**WISE-1510、WISE-3610、WISE-1810 Debug method**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | WISE-3610、WISE-1510、WISE-1810 | **Date** | 2018/07/23 |
| **Keyword** | WISE-3610、WISE-1510、WISE-1810、Debug、Debug card | | |

* **Test Structure:**

The detail of Wise-1510 debug structure is as below:

1. WISE-1510 model: The kernel of Lora model.

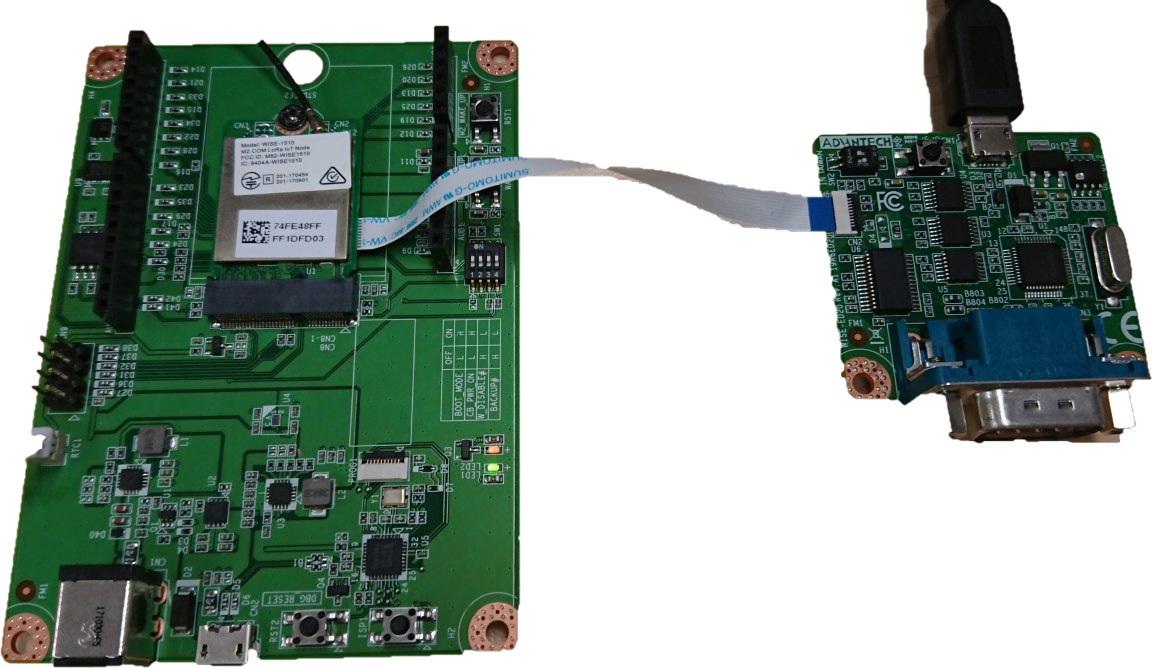
2. Antenna connector: Connect to the antenna.

3. WISE-DB1505: The platform of WISE-1510 provides many I/O port, and it could be replaced by WISE-DB1500-OIA1E.

4. USB port: Link the computer and the debug card.

5. WISE-ED20: By using the WISE-ED20 debug card, you can flash the WISE-1510 model firmware and check the log.

4



3

2

1

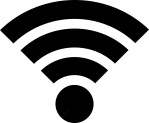
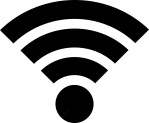
5

For setting the WISE-1510, you will need WISE-ED20 debug card, and you can connect it through serial port and node-cli.exe.

There are three ways to connect Wise-3610 debug structure. One is through the Wi-Fi, another is through the WAN port, and the other is through LAN port.

