

Battery Firmware Upgrade Manual

V2.0
27nd February, 2023



CONTENTS

1. Determine Your Battery Version.....	3
E-Box-48100R-A Version	3
E-Box-48100R-B Version	3
E-Box-48100R-C Version	3
2. Prepare for the Upgrade	4
Step 1. Download the upgrade documents	4
Step 2. Install the hyper terminal	4
Step 3. Get the suitable cable.....	5
3. Start Upgrading.....	6
Step 1. Connect the cable	6
Step 2. Turn on the Battery.....	7
Step 3. Run the Hyper Terminal to Upgrade.....	7
4. Recover the Battery	12

1. Determine Your Battery Version

E-Box-48100R-A Version

1. Link Port 0 and Link Port 1 in Vertical Line
2. 4 Position DIP switch (ADD)



E-Box-48100R-B Version

1. Link Port 0 and Link Port 1 in Horizontal Line
2. 4 Position DIP switch (ADD)



E-Box-48100R-C Version

1. Link Port 0 and Link Port 1 in Horizontal Line
2. 6 Position DIP switch (ADD)



2. Prepare for the Upgrade

Step 1. Download the upgrade documents

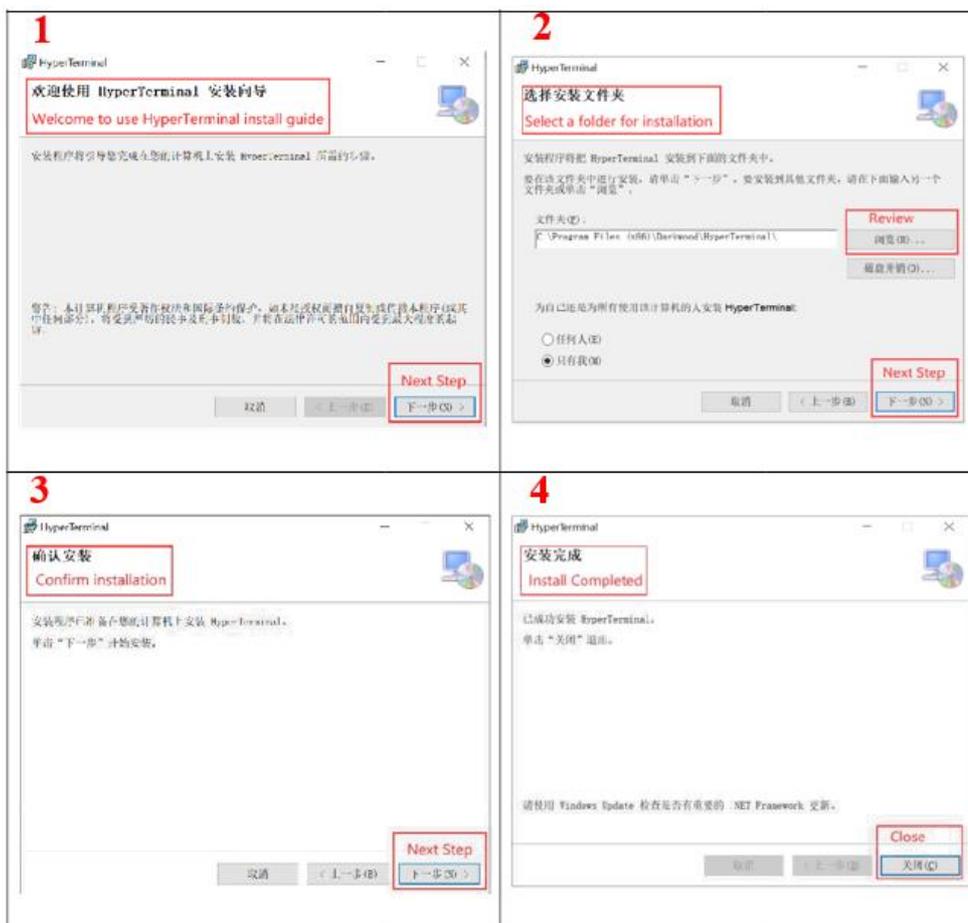
Download these three documents from this link:

https://www.pytesusa.com/upgrade_system/

-  Battery Firmware Upgrade Manual.pdf
-  driver for RJ11 to USB cable.exe
-  driver for RJ45 to USB cable.exe
-  hyper_terminal_latest.msi
-  SPBMS16SRP2110V1.1.6.bin for A Version Battery
-  SPBMS16SRP2111V1.3.18.bin for B Version Battery
-  SPBMS16SRP2203V1.5.18.C8.bin for C Version Battery

