S O C
R O B O T I C S

Overview

NanoMP is a direct connect wireless access point for the RF24L01 wireless module.

Features:

- Three processor options:
  - STM32F042
  - STM32F072
  - STM32F303
- On chip DFU boot loader for software field upgrade
- SPI interface connector for RF2401 Wireless module
- Both I2C ports brought to connectors
- Connector for OLED 128x64 display
- Plug directly into PC or laptop
- Real time data acquisition application communicating wirelessly with Pico sensors using RF24L01 module
- Application source code provided
- Software application developed with CooCox IDE
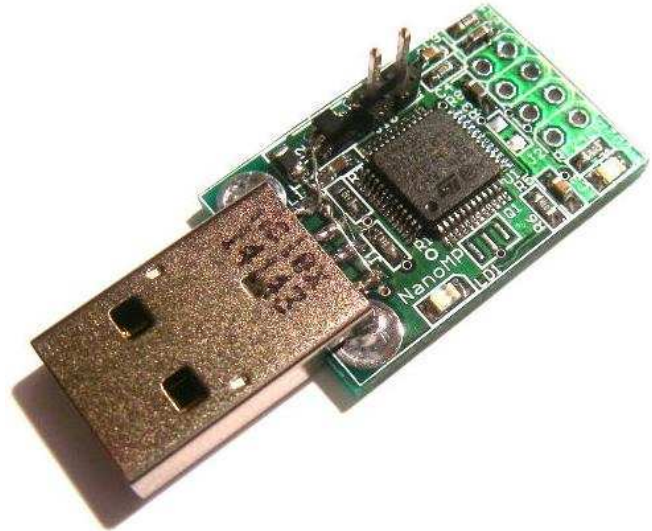
The NanoMP is primarily a wireless access point for the RF24L01 wireless module. NanoMP comes with a real time wireless communications application that communicates with wireless Pico IMU sensors.
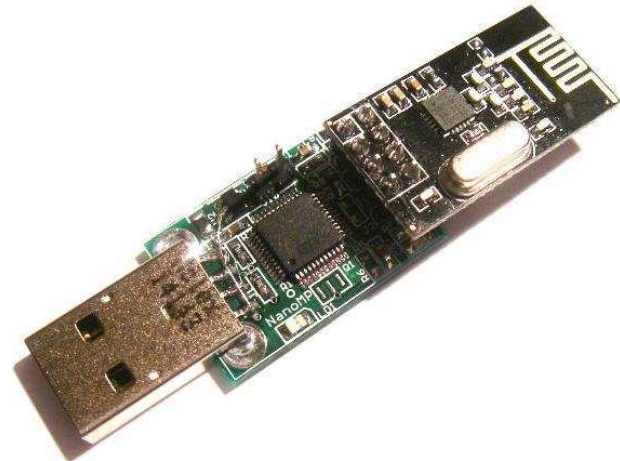
Source code for the application is available for download. The application was developed using the CooCox open source IDE. The onboard bootloader allows new software to be uploaded without the need for specialized programming hardware.

Three different processor options ensure both a low cost option and a high performance option are available.

The NanoMP is designed to plug directly in to a PC or laptop without a USB cable.

RF24L01 Wireless Connector

Nano has a connector that allows direct connection of a low cost RF2401 wireless communication module allowing the Nano to be a wireless base station for low cost wireless data acquisition modules.

RF Modules

RF24L01   ESP8266 WiFi

NanoMP Connector Pin Assignments

NanoMP has a limited number of interface options and is primarily a wireless communications hub for a PC, laptop or tablet. Both I2C communication ports are brought out to connectors allowing connection of FemtoFlex chains. Three ARM7 processor options are available with different speeds and flash options. Source code is provided for all three processors with different features. Applications were developed using the open source CooCox IDE.

    STM32F042   - 48MHz, 32K Flash, 8K SRAM
    STM32F072   - 48MHz, 128K Flash, 16K SRAM
    STM32F303   - 72MHz, 256K Flash, 40K SRAM, Hardware FPU

A dedicated connector enables direct connection of the popular RF24L01 wireless communication module. NanoMP also supports the ESP8266 Serial WiFi module (with an adapter). A low cost OLED 128x64 pixel display can also be connected. The board can be re-programmed by installing a jumper on the DFU header.

NanoMP Connector Pin Assignment