

# Squirrel Data Logger

Configuring the 20xx Wired and Wireless  
Ethernet Device

*Getting Started*

<b>1. Overview .....</b>	<b>3</b>
<b>2. Setting up the 20xx Loggers IP Address.....</b>	<b>4</b>
<b>3. Email Notification Setup.....</b>	<b>6</b>
<b>4. The SQ20xx Applet.....</b>	<b>10</b>
<b>5. Setting Up a Wireless Ethernet Logger.....</b>	<b>12</b>
<b>6. Setting Up a Direct Connection to a PC.....</b>	<b>17</b>
<b>7. Configuring the Data Logger for WiFi.....</b>	<b>22</b>

# 1. Overview

---

This document describes the process for configuring the 20xx range of loggers inbuilt Ethernet adaptor.

## Prerequisites

Before proceeding with the installation you will require all of the following:

- A 20xx logger with inbuilt Ethernet, externally powered
- A networked PC that is able to access the network on which you intend to connect the 20xx logger
- An Ethernet connection on the network you wish the SQ20xx logger to reside.
- Before proceeding you must speak to your network administrator to get the following information regarding the network you will be connecting the SQ20xx logger to:
  - The network gateway
    - This should ideally be a static IP address.
    - If a static address cannot be found then the next best would be an assigned address.
    - The worst case would be a leased address with a significant timeout.
  - The network subnet mask
  - An available IP address.

**NOTE:** One of the above must be found. Failure to do so could result in problems communicating with the logger in the event of a reset caused by a power failure.

- When you have the details from your network administrator as detailed above note them down here as they will be required when setting up communications from within SquirrelView and the logger.
  - IP address.                    \_\_\_\_\_.
  - Subnet mask                    \_\_\_\_\_.
  - Network gateway                \_\_\_\_\_.

## 2. Setting up the 20xx IP Address

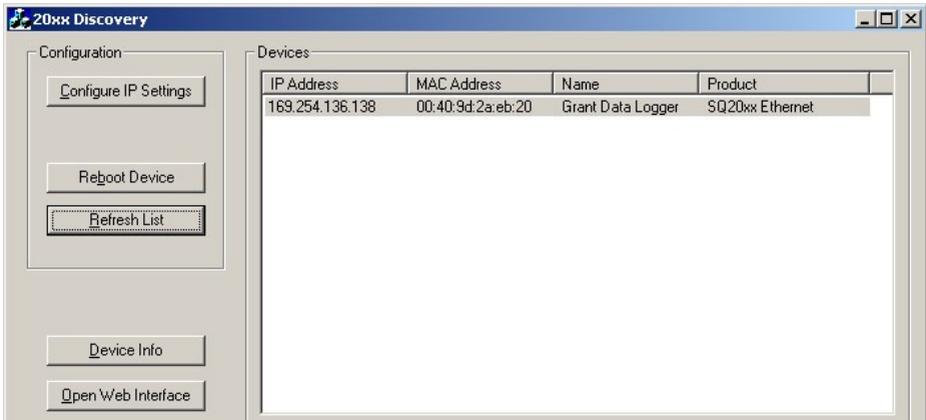
### 2.1 SQ20xx Discovery

The 20xx Discovery program will allow you to find and select the 20xx logger(s) to be setup.

