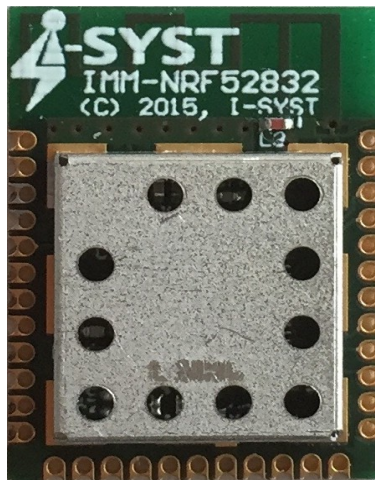


HARDWARE REFERENCE

IMM-NRF52832 Micro-module



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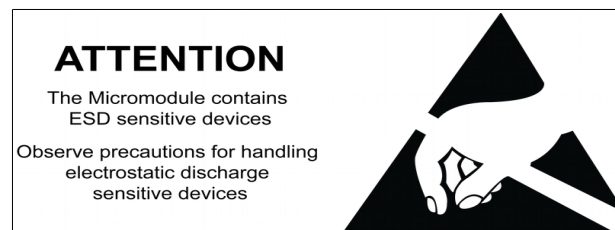


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Introduction

The nRF52832 is an ultra low power System on Chip (SoC) from Nordic Semiconductor. It integrates the nRF52 series 2.4GHz transceiver, a 32 bits ARM® Cortex™-M4F MCU, Flash memory, analog and digital I/O. The nRF52832 supports ANT, Bluetooth Low Energy and proprietary protocols.

The IMM-NRF52832 is a 23 x 17 mm micro-module with embedded PCB antenna. It allows developers to take full advantage of the nRF52832 by making all its I/O available via 35 SMD/Through hole 1.27mm pitch pads. The module can be mounted with header pins in order to re-use during development and prototyping phase and SMD it for production to be the most cost effective.

Features:

- 32 bits ARM® Cortex™-M4F @ 64MHz.
- 2.4GHz multi-protocol transceiver
- 64KB SRAM.
- 512KB Flash
- 32 MHz & 32.768 KHz Crystals
- DC/DC power mode configuration
- 30 configurable I/O pins
- Type 2 NFC-A Tag with wakeup on field
- 8 configurable 12 bits, 200 ksps ADC
- Digital microphone interface
- 3 x 4 channels PWM
- AES hardware encryption
- RNG
- RTC
- Temperature sensor
- Up to 4 PWM
- Digital interfaces SPI Master/Slave, 2-wire Master (I2C compatible), UART (CTS/RTS)
- Quadrature decoder
- Low power comparator
- Operating voltage : 1.8V to 3.6V
- Dimension : 23 x 17 mm

Module Layout

I/O Pads layout

Bellow is the direct relationship of the module pads and the nRF52832 I/O pins. Shared peripherals pins are indicated in different colors.

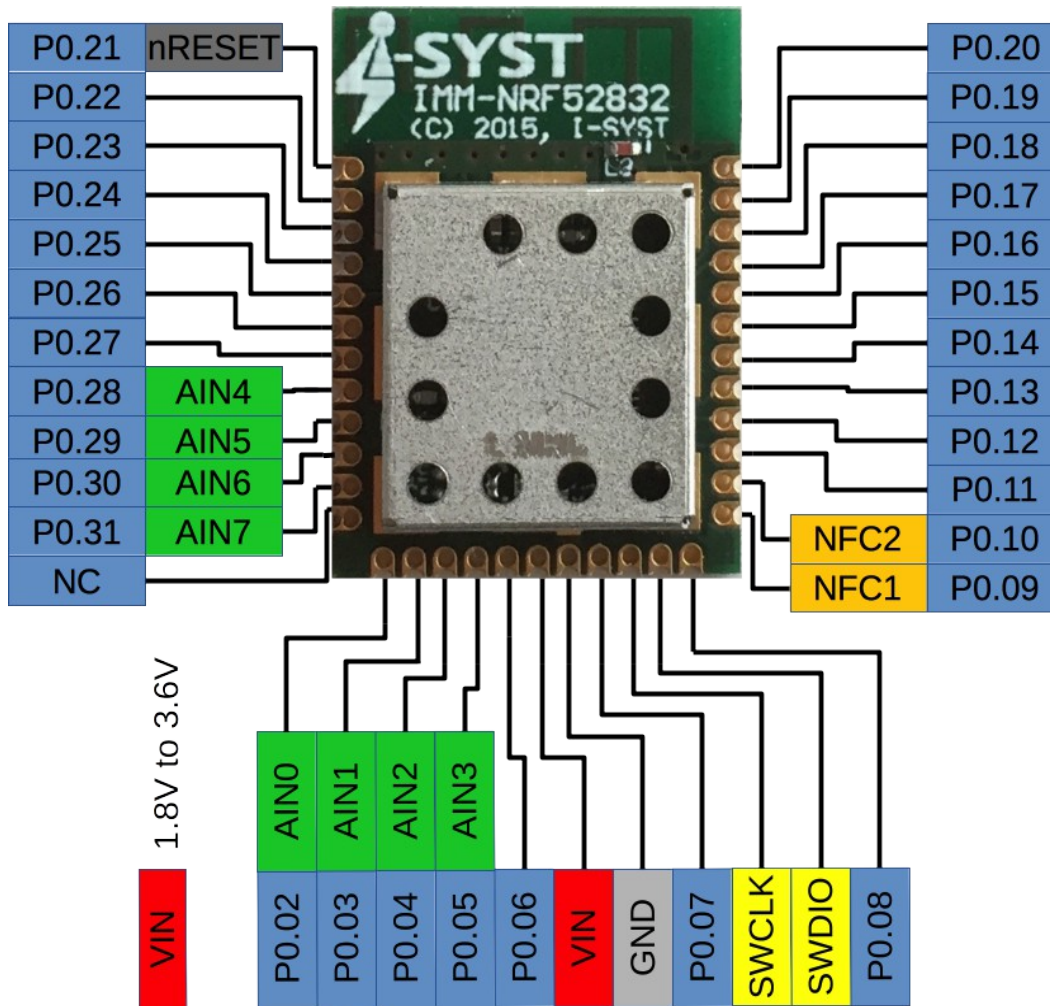
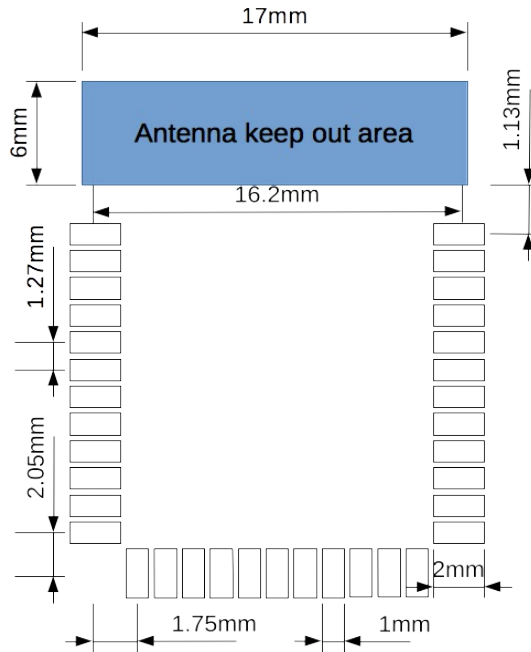


Fig. 1: I/O Mapping

SMD Foot Print

Note : Do not route any traces or planes under the indicated antenna area.



Through Hole Foot Print

Note : Do not route any traces or planes under the indicated antenna area.

