

# ETH2020 Converter Setup (RJ45)

## 1. INTRODUCTION

The main function of ETH2020 is to receive instruction from the control PC with an Ethernet cable and forward it to the battery test equipment. At the same time, it obtains the real-time voltage and current data from the testers and transmits them back to the computer.



Figure-1

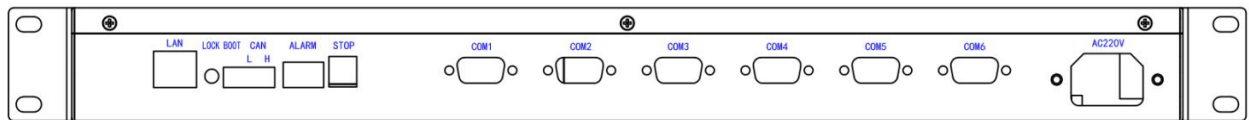


Figure-2

**LAN port:** connected with PC with Ethernet cable.

**LOCK:** release the binding between PC and ETH2020 converter.

**BOOT:** used for programming on the equipment.

**CAN:** reserved for other uses.

**ALARM:** for alarm flashlight.

**STOP:** for emergent stop.

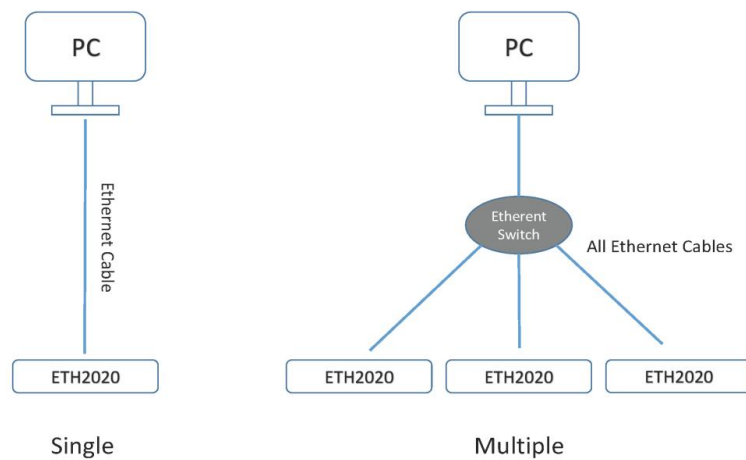
**COM1-COM6:** connected battery testers with serial cables. Every two testers are connected in series and then to one of the COM ports.

## 2. QUICK INSTALLATION

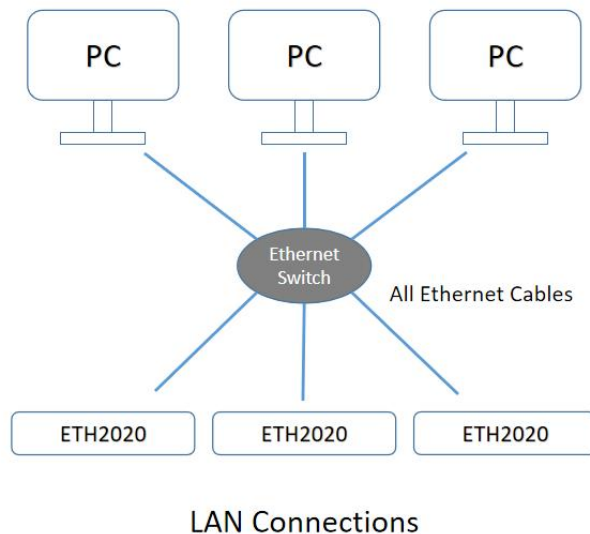
### 2.1 CONNECTIONS

The ETH2020 converter works as an intermediary between the PC and battery testers. The connections are with LAN cables. If there are several ETH2020 converters, a switch is necessary. Two connections are accepted: direct connection and local area network (LAN).

- a) Direct connection: directly connect the ETH2020 converter to the PC with Ethernet cables. For several ETH2020, use an Ethernet switch. The network doesn't communicate with the outside. Direct connection is suggested as it is simple and reliable.



- b) LAN connection: several PCs and ETH2020 are connected via one or more Ethernet switches. This connection allows devices to be expanded and a large number of battery testers can be managed by the PC. It requires the IP of each device to be individually assigned.

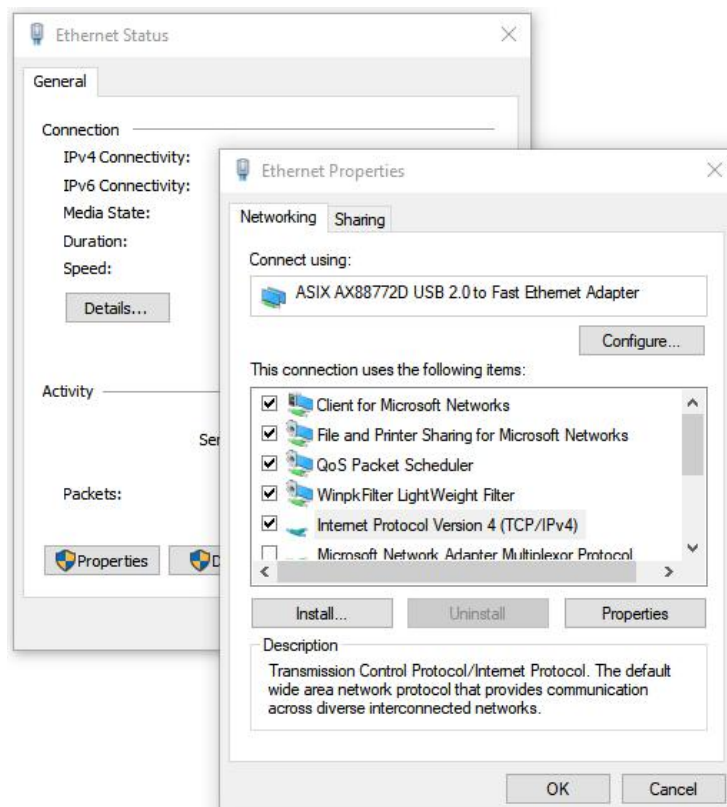
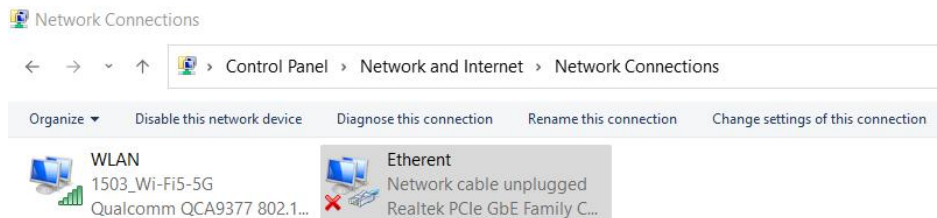


**Note: Don't turn on all the ETH2020 simultaneously when they are initially connected, since all the ETH2020 have the same default IP address (192.168.10.100). The ETH2020 should be turned on and set one by one. It is bound to the computer. Once the IP address was assigned, turn on another. Note that the IP addressing requires restart of the ETH2020 manually. Repeat the above to assign the IP of all the ETH2020. Pay attention to the IP allocations, and make them in sequence. The region (192.168.10.100 ~ 192.168.10.110) is strongly suggested for the ETH2020.**

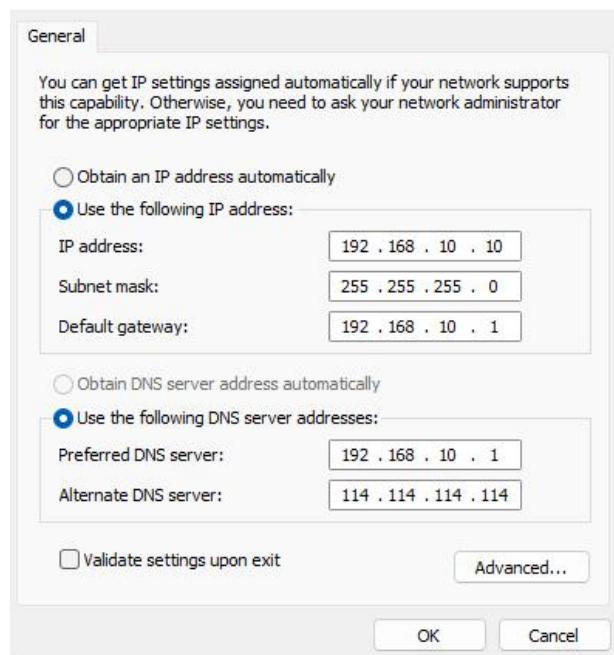
## 2.2 IP ADDRESS OF THE PC

The default IP address for ETH2020 is 192.168.10.100. It requires the IP of the computer to be in the same region.

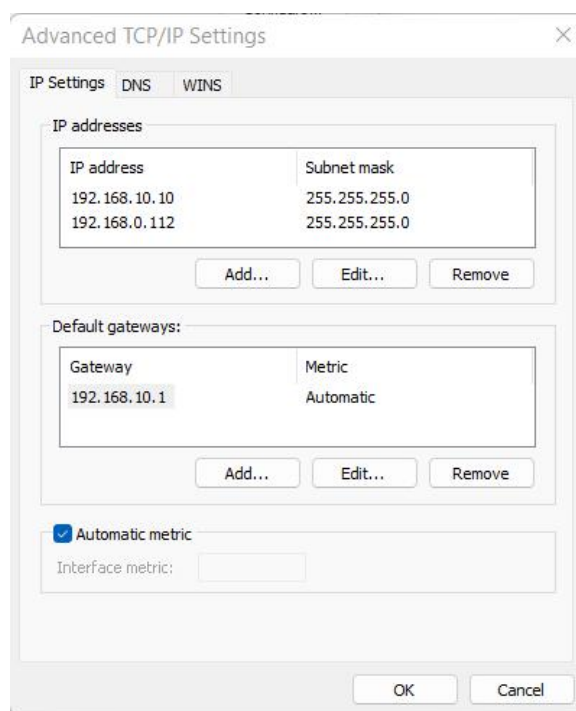
Go to Control Panel\Network & Internet\Network Connections. Right-click the Ethernet icon, and select "Property". Then double click TCP/IPv4 option.



Modify IP address to be in the region 192.168.10.X. For example 192.168.10.10.



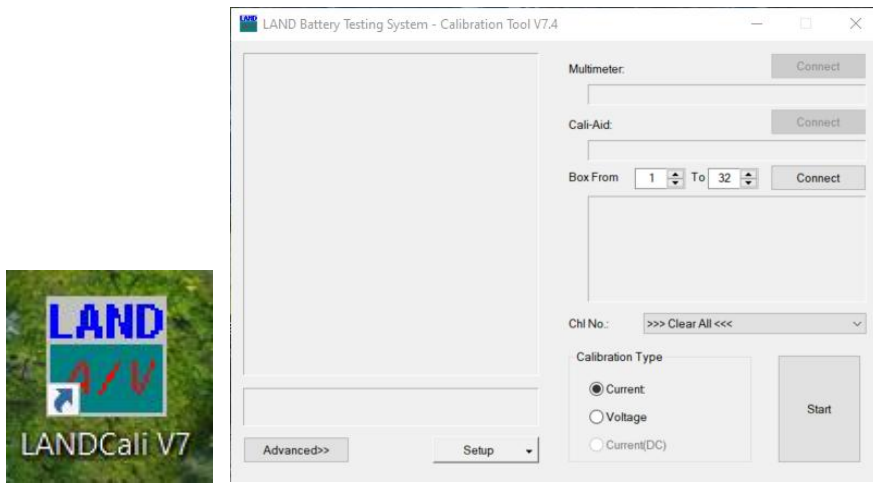
If the current IP address needs to be retained, the IP 192.168.10.X can be used as an additional. Click the “Advanced” button to add this additional IP.



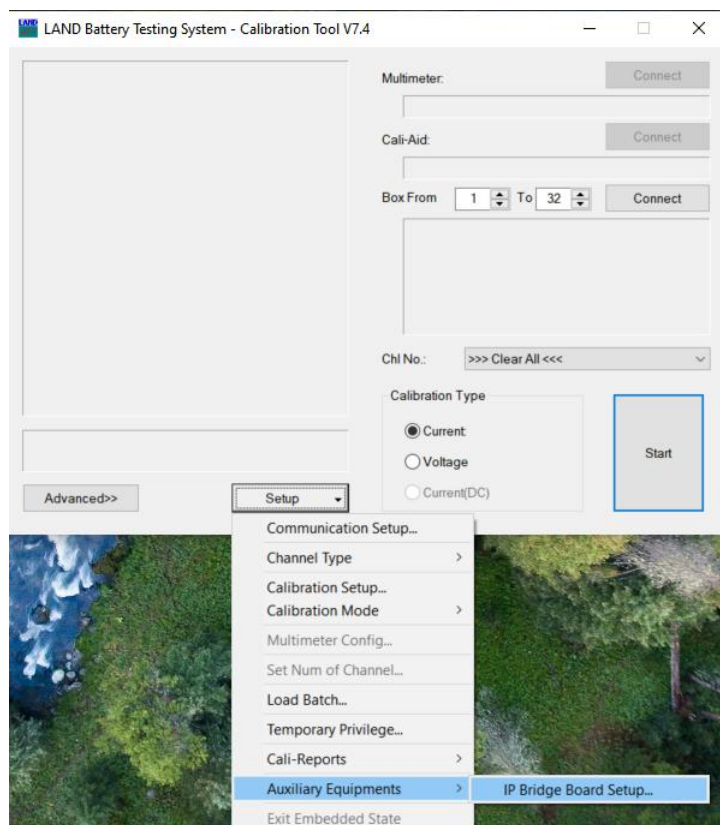
**Note: Make sure that the IP of the computer is different from that of the ETH2020 converter. Fill in the subnet mask with 255.255.255.0 and the default gateway with 192.168.10.1. The default gateway can not be used if the computer has dual Ethernet cards or has several IP addresses.**

## 2.3 BIND THE ETH2020 TO THE COMPUTER

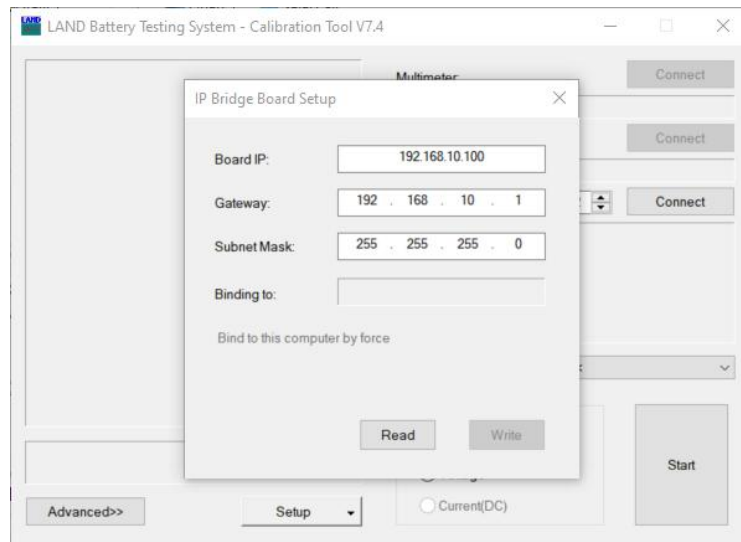
Turn on the ETH2020 and start the LANDCali program V7.



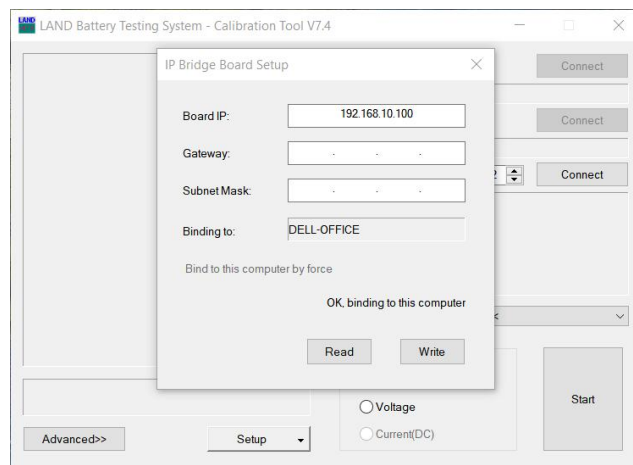
Select Setup > Auxiliary equipment > IP Bridge Board Setup



Fill in the IP address and gateway of the ETH2020 device (default IP 192.168.10.100) and click “Read”.



Click “Bind to this computer by force”. Once it becomes gray, the ETH2020 is bound to the computer.



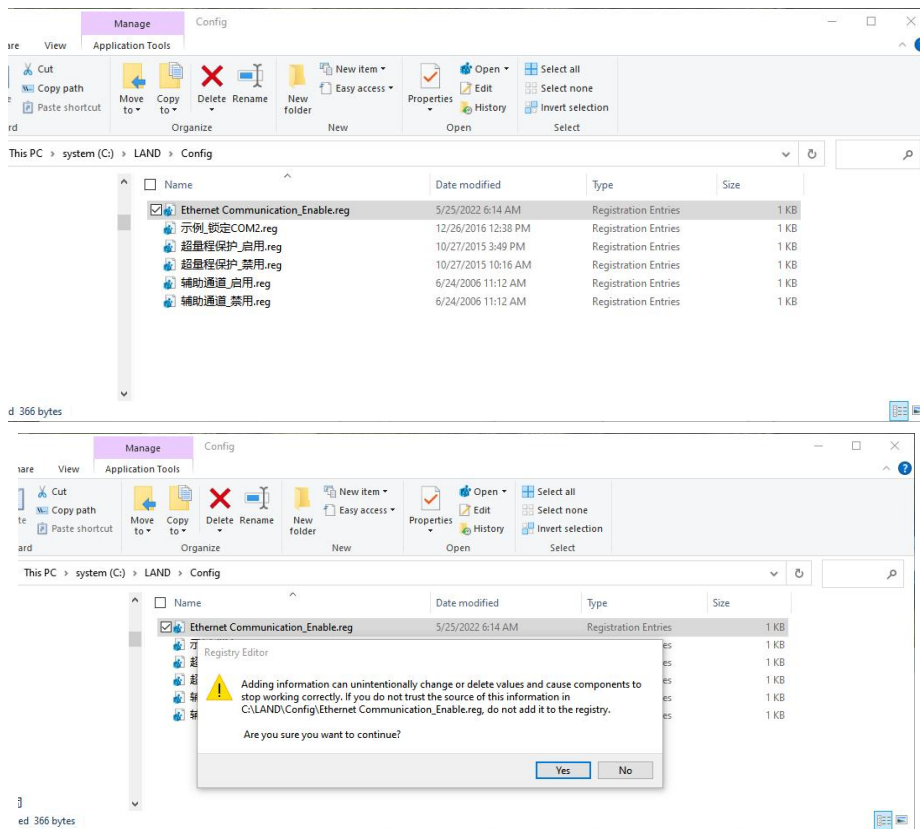
## 2.4 IP ADDRESS OF THE ETH2020

The device has the default IP: 192.168.10.100 and it is supposed to be bound to the computer. For other ETH2020 devices to be added to the same computer, the current IP needs to be modified. Input another IP value, for example, 192.168.10.101, the Gateway and Subnet Mask, and click “Write”. The modification will take effect when the ETH2020 is restarted.

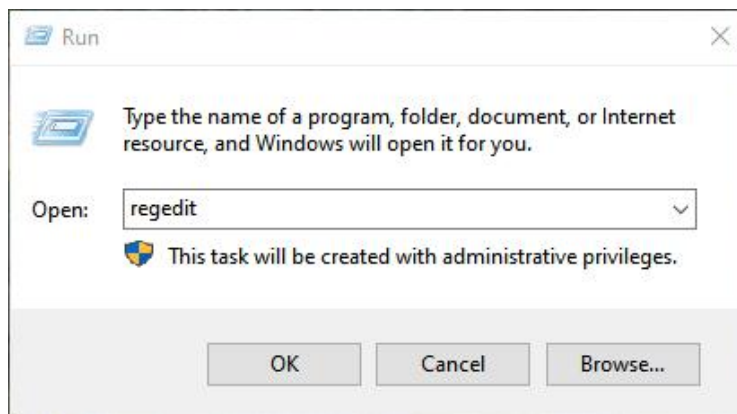
## 2.5 REGISTRY MODIFICATION

Open the Config folder where the software is installed (usually D:\LAND\Config), and double click the “Ethernet Communication\_Enable.reg”. Click Yes, and then click OK. If the