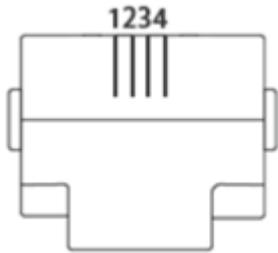
Step 2. Install the hyper terminal

Open [hyper_terminal_latest.msi](#) File to Run the application.:

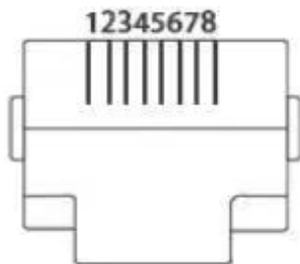


Step 3. Get the suitable cable

Type I for E-Box-48100R A
Version
(4 pin/RJ11 to USB)



Type II for E-Box-48100R
B&C Version
(8 pin/RJ45 to USB)



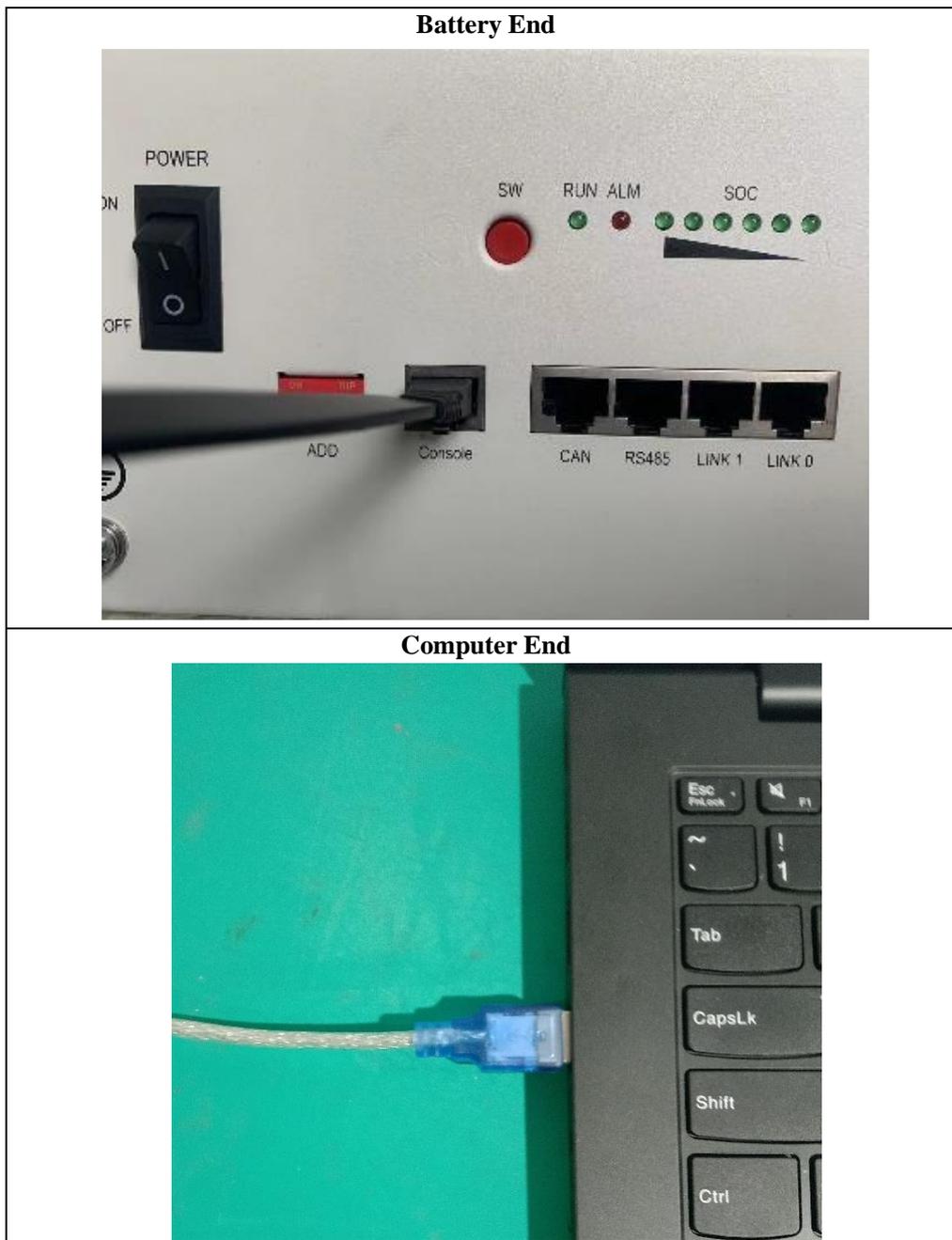
3. Start Upgrading

Step 1. Connect the cable

Connect the battery and PC/laptop with the Cable. The crystal end plugs in battery Console port and USB end plug in your PC/laptop.

*Use the RJ11 to USB cable for E-Box-48100R A Version

Use the RJ45 to USB cable for E-Box-48100R B&C Version



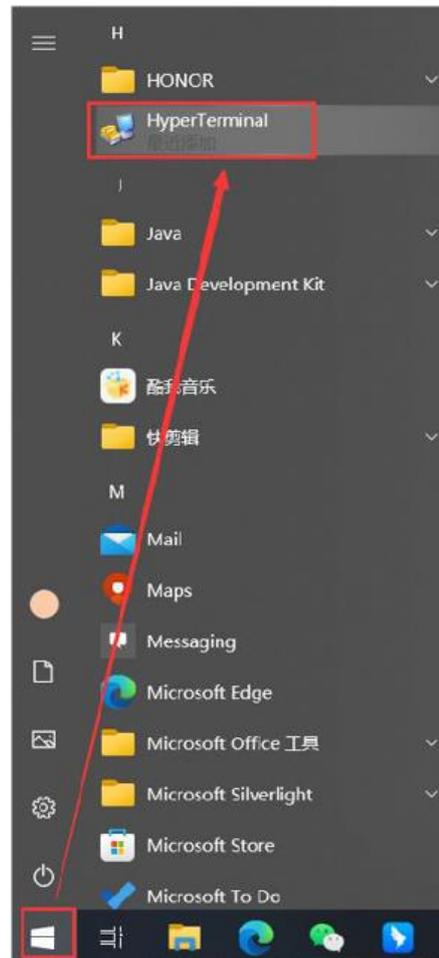
Step 2. Turn on the Battery

After wiring, turn on the battery Power button and press the SW button for one second.



Step 3. Run the Hyper Terminal to Upgrade

Open the Hyper Terminal

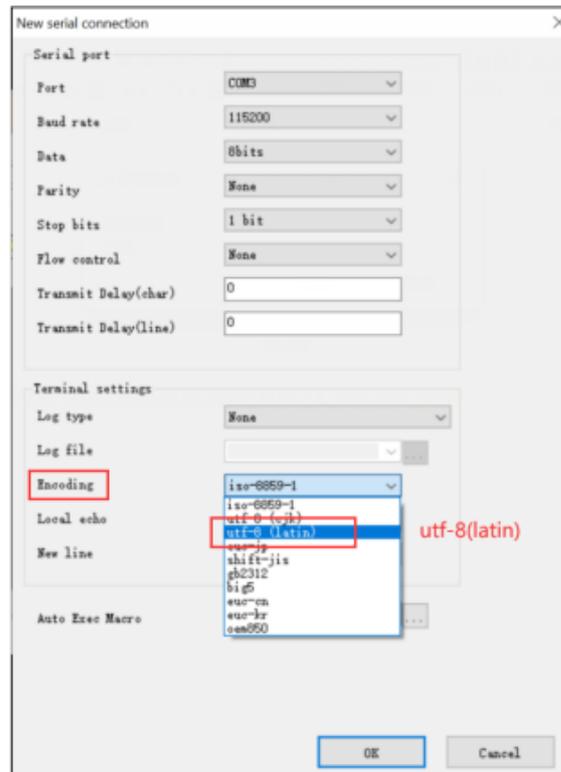
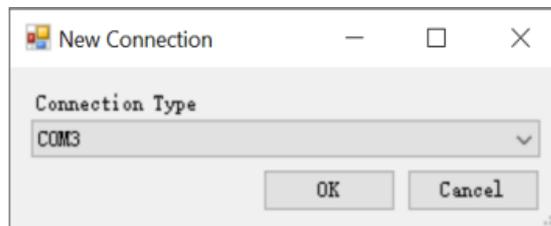
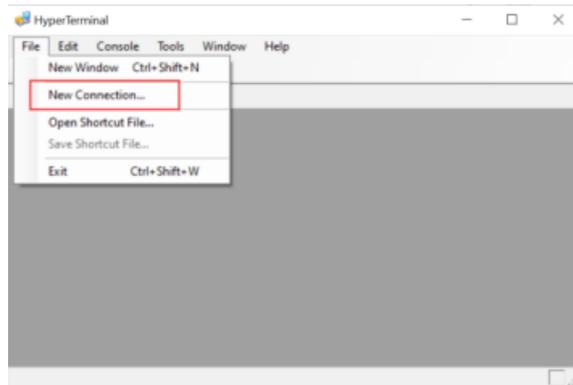


