



App Note 112

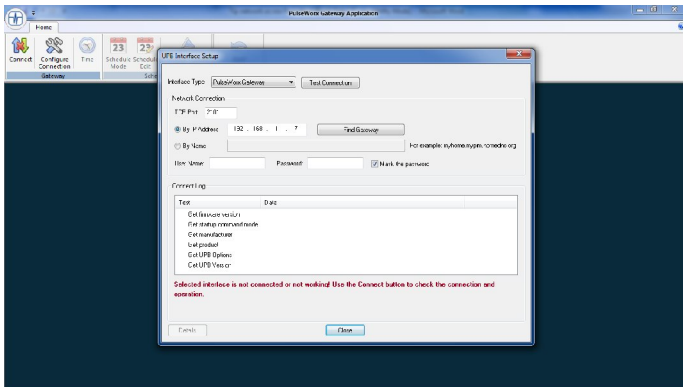
PulseWorx Gateway

Setup your Gateway for access from anywhere

One of the major advantages of the PulseWorx Gateway is that you can use it in conjunction with mobile applications to access your system while away from home over the internet. The configuration for this isn't difficult but can be technically challenging if you have not done it before. The exact configuration steps depend upon your networking gear, unfortunately, we cannot provide step by step instructions. But here is a plan:

To get started, the PulseWorx Gateway should already be installed and you have connected to it with UPStart and exported your design. It is now time to work with the mobile applications. The suggestion is that you build slowly step by step tackling each network issue one at a time. Don't immediately try the hardest thing – connection from outside your firewall using the iPhone/iPad – but work up to it.

The first step is to download and install the Windows PulseWorx Application -available from the PCS website [PulseWorx resources page](#). This application connects to the Gateway in a similar manner as the iPad/iPhone application and is a good check on how you have the Gateway configured. Complete instructions are in the Gateway User Guide but the application is very simple to use. Select from the ribbon "Configure Connection" and enter the IP address of the Gateway and port number then test the connection using the "Test Connection" button.



Then close the interface setup dialog and connect using the "Connect" ribbon button. By using this application you can make sure that you know the correct IP address and port number and, if you have configured your Gateway with a username and password, that you have entered them correctly. You may get a popup message from Windows asking you to authorize the application to connect to a network port. That is expected and you should allow it. Once you have completed this step you now know that you can access your Gateway from inside your network using this one application.

Next will be to download and install the iOS PulseWorx application from the Apple App Store (iTunes). Like many applications, the PulseWorx application is configured using the Settings application so start there. Make sure that the iPad/iPhone is connected to your local Wi-Fi then enter into the settings the same IP address, port, and if needed, the username and password that you used with the Windows application. Close the settings when done and open the PulseWorx application. The connection should be made. If the connection fails then double check the settings.



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When that step is completed you now know that the mobile application on your iPad/iPhone is correctly setup and you can connect on your local network from inside the firewall. Almost there!

At this point, unfortunately we cannot provide step by step instructions since you need to do two things that vary with your specific situation. The first step is to establish a "Dynamic DNS" account. This allows access from outside of your network using a name rather than a fixed IP address which can change. To learn more about this try a Wikipedia search for "Dynamic DNS" and also look at the website <http://dyn.com/dns/>. Once you have established an account with a dynamic DNS service you are ready for the final step.

Port Forwarding – again a Wikipedia search on these terms will help if you are not familiar – is the method by which you can access your network from outside the firewall and have messages send to a port – the 2101 port used by the Gateway – passed on to the Gateway.

Port Forwarding is configured in your router or DSL/Cable modem but the procedure for each make and model is different. A good reference is <http://portforward.com/>. All routers have this feature and with some perseverance you will find it in the router settings someplace. You want to configure it so messages to the Gateway port (2101 unless you changed it) are sent to the IP Gateway address – the IP address you configured UPStart and the Windows PulseWorx application for.

Once port forwarding is configured then the complete path from your iPad/iPhone to the Gateway is in place. The iPhone/iPad is configured with the dynamic DNS name and port and connects to the internet. The dynamic DNS service converts that name into the current IP address of your home. A connection is made to that IP address and the port forwarding makes sure that messages to that port are sent to the Gateway.

In the iPad/iPhone application you can change the settings to use the DynDns name from the account you created and try the connection. Make sure that your iPad/iPhone is not connected to your internal Wi-Fi network for this test. Make sure it is connecting using the cell network so it makes the connection from outside your firewall.

The best technical tip we can provide is this: When working though all these steps, go slowly. Get things working first using the Windows PulseWorx application, and then use the iPad/iPhone inside your firewall. Only when that is all working then configure and test all that is needed for access from outside the firewall.

The second best technical tip is: Connection problems are almost always from a configuration error or a firewall blocking access. Modern networks have many layers of security that try and prevent exactly what we need to make work – port access from outside the network. Always check firewalls and anti-virus programs if you run into problems.