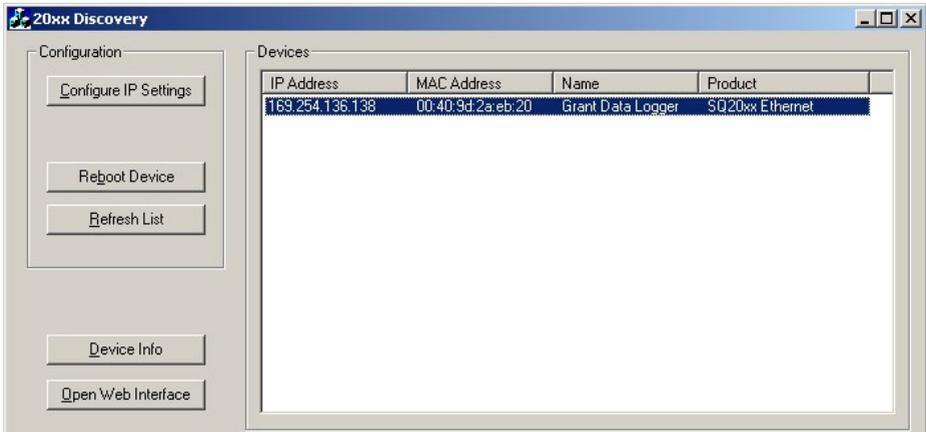
To run:

1. Use the Find Device button within the Communication wizard of the Squirrelview software or go to the following directory:
  - a. \Program Files\SquirrelView\Tools\SQ20xx\_Ethernet

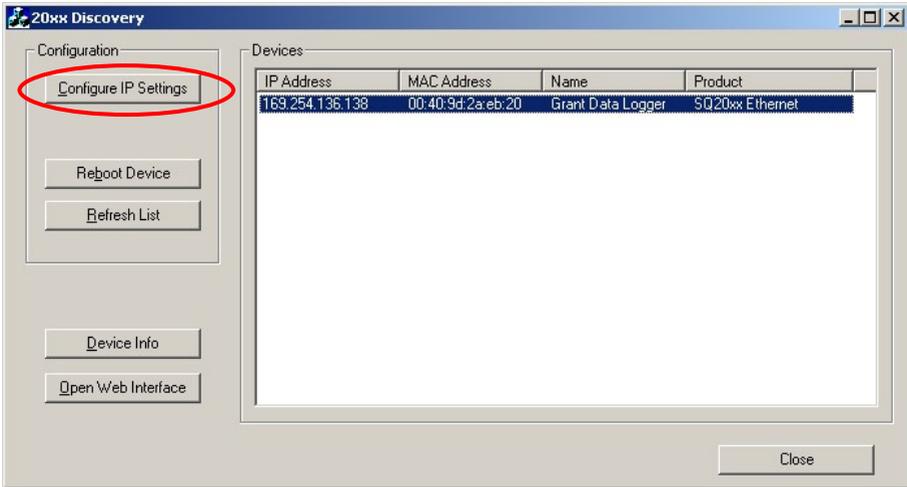
And double click on the file Finder.exe. The 20xx Discovery program should appear as below after completing a search for connected 20xx loggers.



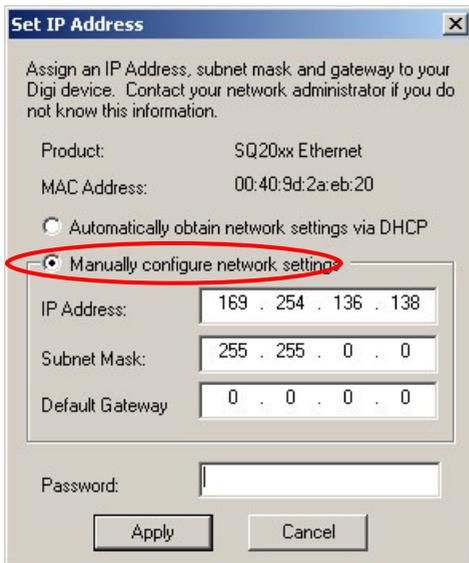
Next click on the logger you wish to configure in the list of devices:



Then click on the 'Configure IP Settings' button to display the configuration dialog



From this dialog you can type in the settings provided by your network administrator by selecting the 'Manually configure network settings' radio button.



After filling in the three fields type **dbps** into the password field.

Finally click 'Apply' to send your settings to the logger.

