Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

INNOTECH®

Proprietary

Trademark

The term ‘Innotech’ used in this manual is a trademark of Mass Electronics Pty Ltd trading as Innotech Control Systems Australia.

'Microsoft' and 'Windows' are registered trademarks of Microsoft Corporation in the United States and other countries.

Disclaimer

While great efforts have been made to assure the accuracy and clarity of this document, Mass Electronics Pty Ltd assumes no liability resulting from any omissions in this document, or from misuse of the information obtained herein. The information in this document has been carefully checked and is believed to be entirely reliable with all of the necessary information included. Mass Electronics Pty Ltd reserves the right to make changes to any products described herein to improve reliability, function, or design, and reserves the right to revise this document and make changes from time to time in content hereof with no obligation to notify any persons of revisions or changes. Mass Electronics Pty Ltd does not assume any liability arising out of the application or any use of any product or circuit described herein; neither does it convey licence under its patent rights or the rights of others.

Document Management

Document Title: Ethernet Setup Manual for Device Communications

Revision History

Version Number	Date	Summary of Changes
1.0	September 2011	Initial Document Release
2.0	January 2015	Updated document style and contact details

This page has been left intentionally blank.

Contents

Chapter 1 - About This Manual

1-1 Overview 10

1-2 Intended Audience 10

1-3 Document Conventions 10

1-4 Document Layout 11

1-5 What's Covered in this Document 11

1-6 Special Considerations 11

Chapter 2 - Preliminary Information

2-1 Overview 14

2-2 Ethernet Standards and Cabling Information 14

2-3 Factory Default Settings of Innotech Devices 15

2-3.1 Default Ethernet Settings 15

2-3.2 Default Device Address and Baud Rate 16

2-4 Dynamic and Static IP Addressing 16

Chapter 3 - Connecting Innotech Devices for Initial Configuration

3-1 Overview 18

3-2 Genesis II, MAXIM III, MAXIM 1010, and CONV-E 18

3-2.1 Connecting to a LAN with DHCP Server 18

3-2.2 Connecting Directly to a Computer 18

3-3 IG01, IG03, IG04, and IWS01 18

3-4 Ethernet Connection Status Indication 19

Chapter 4 - Configuring Ethernet Settings of your Innotech Device

4-1 Overview 22

4-2 Configuring Genesis II, MAXIM III, MAXIM 1010, and CONV-E 22

4-2.1 Searching for your Device on EtherMate 22

4-2.2 Configuring Ethernet Settings of your Device with EtherMate 23

4-3 Configuring IG01, IG03, IG04, and IWS01 25
4-3.1 Configuring Network Settings of your Computer 25
4-3.2 Configuring Ethernet Settings of IG01 with Embedded Web Server 30
4-3.3 Configuring Ethernet Settings of IG03 and IG04 with FusionLIVE 32
4-3.4 Configuring Ethernet Settings of IWS01 with Embedded Web Server 35
Chapter 5 - General Troubleshooting Tips
5-1 Overview 38
5-2 Finding a device with Unknown IP Address 38
5-2.1 Disabling a LAN Adapter 38
5-2.2 Searching for a Device on a Different Subnet 40
Customer Assistance 41
Innotech Support 41

List of Illustrations

Figure 3-1: RJ45 Socket LED Indicators 19
Figure 4-1: EtherMate Main Window 22
Figure 4-2: EtherMate – Search for your device(s) 22
Figure 4-3: EtherMate – Connected Device(s) Found 23
Figure 4-4: Unable to retrieve configuration data popup window 23
Figure 4-5: EtherMate – Assign IP Address Window 24
Figure 4-6: EtherMate – Device found with new IP address 24
Figure 4-7: Open Control Panel from Start Menu 25
Figure 4-8: Windows 7 – Open Network and Sharing Centre 26
Figure 4-9: Windows 7 – Select LAN connection from Network and Sharing Centre 26
Figure 4-10: Windows Vista – Open Network and Sharing Centre 27
Figure 4-11: Windows Vista – Select LAN connection from Network and Sharing Centre 27
Figure 4-12: Windows XP – Control Panel 28
Figure 4-13: Windows XP – Select LAN connection from Network Connections 28
Figure 4-14: Edit Internet Protocol (TCP/IP) Settings 29
Figure 4-15: Modify IP address and subnet mask of your LAN adapter 29
Figure 4-16: Access Embedded Web Server on IG01 30
Figure 4-17: IG01 Embedded Web Server Home Page 30
Figure 4-18: Configure Ethernet Settings of IG01 31
Figure 4-19: Access FusionLIVE on IG03 and IG04 32
Figure 4-20: Launch FusionLIVE – IG03 and IG04 32
Figure 4-21: Click to configure IG03 or IG04 settings in FusionLIVE 33
Figure 4-22: IG03 Ethernet Tab – Configure Ethernet Settings 33
Figure 4-23: IG04 Ethernet Tab – Configure Ethernet Settings 34
Figure 4-24: FusionLIVE – Click continue in Warning Window 34
Figure 4-25: Access IWS01 Embedded Web Server 35
Figure 4-26: IWS01 Login Screen 35
Figure 4-27: Click Setup from IWS01 Home Screen 35
Figure 4-28: IWS01 – Communication Tab 36
Figure 4-29: Configure IWS01 Ethernet Settings 36
Figure 5-1: Changing LAN Adapter Settings 38
Figure 5-2: Windows 7 / Vista – Disable LAN Adapters 39
Figure 5-3: Windows XP – Disable LAN Adapters 39
Figure 5-4: EtherMate – Select to search for devices on different subnets 40
Figure 5-5: EtherMate – Search for device on different subnet 40
Figure 5-6: Ethernet Device List 40

List of Tables

Table 1-1: Text Conventions 10
Table 1-2: Document Layout 11
Table 2-1: Ethernet Standards 14
Table 3-1: Ethernet status LEDs 19

Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

1 About this Manual

1-1 Overview

This document provides instructions for configuring the Ethernet settings on Innotech controllers and devices equipped with an Ethernet port. Depending on the controller or device, this can be accomplished with either EtherMate from Innotech, or with the embedded web server where applicable. Detailed information for configuring and commissioning Ethernet connections on applicable Innotech device(s) is provided. This manual also contains a general troubleshooting section to assist you in configuring Ethernet settings on devices where the IP address of the Innotech device is unknown or has been lost.

If installing on a shared network, site installation and Ethernet commissioning will in most cases involve compliance with the requirements of the IT Manager for Networking and Information Security. Technicians performing the installation are advised to contact the IT Manager on site for specific site installation instructions.

This is not necessary for installations on a dedicated network.

1-2 Intended Audience

This document is intended for commissioning personnel.

1-3 Document Conventions

The following conventions are used in this document:

Table 1-1: Text Conventions

Convention	Description
Bold	Bold text indicates commands, keywords, mouse clicks or menu selections that are used to complete a task.
Italics	Italic text indicates a value that you must supply and enter as indicated.

These notices indicate a piece of useful information which should be read.

IMPORTANT

*These notices contain information about the software that **must be done** before proceeding further to ensure success.*

1-4 Document Layout

This document consists of the following chapters as described below:

Table 1-2: Document Layout

Chapter Number	Chapter Name	Description
Chapter 1	About this Manual	Chapter 1 contains general information such as document conventions, required software and tools, and computer specifications.
Chapter 2	Preliminary Information	Chapter 2 contains general information on Ethernet standards and Ethernet cabling information.
Chapter 3	Connecting Innotech Device(s) for Initial Configuration	Chapter 3 contains information on different ways you can connect your Innotech devices to configure the Ethernet settings for permanent deployment on your LAN.
Chapter 4	Configuring Ethernet Settings of your Device	Chapter 4 contains instructions to configure the Ethernet settings on your devices to prepare for installation on your LAN.
Chapter 5	General Troubleshooting Tips	Chapter 5 contains general troubleshooting tips.

1-5 What's Covered in this Document

This document provides detailed instructions for configuring the Ethernet settings of your Innotech devices to function on your Local Area Network (LAN). In preparing this document it is assumed that you are familiar with using Windows 7 Professional, Windows Vista Business or Windows XP Professional operating systems. Instructions for configuring the Ethernet settings are provided for the following Innotech controllers and devices:

- Genesis II controller
- MAXIM III controller
- MAXIM 1010 controller
- IG01 Sub System Gateway
- IG03 BACnet Gateway
- IG04 BACnet Gateway
- CONV-E converter
- IWS01 innSIGHT Supervisor Web Server

1-6 Special Considerations

In order to successfully configure the Ethernet settings of your Innotech device(s) on the site LAN where the device(s) will be installed, you must have the following information available:

- Static IP address to be assigned for each Innotech device(s)
- Subnet mask for the LAN
- Default gateway address for the LAN

Consult with the site IT Manager to gather this information before proceeding to configure the Ethernet settings of your Innotech device(s).

This page has been left intentionally blank.

Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

2 Preliminary Information

INNOTECH®

2-1 Overview

This chapter provides general information on Ethernet standards, including the cabling used in particular Ethernet installations and the capabilities of each standard. This is followed by information on factory default settings for Innotech device(s), which includes Ethernet settings, device address, and baud rate.

2-2 Ethernet Standards and Cabling Information

Ethernet standards are limited by the bandwidth capability of the cable and the maximum cable length that can be utilised to achieve optimum performance. The following table shows the Ethernet standards and the recommended cable lengths to achieve desired data rates.

Table 2-1: Ethernet Standards

	Standard	Data Rate / Speed	Media Type	Maximum Length (m)	
				Half Duplex	Full Duplex
Ethernet	10BaseT	10Mbps	Cat 3 or higher UTP or STP	100	100
	10BaseFL	10Mbps	Fibre Optic	2000	Less than 2000
	10Base FB	10Mbps	Fibre Optic	2000	
Fast Ethernet	100BaseTX	100Mbps	Cat 5 UTP or STP	100	100
	100BaseFX	100Mbps	Fibre Optic	400	2000
	100BaseT4	100Mbps	Cat 3 or higher UTP or STP	100	
Gigabit Ethernet	1000BaseT	1Gbps	Cat 4 or higher UTP	100	550
	1000BaseTX	1Gbps	Fibre Optic	100	550
	1000BaseLX	1Gbps	Fibre Optic	316	5000

2-3 Factory Default Settings of Innotech Devices

All Innotech controllers and devices are configured at the factory with default Ethernet settings that can be modified based on your network requirements. These settings are required in order to correctly configure these devices so that correct functionality is achieved within your network configuration. The following sections provide the default Ethernet settings for devices equipped with an Ethernet port, and the default Innotech network settings for devices that are covered in this document.

2-3.1 Default Ethernet Settings

It is important to know the default Ethernet settings of your Innotech device(s) in order to prepare the device(s) for deployment on your particular LAN. The table below shows each applicable controller or device, and the associated factory default Ethernet settings.

Table 2-2: Default Ethernet Settings

Device	Address	IP address	Subnet mask	Default Gateway	Net comms port
Genesis II	DHCP AutoIP	DHCP AutoIP – 169.168.x.x	DHCP or 255.255.255.0	DHCP or 0.0.0.0	20,000
MAXIM III	DHCP AutoIP	DHCP AutoIP – 169.168.x.x	DHCP 255.255.255.0	DHCP or 0.0.0.0	20,000
MAXIM 1010	DHCP AutoIP	DHCP AutoIP – 169.168.x.x	DHCP 255.255.255.0	DHCP or 0.0.0.0	20,000
IG01	Static	192.168.2.100	255.255.255.0	0.0.0.0	20,000
IG03	Static	192.168.2.100	255.255.255.0	0.0.0.0	20,000
IG04	Static	192.168.2.100	255.255.255.0	0.0.0.0	20,000
CONV-E	DHCP AutoIP	DHCP AutoIP – 169.168.x.x	DHCP 255.255.255.0	DHCP or 0.0.0.0	20,000
IWS01	Static	192.168.2.100	255.255.255.0	0.0.0.0	20,000

2-3.2 Default Device Address and Baud Rate

The Innotech network device settings allow your device to communicate with iComm, the Innotech communication software hub. Each device must have a unique device address, and must be configured at the same baud rate as iComm in order to communicate on an Innotech network. The table below shows the default network settings of each applicable controller or device as they are shipped from the factory.

Table 2-3: Default Innotech Network Settings

Device	Innotech device address	Baud rate
Genesis II	1	57,600
MAXIM III	1	57,600
MAXIM 1010	1	57,600
IG01	2	57,600
IG03	2	57,600
IG04	2	57,600
CONV-E	N/A	9,600

The IWS01 does not have a physical Innotech network address.

2-4 Dynamic and Static IP Addressing

An IP address can be assigned to a device or a computer automatically by a DHCP server (dynamic IP address), or manually by modifying the properties of your LAN adapter (static IP address). Innotech devices are factory configured for either dynamic or static IP address assignment, as shown in Table 2-2: Default Ethernet Settings on page 15.

You must assign a static IP address to your Innotech device(s) to avoid any communication problems. One such problem with dynamic IP addressing is IP address conflicts, where two device(s) get assigned the same IP address. Another problem that may occur with dynamic IP addressing is that your Innotech device(s) may get assigned a different IP address each time the device reboots or restarts. Both of these problems can result in your device(s) not communicating correctly on your network or with iComm.

It is also important to know that when a device that is factory configured for dynamic IP address assignment is unable to reach the LAN DHCP server, it will automatically be assigned a special IP address in the range of 169.168.xxx.xxx by the Windows service called APIPA (Automatic Private IP addressing).

Therefore when connecting the Genesis, MAXIM III, MAXIM 1010, or a CONV-E to a LAN without a DHCP server, or when connecting directly to your computer, please keep in mind that these devices may be automatically assigned the 169.168.xxx.xxx IP address by the APIPA service. This information is important and may be helpful when diagnosing communication problems with your Innotech device(s).

Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

3 Connecting Innotech Devices for Initial Configuration

INNOTECH®

3-1 Overview

This chapter provides information on different methods of connecting your Innotech device(s) to your computer, or your LAN for initial configuration. There are several options available to you and each one is described in detail below. Depending on what device(s) you are connecting, and how you connect to your LAN will dictate the method of configuring the Ethernet settings of your device(s) to function on your LAN. Therefore reference links are provided for you to easily navigate to the appropriate chapter to configure the Ethernet settings of your device(s).

3-2 Genesis II, MAXIM III, MAXIM 1010, and CONV-E

The Genesis II , MAXIM III, and MAXIM 1010 controllers, along with the CONV-E converter are factory configured for DHCP address assignment, as shown in Table 2-2: Default Ethernet Settings on page 15. Although it is not recommended to use DHCP IP address assignment for permanent deployment, these devices can be connected to a LAN with a DHCP server for initial configuration. Alternatively you can connect these devices to a LAN without a DHCP server, or connect directly to your computer as described in the sections below.

3-2.1 Connecting to a LAN with DHCP Server

When you connect the Genesis II, MAXIM III, MAXIM 1010, or a CONV-E to a LAN where IP address assignment is handled by a DHCP server, your device(s) should automatically be assigned an IP address for your particular LAN. You are then ready to configure the Ethernet settings of your device(s) with the EtherMate.

Go to Chapter 4 – Configuring GenII, MAXIM III, MAXIM 1010, and CONV-E.

3-2.2 Connecting Directly to a Computer

You must use an RJ45 crossover cable when connecting your Innotech device(s) to your computer. When your Genesis II, MAXIM III, MAXIM 1010, or CONV-E is connected directly to your computer, or to a LAN with no DHCP server, the IP address will be assigned by APIPA. Please refer to Chapter 2 – Dynamic and static IP addressing for more information on APIPA. You are then ready to configure the Ethernet settings of your device(s) with the EtherMate.

Go to Chapter 4 – Configuring GenII, MAXIM III, MAXIM 1010, and CONV-E.

3-3 IG01, IG03, IG04, and IWS01

The IG01, IG03, and IG04 gateways, along with the IWS01 are factory configured with a static IP address, as shown in Table 2-2: Default Ethernet Settings on page 15. The Ethernet settings on these devices are configured using the embedded web server, and therefore it is recommended that you connect the IG01, IG03, IG04, or IWS01 directly to a computer using an RJ45 crossover cable for initial configuration. You can then configure the Ethernet settings of your device(s) using the embedded web server. Please note that in order to access the embedded web server, you must first configure the network settings of your computer to be on the same network range as the factory default Ethernet settings for these devices.

Go to Chapter 4 – Configuring IG01, IG03, IG04, and IWS01.

3-4 Ethernet Connection Status Indication

Typically an Ethernet connection is established using an RJ45 cable of Category 3 (CAT3) or above rating as described in Chapter 2 – Ethernet standards and cabling information. The coloured LEDs on the Ethernet port indicate the status of the Ethernet connection. The different LED colours and the corresponding status indication are shown in Table 3-1. below.

Table 3-1: Ethernet Status LEDs

Ethernet Link LED (Left LED)		Ethernet Activity LED (Right LED)	
LED colour	**Indication**	**LED colour**	**Indication**
OFF	Not connected	OFF	No Ethernet activity
Amber	Connected at 10MBps	Amber	Connected at Half-duplex
Green	Connected at 100MBps	Green	Connected at Full-duplex

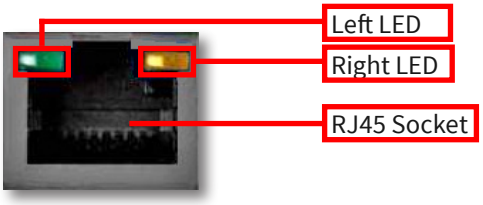


Figure 3-1: RJ45 Socket LED Indicators

This page has been left intentionally blank.

Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

4 Configuring Ethernet Settings of your Innotech Device

INNOTECH®

4-1 Overview

This chapter provides instructions on configuring the Ethernet settings of your Innotech device(s) for permanent deployment on your LAN. The instructions provided will assist you with modifying the factory default Ethernet settings of your device(s) to suit your LAN requirements.

4-2 Configuring Genesis II, MAXIM III, MAXIM 1010, and CONV-E

As previously mentioned the Genesis II, MAXIM III, MAXIM 1010 controllers, and the CONV-E converter are factory configured for DHCP IP address assignment. Whether you have your Innotech device(s) connected to a LAN, or directly to your computer, you will use EtherMate to configure the Ethernet settings to prepare your Innotech device(s) for permanent deployment on your LAN.

Please be sure that you have connected your device to your computer or LAN using a method that best suits your requirements. Refer to Chapter 3 for more information.

4-2.1 Searching for your Device on EtherMate

1. Launch EtherMate.
2. Verify you have selected the correct Network Interface Card (NIC) from the pulldown menu. Select the NIC that is connected directly to your Innotech device, or to your LAN, as illustrated in Figure 4-1 below.

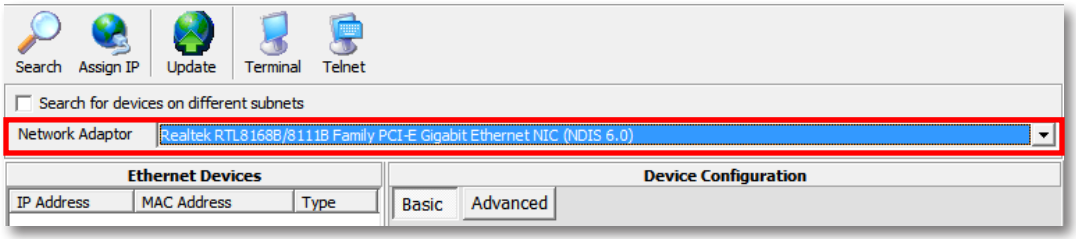


Figure 4-1: EtherMate Main Window

3. From the EtherMate tool bar click on **Search** to search for your Innotech device(s), as illustrated in Figure 4-2 below.

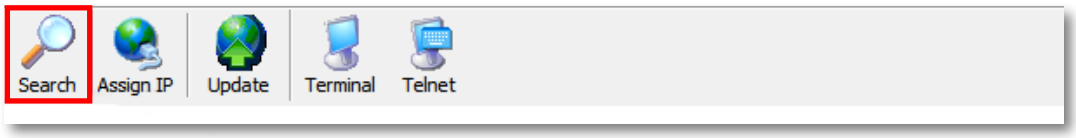


Figure 4-2: EtherMate – Search for your device(s)

4. When EtherMate has finished searching, your device(s) should be listed in the left window pane under Ethernet Devices, as illustrated in Figure 4-3 below.

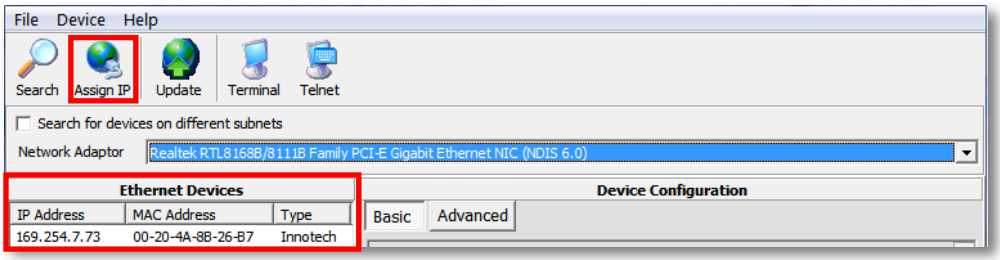


Figure 4-3: EtherMate – Connected Device(s) Found

Please note that the IP address shown in Figure 4-3 has been assigned by the Windows APIPA service because the device is connected directly to a computer. Depending on how your device is connected, your EtherMate search may show a different IP address than the one shown in Figure 4-3 above.

If your device is not listed, verify that the RJ45 cable is properly connected, and visually inspect the LEDs on the Ethernet ports for connectivity and link status indication as described in the Ethernet status indication section of Chapter 3.

Refer to Chapter 5 – General Troubleshooting for further general troubleshooting tips if you still have problems finding your device in EtherMate.

EtherMate can be used to configure any Innotech device equipped with an Ethernet port. This includes devices with an embedded web server.

4-2.2 Configuring Ethernet Settings of your Device with EtherMate

Follow the instructions below to assign your Innotech device a valid IP address as per your LAN requirements.

1. In the left window pane of EtherMate, under **Ethernet Devices**, click on the device you wish to configure, as illustrated in Figure 4-3 above.
2. From the EtherMate tool bar click on **Assign IP**. The Unable to Retrieve Configuration Data window will pop up advising you to configure a valid IP address. Click on **OK** to continue, as illustrated in Figure 4-4 below.

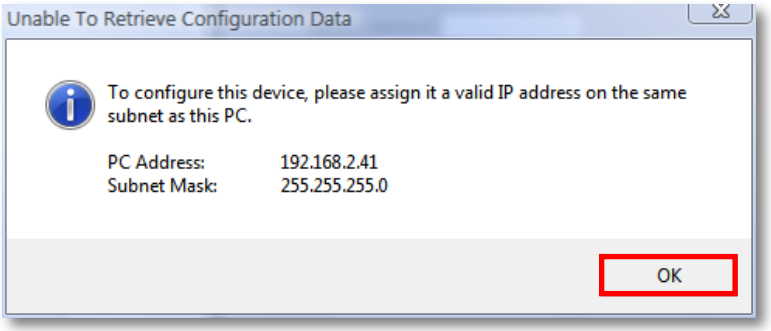


Figure 4-4: Unable to retrieve configuration data popup window

3. The Assign IP Address window will be displayed, as illustrated in Figure 4-5 below. Please note that the IP Address field may automatically populate with an IP address according to your network configuration.

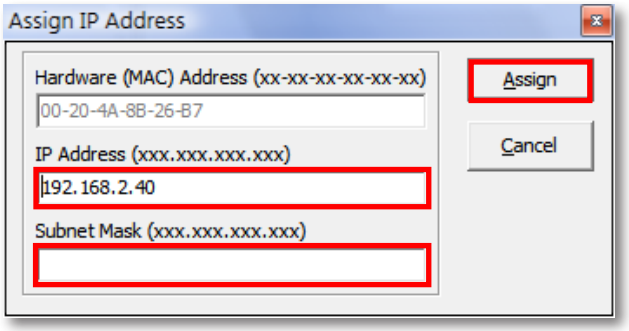


Figure 4-5: EtherMate – Assign IP Address Window

4. Enter the IP address and subnet mask you want to assign your Innotech device, and click on **Assign** to save and apply the new settings. Click on **OK** in the Information popup window.
5. From the EtherMate toolbar click on **Search** to discover your Innotech device with the newly configured IP address and subnet mask. You may have to click on it a couple of times while the device reboots and responds to the request. When the search is finished, your device should be listed in the left window pane under Ethernet Devices, as illustrated in Figure 4-6 below.

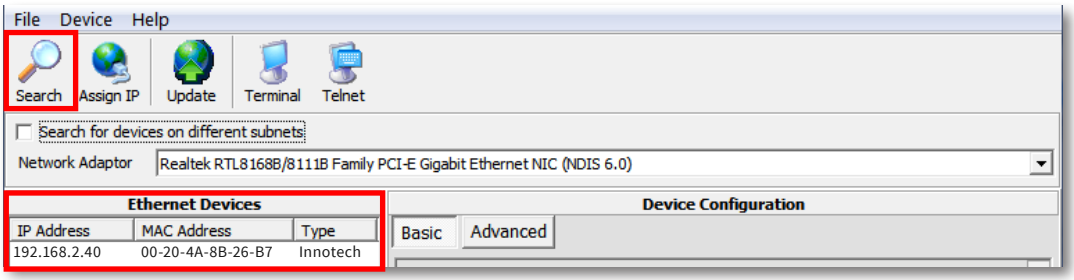


Figure 4-6: EtherMate – Device found with new IP address

4-3 Configuring IG01, IG03, IG04, and IWS01

As previously mentioned the Innotech Gateways – IG01, IG03, and IG04 – and the IWS01 are factory configured with a static IP address. Using the respective embedded web server for each device with Internet Explorer 8 or greater web browser, you can configure the Ethernet settings to suit your requirements. In order to initially access the respective embedded web server out of the box, you need to configure the network settings of your computer to be on the same network range as the default factory Ethernet settings of your particular device(s).

