

Dreampad Bluetooth adaptor

Overview

The project is to develop two variants of a Bluetooth Adaptor for use with the Dreampad Pillow and AURRAS Pillow speaker project.

The two variants , Circadian and REM will be based on the same Bluetooth core and this part of the development will be formed as a standalone module sub section.

The adaptors provide BT connectivity to source device such as mobile phone or tablet as an audio source to the Dreampad device.

Each adaptor will be housed in the same physical plastic housing with Dreampad logo. A universal box will be achieved for this purpose



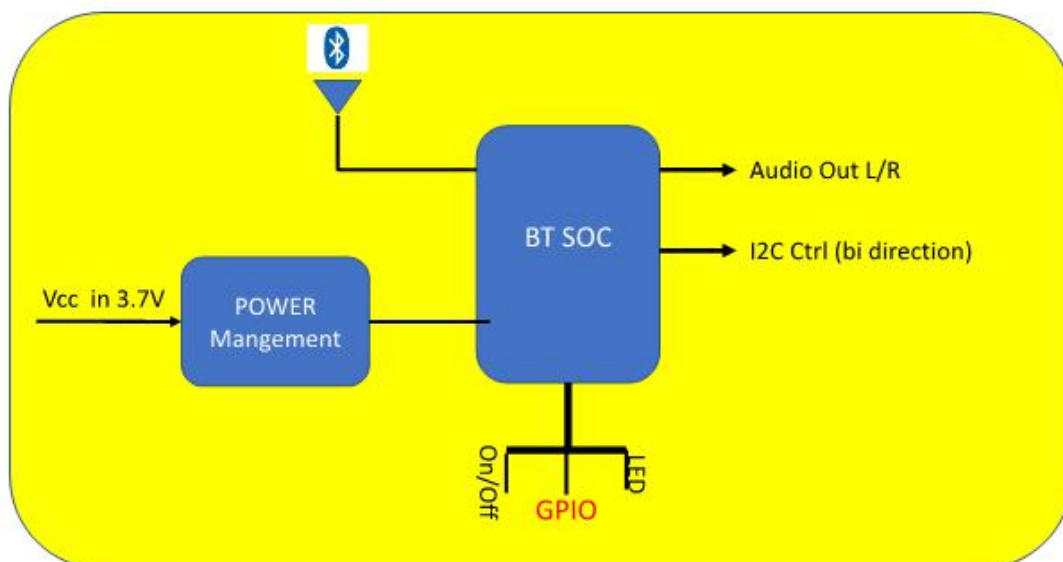
Bluetooth Core

The Bluetooth SOC will be designed effectively as a sub section module of the design. The aim would be to certify it such that it can be reused in multiple variants of this design and potentially others

BT Core specifications

- BT5.0, A2DP, AVRCP (receiver mode only)
- Operation Range: Up to 10m / 33ft (without any blocking objects)
- Pairing name: Dreampad (Circadian, REM,XXX)
- BLE (Not support)
- 2402~2480MHz ,TX power less than 4dBm

Block Diagram



FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and

on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment