow play, so that more people are exposed to traditional culture.

This work is based on Xilinx's Artix7 series of chips, using FPGA as the control center of the system to realize the robotic performance shadow play.The user operates the system through the touch screen, selects the performance track, and the system can perform different track performances. After clicking on the performance track, the robot completes the shadow play action, the music module plays the corresponding track background music, the action and the music complement each other, supplemented by the front curtain, the background light, and a sublime shadow play is displayed in front of the audience.

Pictures: