

# Ports in Windows 7 Firewalls

## Application Note

## Introduction

A port is associated with an IP address of the host, as well as the type of protocol used for communication. In plain English, the purpose of ports is to uniquely identify different applications or processes running on a single computer and thereby enable them to share a single physical connection to a packet-switched network like the Internet.

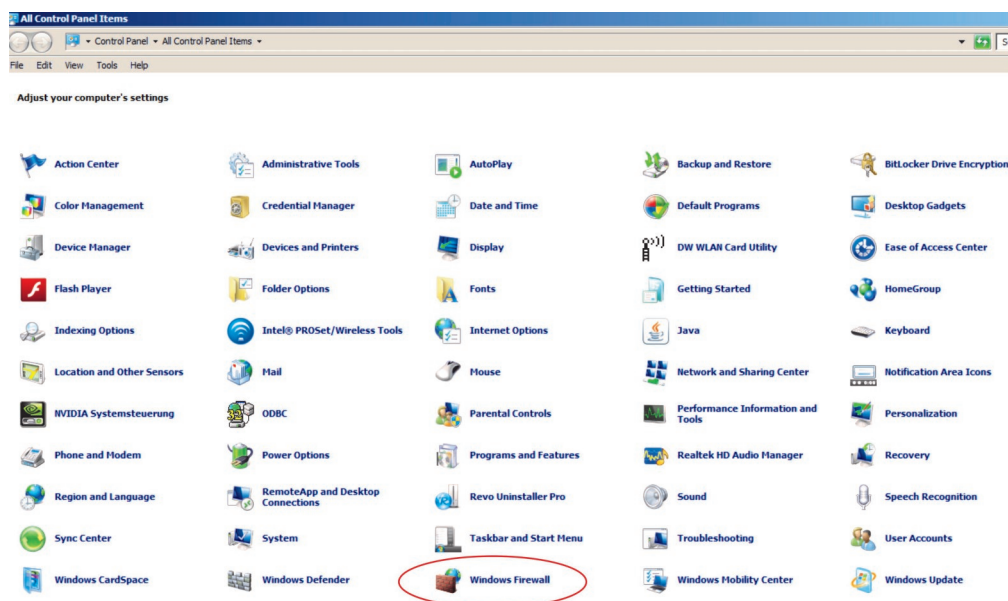
A firewall controls access and exit between networks based on IP addresses and port numbers, so if remote access to for instance a W-CLOUD server or a RS-BA1 server for ICOM IC-9100 receiver control is desired, the firewall must be configured to open the appropriate inbound ports.

If a device, a server or an application must access the network an outbound port must also be opened. In Windows 7 inbound and outbound ports must be separately opened.

Applications and devices may use TCP or UDP depending on their specific requirements, but W-CLOUD, W-CODE and WiNRADiO devices use TCP because of its built in error detection and retransmission features. UDP has much less protocol overhead, but is unreliable. The example below shows the configuration of an inbound port, but the procedure is exactly the same for outbound ports.

