

# POWER DOWN MEASUREMENT APP NOTE

## 1. Overview

This Power demo application allows each of the various low mode modes to be selected, using a simple user interface via the serial port.

## 2. Hardware Requirements

- Carrier Main Board(JN5189)
- ARNO Mezzanine Card
- Mini USB Cable
- PC or Laptop

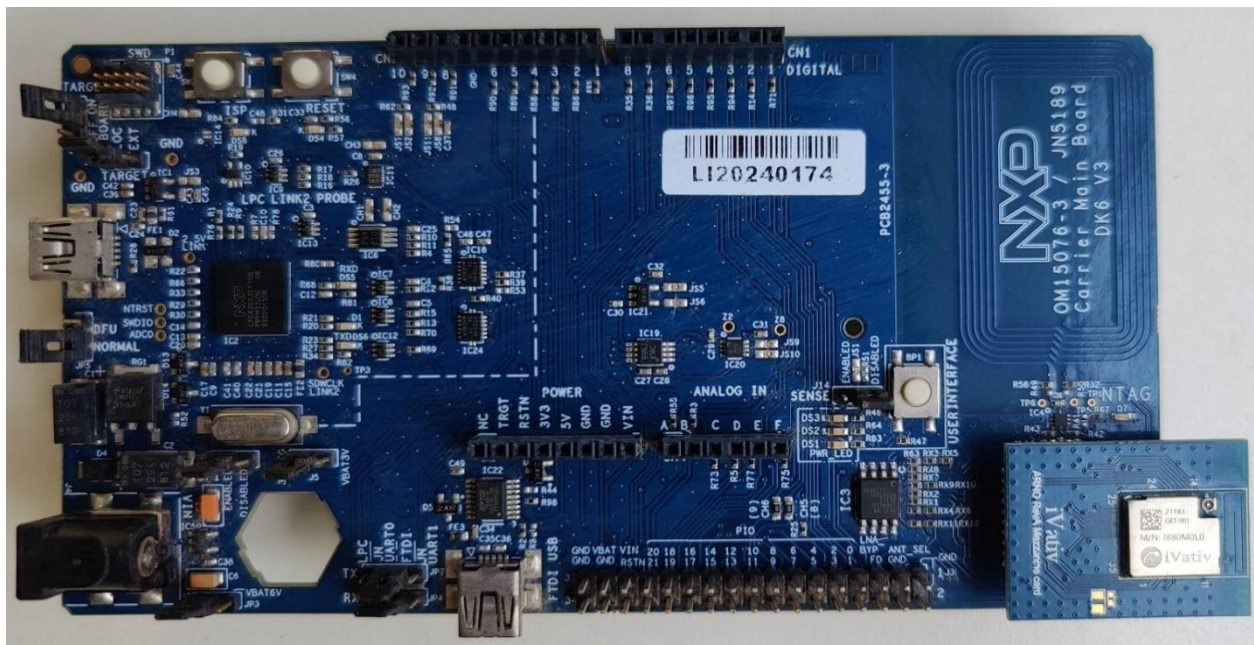
## 3. Software Requirements

- MCUXpresso IDE
- QN9090 SDK latest version
- Install IoT Toolbox in mobile from App Store/Google Play store