Therefore the first part of this section provides instructions to configure the network settings of your computer. If you are familiar with how to configure the network settings of your computer, go ahead and change them accordingly. When you are done click on one of the links below to configure your Innotech Gateway. Otherwise continue on to the next section for instructions to configure the network settings of your computer.

Configuring Ethernet settings of IG01 with embedded web server

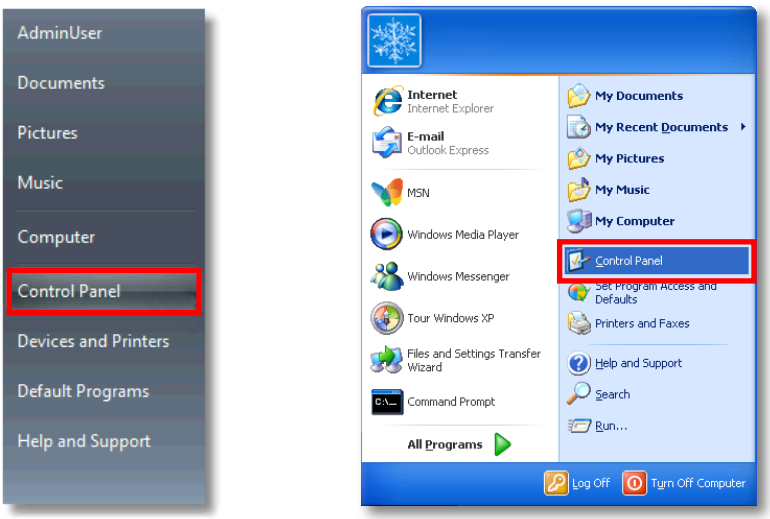
Configuring Ethernet settings of IG03 and IG04 with FusionLIVE

Configuring Ethernet settings of IWS01 with embedded web server

The screenshots shown in this section were taken on a computer with Windows 7 Professional operating system. Information for other supported operating systems is illustrated as necessary.

4-3.1 Configuring Network Settings of your Computer

Regardless of which Windows operating system you are using, open Control Panel from the Windows **Start Menu**, as illustrated in Figure 4-7 below.



Windows 7 Windows XP

Figure 4-7: Open Control Panel from Start Menu

The next step is to edit the properties of your default LAN adapter. The instructions to do this vary slightly depending on which operating system you are using. Therefore instructions for Windows 7, Windows Vista, and Windows XP are provided. Click on one of the links below for instructions pertaining to your operating system.

Windows 7 Professional

Windows Vista Professional

Windows XP Professional

4-3.1.1 Windows 7 Professional – Edit LAN Adapter Properties

1. In the Control Panel window, select **Small Icons** from the View by: drop down menu. Next click on **Network and Sharing Center**, as illustrated in Figure 4-8 below.

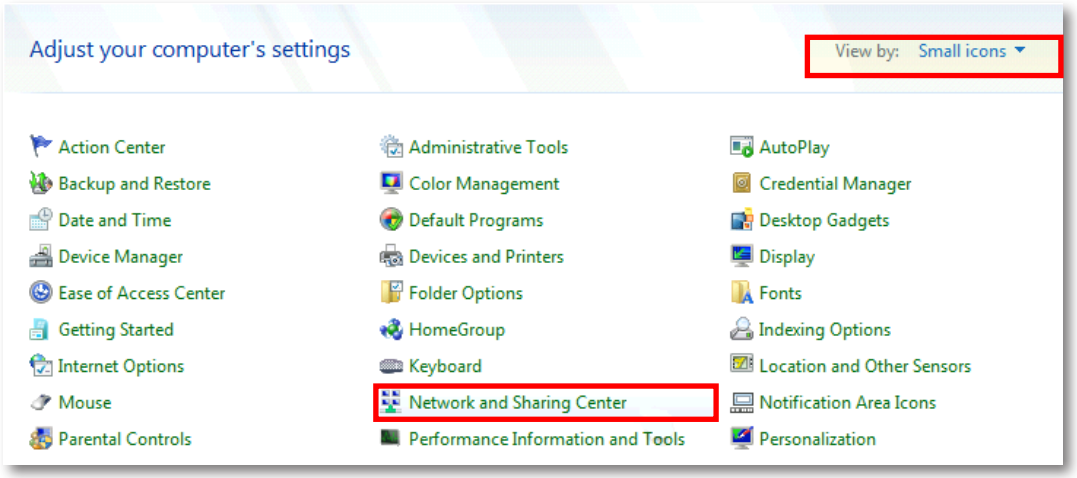


Figure 4-8: Windows 7 – Open Network and Sharing Centre

2. From the Network and Sharing Center window, locate the LAN adapter that you have your device connected to and then click on **Local Area Connection**, as illustrated in Figure 4-9 below.

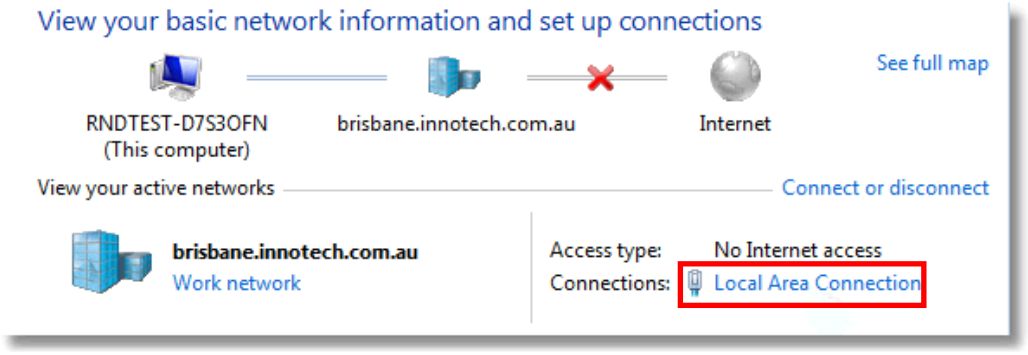


Figure 4-9: Windows 7 – Select LAN connection from Network and Sharing Centre

3. In the Network Status popup window, click on **Properties** to configure the network settings of your LAN adapter to match the Ethernet settings of your Innotech device(s).

Continue to Modify LAN Adapter Properties on page 29

4-3.1.2 Windows Vista Professional – Edit LAN Adapter Properties

1. In the left pane of the Control Panel window, select **Classic View**. Then double click on **Network and Sharing Center**, as illustrated in Figure 4-10 below.

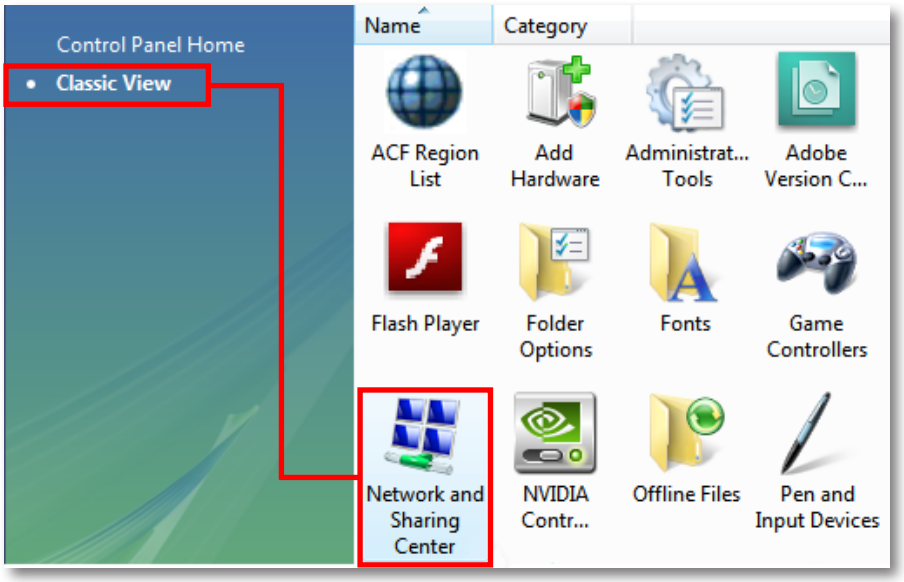


Figure 4-10: Windows Vista – Open Network and Sharing Centre

2. From the Network and Sharing Center window, locate the LAN adapter that you have your device connected to. Click on **View status**, as illustrated in Figure 4-11 below.

