

User Guide

Arch Bluetooth Low Energy Modular Radio

Part Name: con_nrf52832_v21

FCC ID: 2AJS3-BTC1

Introduction

The Arch nRF52832 based controller tile is a part of the IOTile framework for building connected sensors. Controller tiles like the con_nrf52832 host the device's sensor graph and coordinate the activities of the other tiles including timing RPCs and streaming data remotely as needed.

Operating Conditions

Condition	Minimum Value	Typical Value	Maximum Value
Operation Temperature	-40C	25C	+85C
Input Voltage	3.0V	3.7V	24V
Logic Voltage		2.8V	

Pinout

Pin	Name	Direction	Function
1	VCC	OUT	2.8V output to power external circuitry
2	REQ	IO, Open Drain	Arch TileBus protocol TDMA bus request line
3	BUSY	IO, Open Drain	Arch TileBus protocol TDMA bus busy line
4	ACK	IO, Open Drain	Arch TileBus protocol bus acknowledge line
5	CLOCK	IO	TileBus clock line
6	DATA	IO	TileBus data line
7	DSEL	IN, Active Low	Directly wake controller from dormant mode
8	HSD1	IO	High speed data 1
9	HSD2	IO	High speed data 2
10	HIEN	OUT, Open Drain	Enable power circuitry connected to VHI (always low)
11	VHI	IN	VCC input to tile
12	GND	Ground	Ground.

Usage

The controller tile may be either soldered with 12 pin, 50 mil pitch female vertical headers and attached to an IOTile compatible carrier board, or it may be surface mounted using its castellated edge connectors.

Unauthorized Modifications

Per FCC requirements, the user is cautioned that *changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

FCC Compliance Statement

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.

FCC Regulatory Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number :

(A) If using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.

This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: 2AJS3-BTC1” Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization