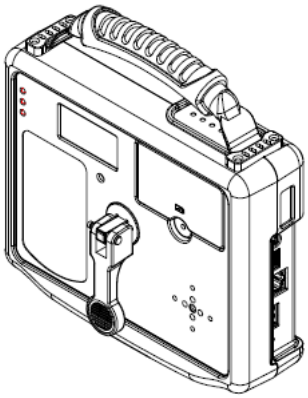
Windy Plus Box PC

for Vehicle Producing Examination



USER MANUAL

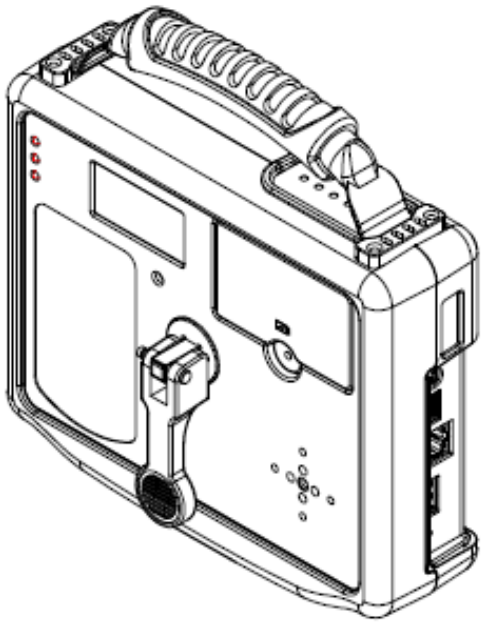
Version: 1.0

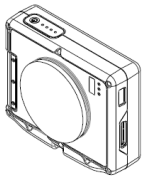
Attention!!!

This product is designed for vehicle producing examination only. It should be used in vehicle production line and required to be away from operator >30cm when operating.

TABLE OF CONTENTS

CHAPTER 1 Read Me First





Attention!!!

This product is designed for vehicle producing examination only. It should be used in vehicle production line and required to be away from operator >30cm when operating.

IMPORTANT SAFETY INSTRUCTIONS

Please read these instructions carefully before using the product and save for later reference. Follow all warnings and instructions marked on the product.

Unplug this product from the wall outlet before cleaning. Clean the product with a damp soft cloth. Do not use liquid or aerosol cleaners as it may cause permanent damage to the outer covering.

Do not use this product near water.

Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. (For AC version only)
Do not defeat the purpose of the grounding-type plug.

Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

Do not attempt to service this product by yourself, as opening or removing covers may expose you to dangerous voltage points or other risks and will void the warranty. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

When the power cord or plug is damaged or frayed.

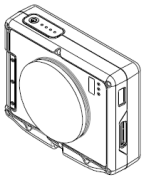
If liquid has been spilled into the product.

If rainy or water has been exposed to the product.

If the product does not operate normally that the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

If the product has been dropped or the cabinet has been damaged.

If the product exhibited a distinct change in the performance, that indicates a need for service.



Copyright Notice

Trademark Acknowledgement

Disclaimer

Winmate Communication Inc. reserves the right to make any product changes without notice, including circuits and/or software described or contained in this manual in order to improve design and/or performance. Winmate Communication assumes no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or masks work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. Winmate Communication Inc. makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

Warranty

Winmate warrants that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, Winmate will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in it's original packaging to obtain warranty service.

If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W15Axxxxxxxx means October of year 2015.

Customer Service

We provide service guide for any problem as follow steps：First, visit the website at http://www.winmate.com.tw to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

- Product serial number
- Peripheral attachments
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Notice

1. Do not use abrasive cleaners, waxes or solvents for cleaning, use only a dry or damp, soft cloth.
2. Use only with a high quality, safety-approved, AC/DC power adapter.

Safety Precautions

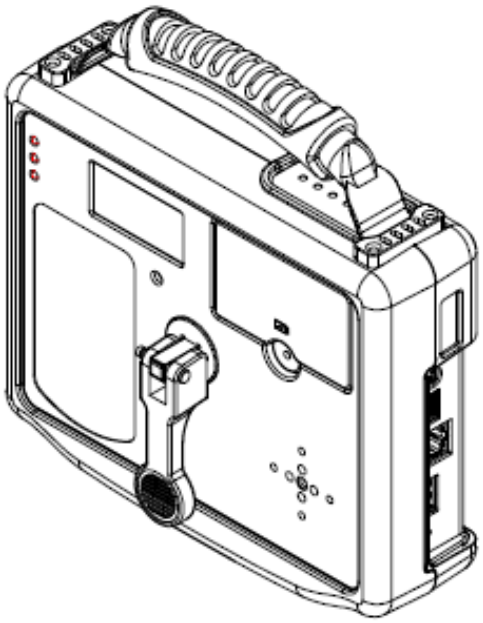
- **Warning!**

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

- **Caution!**

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

CHAPTER 2 Getting started



CHAPTER 2 GETTING STARTED

Congratulations for you to purchase this rugged box computer.

This chapter tells you step by step how to boot up the box computer. You can find instructions for the following procedures:

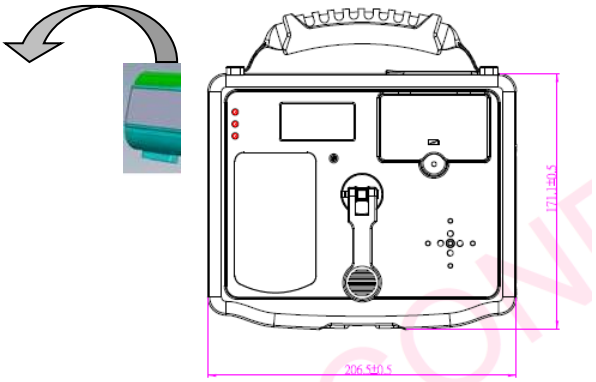
Connecting the AC Power

Our box PC can operate either on the external AC power adapter or internal battery power. It is suggested that you use AC power when you boot up the box PC first time.

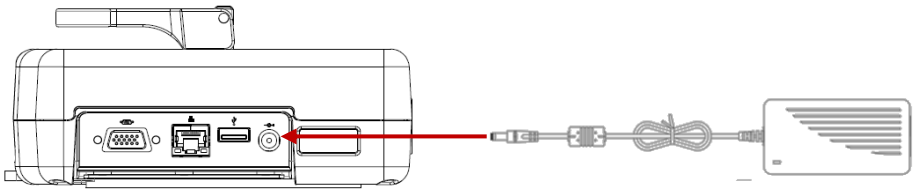
Caution !!!

Use only the AC adapter included with your box PC. Using aftermarket AC adapter may damage the box PC. When you disconnect the AC adapter, disconnect from the electrical outlet first and then from the box PC. When unplugging the connector, always hold the plug head. Never pull on the cord.

1. Make sure that the box PC has been shut down.
2. Rotate the box PC on the proper side and take off the battery cover, then put battery pack into the battery slot with cover.



4. Open the IO protect cover, then plug the DC cord of the AC adapter to the power connector of the box PC.



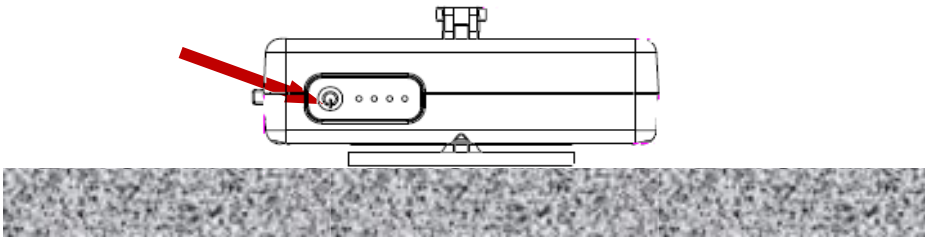
5. Plug the female end of the AC power cord to the AC adapter and the male end to the power electrical outlet.
6. Boot up the Box PC few seconds later after power is being supplied from the electrical outlet to the AC adapter.
7. When the AC adapter is connected, the Battery Pack is also under charging. You can check the battery status LED indicator to see the currently progress. The indicator turns to green

when is fully charged.

Boot up and shut down the Windy

Boot up the Windy

1. Put your Windy on a flat and stable surface or holding the Windy on your hand.
2. Make sure that the Windy is either connected to AC power or the battery pack with power.
3. **Press the power button by 3~4 seconds to boot it up.**



Shut down the Windy

To turn off the Windy power, click the “Shut Down” command of your operating system.

Caution !!!

If you have to boot up the Box PC again immediately after shut it down, wait for at least five seconds. Turning the Box PC off and on rapidly may damage it.

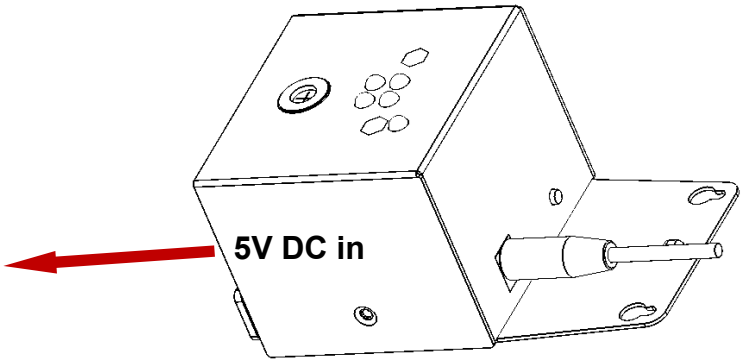
How to wake up Windy by TX box

When the Windy is in S3 or S5 mode, you can wake it up with a TX box (optional).

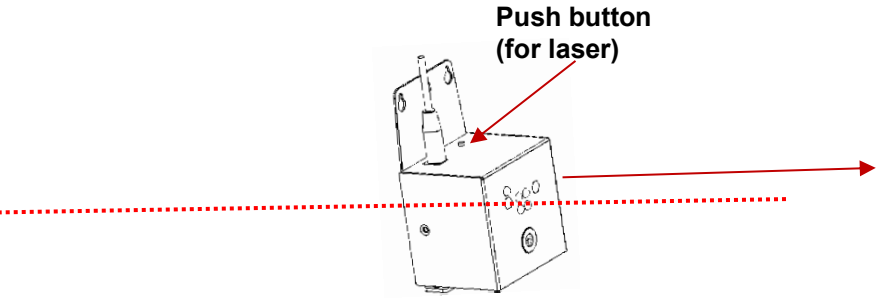
Please follow the steps list below to apply this function.

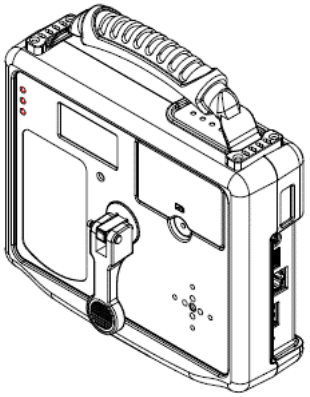
1. Set the Windy from working state (S0) into sleep state (S3) or Soft Off state (S5)

2. Take out the TX box and connect it to power source (5V DC in).

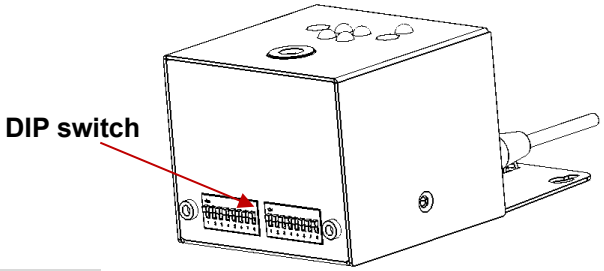


3. Aim the IR receiver (either of three) on Windy with TX box. From distant location (<10m), please push the button on top of TX box. The red cross laser should be helpful for alignment.





4. To avoid the repeat signal interference, Windy is designed to ignore same wake up signal from TX box in 30sec. It's recommended to adjust the DIP switch on the bottom of TX box after wake up the Windy from S3 or S5 mode.



Product Overview

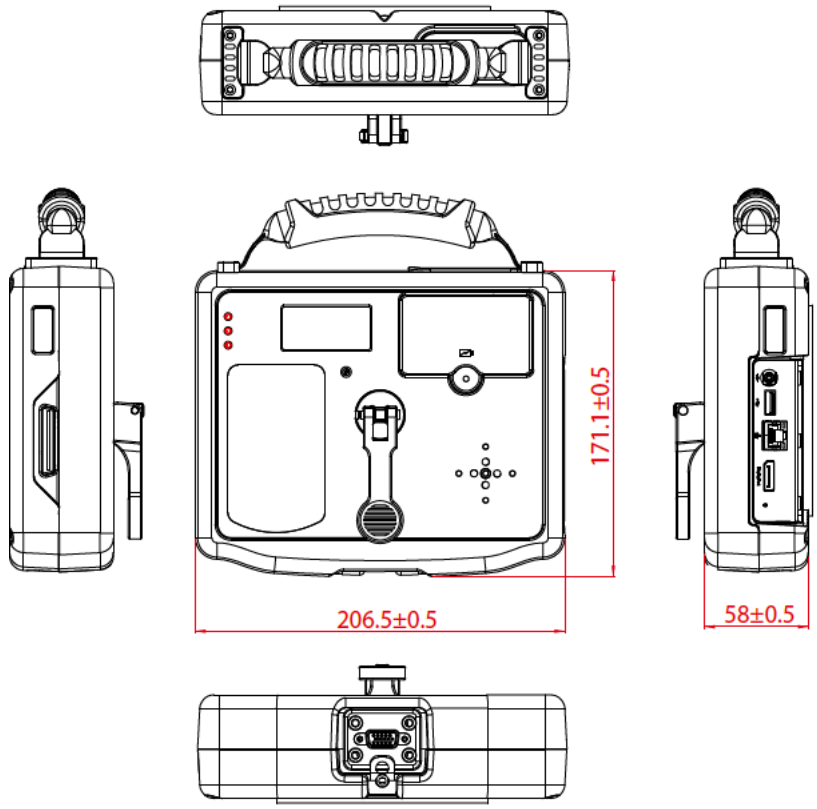


Diagram of front view

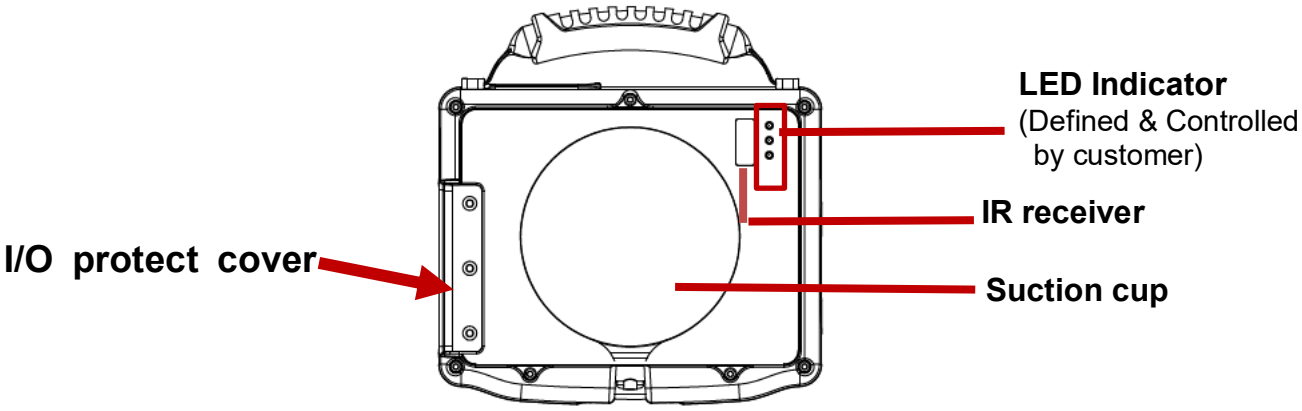


Diagram of Side view

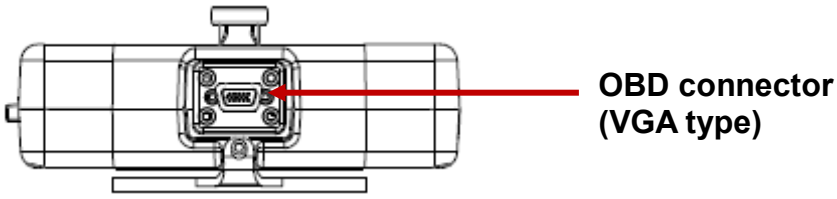


Diagram of Rear view

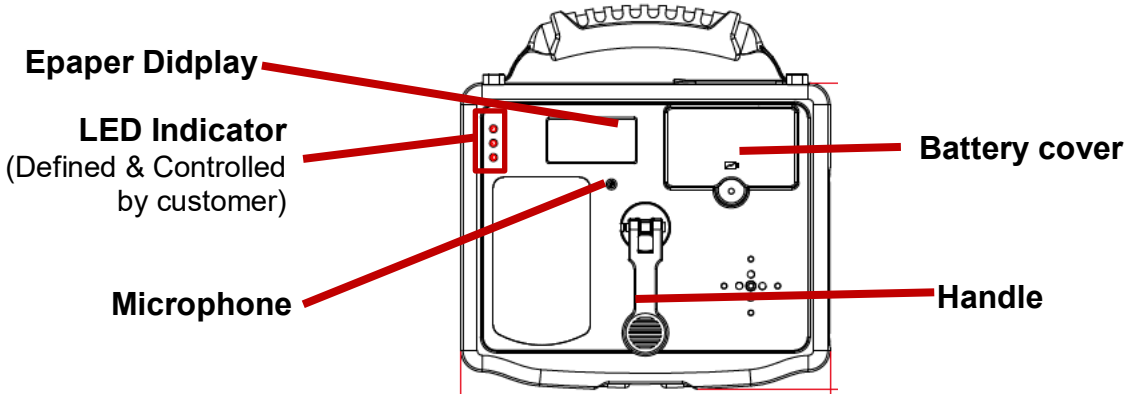
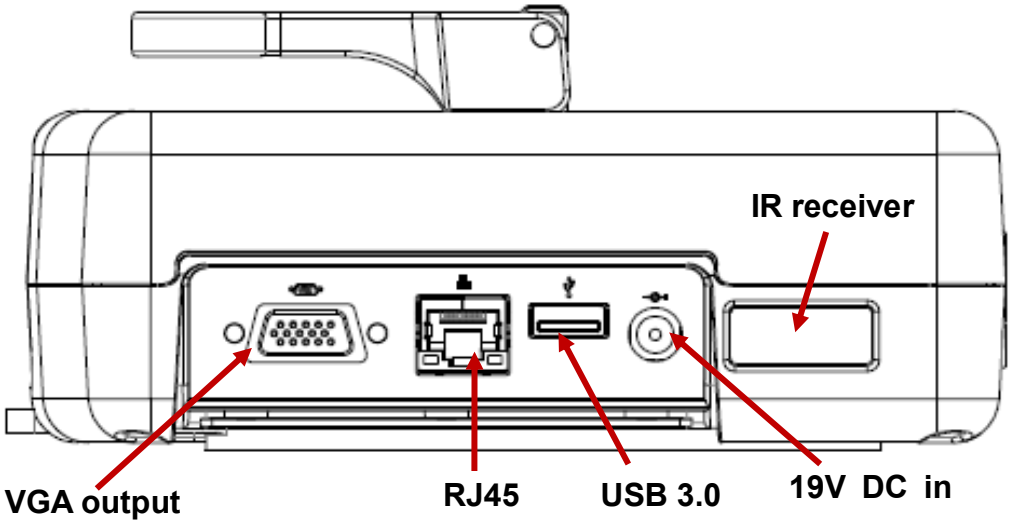
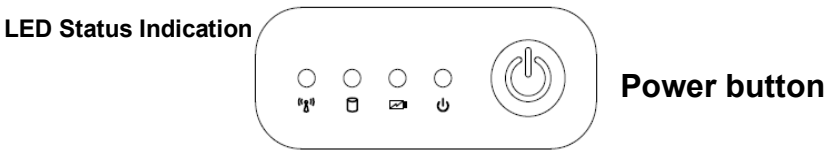


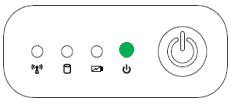
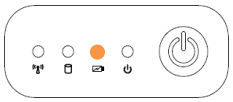
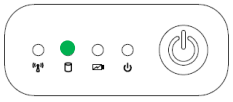
Diagram of I/O view

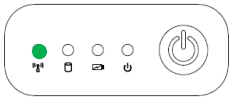


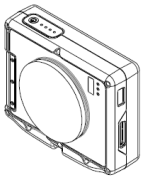
Instruction of OSD & LED Status Indication



LED Status Indication Description

LED Term	LED Indicator	Indicator Status Description
Power mode		Green light：Power On No light : Power Off
Battery Status		No light：Charge completely or Normal using (>10%) Orange Light： Under charging Red Light Blinking：Low Battery (<10%)
Storage \\\Status		Green light：Storage operating

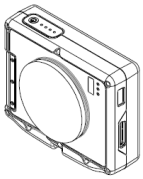
Wi-Fi Status		Green light：Wi-Fi operating No light : Wi-Fi suspend



Product Specification

The product specification(default) as the following table description:

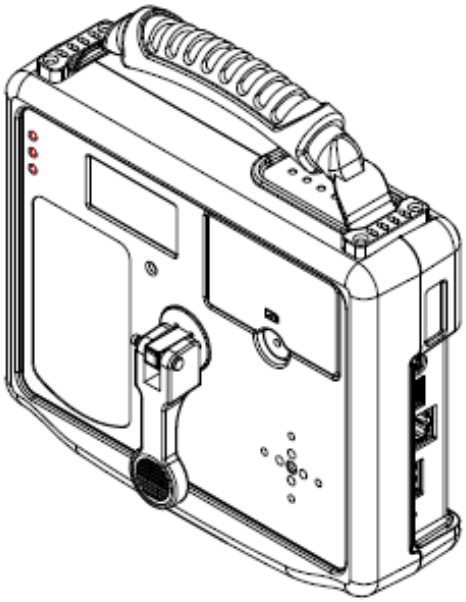
System Main board Spec	
Processor	Intel® Pentium® Processor N4200 1. 1GHz, turbo up to 2.5GHz
BIOS	Insyde System BIOS
System Memory	1 x 8GB SODIMM DDR3L-1866 (Max 8GB)
LAN Controller	Intel I210
Storage	1 x M.2 2242 Key B 256GB SSD, 1 x M.2 2242 Key B SSD slot (empty as default)
Audio	Microphone(-42±3dB) x1
External I/O & Buttons	
OSD	1x Power Button (Top side)
LAN	1x RJ45 (I/O side)
2.5 Power Jack	1x 19V DC in (I/O side)
USB	1x USB 3.0/2.0 (I/O side)
VGA	1x VGA (I/O side)
Docking connector	OBD type
Internal I/O & Buttons	
SSD/Wi-Fi	M.2 x4 (2 for SSD / 1 for Wi-Fi/1 for WWAN)
LAN	Wafer for e-COM CAN BUS
LED panel	GPIO (PWM) x3
Wireless Communication	
Wi-Fi + BT	802.11 ac,a/b/g/n Wi-Fi M.2 card
Wake up sensors	
G sensor	3D acceleration sensor up to 10g Drop detection and motion wake up Controlled by software API (Customization)
IR Sensor	IR Sensor x3, Wake up function with **TX Box** (16bit ID signal)
LED indicator	
OSD	Indicator of Power/SSD/Battery/Wi-Fi/ operating status
LED pane	3x pairs for indicating Undefined status (front & back side) LED light by RGB combined colors
Software	
OS	Windows 10 IOT Enterprise



Product Specification (continue)

Mechanical and Environment	
Weight	1.3 Kg (w/o accessories)
Operating Temperature	-10℃~50℃
Operating Humidity	10% to 95% (non condensing)
Mounting	Suction cup with handle
Shock	MIL-STD-810G M516.6 (By request)
Vibration	MIL-STD-810G M514.6 (By request)
Drop	4 ft, Free to concrete
Certifications	CE, CE Wi-Fi, FCC, CCC
Power Management	
Power Input	19V DC in
Battery	Li-Ion battery 3000mAh, 7.4V
Adapter	100-240V, 50-60Hz, 19VDC