## Configuration of a Port

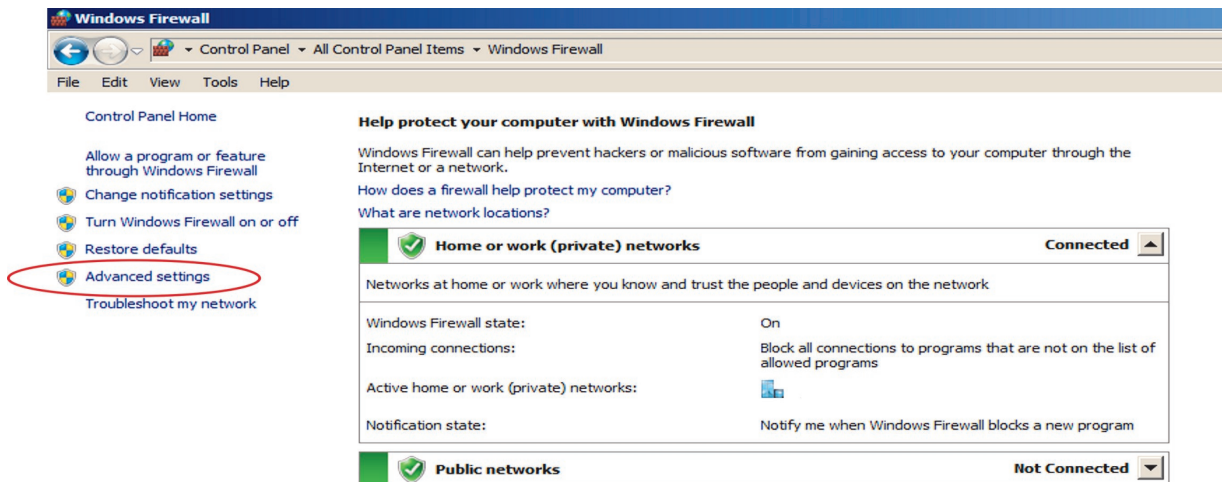
In Control Panel select "Windows Firewall".



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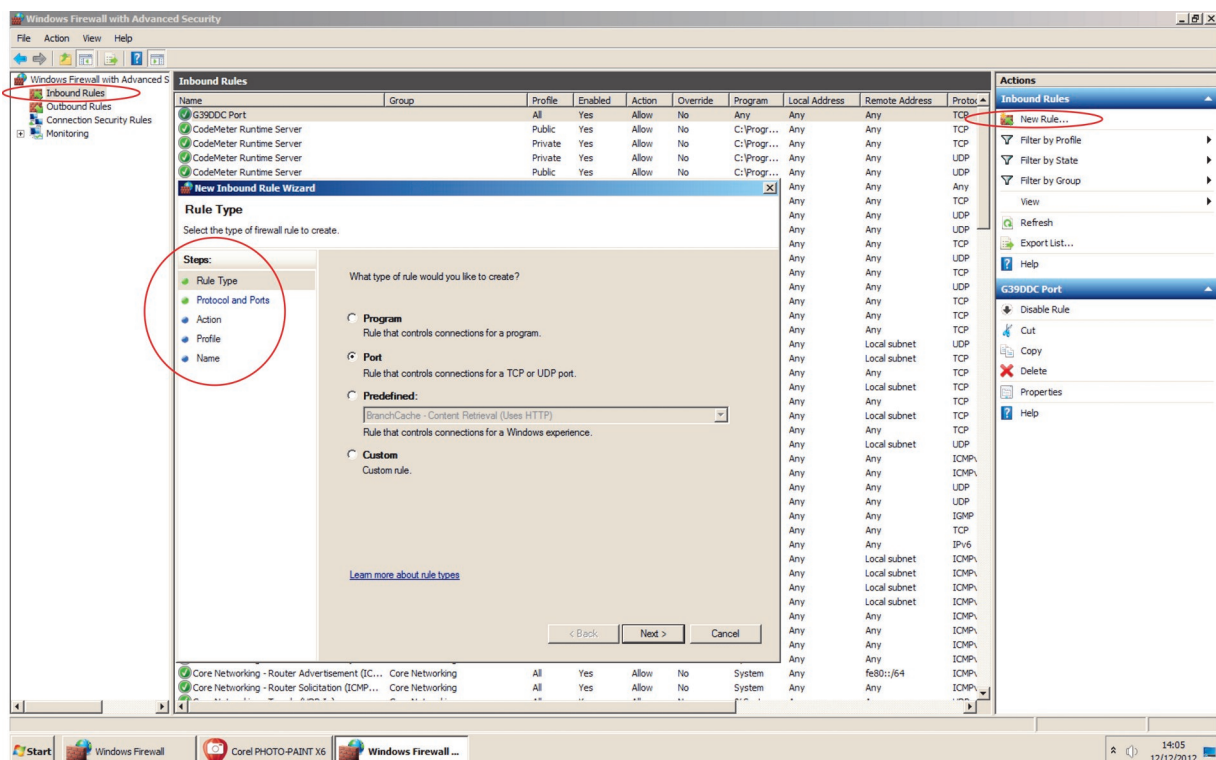
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Select "Advanced settings"



After selection of "Inbound Rules" (left panel) and "New Rule" (right panel) the "New Inbound Rule Wizard" appears, which takes you through the five steps required to configure a port.