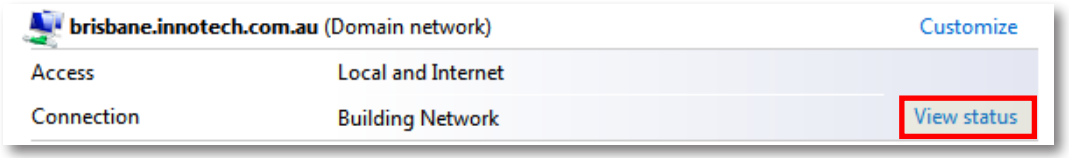


Figure 4-11: Windows Vista – Select LAN connection from Network and Sharing Centre

3. In the Network Status popup window click on **Properties** to configure the network settings of your LAN adapter to match the Ethernet settings of your Innotech device(s).

Continue to Modify LAN Adapter Properties on page 29

4-3.1.3 Windows XP Professional – Edit LAN Adapter Properties

1. In the left pane of the Control Panel window, select **Classic View**. Then double click on **Network Connections**, as illustrated in Figure 4-12 below.

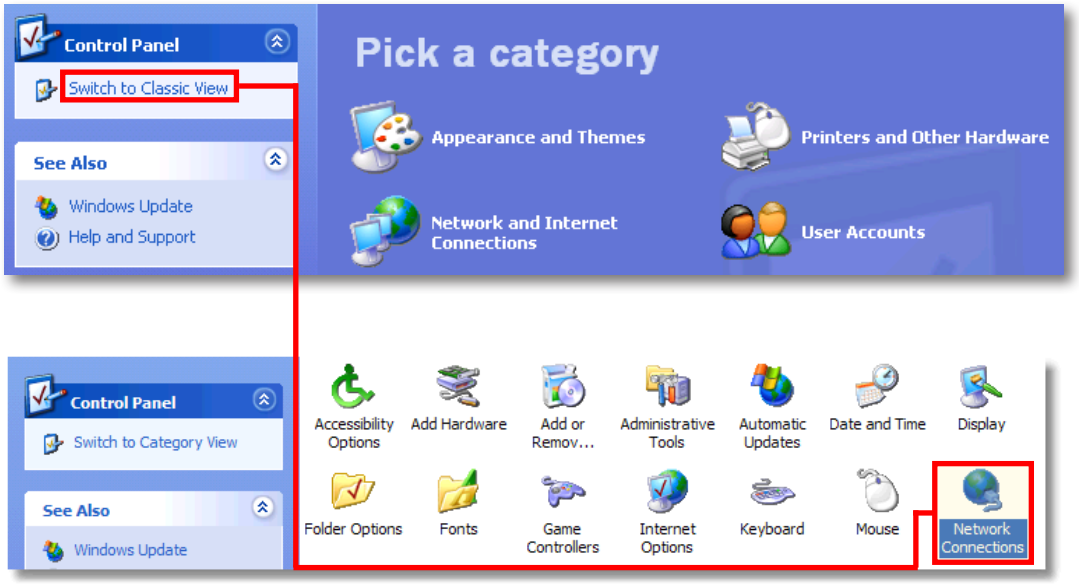


Figure 4-12: Windows XP – Control Panel

2. From the Network Connections window, locate and **double click** on the LAN adapter that you have your device connected to, as illustrated in Figure 4-13 below.

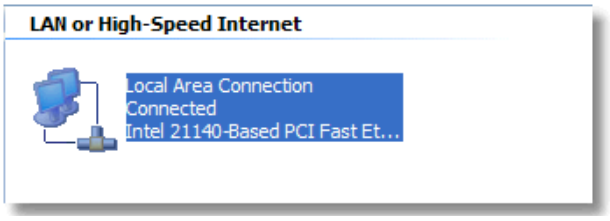
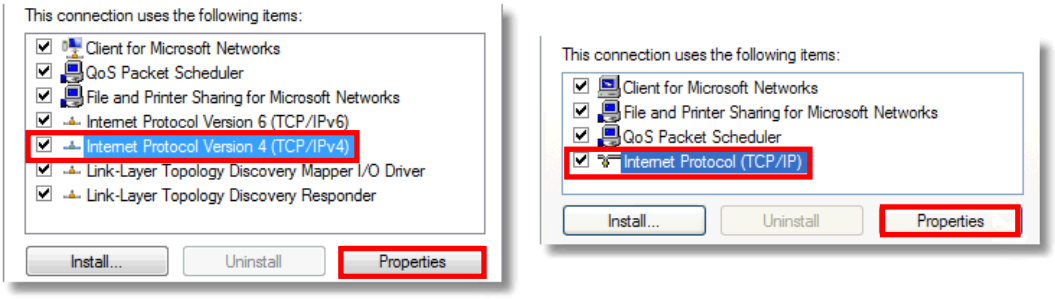


Figure 4-13: Windows XP – Select LAN connection from Network Connections

3. In the Local Area Connection Status popup window, click on **Properties** to configure the network settings of your LAN adapter to match the Ethernet settings of your Innotech device(s).

4-3.1.4 Modify LAN Adapter Properties

The next step is to modify the network settings of your default LAN adapter to be on the same subnet as your Innotech device(s). By following the previous instructions for your particular operating system to edit the default LAN adapter properties, you will be presented with a popup window similar to the ones illustrated in Figure 4-14 below.



Windows 7 / Vista – Network Properties

Windows XP – Local Area Connection Properties

Figure 4-14: Edit Internet Protocol (TCP/IP) Settings

1. Select Internet Protocol, as illustrated in Figure 4-14 above, according to your operating system and click on **Properties**.
2. In the Internet Protocol TCP/IP Properties window, enter an IP address in the range of *192.168.2.xxx,* and subnet mask of *255.255.255.0* to configure your computer to be on the same subnet as your Innotech device(s), as illustrated in Figure 4-15 below.

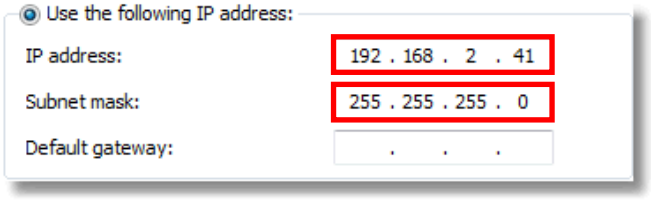


Figure 4-15: Modify IP address and subnet mask of your LAN adapter

IMPORTANT

The IP address you assign your computer must be unique, and must not be assigned to any other device(s) or computer on that particular LAN.

3. When you are done entering the new network settings, click on **OK** to close the Internet Protocol TCP/IP Properties window.
4. Next click on **Close** or **OK** on the remaining open windows to save your new network settings.

With the new network settings configured, you are ready to modify the default Ethernet settings of your IG01, IG03, IG04 gateway, or IWS01 to suit your LAN requirements. Depending on the type of device you want to configure, click on one of the links below.

Configure Ethernet settings of IG01 with embedded web server

Configure Ethernet settings of IG03 and IG04 with FusionLIVE

Configure Ethernet settings of IWS01 with embedded web server

The IG01, IG03, IG04, and IWS01 can also be configured with EtherMate, as described in the Searching for your Device on EtherMate on page 22.

4-3.2 Configuring Ethernet Settings of IG01 with Embedded Web Server

The Ethernet settings on the IG01 Sub System Gateway can be configured and modified with the embedded web server to suit your LAN requirements. To initially access the embedded web server of the IG01 out of the box, you need to configure the network settings of your computer to be on the same network range as the IG01 default factory Ethernet settings.

For detailed instructions on how to configure your computer network settings, please refer to the Configuring network settings of your computer section.

When you have configured your computer network settings, follow the instructions below to access the IG01 embedded web server, and edit or modify the default Ethernet settings of the IG01 to suit your LAN requirements.

1. Launch Internet Explorer and enter the default IP address of the IG01 (*192.168.2.100*) into the address bar, as illustrated in Figure 4-16 below.

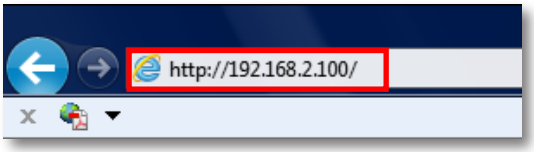


Figure 4-16: Access Embedded Web Server on IG01

2. The home page of the IG01 embedded web server should now be displayed. Click on **Comm Setup** from the menu buttons in the left pane of the window, as illustrated in Figure 4-17 below.

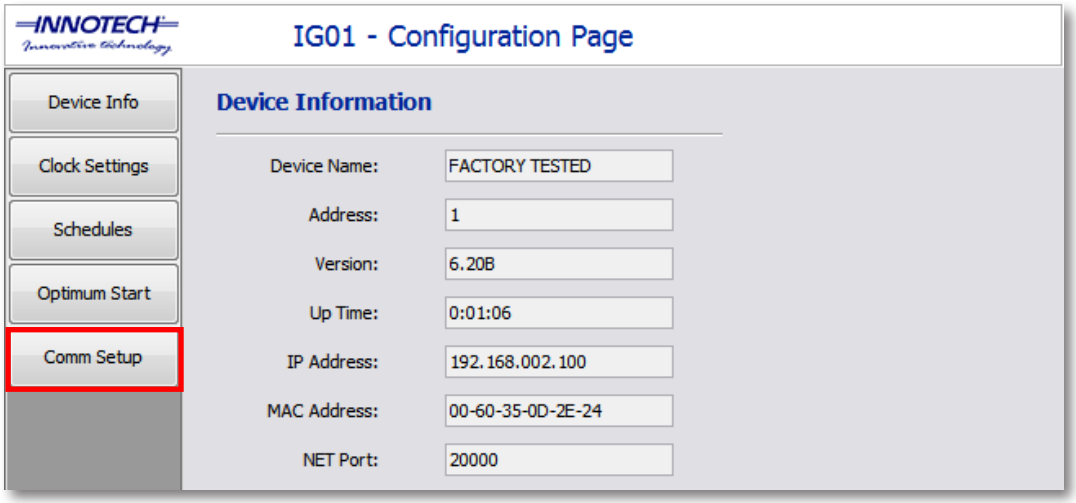


Figure 4-17: IG01 Embedded Web Server Home Page

3. Refer to Figure 4-18 and the table below for detailed information to help you configure the IG01 to suit your LAN requirements.

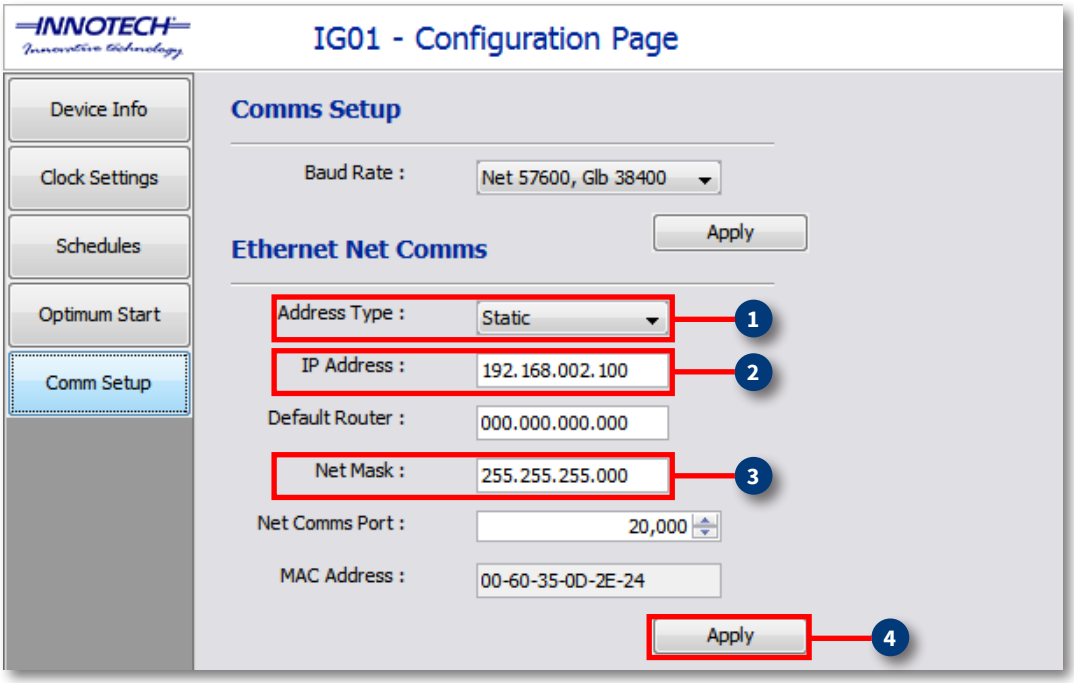


Figure 4-18: Configure Ethernet Settings of IG01

Table 4-1: IG01 Configuration Page

Index	Area on the screen	Description
1	Address Type	Always select **Static** to avoid network communication problems, or problems communicating with iComm.
2	IP Address	Enter the static IP address you want to assign the IG01 as per your LAN requirements.
3	NetMask	Enter the subnet mask as per your LAN requirements.
4	Apply	When you have entered the desired Ethernet settings, click on **Apply** to save the new settings.

When the new settings have been applied, Status: *Done* will be displayed at the bottom left corner of the IG01 web page.

IMPORTANT

Please note that when the IP address of your device is changed and saved as described here, you may have to modify your computer network settings to be on the same network range as your device if it is different. You can then access the embedded web server by entering the new IP address assigned to your device into the browser address bar.

If you are having difficulty accessing the IG01 embedded web server at any point, refer to Chapter 5 – General Troubleshooting for general troubleshooting information.

4-3.3 Configuring Ethernet Settings of IG03 and IG04 with FusionLIVE

The Ethernet settings on the IG03 and IG04 Gateway can be configured and modified with the embedded FusionLIVE Java interface to suit your LAN requirements. To initially access the FusionLIVE interface on the IG03 or IG04 out of the box, you need to configure the network settings of your computer to be on the same network range as the IG03 or IG04 default factory Ethernet settings.

For detailed instructions on how to configure your computer network settings, please refer to the Configuring network settings of your computer section.

When you have configured your computer network settings, follow the instructions below to access the IG01 embedded web server, and edit or modify the default Ethernet settings of the IG01 to suit your LAN requirements.

Please note that differences between the IG03 and IG04 web server interface are illustrated and described as necessary.

The Java Runtime Environment (JRE) version 6.1 or greater must be installed on the computer in order to access the FusionLIVE interface. If you don't have JRE installed on your computer, you will be prompted to download and install JRE when you connect to an IG03 or IG04 for the first time.

1. Launch Internet Explorer and enter the default IP address of the IG03 or IG04 (*192.168.2.100*), as illustrated in Figure 4-19 below.

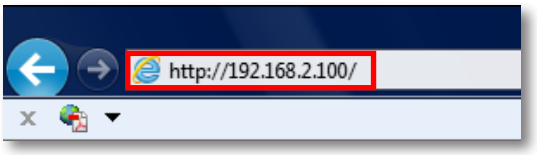
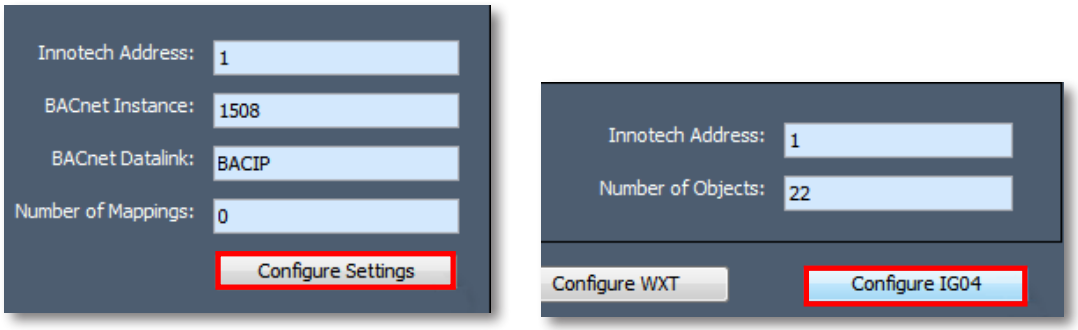


Figure 4-19: Access FusionLIVE on IG03 and IG04

2. The embedded server home page will be displayed. Click on the Launch FusionLIVE button to launch the FusionLIVE configuration page, as illustrated in Figure 4-20 below. The Java applet will be downloaded at this time in order to view the FusionLIVE interface.

Figure 4-20: Launch FusionLIVE – IG03 and IG04

3. From the FusionLIVE configuration page, click on the configuration button for the IG03 or IG04, as illustrated in Figure 4-21 below.



Configure settings button – IG03 Configure settings button – IG04

Figure 4-21: Click to configure IG03 or IG04 settings in FusionLIVE

4. The Configure BACnet Gateway Settings window will open. Click on the **Ethernet** tab to configure the Ethernet settings of the IG03 or the IG04, as illustrated in Figure 4-22 and Figure 4-23 (page 34) respectively.