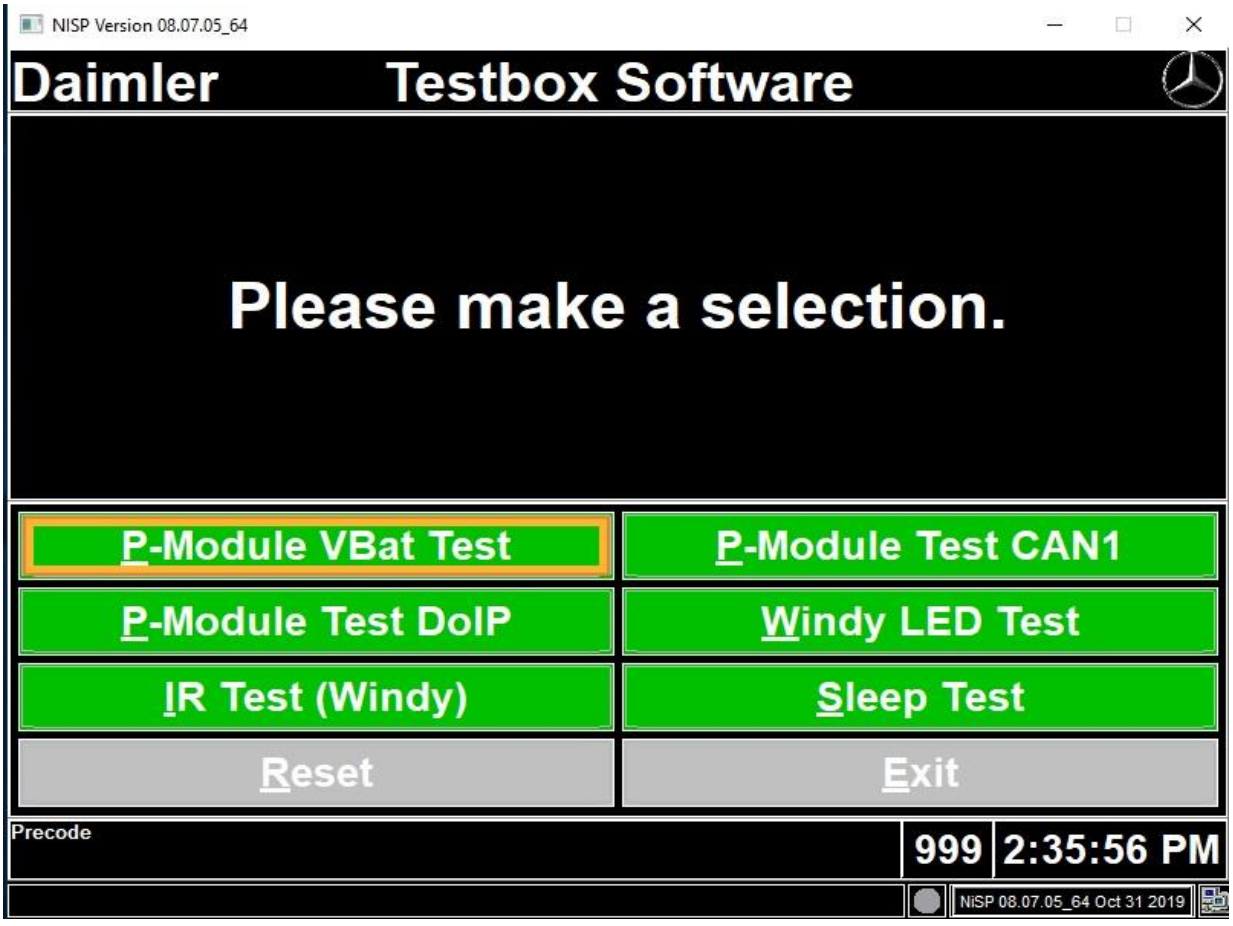
CHAPTER 3 Useful Information



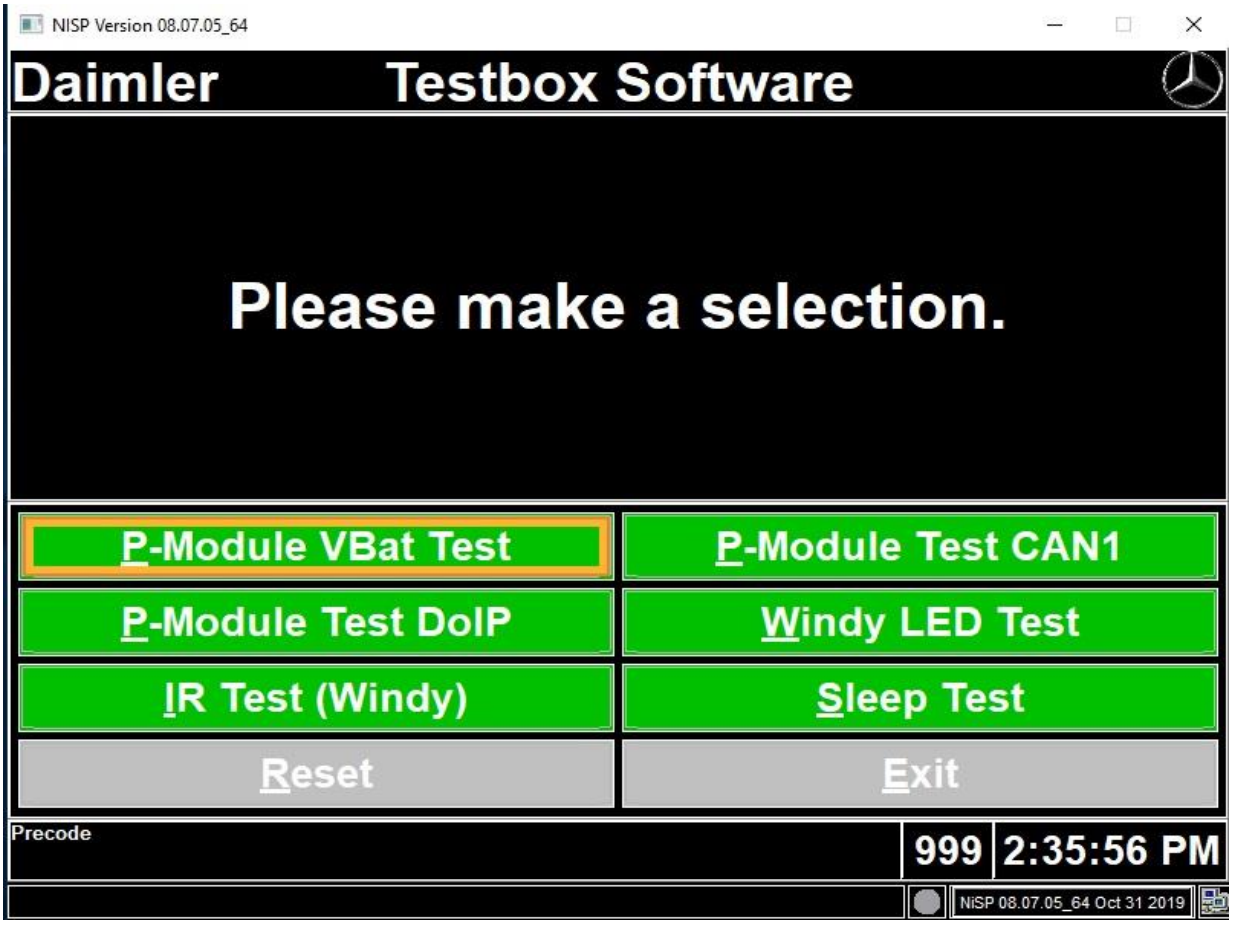
To implement the process of function test or BIOS update, you have to use VGA connector to show the Windy's output to a display (Resolution will be adjusted automatically).

1. The procedure to test connecting with OBD BOX

1.1 After running the program, please select the "P-Module VBat Test".



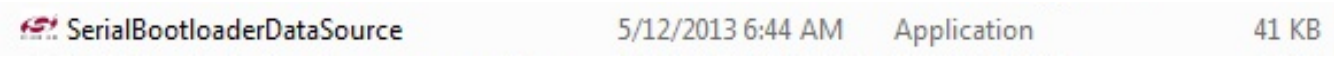
1.2 Click all the testing Item sequentially. It will show green when it Pass, but red when Fail.



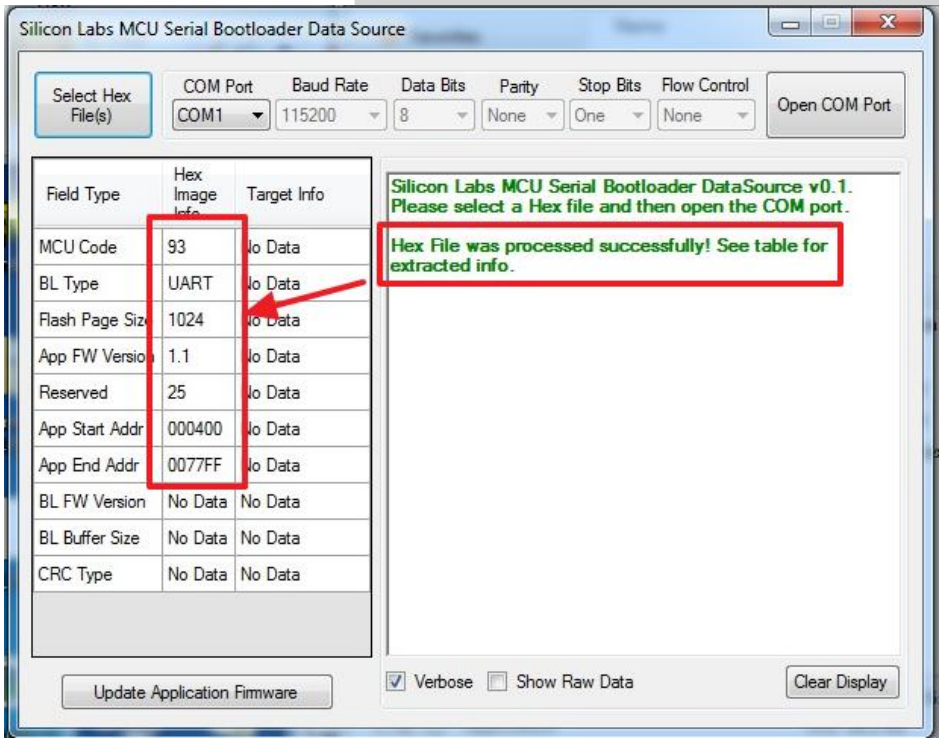
1.3 After all the test has been done, please click the "EXIT" icon.

2. The procedure to update bios of MCU

2.1 Open “MCU AP” folder and run “SerialBootloaderDataSource.exe”



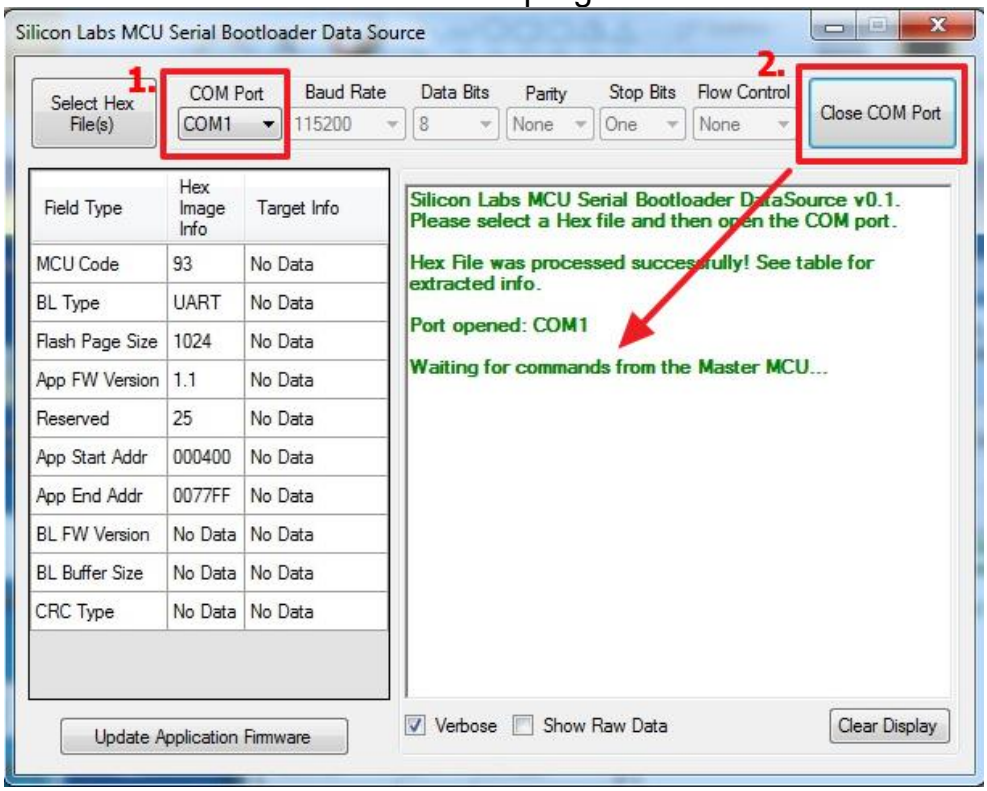
2.2. a. Click “Select Hex File(s)” b. Click .hex file
c. Click “Open” d. Run the Hex file successfully as follow.



