

Cable Modem Network Interfacing and Setup

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General:

This document provides general guidelines in installing an IP enabled device such as the WEM-MX, WEPM or a WEM-IO device on a network.

The Internet Service Provider (ISP) typically does not provide support for router configuration making it even harder to initialize a setup. This example is not the only way. Various ISP's provide different means of access and communications.

I have a DSL line – now what?

You will need:

- a. Laptop configured for DHCP access.
- b. Three network cables for which continuity has been verified.
- c. MS Internet Explorer 6.0 or higher.
- d. A router.

Step 1:

Verify the Internet Connection. Connect your laptop directly to the broadband modem and verify that you can connect to the Internet and have an active connection. If not, contact your ISP.

Step 2:

Check if the ISP is blocking (inbound) port 80 which is the HTTP access port.

Note: Some ISP's block certain ports such as 25 (email), 80 (http).

For example: The ISP, Optimum Online blocks the following ports: 25, 80, 8080, 135 ~ 139, 445, 1043, 1080, and 3128.

A subscription is required to their 'Boost Services' for which they will unblock ports 25 and 80.

To communicate to Energy Tracking's devices, you only need access to port 80.

The following example is based on Optimum Online ISP.

Make sure that your ISP is not blocking port 80. Log-in to your account.

Click on: '[Optimum Services](#)'.



Click on '[Set Up](#)'

The form has two columns: 'Port 80' and 'Port 25'. Under 'Port 80', the 'On' radio button is selected. Under 'Port 25', the 'Off' radio button is selected. There is a 'Submit' button in the center. Below the form, there is a note: 'Editing port settings requires you to be at your service location and on the Cablevision network. You will have to reboot your modem for the changes to take effect'. An arrow points from this note to the 'Submit' button.

Confirm that the Port 80 is 'On' else Select 'On' and Click '[Submit](#)'.

Please note that the cable modem needs to be power cycled.

Step 3:

Coordinate with the ISP to provide a fixed / static IP Address which will certainly help to make sure that you will always have immediate access and that the public IP address will never change.

Step 4:

Now, we need to configure the router. For this example, we have used a router provided by LinkSys. Energy Tracking strongly advises the use of a router to maximize security.

4.1 Router Configuration

Follow the router manufacturer's documentation.

Connect the RJ45 Ethernet cable from the cable modem to the router's 'Internet' jack. Connect your laptop to one of the other open jacks. Connect the WEM-MX to another jack. Turn on your laptop and power up the meter. The WEM-MX is by default in DHCP mode and will acquire an IP address from the router automatically.

For LinkSys, the default IP address is: <http://192.168.1.1>

Log into the router and change the default user name and password. **Please document them.**



Gateway Userlist:	<input type="text" value="1"/>
Gateway Username:	<input type="text" value="admin958XZR\$*&"/>
Gateway Password:	<input type="password" value="*****"/>
Re-enter to Confirm:	<input type="password" value="*****"/>

Click on 'Save Settings'.

Shutdown the browser and confirm that you can access the router based on the new user name and password settings.

4.2 Enable Remote Management.



Click on '[Save Settings](#)'.

4.3 Change the default port settings for Remote Management.



Choose any port value above 8080 to 65535. In this example, we have chosen port 9891.

4.4 Single Port Forwarding.

Via the Menu options on the router find the location where '[Single Port Forwarding](#)' can be accomplished. In the example router this was under the menu item 'Firewall'.



Application	External Port	Internal Port	Protocol	IP Address	Enabled
HTTP - MX 1	80	80	TCP	192.168.4.205	<input checked="" type="checkbox"/>
HTTP - MX 2	9590	80	TCP	192.168.4.201	<input checked="" type="checkbox"/>

In the example above, we have entered details to access 2 WEM-MX meters based on the entered IP address.

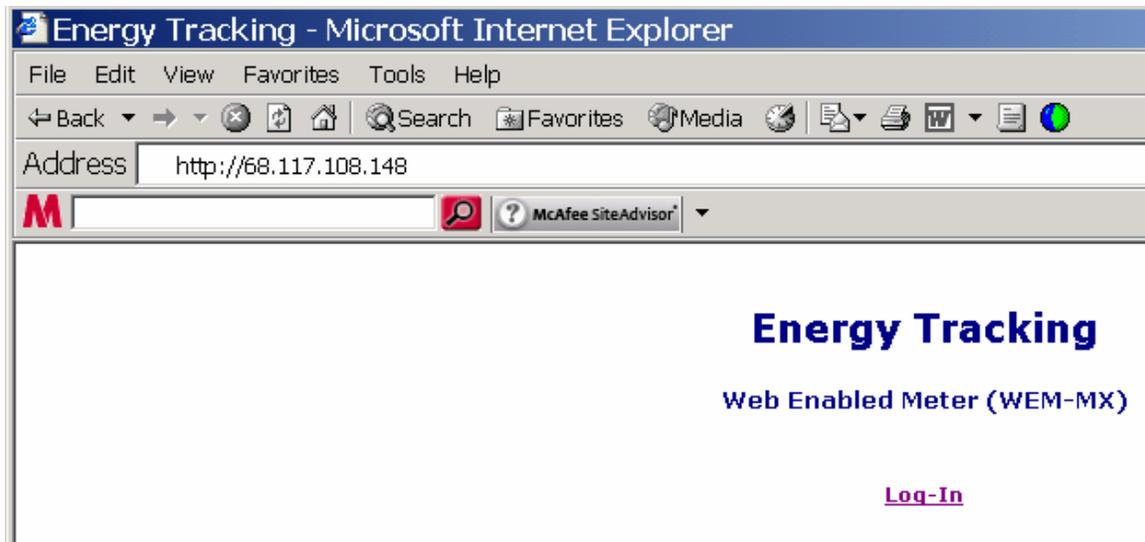
Please note that both WEM-MX meters were setup using a fixed IP address which still needs to be done.

VERY IMPORTANT: You must change the default username and password access to the WEM-MX.

From a remote location launch MS Internet Explorer and enter

<http://xxx.xxx.xxx.xxx>

where xxx... is your public IP address assigned by your ISP. You will be routed to the first meter and should see the meter's log-in page.



Note: The above IP address 68.117.108.148 is fictitious.

<http://xxx.xxx.xxx.xxx:9590> where xxx... is your public IP address assigned by your ISP. You will be routed to the second meter.

Please note the `:9590` suffixed after the public IP Address.

Step 5:

If the above suggestions after following Steps 1 & 2 do not work, then please contact the router manufacturer or access their web site for support.