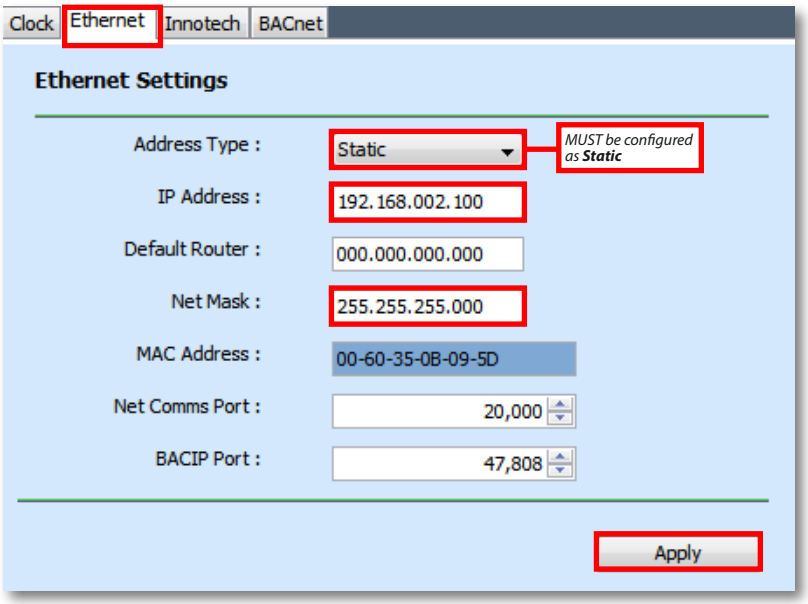


Figure 4-22: IG03 Ethernet Tab – Configure Ethernet Settings

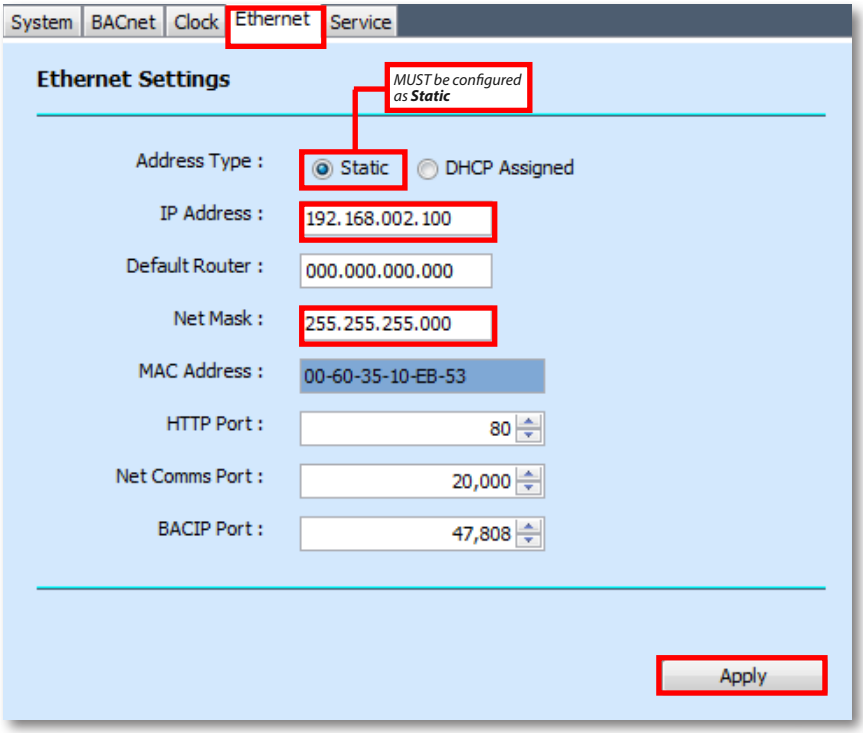


Figure 4-23: IG04 Ethernet Tab – Configure Ethernet Settings

5. Enter the IP address and the subnet mask in the appropriate fields and click on **Apply** to save the new settings.

IMPORTANT

It is recommended to configure the IG03 or IG04 with a static IP address to avoid communication problems. Therefore leave the Address Type option at the default setting of Static.

6. A warning window will be displayed. Click on **Continue** to apply and save the new Ethernet settings on the IG03 or IG04, as illustrated in Figure 4-24 below.

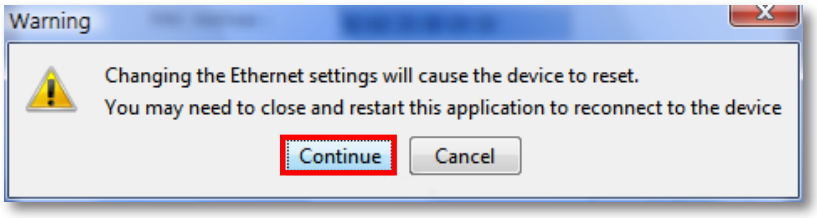


Figure 4-24: FusionLIVE – Click continue in Warning Window

IMPORTANT

Please note that when the IP address of your device is changed and saved as described here, you may have to modify your computer network settings to be on the same network range as your device if it is different. You can then access the embedded web server by entering the new IP address assigned to your device into the browser address bar.

If you are having difficulty accessing the IG03 or IG04 embedded web server at any point, refer to Chapter 5 – General Troubleshooting for general troubleshooting information.

4-3.4 Configuring Ethernet Settings of IWS01 with Embedded Web Server

The Ethernet settings on the IWS01 can be configured and modified with the embedded web server to suit your LAN requirements. To initially access the embedded web server on IWS01 out of the box, you need to configure the network settings of your computer to be on the same network range as the IWS01 default factory Ethernet settings.

For detailed instructions on how to configure your computer network settings, please refer to the Configuring network settings of your computer section.

When you have configured your computer network settings, follow the instructions below to access the IWS01 embedded web server, and edit or modify the default Ethernet settings of the IWS01 to suit your LAN requirements.

The IWS01 is built using Microsoft Silverlight® technology and requires the latest Silverlight plug-in to be installed. When the embedded web server is loaded, the user will be prompted to install the Silverlight plug-in if it is not already installed.

1. Launch Internet Explorer and enter the default IP address *(192.168.2.100)* of the IWS01, as illustrated in Figure 4-25 below.

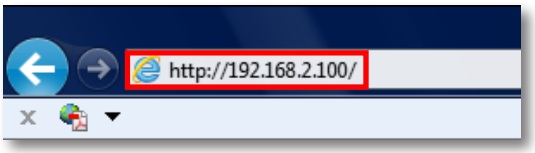


Figure 4-25: Access IWS01 Embedded Web Server

2. The IWS01 embedded web server home page will open. Click on the **Access Level** pulldown menu and select Engineering. Enter the default password of **1111,** and click on **Log In**, as illustrated in Figure 4-26 below.

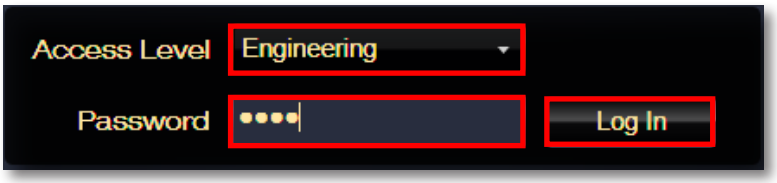


Figure 4-26: IWS01 Login Screen

3. From the home screen of the embedded web server, click on **Setup**, as illustrated in Figure 4-27 below.

Figure 4-27: Click Setup from IWS01 Home Screen

4. Click on the **Communication** tab to modify the Ethernet settings of IWS01 to suit your LAN requirements, as illustrated in Figure 4-28 below.

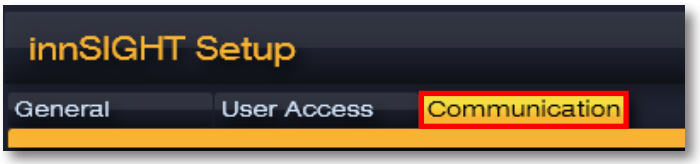


Figure 4-28: IWS01 – Communication Tab

5. Enter the necessary information to configure the Ethernet settings of IWS01 according to your LAN requirements, as illustrated in Figure 4-29 below. When you have finished entering all of the necessary information, click on **Apply Changes** to save the new settings.