"Rule Type" - Create the type of rule which applies (in this case the type is "Port").



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“Protocols and Ports” - Enter the protocol type and port number required by the application or device for which a port must be opened.

The screenshot shows the 'New Inbound Rule Wizard' window with the 'Protocol and Ports' step selected in the left-hand 'Steps' pane. The main area contains the following options:

- Does this rule apply to TCP or UDP?**
  - ☒ TCP
  - ☐ UDP
- Does this rule apply to all local ports or specific local ports?**
  - ☐ All local ports
  - ☒ Specific local ports:   
Example: 80, 443, 5000-5010

At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. A link 'Learn more about protocol and ports' is also present.

“Action” – Determine the action to be taken if a connection matches the specified conditions.

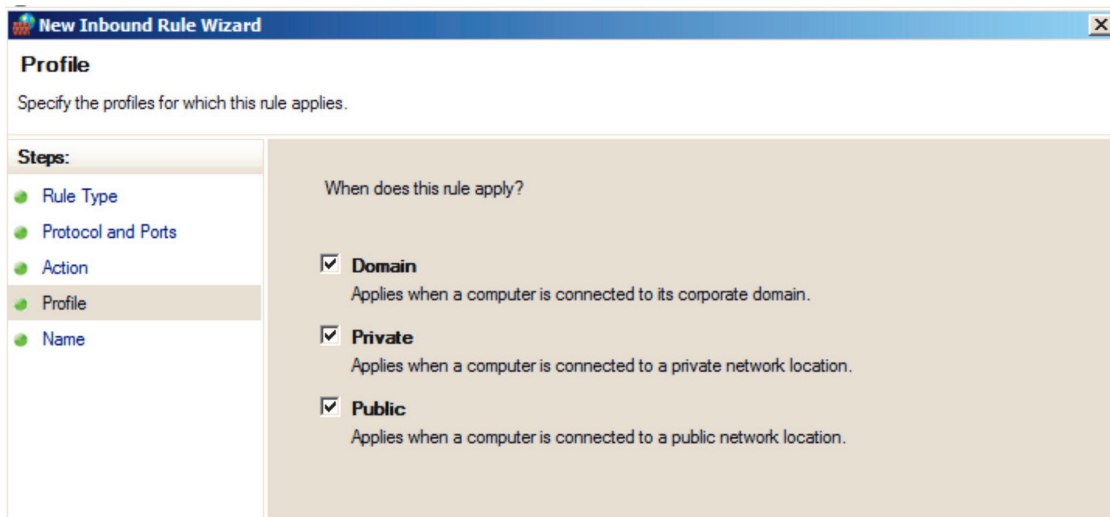
The screenshot shows the 'New Inbound Rule Wizard' window with the 'Action' step selected in the left-hand 'Steps' pane. The main area contains the following options:

- What action should be taken when a connection matches the specified conditions?**
  - ☒ **Allow the connection**  
This includes connections that are protected with IPsec as well as those are not.
  - ☐ **Allow the connection if it is secure**  
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.
  - ☐ **Block the connection**