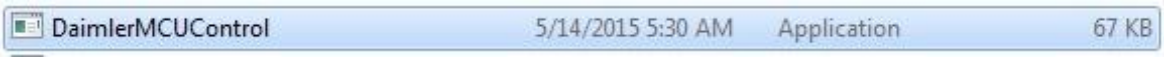
2.3 a. Click “COM Port”

b. Click “Open COM Port”

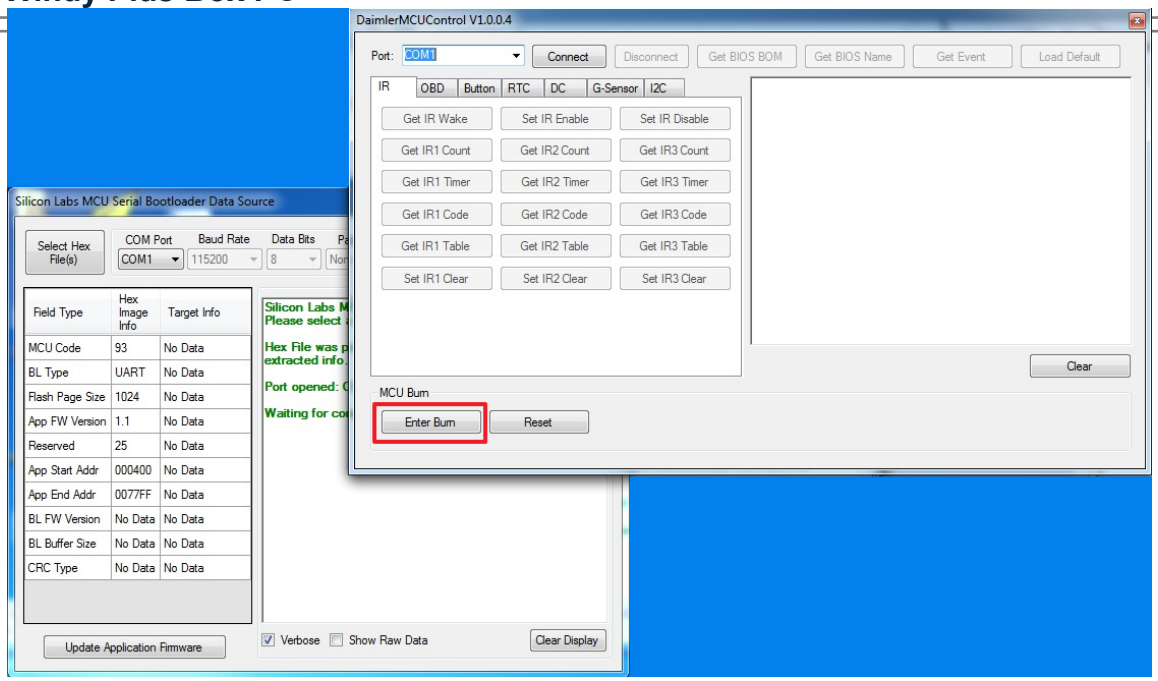
□Please do not close the whole program window.



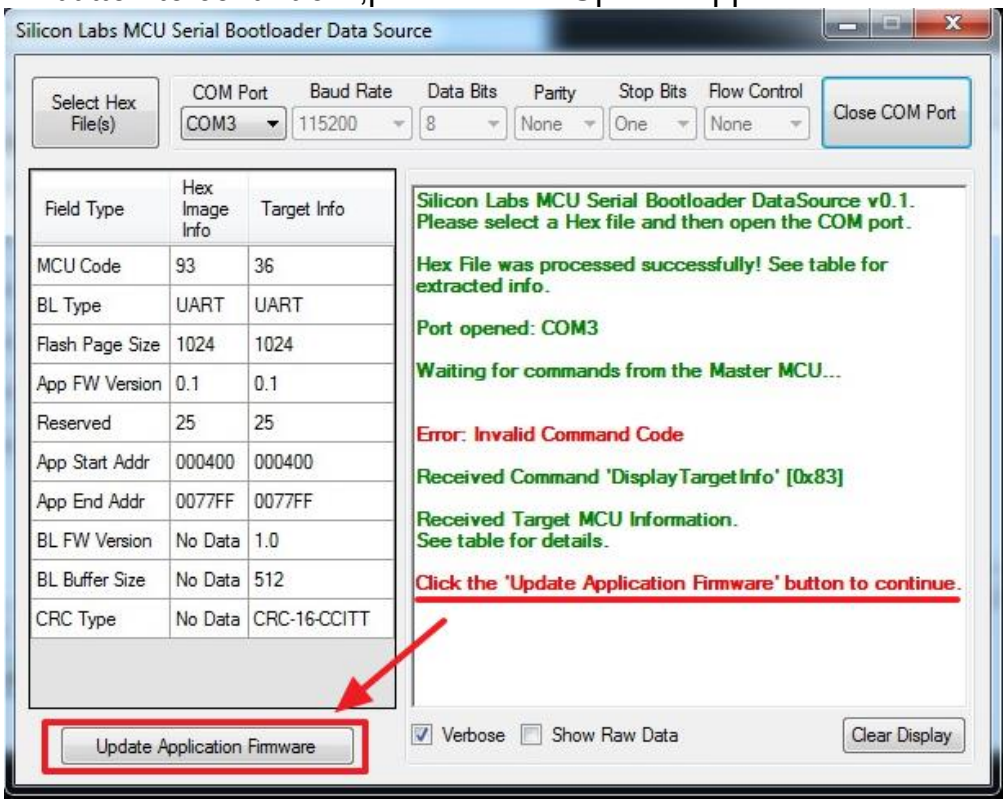
2.4 Run ”DaimlerMCUControl.exe”



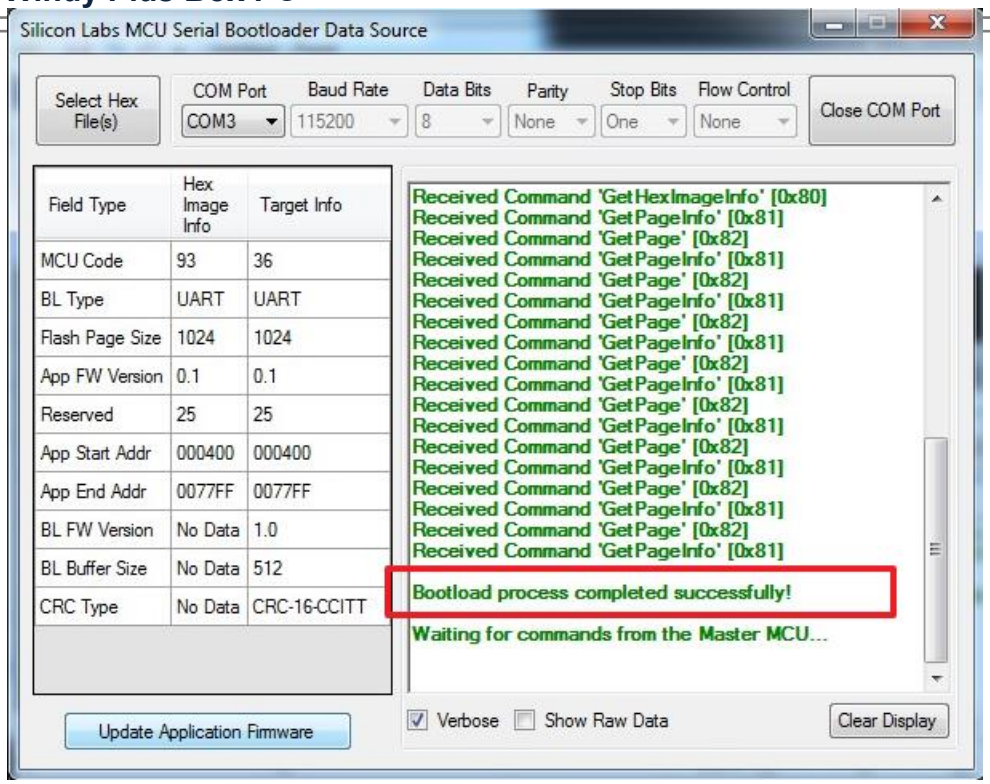
2.5 Click “Enter Burn”



2.6 If the program shows the notice *"Click the 'Update Application Firmware' button to continue "* ,please click "Update Application Firmware" .