Create a new connection as following steps:

- Click File in Menu bar
- New Connection →COMX*
- Encoding →utf-8(latin)

*The COM number may vary, it doesn't matter.
If you don't see the COM Option, please close the Hyper Terminal and install the driver for RJ45/RJ11 to USB depend on your battery version, then Reopen the Hyper Terminal, Repeat the steps above.

-  driver for RJ11 to USB cable.exe
-  driver for RJ45 to USB cable.exe



Input "info" to check the current battery software version

```

COM3 - HyperTerminal
File Edit Console Tools Window Help
COM3
info
@
Device address      : 1
Manufacturer        : PYTES
Device name         : E-BOX48100-R
Board version       : SQBMSV11
Main Soft version   : SPBMS16SRP2110V1.1.4
Soft version        : V1.1
Boot version        : V1.4
Comm version        : V2.0
Release Date        : 22-06-23
Barcode             : TEST0000000000001

Specification       : 51.2V/100AH
Cell Number         : 16
Max Dischg Curr     : -102000mA
Max Charge Curr     : 102000mA
    
```

Input "updata" to get upgrade program started as following steps:

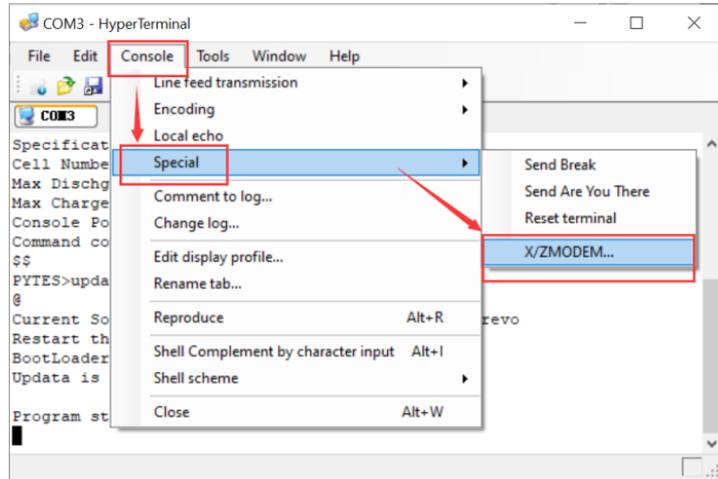
***Please note that after starting this process, you must complete the upgrade and cannot quit in the middle, otherwise it will cause the battery to die.
If the upgrade is interrupted due to various force majeure reasons, please refer to the Battery Recovery Section to recover

```

COM3 - HyperTerminal
File Edit Console Tools Window Help
COM3
Specification       : 51.2V/100AH
Cell Number         : 16
Max Dischg Curr     : -102000mA
Max Charge Curr     : 102000mA
Console Port rate   : 115200
Command completed successfully
$$
PYTES>updata
@
Current Soft version : SPBMS16SRP2110V1.1.4
Restart the BMS system!
BootLoader soft version: V1.4
Updata is ready!

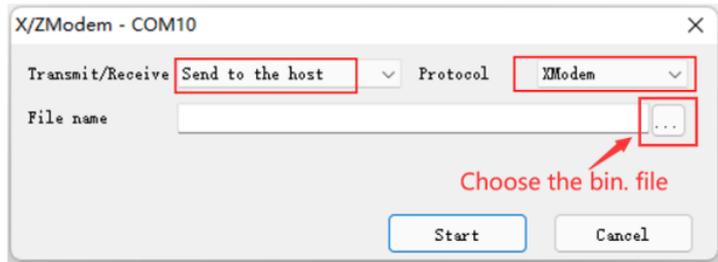
Program start!
    
```

Steps 1:
 → Click Console in Menu bar
 →Special →X/ZMODEM

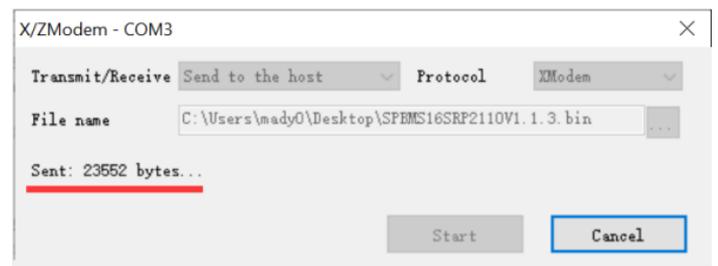


Steps 2:
 a. Select "Send to the host"
 for Transmit/Receive
 b. Select "XModem" for
 Protocol
 c. Review the bin. file path

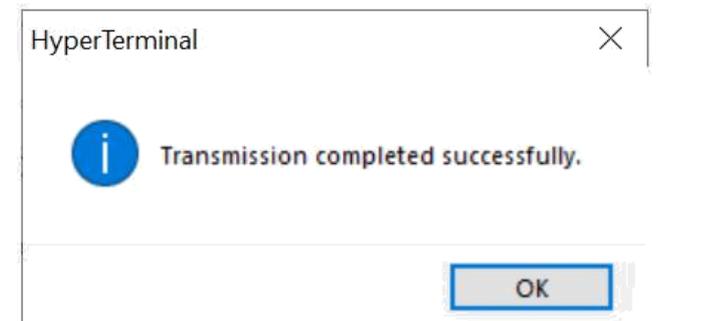
* Please prepare the bin. file in advance according to your battery version. Do not confuse the bin. file Otherwise it will cause the battery to die please refer to the Battery Recovery Section to recover



Transmission processing



Transmission completed



Input "info" again to check the battery Main Soft Version. Make sure it has changed to the updated bin. file name.

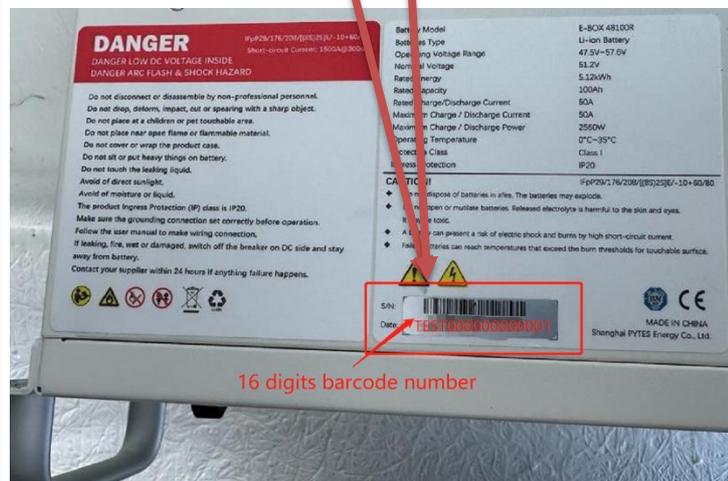
*Also check the Barcode that should remain the same as the S/N in the battery label. If not, please input "tbar" + SN to rewrite the barcode. Note that the S/N code is composed of 16 letters and digits.

```

COM4 - HyperTerminal
File Edit Console Tools Window Help

COM4
info
@
Device address      : 1
Manufacturer       : PYTES
Device name        : E-BOX48100-R
Board version      : SQBMSV11
Main Soft version  : SPBMS16SRP2110V1.1.3
Soft version       : V1.1
Boot version       : V1.4
Comm version       : V2.0
Release Date       : 22-06-06
Barcode            : TEST000000000002

Specification      : 51.2V/100AH
Cell Number        : 16
Max Dischg Curr    : -102000mA
Max Charge Curr    : 102000mA
Console Port rate  : 115200
Command completed successfully
$$
PYTES_debug:tbar TEST000000000001
@
Test result:pass
Barcode:TEST000000000001
Command completed successfully
$$
    
```



Input "login debug" and Input "config default" to make the new BMS parameters take effect.

```

PYTES>login debug
@
Command completed successfully
$$
PYTES_debug>config default
@
Command completed successfully
$$
PYTES_debug>
    
```

4. Recover the Battery

If any force majeure causes the B Version and C Version Battery to die (The Run light does not flash, you cannot type in hyper terminal), Please refer to following steps to recover the battery.

