# How to Port Forward – Advanced Modems

If you have a router at home or your office, you will need to forward ports for outside traffic to get into your network. Your router comes pre-configured with a few of those doors (or ports) open to let you access the internet, but the others are closed.

So, to run a mail server, game server, access your computer remotely, etc.. You will need to open an extra door or two in your router for the outside traffic to get inside. This is called Port Forwarding.

To setup up port forwarding on the GTEN Router, follow the steps below:

1. Make sure you are connected to the correct network (SSID) and then pull up a web browser, e.g., Google Chrome, Firefox, Safari, Edge, or Explorer.
2. In the URL address bar (web address), type in 192.168.2.1, and press "Enter", or "Return", on your keyboard. * **It is not necessary to enter http://**
3. You should be at the login page for the router settings. The default **username** and **password** for the router settings login is (in all lower case, for both): **GTEN (see example)**
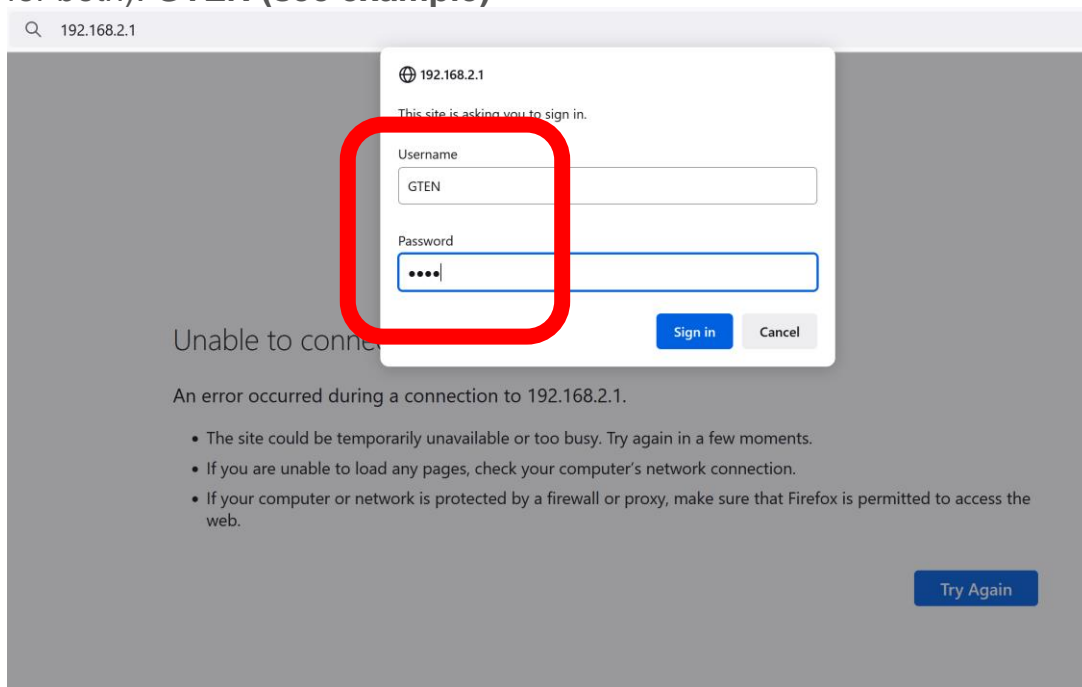
4. Next, locate the port forwarding settings. This will be under **WAN** (Main Page)**,** then click on the **Port Forwarding** tab and enable the **Manual Port forwarding option** and you can then set the proper forward options. **(see example)**

When you are all set. Click the **Apply** button to save your changes.

5. Below are some examples of how to use the Manual Port Forwarding options: (see examples)

When you are all set. Click the [Apply] button to save your changes.

6. To delete a Manual Port entry, check the appropriate entry and then click on the RED – button. (see example)

Manual Port Forwarding List

Service Name	Source IP	Port Range	Local IP		Local Port	Protocol	
				❯		TCP ⌄	➕
HTTP	192.168.2.3	22:6500	192.168.2.56		23	TCP	☑ ➖

When you are all set. Click the [Apply] button to save your changes.

Pro Tip: What are the different port numbers?

There are 65,535 possible port numbers, although not all are in common use. Some of the most commonly used ports, along with their associated networking protocol, are:

- **Ports 20 and 21:** File Transfer Protocol (FTP). FTP is for transferring files between a client and a server.
- **Port 22:** Secure Shell (SSH). SSH is one of many tunneling protocols that create secure network connections.
- **Port 25**: Historically, Simple Mail Transfer Protocol (SMTP). SMTP is used for email.
- **Port 53:** Domain Name System (DNS). DNS is an essential process for the modern Internet; it matches human-readable domain names to machine-readable IP addresses, enabling users to load websites and applications without memorizing a long list of IP addresses.
- **Port 80:** Hypertext Transfer Protocol (HTTP). HTTP is the protocol that makes the World Wide Web possible.
- **Port 123:** Network Time Protocol (NTP). NTP allows computer clocks to sync with each other, a process that is essential for encryption.
- **Port 179:** Border Gateway Protocol (BGP). BGP is essential for establishing efficient routes between the large networks that make up the Internet (these large networks are called autonomous systems). Autonomous systems use BGP to broadcast which IP addresses they control.
- **Port 443:** HTTP Secure (HTTPS). HTTPS is the secure and encrypted version of HTTP. All HTTPS web traffic goes to port 443. Network services that use HTTPS for encryption, such as DNS over HTTPS, also connect at this port.
- **Port 500:** Internet Security Association and Key Management Protocol (ISAKMP), which is part of the process of setting up secure IPsec connections.
- **Port 587:** Modern, secure SMTP that uses encryption.
- **Port 3389:** Remote Desktop Protocol (RDP). RDP enables users to remotely connect to their desktop computers from another device.

The Internet Assigned Numbers Authority (IANA) maintains the full list of port numbers and protocols assigned to them.