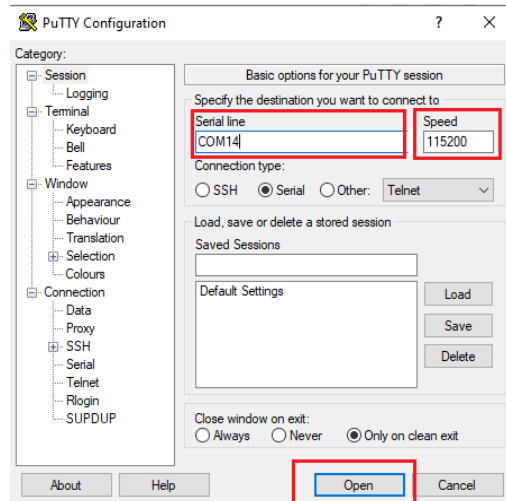
## 4. Procedure

**Note:** To make changes in QN9090 SDK for the ARNO module refer to ARNO module working procedure in ARNO User Guide.

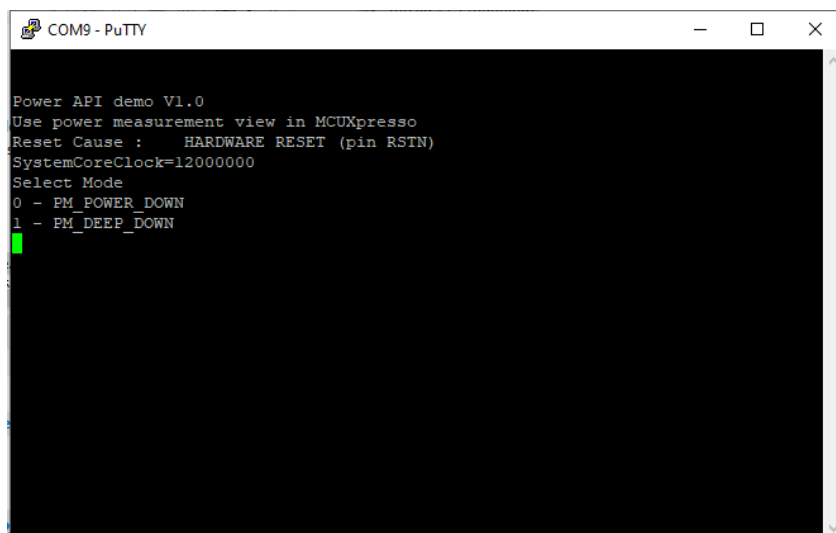
- Insert the ARNO Mezzanine Card on the Carrier board as shown in below figure



- Connect the ARNO DVK to the PC or Laptop with the mini USB cable
- Press the reset button on the DVK
- Open the device manager and check for the COM port
- Open the putty terminal in PC, change the serial line with the com port number and the speed with the 115200 and then click on open

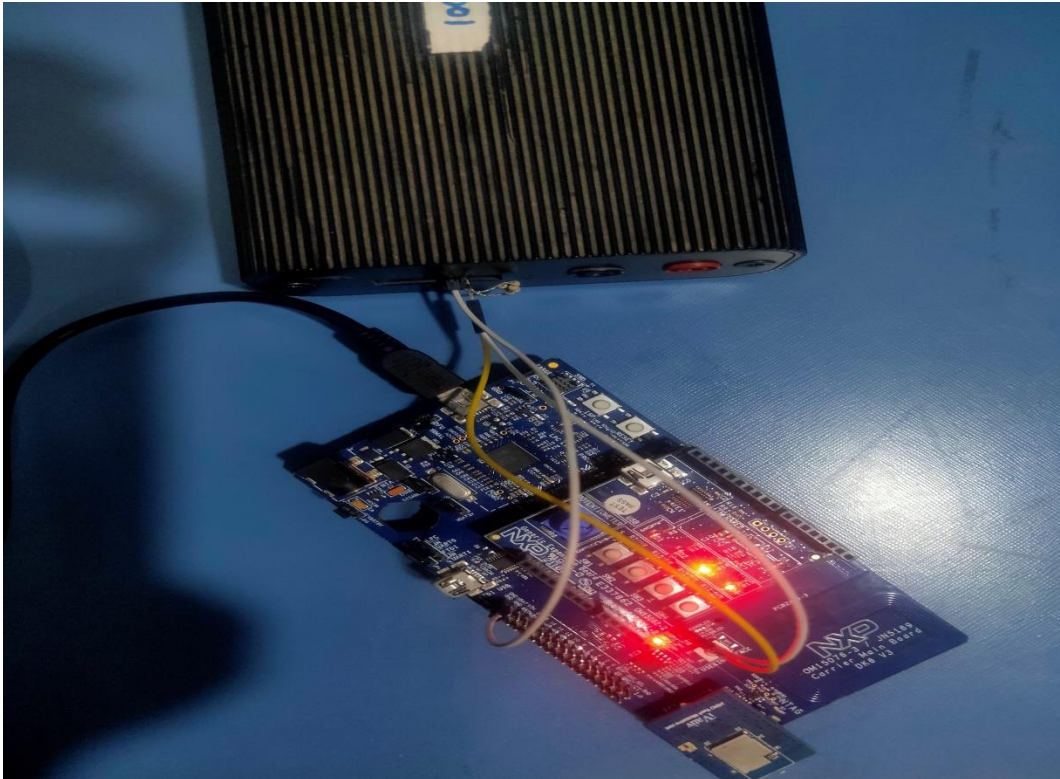


- Compile and run the application
- Options can be observed on the serial terminal on the putty like below figure

