



Cdtech CDZ-N2EFR32-00 Zigbee Module User Guide

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CDZ-N2EFR32-00 DATASHEET

Software:

Customer	Approve	Date

Design	Check	Version	Date
		V1.0	2019.01.20

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Reversion History:

Version	Date	Modification
1.0	2019.01.20	

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Overview

CDZ-N2EFR32-00 is A highly integrated Zigbee module built-in a EFR32MG21 chip, The Silicon EFR32MG21 using the Industry`s advanced CMOS low-power process integrated ARM Cortex-M33 32-bit with DSP instruction and floating-point unit(FPU) for efficient signal processing.

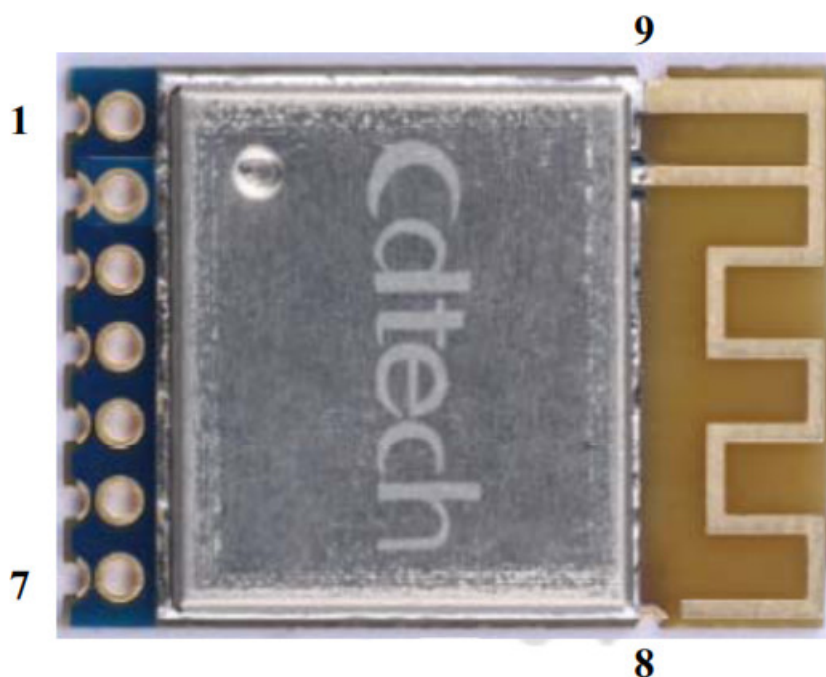
Features

- Support Zigbee
- RF transmit power with level control, support
- GFSK receiver sensitivity
- Built-in ARM Cortex-M3 processor, 32-bit fixed-point core
- Supports Cypress proprietary data rate up to 2Mbps
- Supports UART interface for debug and programming, I2C, ADC , SPI, and
- PWM interface

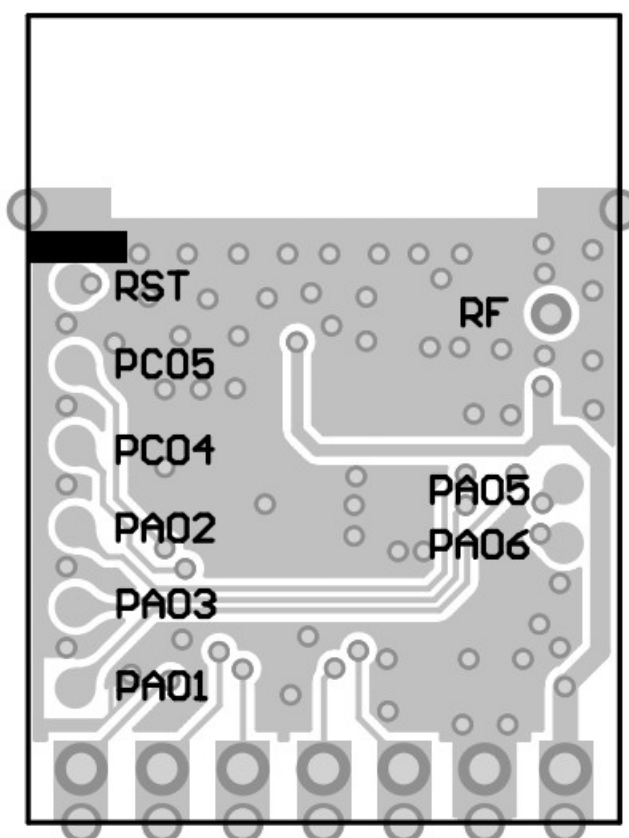
General Specification

Model	CDZ-N2EFR32-00
Product Name	Zigbee module
Major Chipset	EFR32MG21A010F512 IM32
Wireless Standard	802.15.4
Profiles	Zigbee , ZigbeePRO , ZigbeeRF4CE , 6LoWPAN
Modulation Method	2GFSK
Frequency Band	2.400~2.483.5 GHz
Operation Range	Up to 150 meters in open space
Supply Voltage (Vbat)	DC +3.0V ~ +3.8V
Power current(Zigbee)	Up to 33.1 mA (+10 dB)
Driver current (PWM)	16 mA
Operating Temperature	-40~ +125°C ambient temperature
Maximum Junction Temperature	+135°C
Storage Temperature	-50 ~ 150°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
ESD Protection	2KV
Dimension	20.0 x 14.7 x 2.5 mm (LxWxH) ±0.15mm

Pin Description



NO	Name	Description
1	VDD	POWER(+3.0~+3.8V Input)
2	GND	Ground
3	PWM	Configure PWM
4	PWM	Configure PWM
5	PWM	Configure PWM
6	PWM	Configure PWM
7	ADC	Analogue programmable input
8	GND	Ground
9	GND	Ground



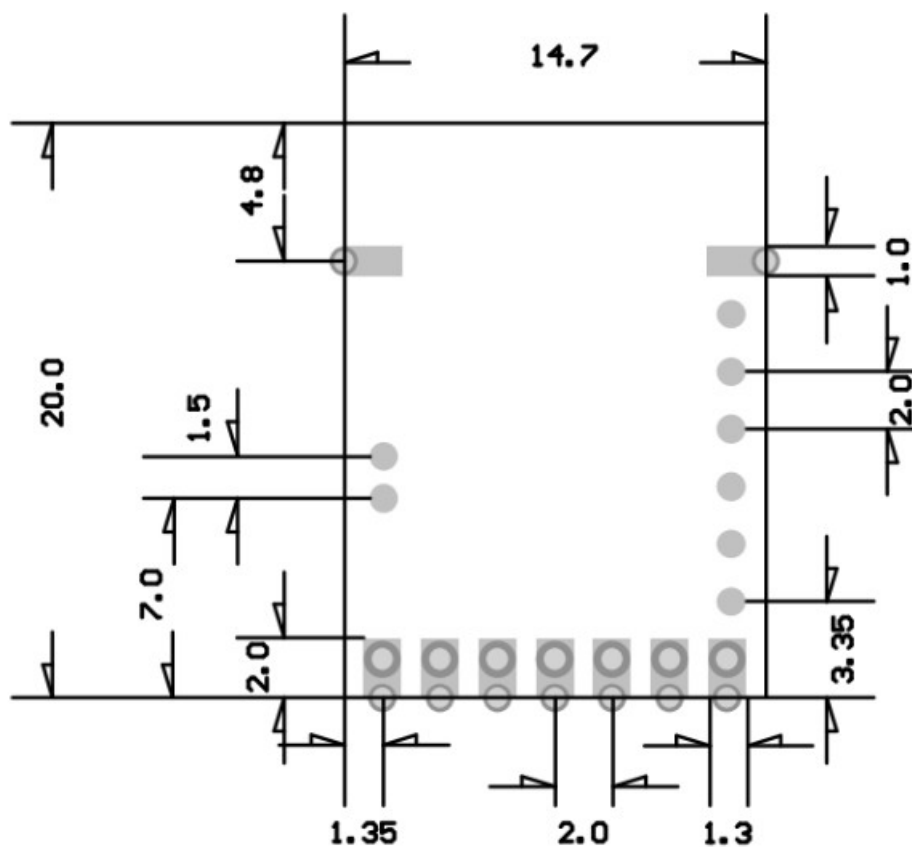
RST—RESET
 PA01—SW_CLK
 PA02—SW_DIO
 PA03—SWO
 PA05—UART_TX
 PA06—UART_RX
 PC04—PTI_DATA
 PC05—PTI_SYNC

Critical material

Crystal	38.4Mhz	TXC
SOC	EFR32MG21A010F512	Silicon
PCBA VER	132-N2EFR32-01	A , O

Recommended PCB Layout

UNIT: MM ± 0.15

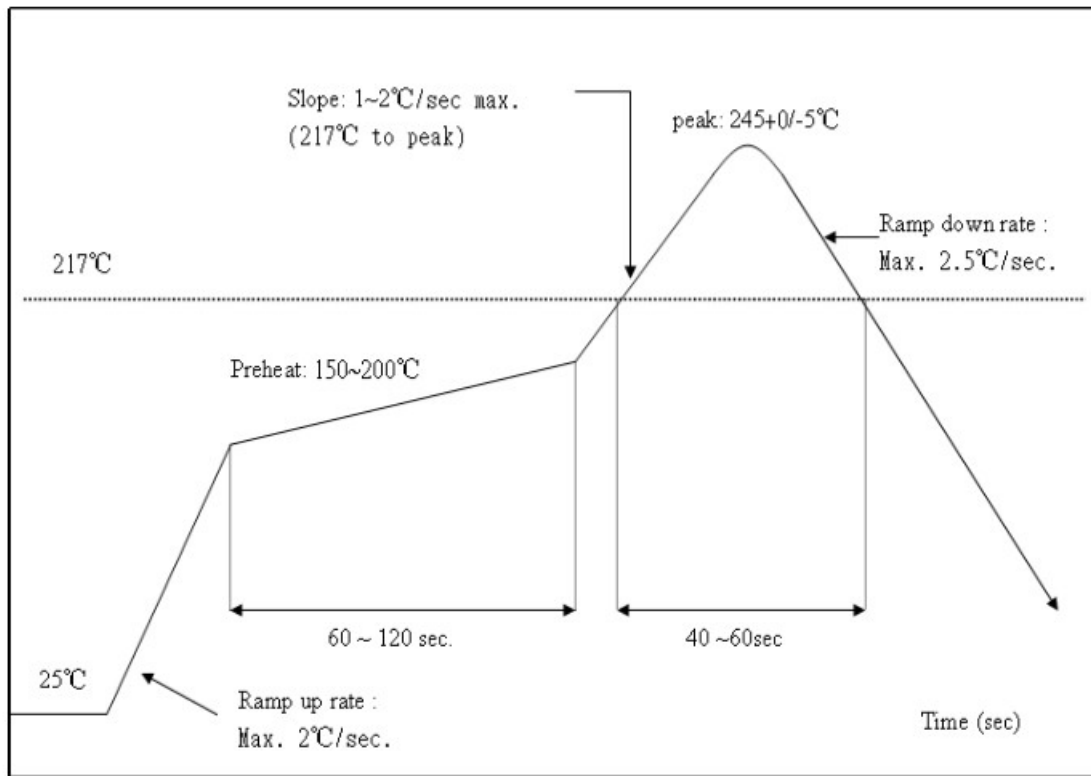


Recommended Reflow Profile

Referred IPC/JEDEC standard.

Peak Temperature : $<250^{\circ}\text{C}$

Number of Times : 2 times



Package



ESD CAUTION

The CDZ-N2EFR32-00 is ESD (electrostatic discharge) sensitive device and may be damaged with ESD or spike voltage. Although CDZ-N2EFR32-00 is with built-in ESD protection circuitry, please handle with care to avoid the permanent malfunction or the performance degradation.

Federal Communication Commission Interference 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.

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 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. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC ID:ROW-CDZ-N2EFR3200
IC:23734-N2EFR32

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2. The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

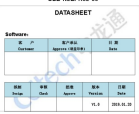
End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains FCC ID: ROW-CDZ-N2EFR3200”. The grantee’s FCC ID can be used only when all FCC compliance requirements are met. Manual Information To the End User The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warnin

IC statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions: This device may not cause interference. This device must accept any interference, including interference that may cause undesired operation of the device.

Documents / Resources



Cdtech CDZ-N2EFR32-00 Zigbee Module [pdf] User Guide
CDZ-N2EFR3200, CDZN2EFR3200, ROW-CDZ-N2EFR3200, ROWCDZN2EFR3200, CDZ-N2EFR32-00, Zigbee Module