2.7 When the message "Bootload process completed successfully!" appears in the columm, it means update boot loader process was fully completed.



3. The procedure to test all the Wake up function

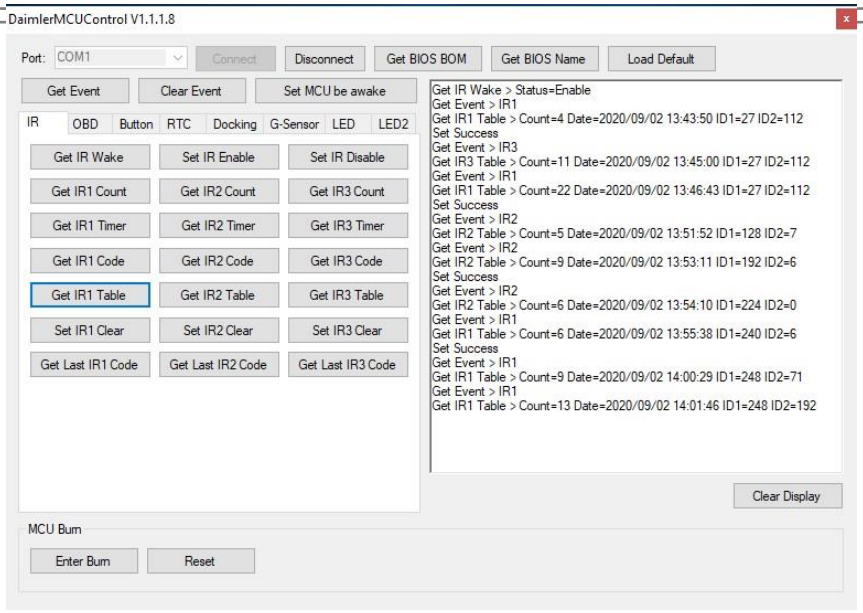
3.1 IR Wake up

a. Implement Daimler MCU Control and perform COM Port Connect to COM3 then set IR Enable.

b. Click Get IR Wake and make sure IR Wake Status=Enable

c. Let the system to Sleep / Hibernate / Shout down Mode, then use the TX BOX to wake Windy up and get event to confirm which IR worked.

d. Click Get IR Table and make sure if it has count, the information of time and ID need to be correct.



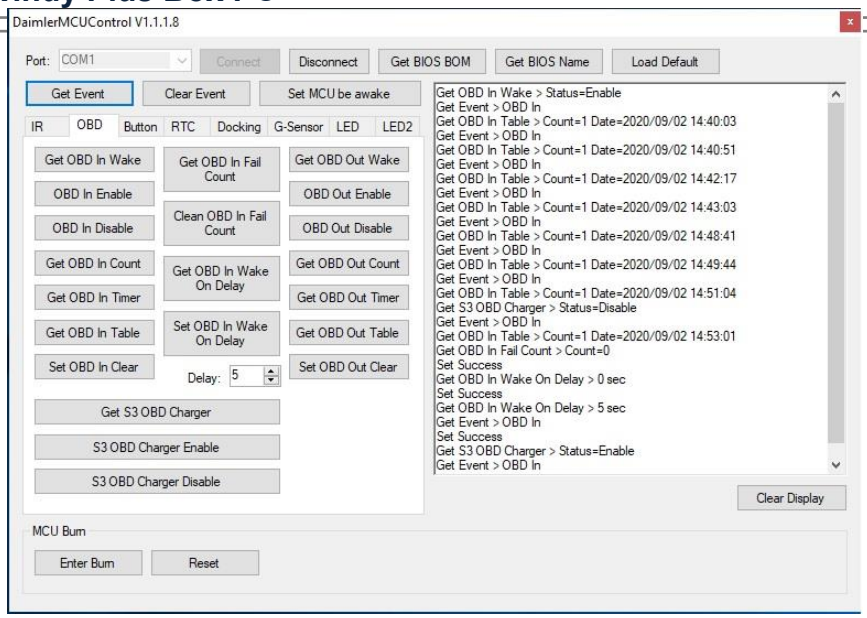
3.2 OBD In Wake up

a. Implement Daimler MCU Control and perform COM Port connect to COM3 then set OBD In Enable.

b. Click Get OBD In and make sure OBD In Wake Status=Enable。

c. Allow the system to enter the Sleep / Hibernate / Shout down Mode and plug in the OBD cable to wake up the Porty G3 S. Click get Event to confirm whether wake up by OBD In.

d. Click OBD In Setting make sure whether the count and time information are correct.



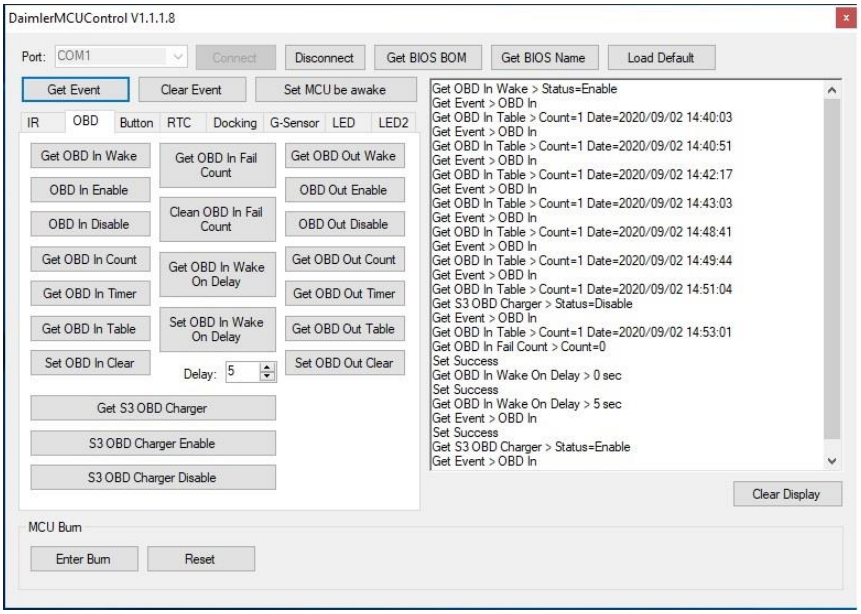
3.3 OBD Out Wake up

a. Implement Daimler MCU Control and perform COM Port connect to COM3 then set OBD out enable.

b. Click Get OBD Out and make sure OBD Out Wake Status=Enable。

c. Allow the system to enter the Sleep / Hibernate / Shut down Mode and un-plug the OBD cable to wake up the Porty G3 S. Click get Event to confirm whether wake up by OBD Out.

d. Click OBD Out settings and make sure whether the count and time information are correct.