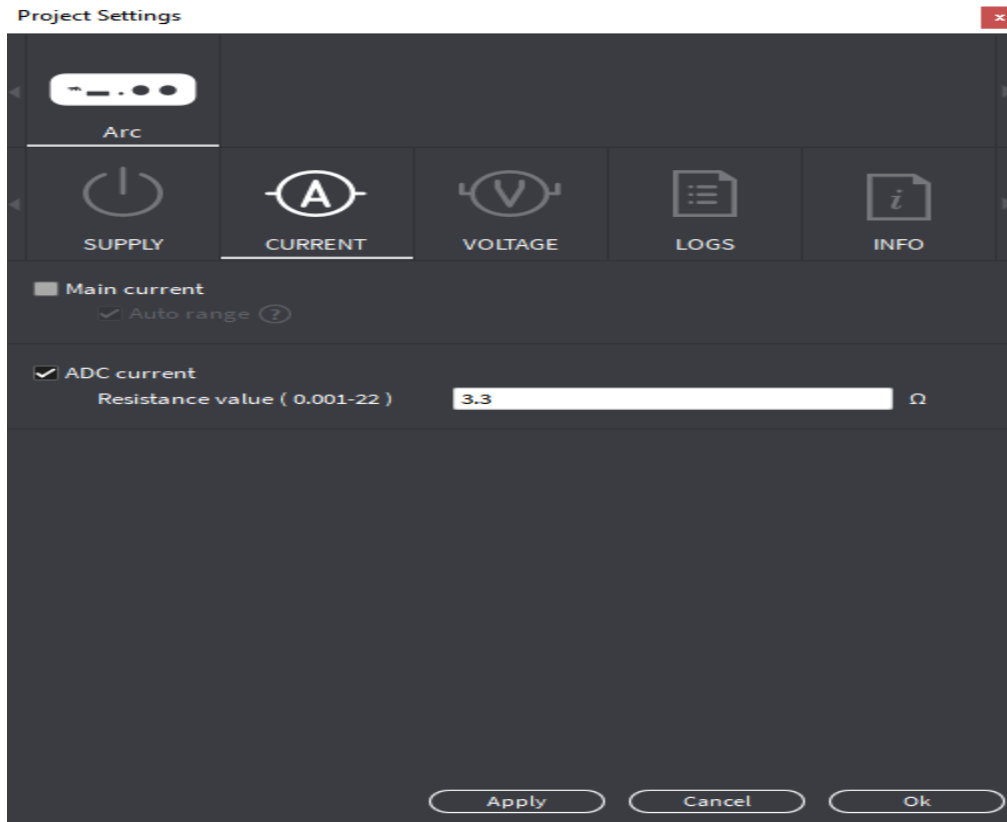


- User can select PM\_POWER\_DOWN option(i.e. 0 or 1) and press enter to enter into particular mode
- After entering into Power down Mode then 3.3ohms Resistor is placed across ADC positive and negative pins in Otii.

- Remove Jumper(J14) and place the ADC pins positive and negative pins in otii to the R51 and disabled pins of jumper(J14).
- ADC positive pin in otii is connected to the disabled pin of (J14) jumper .
- ADC negative pin in otii is connected to the R51 pin of (J14) jumper pin.
- AGND in otii is connected to the GND pin 33 on Board.
- Connections are made as per the below diagram.



- In otii settings, Ammeter settings as shown in figure.
- After selecting Ammeter, we have to give Resistance value as 3.3ohm and then click on Apply and Ok.



- Then, we got this below waveform of power down current measurement as 823 to 840 Nano Amps of current.