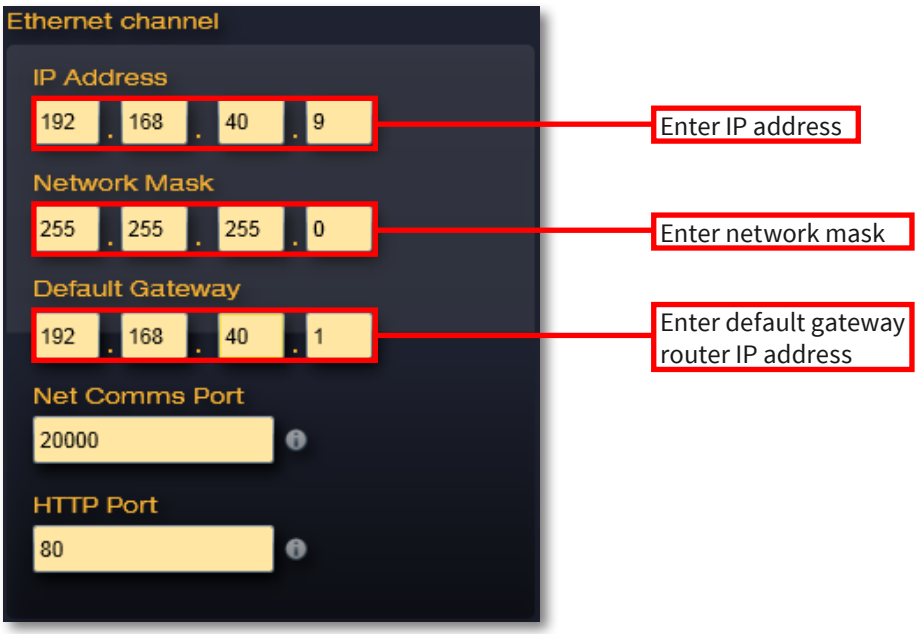


Figure 4-29: Configure IWS01 Ethernet Settings

IMPORTANT

If you modify the default Ethernet settings, remember to change your computer network settings accordingly. Refer to the Configuring network settings of your computer section for instructions.

Innotech Products

ETHERNET SETUP MANUAL FOR DEVICE COMMUNICATIONS

5 General Troubleshooting Tips

INNOTECH®

5-1 Overview

This chapter provides general troubleshooting information for your Innotech device(s) covered in this document. This information will help you recover the IP address of your device(s) in cases where the IP address is unknown, or has not been configured correctly.

Recovering the IP address of your device(s) depends on the type of device. Also, some recovery methods are more complicated than others and limited to specific devices, and therefore should only be used as a last resort. The recovery method described in the next section will work with all Innotech devices equipped with an Ethernet port.

5-2 Finding a device with Unknown IP Address

Sometimes your device(s) may have an IP address that is on a different network range than your computer or your LAN. In order to search for a device with an IP address that may be on a different subnet, your device must be directly connected to your computer LAN adapter using an Ethernet crossover cable. If you have multiple LAN adapters in your computer, all other LAN adapters must be disabled, as described in the next section.

Otherwise you can skip to the Searching for a device on a different subnet section to search and find your Innotech device with EtherMate.

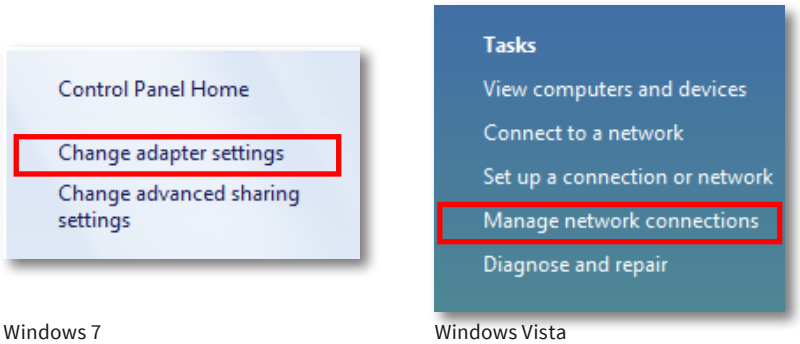
5-2.1 Disabling a LAN Adapter

Disabling a LAN adapter varies somewhat depending on the type of operating system you are running on your computer. Therefore instructions are provided below to disable a LAN adapter in Windows 7, Vista, and XP operating systems supported by Innotech.

Before proceeding, verify that your Innotech device is connected directly to the LAN adapter of your computer using an Ethernet crossover cable.

5-2.1.1 Windows 7 and Vista

1. Open **Control Panel | Network and Sharing Center**.
2. In the left pane of the Network and Sharing Center window, click on Change adapter settings for Windows 7. For Windows Vista click on Manage network connections, as illustrated in Figure 5-1 below.



Windows 7 Windows Vista

Figure 5-1: Changing LAN Adapter Settings

3. Right click on each LAN adapter you want to disable, and click on Disable in the popup window, as illustrated in Figure 5-2 below.

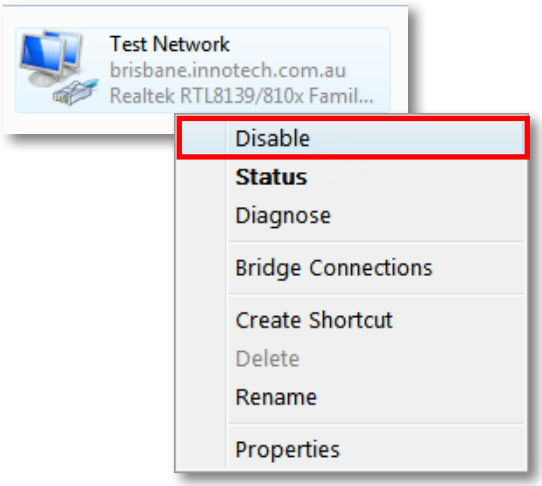


Figure 5-2: Windows 7 / Vista – Disable LAN Adapters

IMPORTANT

Be sure not to disable your active LAN connection that is connected to your device.

5-2.1.2 Windows XP

1. Open **Control Panel | Network connections**.
2. Right click on each LAN adapter you want to disable, and click on **Disable** in the popup window, as illustrated in Figure 5-3 below.

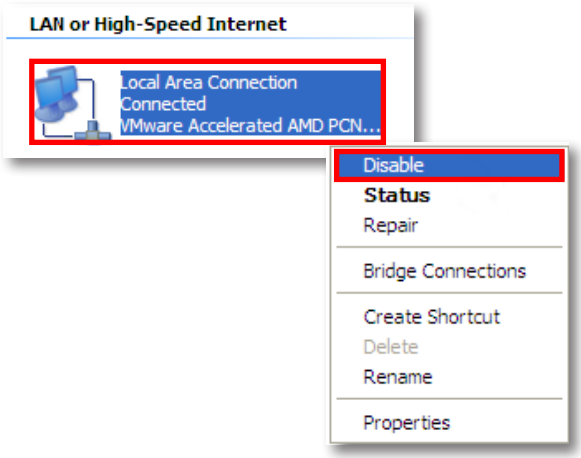


Figure 5-3: Windows XP – Disable LAN Adapters

5-2.2 Searching for a Device on a Different Subnet

When you have disabled all LAN adapters, with the exception of the one your device is connected to, you are ready to search for your device using EtherMate.

Follow the steps below to search for your Innotech device with EtherMate.

1. Launch EtherMate and verify that you only have one LAN adapter listed in the pulldown menu. Click the check box next to *Search for devices on different subnets*, as illustrated in Figure 5-4 below.

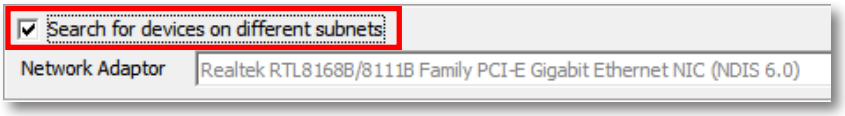


Figure 5-4: EtherMate – Select to search for devices on different subnets

2. Click **Search** to search for your device, as illustrated in Figure 5-5 below.

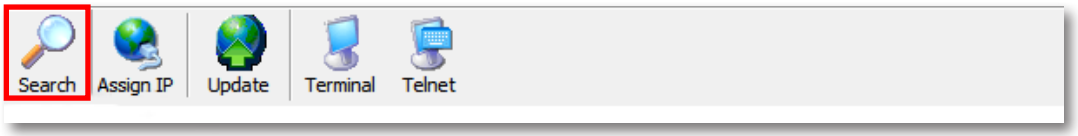


Figure 5-5: EtherMate – Search for device on different subnet

3. You should see your device listed, as illustrated in Figure 5-6 below.

Figure 5-6: Ethernet Device List

You are now ready to assign your device an IP address as per your LAN requirements. Refer to Chapter 4 – Configuring Ethernet settings of your device with EtherMate to assign your device an IP address to suit your LAN requirements.

If you do not see your device listed, refer to the relevant section in this chapter for further troubleshooting information.

This page has been left intentionally blank.

Innotech Support

Innotech provides technical information on the Web to assist you with using its products.
At www.innotech.com.au, you can find technical manuals, user instructions, and data sheets for all our products.

For direct product support or product information, contact your local distributor, or an Innotech representative.

You can contact us via email, fax, or postal mail:

Website: www.innotech.com.au
Email: sales@innotech.com.au
Fax: +61 7 3421 9101
Mail: Innotech Control Systems
P.O. Box 292
Sunnybank
QLD 4109
Australia