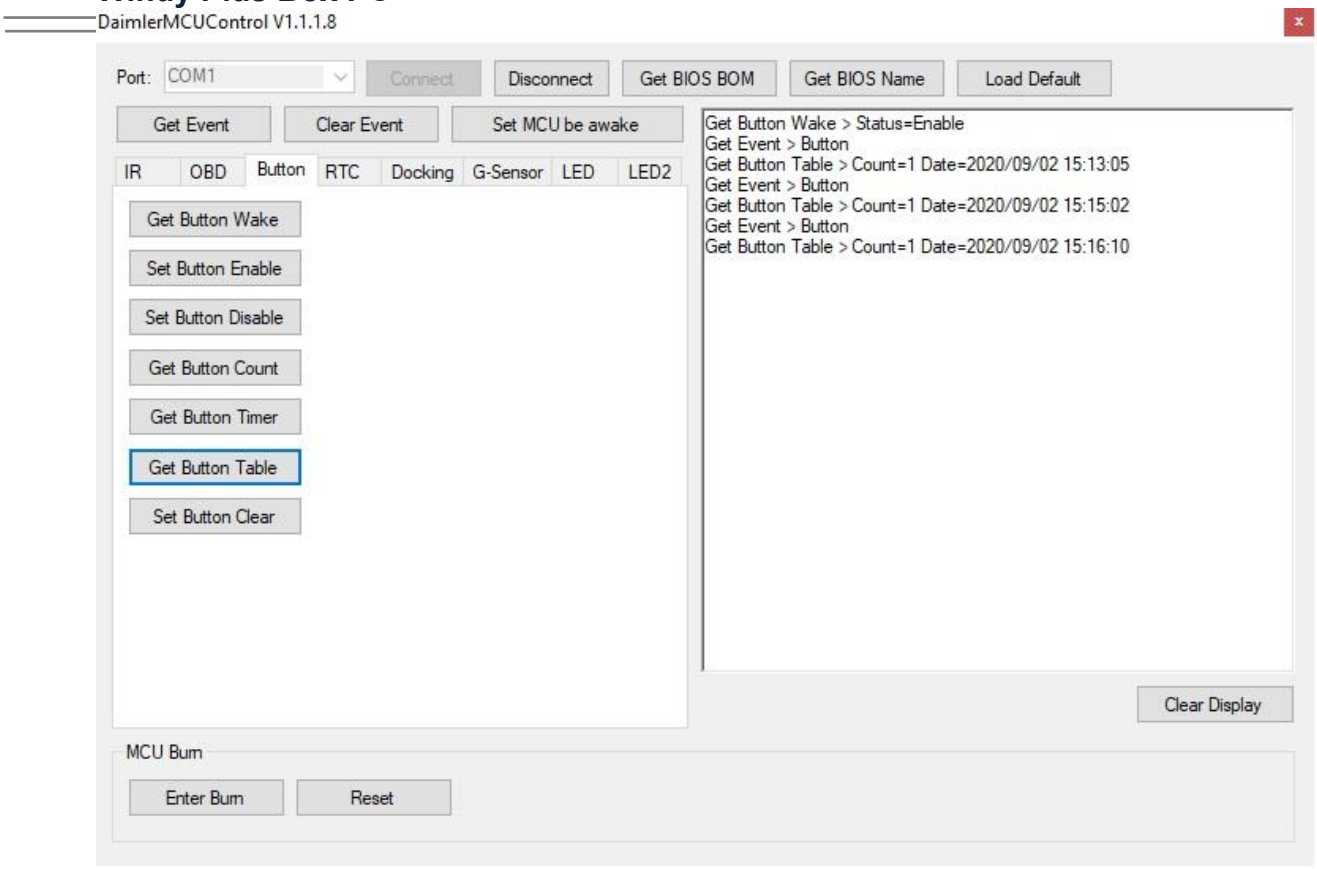
3.4 Button Wake up

a. Implement Daimler MCU Control and perform COM Port connect to COM3 then set
Button out enable

b. Click Get Button settings and make sure Button Wake Status=Enable。

c. Allow the system to enter the Sleep / Hibernate / Shut down Mode and press the
power button to wake up the Porty G3 S. Click get Event to confirm whether wake up by Button.

d. Click OBD Out setting make sure whether the count and time information are correct.

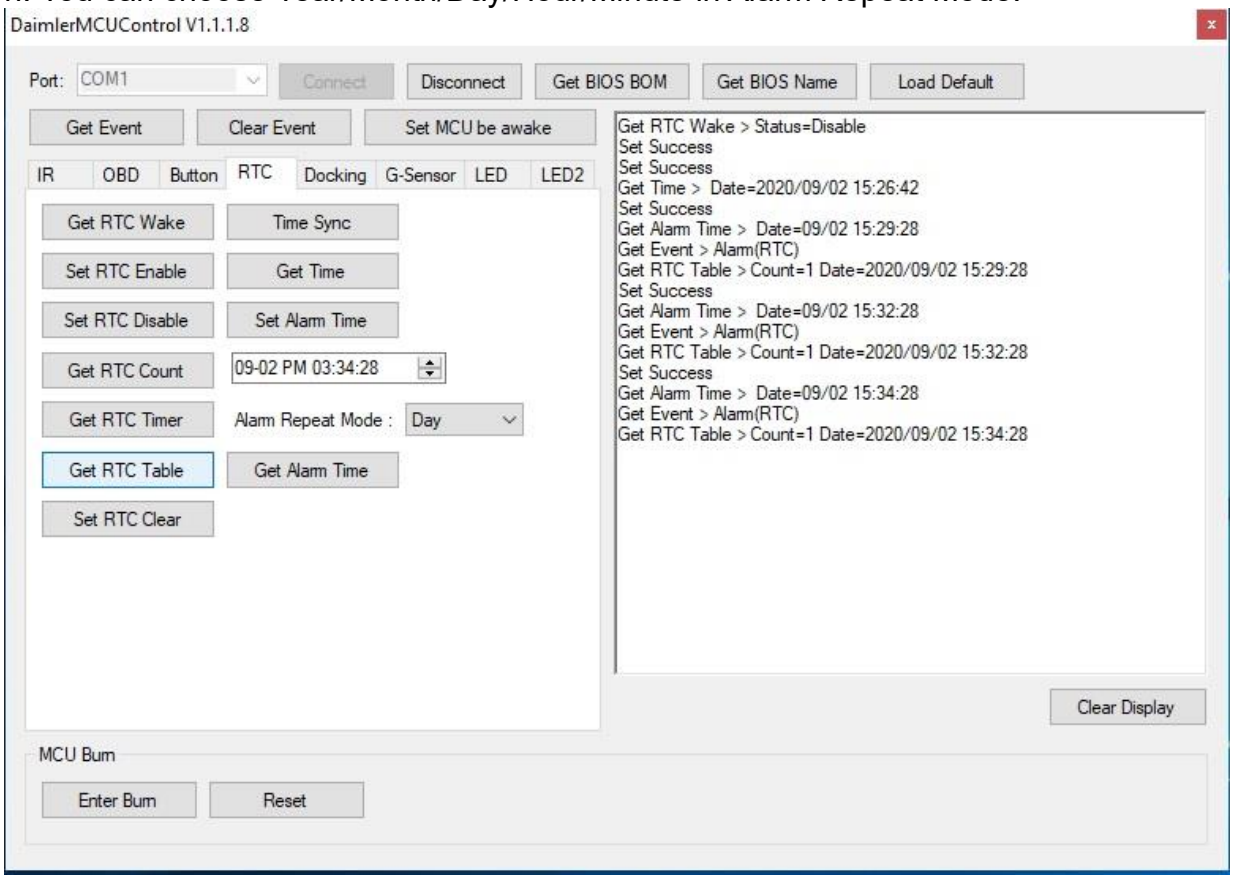


3.5 RTC Wake up

a. Implement Daimler MCU Control and perform COM Port connect to COM1 then set RTC enable.
b. Click Get RTC Wake and make sure RTC Wake Status=Enable.
c. Click on the Time Sync and allow time synchronization
d. Click Get Time, confirm the time is synchronized
e. Set Alarm Time in order to set the wake-up time.
f. Allow the system to enter the Sleep / Hibernate / Shut down Mode and after a specified time to wake up Windy Plus. Click get Event to confirm whether wake up by RTC.
g. Click Get RTC Table and make sure whether the count and time information are

correct.

h. You can choose Year/Month/Day/Hour/Minute in Alarm Repeat Mode.



3.6 Docking In Wake up

a. Implement Daimler MCU Control and perform COM Port connect to COM1 then set DC In enable.

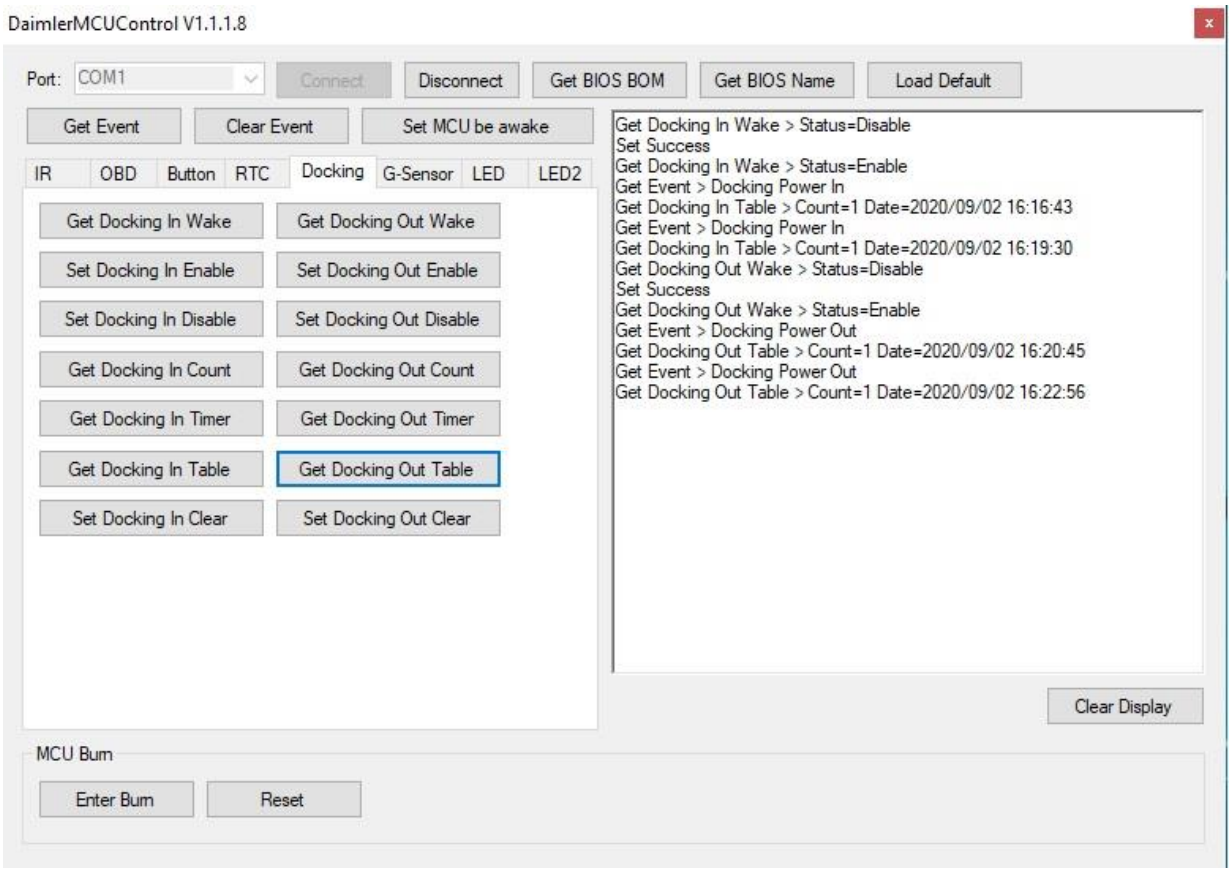
b. Click Get Docking In Wake and make sure Docking in Wake Status=Enable。

c. Allow the system to enter the Sleep / Hibernate / Shut down Mode and plug in the power adapter to wake up the Windy Plus, Click get Event to confirm whether wake up by DC Power In.

