InfiniTable is an interactive, multifunctional game surface consisting of individual intelligent tiles designed to be connected in any configuration.

**Printed Circuit Board**

The NXP LPC4088 is the brains of the project, integrating all subsystems and peripherals allowing for complete control of the surface.

**Processor**

**CPLD**

The CPLD breakout board provides the intelligence behind each tile. It receives data from the force sensors and relays that information to the processor using I^2^C communication, while receiving commands from the processor to control the LEDs.

**Intelligent Tiles**

**Printed Circuit Board**

**Processor**

**CPLD**

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**SD Card**

The SD Card reader is surface mounted and works with a generic SD Card. It stores files and audio data for configuring the tile and playing music.

**Bluetooth**

Bluetooth provides wireless interactions with InfiniTable via an android application. Commands are sent from an android application to control the behavior of the surface.

**Android App**

The android application provides full control over InfiniTable through a Bluetooth connection. It can change modes of operation, play interactive sounds, and control music while using the surface.

**LEDs**

LEDs visually display the data from the force sensors. They flash in different patterns, colors, and frequencies depending on the game mode and surface settings.

**Force Sensors**

The force sensors are arranged in a 2x2 array on each tile and provides four quadrants of location accuracy. The sensors send data to the CPLD using an analog to digital converter.