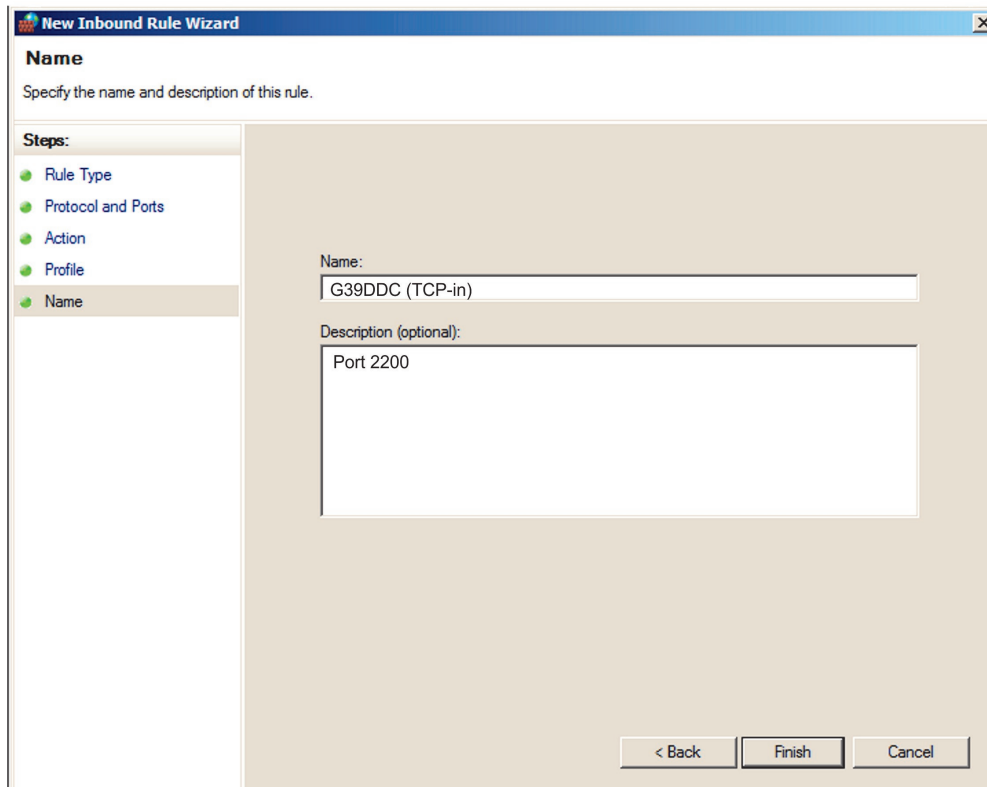
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„Profile“ – Enter the locations where the rule you have created earlier apply. Normally all locations should be ticked.



„Name“ – Create an easily remembered name for the rule.



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Since more than thirty years Wavecom Elektronik AG has developed, manufactured and distributed high quality devices and software for the decoding and retrieval of information from wireless data communication in all frequency bands. The nature

of the data communication may be arbitrary, but commonly contains text, images and voice. The company is internationally established within this industry and maintains a longstanding, world-wide network of distributors and business partners.

### Product Information

Products	<a href="http://www.wavecom.ch/product-summary.php">http://www.wavecom.ch/product-summary.php</a>
Datasheets	<a href="http://www.wavecom.ch/brochures.php">http://www.wavecom.ch/brochures.php</a>
Specifications	<a href="http://www.wavecom.ch/product-specifications.php">http://www.wavecom.ch/product-specifications.php</a>
Documentation	<a href="http://www.wavecom.ch/manuals.php">http://www.wavecom.ch/manuals.php</a>
Online help	<a href="http://www.wavecom.ch/content/ext/DecoderOnlineHelp/default.htm">http://www.wavecom.ch/content/ext/DecoderOnlineHelp/default.htm</a>
Software warranty	One year free releases and bug fixes, update by DVD
Hardware warranty	Two years hardware warranty
Prices	<a href="http://www.wavecom.ch/contact-us.php">http://www.wavecom.ch/contact-us.php</a>

### System Requirements

	<i>Minimum</i>	<i>Recommended</i>
CPU	P4 Dual-Core 2.4 GHz	Core i5 or Core i7 2.8 GHz
Memory	2 GB RAM	4 - 8 GB RAM
OS	Windows XP	Windows 7 32-bit or Windows 7 64-bit

### Distributors and Regional Contacts

You will find a list of distributors and regional contacts at <http://www.wavecom.ch/distributors.php>