1. Connecting the WISE-3610 with Wi-Fi port.



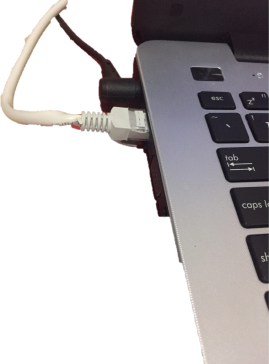


1. Connecting the WISE-3610 with WAN port.





1. Connecting the WISE-3610 with LAN port.



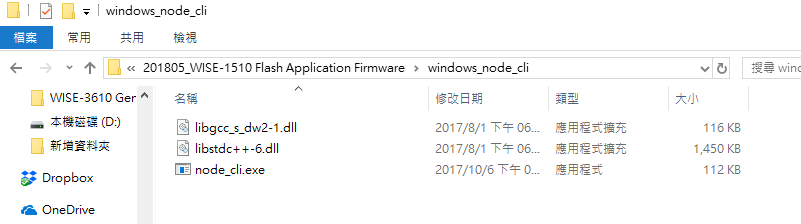


Check the WISE-1510 Lora node connects to the WISE-3610 Lora gateway.

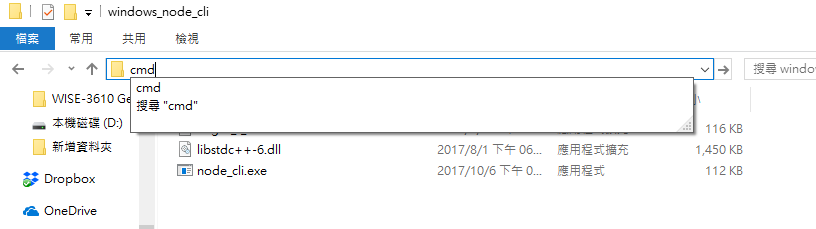
* **Debug method:**

WISE-1510 Debug method:

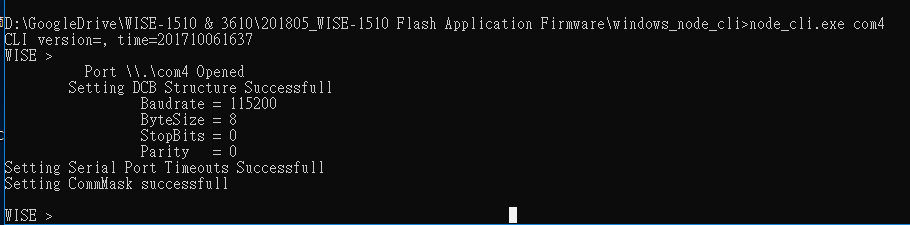
You have to use “node\_cli.exe” to log in the WISE-1510.



You will type “cmd” in the path and you will execute the “command prompt”.

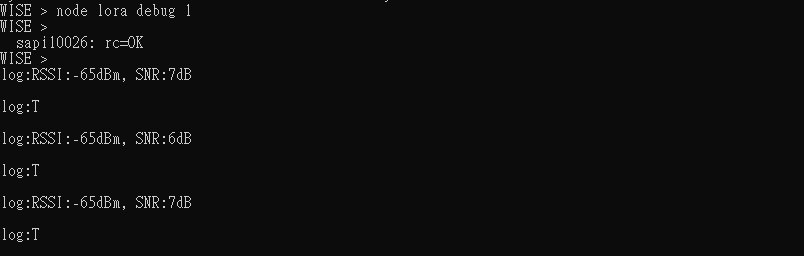


In the command prompt, typing “node\_cli.exe XXX” where XXX is the name of comport. In this example, the comport is com4 and you will see the information as below.



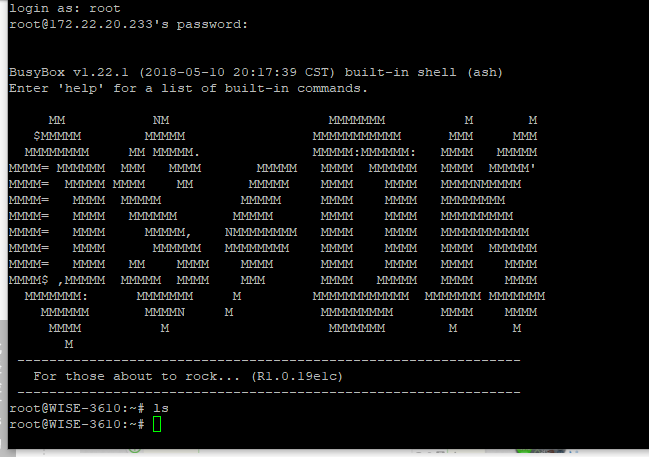
In the [V1.03 SDK], type “node lora debug 1” in the command line, and it will start to show debug message. Type “node lora debug 0” is turned off the debug message

In the [V1.04 SDK] or later, type “node lora debug 0xff” in the command line, and it will start to show debug message. Type “node lora debug 0” is turned off the debug message.



WISE-3610 Debug method:

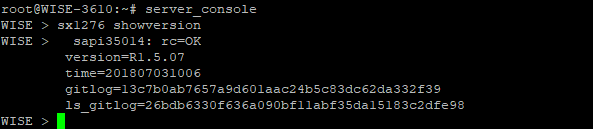
1. You can connect to the WISE-3610 by using ssh, and log in the WISE-3610 as root.



1. Run "server\_console" utility to check the validity of WISE-1810, and also turn on debug mask.



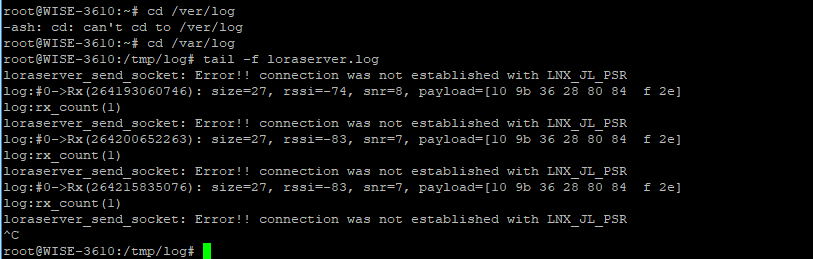
1. When the WISE-1810 is running in the WISE-3610, you can use “server\_console” command to get the WISE-1810 version information. (This step is to check WISE-1810 is still running. )



1. Following, we enable debugging and redirect output to the WISE-3610 by using “sx1276 debug –mask 255 –port 1” command. If you want to disable debugging, using “sx1276 debug --mask 0 --port 0” command.



1. When the debugging is enabling, the log will update in the “/var/log” folder. You can use “tail -f loraserver.log” to check final updated log.



1. Check if the following line keeps refreshing. This line means WISE-3610 still generates beacon.

ns\_process\_bcn\_tmst: tmst(105691753), delta(2463535), time(1531120690283722), delt2456323)

or

log:#0->Tx(1017330951): freq=926900000, power=xx, 36 10 ...

This line means WISE-1810 transmits the beacon successfully.

7. Press "Ctrl+C" to terminate the output.

8. Upload the log to your PC using TFTP. (You've to run TFTP server on your PC in advance.)

# tftp -pl loraserver.log xxx.xxx.xxx.xxx

where xxx.xxx.xxx.xxx is IP address of your PC.

9. Send the log to RD for further analysis

WISE-3610 Log preserve

Due to WISE-3610 flash size limitation, loraserver.log is overwritten when its size reaches 2M bytes. If you want to keep all loraserver logs, you have to plug in a USB disk. And do following setting:

1. Log in the WISE-3610
2. Check if WISE-3610 has detected the USB drive by

#mount

…

/dev/sda1 on /mnt/usb type vfat (rw,relatime,fmask=0022,dmask=0022,codepage=437,iocharset=iso8859-1,shortname=mixed,errors=remount-ro)

1. Create a loralog in /etc/config via vi editor to enable this feature.
2. The loralog contain is like the following, you can just copy paste and then try again.
3. config FTP 'FTP'  
     
   config TFTP 'TFTP'  
     
   config SD 'SD'  
     
   config USB 'USB'  
           option Enabled 'true'

Then you will observe whether loraserver\_xxxxxx.log being tar and moved to the USB disk after 10 minutes.

Check WISE-1810 firmware version

If you want to check the WISE-1810 version, type “XXX.XXX.XXX.XXX/cgi-bin/luci/sysinfo ” in the URL where XXX.XXX.XXX.XXX is the WISE-3610 IP address.

