

5.0 Networking & communication

5.1 Introduction

CAUTION: Risk of Tampering!



The eTracer doesn't feature built-in network security. It is the responsibility of the user or network administrator to place the eTracer behind a network firewall to prevent unauthorized access.

The Ethernet port supports HTTP, TCP/IP protocols to provide a fully web-enabled interface between the eTracer and a LAN network. Some of the many features the Ethernet connection provides include:

- Monitor the controller from a web browser
- Modify controller settings from a web browser
- Create custom web pages to show system data
- Send a text message if a fault or alarm occurs

This section provides a summary of each of the features. For detailed information about Ethernet connectivity and networking, please refer to our website at:

<http://www.epsolarpv.com/>

Network Information

Connect to the eTracer via an Ethernet network or connect the controller directly to a PC using an Ethernet cross-over cable. Use CAT-5 or CAT-5e twisted pair Ethernet cables with RJ-45 connectors.

Factory default network Settings:

DHCP	auto
IP	192.168.1.2 (If DHCP is not set.)
Subnet mask	255.255.255.0
Gateway	192.168.1.1
TCP/IP port	80

Web pages

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Connect the eTracer controller to the network using an Ethernet cable. Open a web browser on any PC on the network. Enter the IP address of the controller ('192.168.1.2' by default) in the address bar of the web browser. The eTracer user login webpage will load. Links are provided to Real Time Data, Ctr Para Set, Net Para Set, Log Query, Password, and Help Document pages. Pages served by the eTracer are ideal for retrieving quick information about the charge controller and making adjustments to network settings. However, there is no ability to customize the layout or data displayed. Also, information from multiple controllers cannot be displayed on the same webpage.

5.2 Setting

Set the eTracer IP address, corresponding subnet mask and default gateway and connect to network. Enter IP address of equipment at the address bar of browser and then the equipment can be monitored.

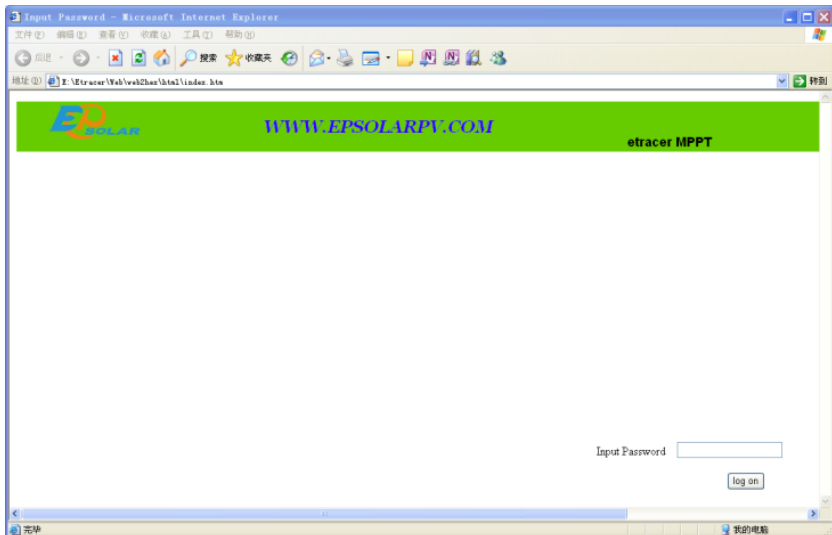
Web monitoring mainly includes such functions as user login, real-time data, control parameters setting, network parameters setting, log query and password modification, etc.

1) User login

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Not all users that are connected into Internet/Intranet can browse those data in the system. Generally password should be input so as to ensure safety of the system.

Enter network password and press the button "log on", and if it is right, it will display monitoring page; otherwise, it will prompt "Password Error".



2) Real Time Data

Click “Real Time Data” on the left side to view real-time operating parameters.

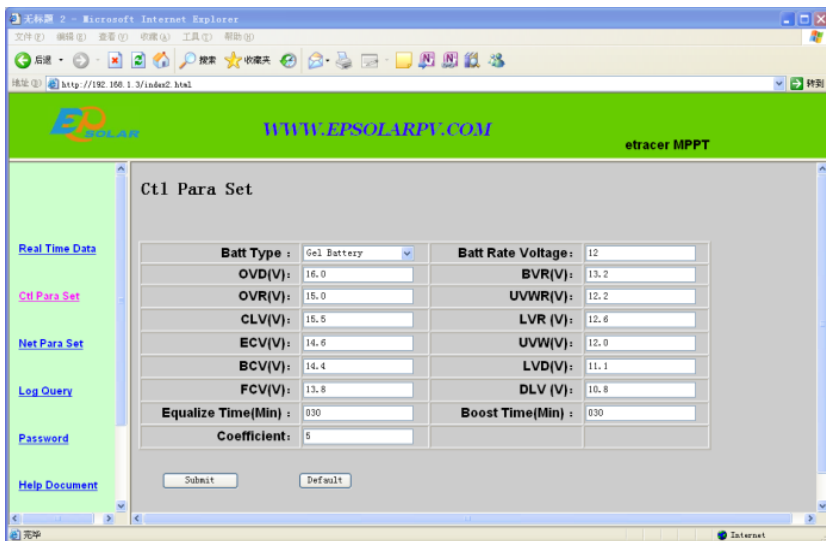
Real Time Data

Batt Voltage(V):	000.0	Batt State:	OVD
PV Voltage(V):	000.0	Charge State:	Floating
Charge Current(A):	000.0	SOC(%):	00
Charge Power(KW):	0000	Remote Sensor Temp(°C):	000.0
Charge Energy(KWh):	000.0Wh	Local Sensor Temp(°C):	000.0
Batt Max Voltage(V):	000.0		
Batt Min Voltage(V):	000.0		

3) Ctrl Para Set

Click “**Ctl Para Set**” on the left side to enter Control Parameter Set page and the system will display the current control parameter configuration. Users can also modify control parameters. After users modify control parameters and click “**submit**”, if it is successfully adjusted, “**OK**” will pop out; otherwise, “**error**” will appear. Click “**default**”, control parameters will recover to default values in line with current system voltage.

*Notes: ‘Batt Rate Voltage’ as battery rated voltage is displayed according to the real system value, it is not changeable. If parameter modified in the period is not up to the standard range, dialogue box “**illeagle para**” will pop out and at the same time, the parameter will change to the previous value.*

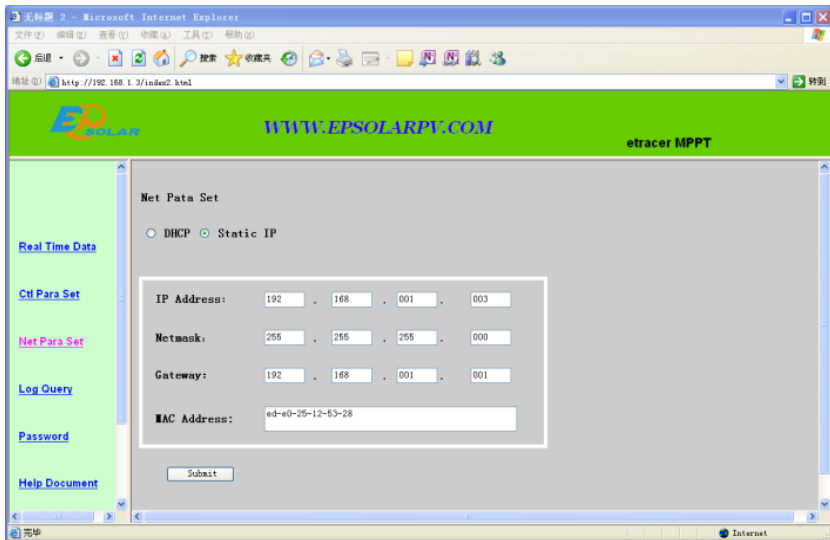


4) Net Para Set

Click “**Net Para Set**” on the left side to enter Network Parameter Set page and the system will display the current network parameter configuration. After users modify network parameter and click “**submit**”, if it is successfully adjusted, “**OK**” will pop out; otherwise, “**error**” will appear.

Notes: If network type is DHCP, it is no need to configurate IP address; if it is Static

IP, it needs to configurate system IP address. MAC address cannot be modified.



5) Log Query

Click “**Log Query**” on the left side to enter Log Query page. Users can choose “**Data Log**” or “**Event Log**”, and after click “**Submit**”, the system will display all current record page by page. Users can check records by turning pages. Click “**Prev**” to turn to the previous page and click “**Next**” to turn to the next page. Users can also choose to directly jump to any page to check records by entering page No., on “**Input Page No**” and click the button of “**Jump**”, the page No. entered should be less than the total page No., otherwise, it will prompt errors.

无标题 2 - Microsoft Internet Explorer
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 后退 前进 刷新 搜索 收藏夹 打印 邮件 任务栏 开始 结束 运行 帮助 转到

地址(A) http://192.168.1.3/index2.html

EP Solar WWW.EPSOLARPV.COM etracer MPPT

Real Time Data

[Ctl Para Set](#)
[Net Para Set](#)
[Log Query](#)
[Password](#)
[Help Document](#)

Data Log

Date	Batt Voltage	PV Voltage	Charge Current	Charge Power	Charge Energy	KS Temp	Local Temp	SOC	Batt State	Charge State
2002-00-01 00-00-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2011-01-01 03-41-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2002-04-17 13-25-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2002-04-17 13-38-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2002-04-17 13-49-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2002-04-17 13-00-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating
2002-04-17 13-10-53	00.0	00.0	00.0	0000	000.0	-030.0	-030.0	000	OVD	Floating

Page NO 1/14 Input Page NO

Internet

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Real Time Data

[Ctl Para Set](#)
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[Help Document](#)

Event Log

Date	Event Des	State	Parameter
2002-04-17 13-22-53	Batt UVW	Start	01.2
2002-04-17 13-22-53	Batt LVD	Start	01.2
2002-04-17 13-56-53	Batt UVW	Start	01.2
2002-04-17 13-56-53	Batt LVD	Start	01.2
2002-04-17 13-27-53	Batt UVW	Start	01.2
2002-04-17 13-27-53	Batt LVD	Start	01.2
2002-04-17 13-57-53	Batt UVW	Start	01.2

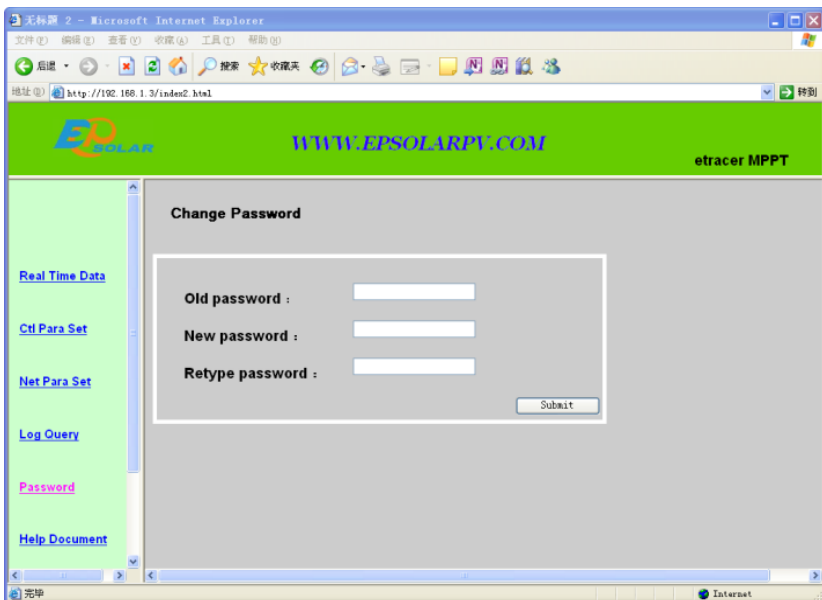
Page NO 1/10 Input Page NO

Internet

6) Password

Click “Password” on the left side to enter password modification page. After enter the old and new passwords, the system will judge if the old password is right and if the new passwords entered twice is the same. If it is right, the system will present “OK”, otherwise, “Error” will appear.

Notes: The input only supports numbers 0-9.



Check log data

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eTracer only records daily data of recent 30 days and it always records standard data as below. The space which can be used to record data will reduce with the increase of stored data.

General data:

- Battery voltage
- Solar modules voltage
- Charging current
- Charging power
- Intraday energy generated
- Battery temperature
- Controller temperature
- SOC percentage
- Battery status
- Charging status
- Warning/Error

5.3 Other Introductions

1. CAN

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MC1.5.3.81-4L port supports CAN bus protocol to be used to connect remote meter or controller. The remote meter offers features as below:

- Monitor controller status
- Modify controller parameters
- Display system data on the screen
- Error or warning happens, displayed on the screen or LED indicator prompts

2. RS-232

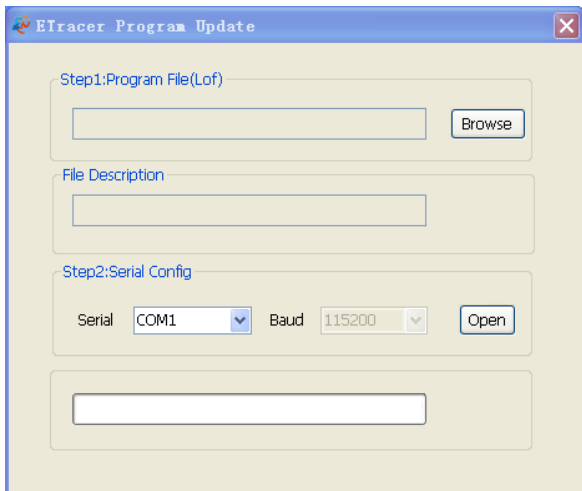
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RS-232 port supports user-defined serial communication protocol to update controller software. Controller can be connected to PC with a cross-over serial line. Users can download from our home page the latest controller program and update software to update controller.

The way to download program file:

Turn off controller at first and make updating software on operation, which is as

follows:



- ① Click “Browse” and choose the program file (type is LOF). If the file is not up to the requirements (wrong type, uncompleted or error with revision, etc), it will be prompted via dialogue box popping out. On “File Description” bar, the basic information on the file chosen will be displayed.
- ② Choose communication serial whose baud rate is 115200bps by default and click the button “Open”.
- ③ Power on the controller. It will start downloading program and the progress bar displays the percentage.
- ④ Restart the controller after downloading program.

Notes: In the period of procedure programming, if the power is off or disconnected, it will prompt “connect time out”.