d. Click Get Docking In Table and make sure whether the count and time information are correct

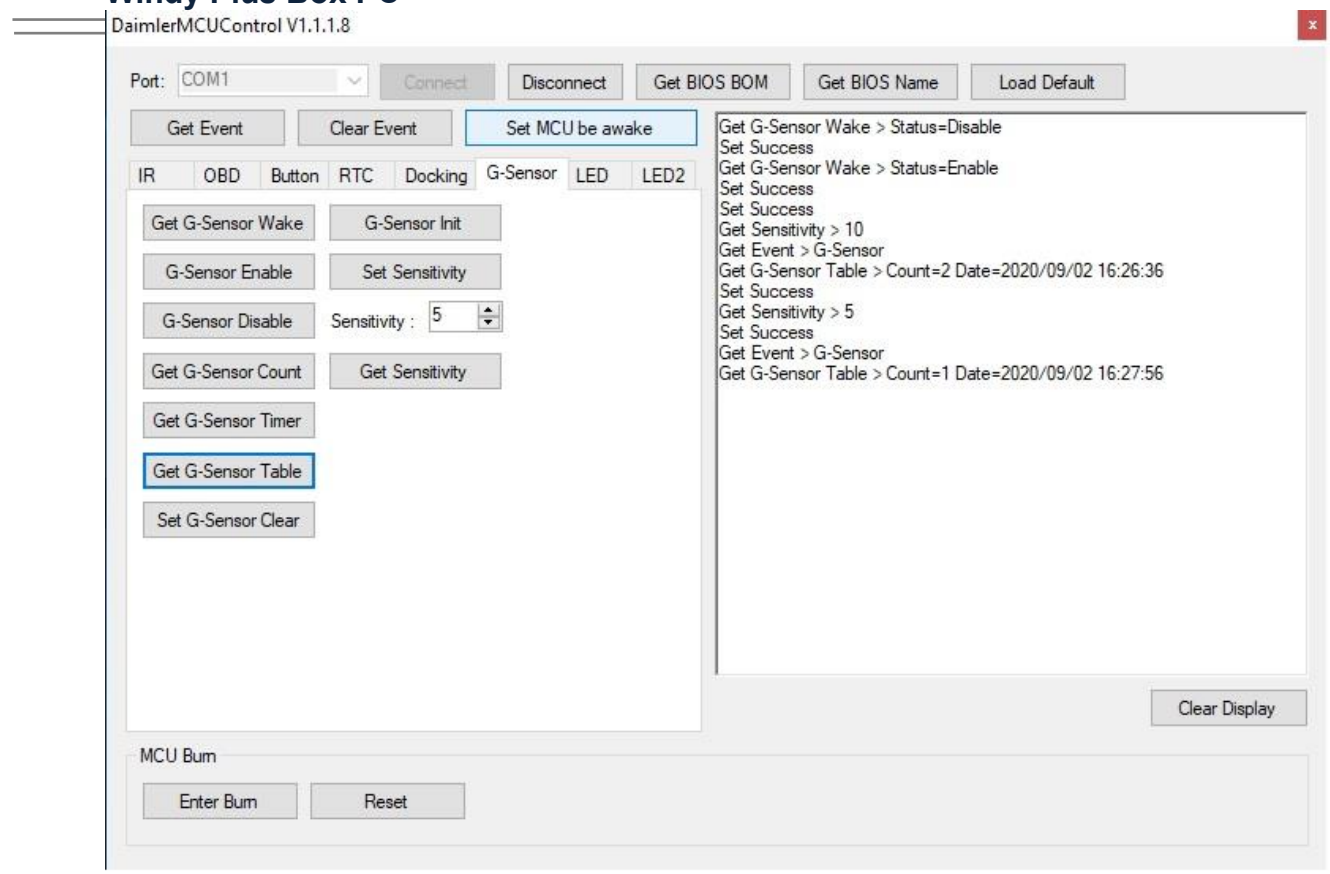
3.7 Docking Out Wake up

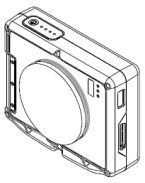
a. Implement Daimler MCU Control and perform COM Port connect to COM1 then set Docking Out enable.
b. Click Get Docking Out Wake and make sure Docking Out Wake Status=Enable.
c. Allow the system to enter the Sleep / Hibernate / Shut down Mode and unplug the power adapter to wake up the Windy Plus. Click get Event to confirm whether wake up by DC Power Out.
d. Click Get Docking Out Table and make sure whether the count and time information are correct.



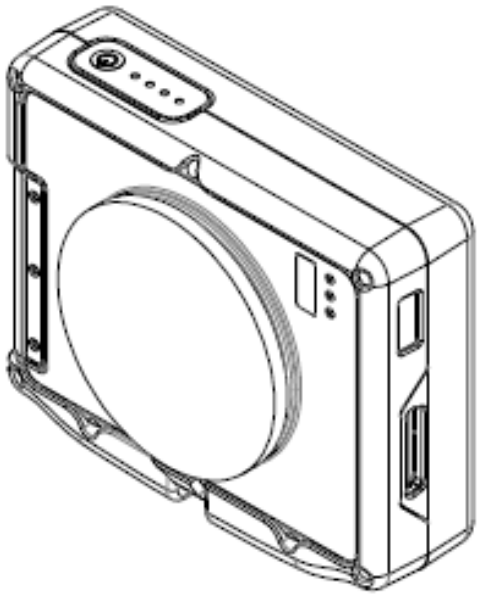
3.8 G-Sensor Wake up

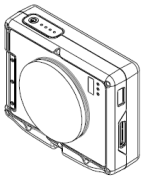
a. Implement Daimler MCU Control and perform COM Port connect to COM1 then set G-Sensor enable.
b. Click Get G-Sensor Wake and make sure G-Sensor Status =Enable。
c. Click on the G-Sensor Int to adjust the sensitivity of G-Sensor (10 to 0).
d. Allow the system to enter the Sleep / Hibernate / Shut down Mode and motion the Windy Plus to wake up it. Click get Event to confirm whether wake up by G-Sensor.
e. Click Get G-Sensor Table and make sure whether the count and time information are correct.


DaimlerMCUControl V1.1.1.8
Port: COM1
Connect
Disconnect
Get BIOS BOM
Get BIOS Name
Load Default
Get Event
Clear Event
Set MCU be awake
IR
OBD
Button
RTC
Docking
G-Sensor
LED
LED2
Get G-Sensor Wake
G-Sensor Init
G-Sensor Enable
Set Sensitivity
G-Sensor Disable
Sensitivity :
5
Get G-Sensor Count
Get Sensitivity
Get G-Sensor Timer
Get G-Sensor Table
Set G-Sensor Clear
Get G-Sensor Wake > Status=Disable
Set Success
Get G-Sensor Wake > Status=Enable
Set Success
Set Success
Get Sensitivity > 10
Get Event > G-Sensor
Get G-Sensor Table > Count=2 Date=2020/09/02 16:26:36
Set Success
Get Sensitivity > 5
Set Success
Get Event > G-Sensor
Get G-Sensor Table > Count=1 Date=2020/09/02 16:27:56
Clear Display
MCU Burn
Enter Burn
Reset



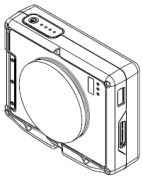
CHAPTER 4 Troubleshooting





Troubleshooting

Problem	Solution
The removable battery is not charging.	✓ Make sure the AC adapter is properly connected, and that the removable battery is properly inserted.
Nothing appears on the output display.	✓ The Windy may be in sleep mode. Press the power button to wake it up.
Wireless LAN signal quality is poor.	✓ The Windy may be out of wireless sufficient range. Move the Windy to be more closer to the access point. ✓ Check if your surroundings have interferences, such as microwave ovens, cordless phones. Move the Windy away from objects causing interference.
Can't connect to other wireless LAN device.	✓ Make sure that function of wireless LAN has been turned on. ✓ Make sure that the SSID setting is the same for every wireless LAN device in the network. ✓ Restart the Windy. ✓ Make sure the IP address or subnet mask setting is correct.
Can't connect to other device with Bluetooth.	✓ Make sure that both devices have Bluetooth turned on. ✓ Make sure that the distance between both devices is within 10 meters and there are no walls or large obstructions between the devices. ✓ Make sure the both devices are turned on and configured to be discoverable. ✓ Make sure that both devices are compatible.



Winmate INC.

9F, No.111-6, Shing-De Rd., San-Chung District,

New Taipei City 241, Taiwan, R.O.C

Web Site: http://www.winmate.com.tw

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.