digiBoard

The future of board games

Overview

Store and play a library of digitized board games

Smart game peices communicate with the digiBoard

Connect and interact with the device using your phone

Background

There has been an ever-growing resurgence of board games in the past 10 years

Ensures people still have a personal interaction on a digitally enhanced board game platform

Lack of digitization within the board game genre

Market gap for an interactive form of entertainment

Alternatives

Touch Technology: Considered Infrared, Resistive and Capacitive Touch

Game Piece Detection: RFID Antennae, Hall Effect Sensors, Ultra-Wideband RFID

Power: Mains Electricity, Lipo Battery

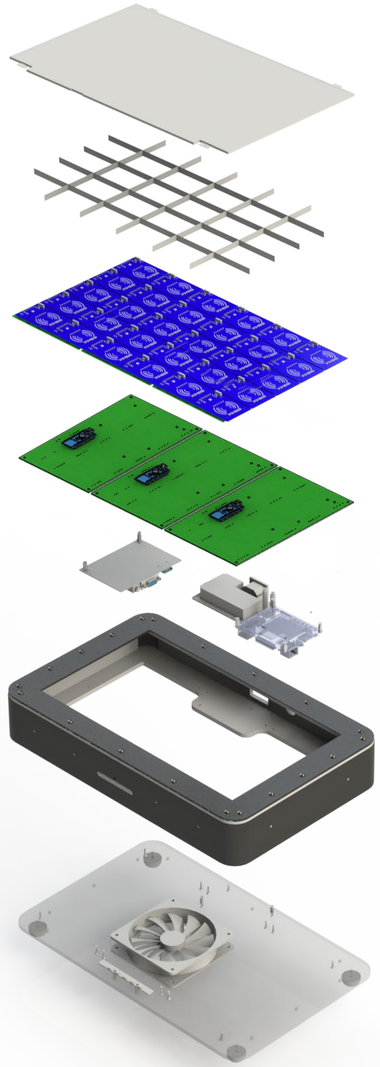
Implementation

Capacitive: Higher fidelity and more touch inputs

RFID antennas: Allows for both identification and localization

Mains electricity: Simplistic integration

Hardware Details



15" capacitive touch-screen display

Steel lattice to prevent RFID interference

RFID Array with 30 antenna

Custom PCBs for sensor interface

Power board and Windows 10 enabled

Enclosure built from laser-cut acrylic and polycarbonate

Cooling fan mounted to the bottom cover

RFID Technology

Identifies and Localizes RFID tags on variety of smart game pieces

Applications of this technology:

- Smart dice
- Smart cards
- Phone data transmission
- 3D printed game objects

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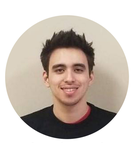

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References

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