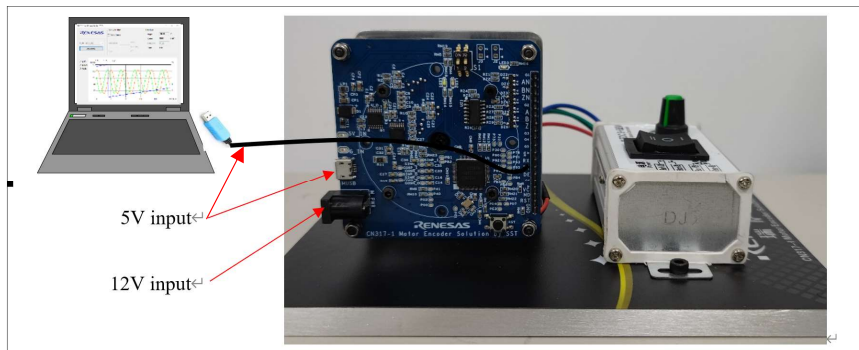


### Introduction

Following this quick start guide, you can directly get the absolute position, the rotating speed of the motor, the direction of rotation, the number of turns, and a chart that shows the differential sine and cosine curve and the corresponding position. Moreover, the resolution can be obtained when the motor stops.

### Hardware Connection (RS485 Output)



Connection Table of the USB-to-Serial Converter.

Pin Name		Cable Color
TX	↔	White
RX	↔	Green
G6	↔	Black
VC	↔	Red

### Run Demo and Observe Measured Data

1. Power on or reset the board after setting both S1-1 and S1-2 to OFF. Both USB-to-Serial Converter and micro-USB can be used as system power supply.
2. Open “GUI\_CN317-1 Motor Encoder Solution.exe”. Select the COM port and click on “Connect” button. Now the system is running in Free Run mode.
3. Turn on the motor.

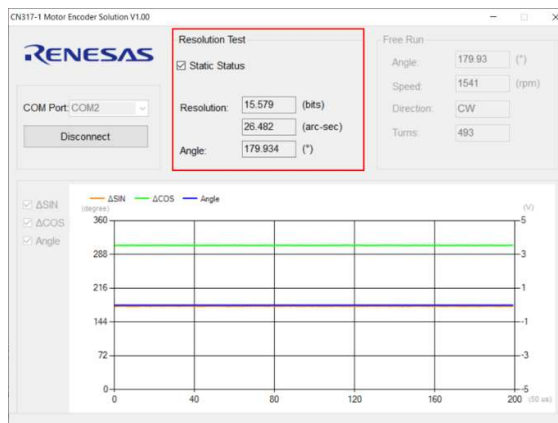
Position	Up	Middle	Down
State	ON/CCW	OFF	ON/CW



4. We can see the Angle (absolute position), the rotating speed of the motor, the direction of rotation, the number of turns, and a chart that shows the differential sine and cosine curves and the corresponding Angle. The MCU records the differential sine value, the differential cosine value, and the Angle value every 50us and sends 200 sets to PC at one time.



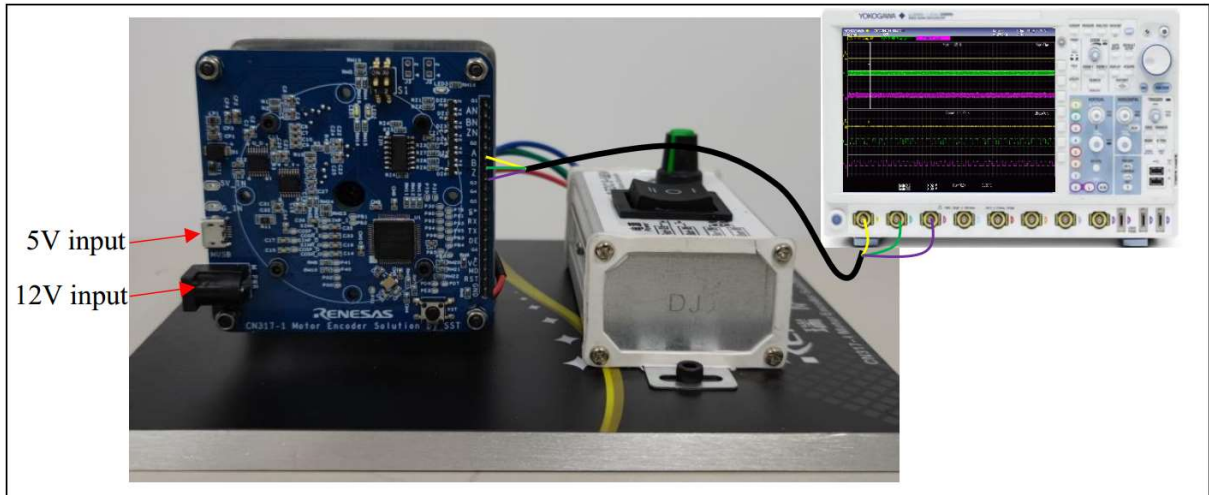
Free Run mode



Static Resolution Test mode

5. Check the Static Status checkbox in Resolution Test after the motor stops. The system is running in Static Resolution Test mode. It takes about 40 seconds to obtain the static resolution by analyzing 1000 pieces of data.

### Hardware Connection (ABZ Output)



### Run Demo and Observe Output Result

1. Power on or reset the board after setting both S1-1 to ON and S1-2 to OFF.
2. Turn on the motor. Monitor the ABZ signals on the oscilloscope.

Note: Due to the limit of RX/24T processing speed, the maximum rotate speed supported is 4000 rpm in ABZ output mode.