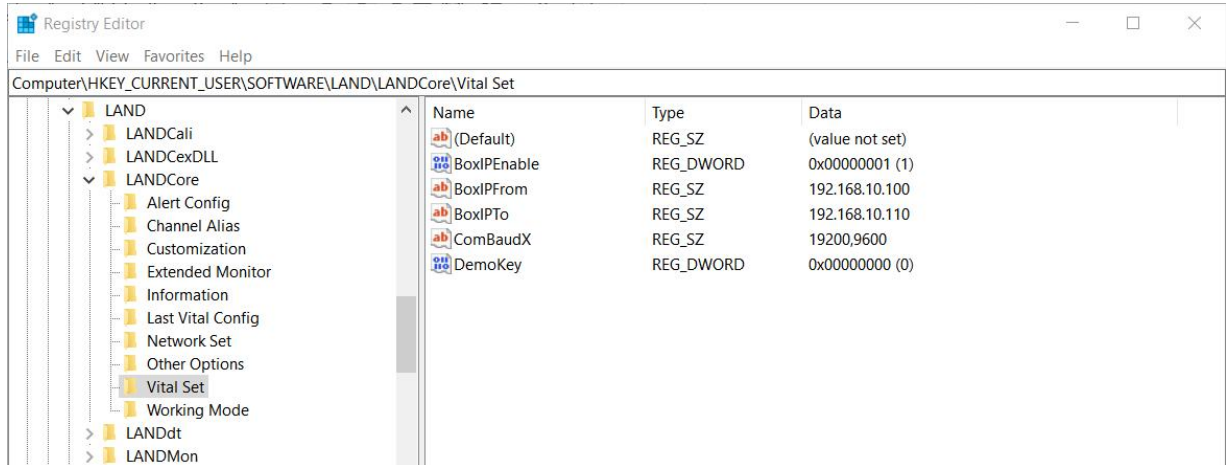
registry file can not be found, download the .reg file and save it to “LAND\Config\”.  
(download page: [www.landtinst.com/registry-download/](http://www.landtinst.com/registry-download/))



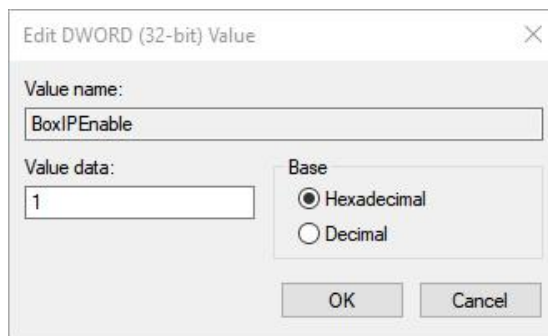
Press the Windows key + R to get the “Run” box. Type “regedit” and enter to open the Registry Editor.



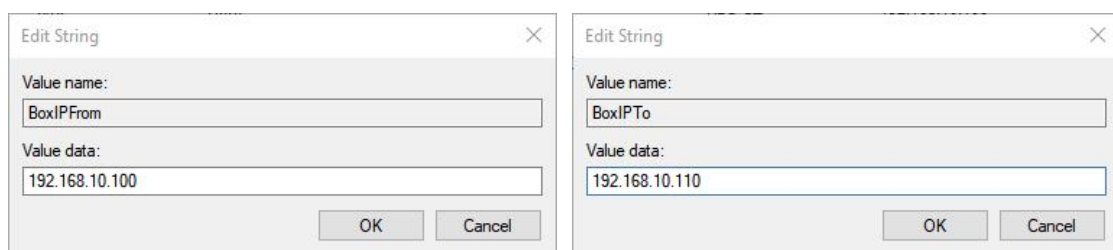
Locate the registry values here:  
Computer\HKEY\_CURRENT\_USER\SOFTWARE\LAND\LANDCore\Vital Set



Open "BoxIPEnable" and set the value as 1 (0 means disable).



Modify the values in "BoxIPFrom" and "BoxIPTo", in which all the IP of ETH2020 devices locates. If there is only one ETH2020, the same value (192.168.10.100) can be used for both. If there are several ETH2020, the IP addresses should be within the range defined by "BoxIPFrom" and "BoxIPTo".



## 2.5 BATTERY TESTER CONNECTIONS

The CT3002 battery testers are connected to the ETH2020 with serial cables. Each ETH2020 has 6 serial ports. Two battery tester units are connected in series and then to one COM port.



A maximum of 12 units can be connected to an ETH2020. Once everything is set, start the LANDMon program. All the testers should be found.

Three units of the CT3002 can share one COM port, but the sampling rate may be affected.