*If you cause the A Version Battery die or the following steps don't work please contact ess_support@pytesgroup.com to recover the battery. So make sure that the bin. file corresponds to your battery version.

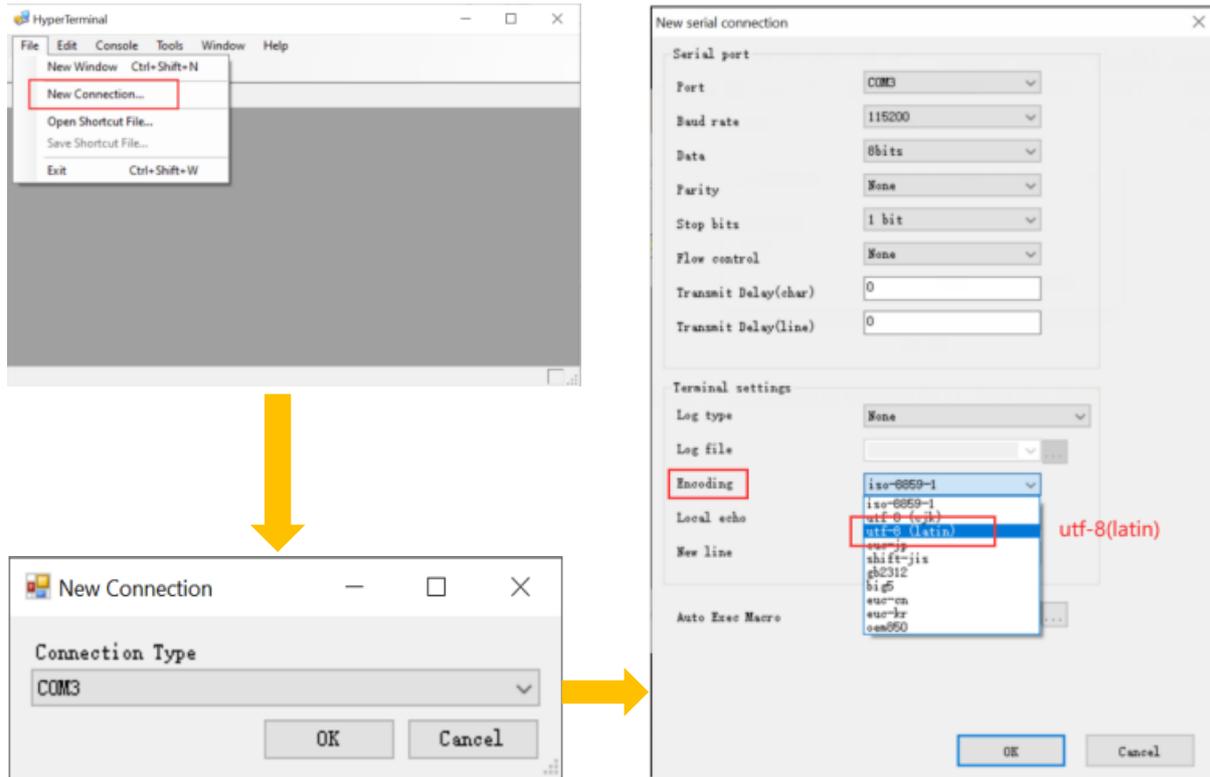
Step 1. Close and Rerun hyper terminal

Step 2. Restart the Battery

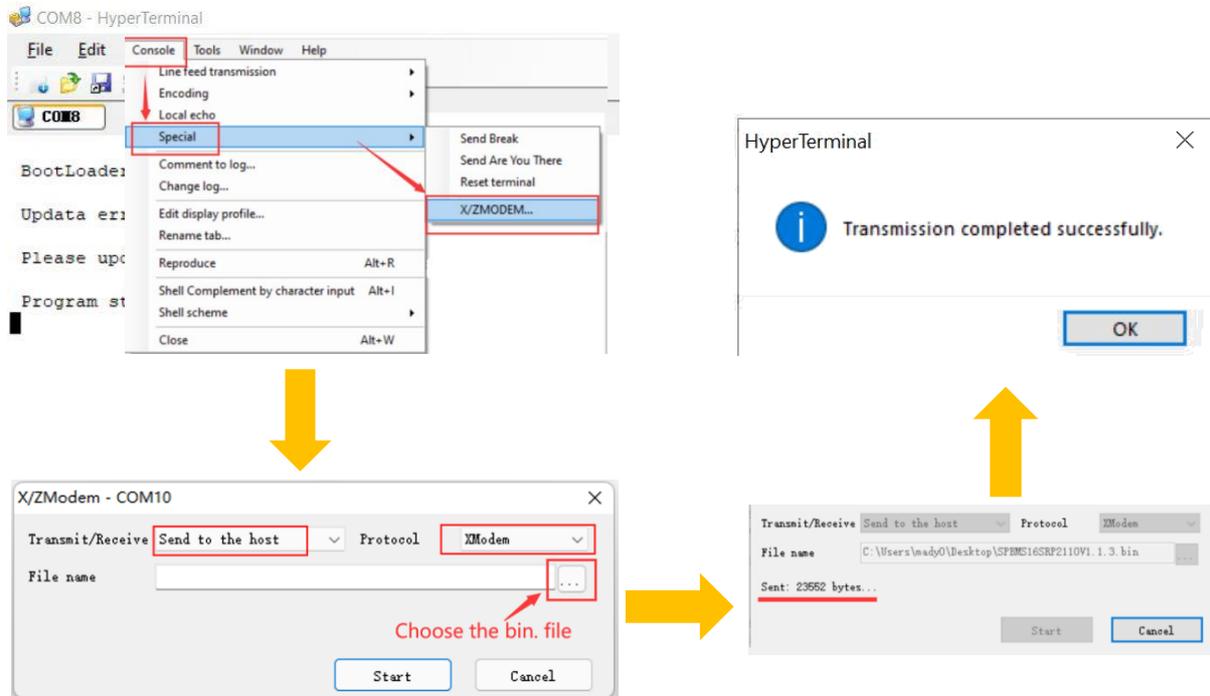
Turn on again the Power Button, and press the SW switch.



Step 3. Create a new connection as before



Step 4. Re-completing the upgrade



Step 5. Check

Input "info" again to check the battery Main Soft Version. Make sure it has changed to the updated bin. file name.

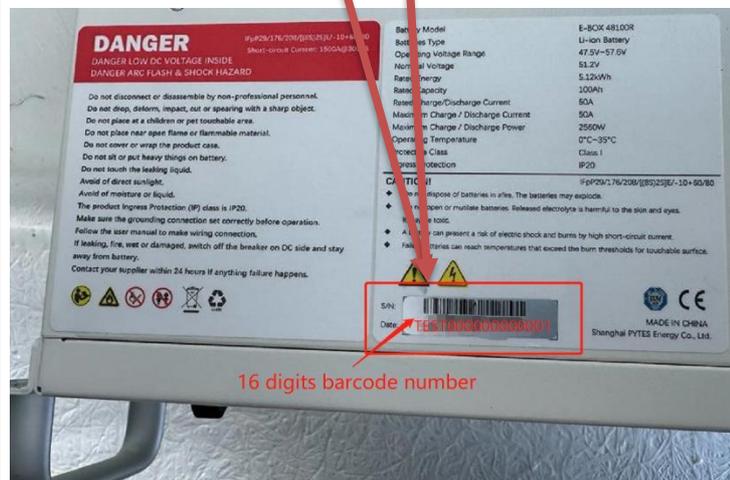
*Also check the Barcode that should remain the same as the S/N in the battery label. If not, please input "tbar" + SN to rewrite the barcode. Note that the SN is 4 digits capital letters and 12 number digits.

```

COM4 - HyperTerminal
File Edit Console Tools Window Help

COM4
info
@
Device address      : 1
Manufacturer       : PYTES
Device name        : E-BOX48100-R
Board version      : SQBMSV11
Main Soft version  : SPBMS16SRP2110V1.1.3
Soft version       : V1.1
Boot version       : V1.4
Comm version       : V2.0
Release Date      : 22-06-06
Barcode           : TEST000000000002

Specification      : 51.2V/100AH
Cell Number       : 16
Max Dischg Curr   : -102000mA
Max Charge Curr   : 102000mA
Console Port rate : 115200
Command completed successfully
$$
PYTES_debug:tbar TEST000000000001
@
Test result:pass
Barcode:TEST000000000001
Command completed successfully
$$
    
```



Input "login debug" and Input "config default" to make the new BMS parameters take effect.

```

PYTES>login debug
@
Command completed successfully
$$
PYTES_debug>config default
@
Command completed successfully
$$
PYTES_debug>
    
```