Configuration of the IP settings is now complete

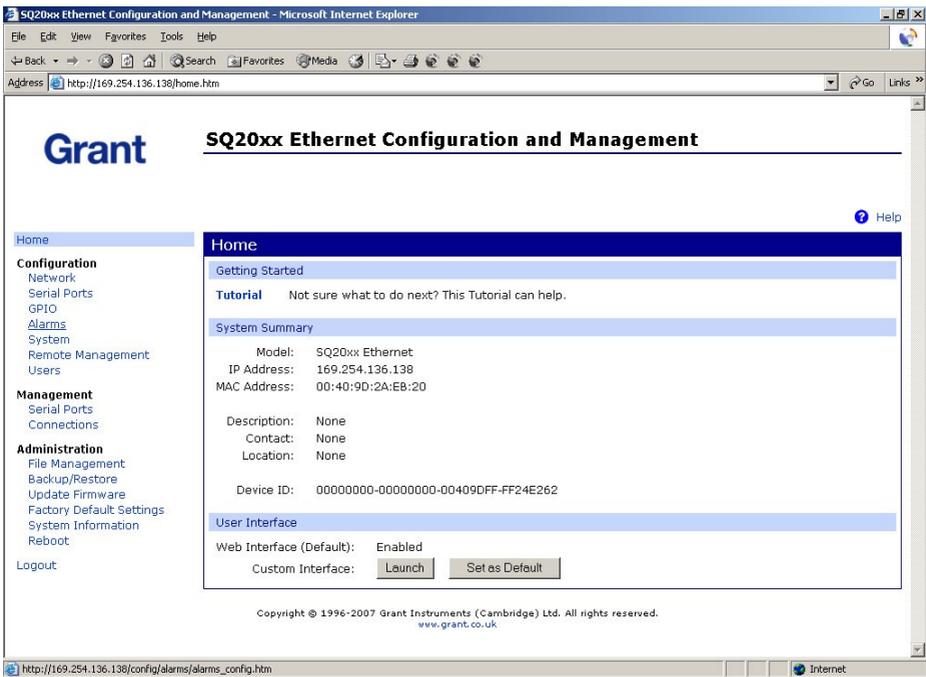
# 3. Email Notification Setup

The logger may be setup to send an email when a new alarm is raised. Before starting to setup the alarm notification you need to ensure you have the following:

- Access to a web browser which can be connected to the 20xx device
- Mail Server Address
- Logger IP address
- Email Address for recipient

To setup email notification perform the following steps:

- Open web browser
- Type in the address of the 20xx logger followed by /home.htm
  - o e.g. `http://192.168.1.237/home.htm`
- Enter username and password
  - o Username – 'root' (default)
  - o Password – 'dbps' (default)
- Select alarms



- Tick the 'Enable alarm notifications' tick box
- Type in the IP address of your companies mail server
- Type in the email address of the logger
- Tick 'Enable' tick box of the Alarm 1
- Click on the 'Apply Button' at the bottom of the window

**Grant** **SQ20xx Ethernet Configuration and Management**

Home Help

**Configuration**

- Network
- Serial Ports
- GPIO
- Alarms**
- System
- Remote Management
- Users

**Management**

- Serial Ports
- Connections

**Administration**

- File Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

---

**Alarms Configuration**

Alarm Notification Settings

Enable alarm notifications

Mail Server Address (SMTP): 10.0.0.0

From E-Mail Address:

Alarm Conditions

Enable	Alarm	Type	Trigger	SNMP Trap	Send To	Email Subject
<input checked="" type="checkbox"/>	Alarm 1	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 2	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 3	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 4	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 5	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 6	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 7	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 8	gpio	x x x x x	disabled		

- Click on the Alarm 1 to configure.

Grant **SQ20xx Ethernet Configuration and Management** [Help](#)

Home

**Configuration**

- Network
- Serial Ports
- GPIO
- Alarms**
- System
- Remote Management
- Users

**Management**

- Serial Ports
- Connections

**Administration**

- File Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot
- Logout

**Alarms Configuration**

Alarm Notification Settings

Enable alarm notifications

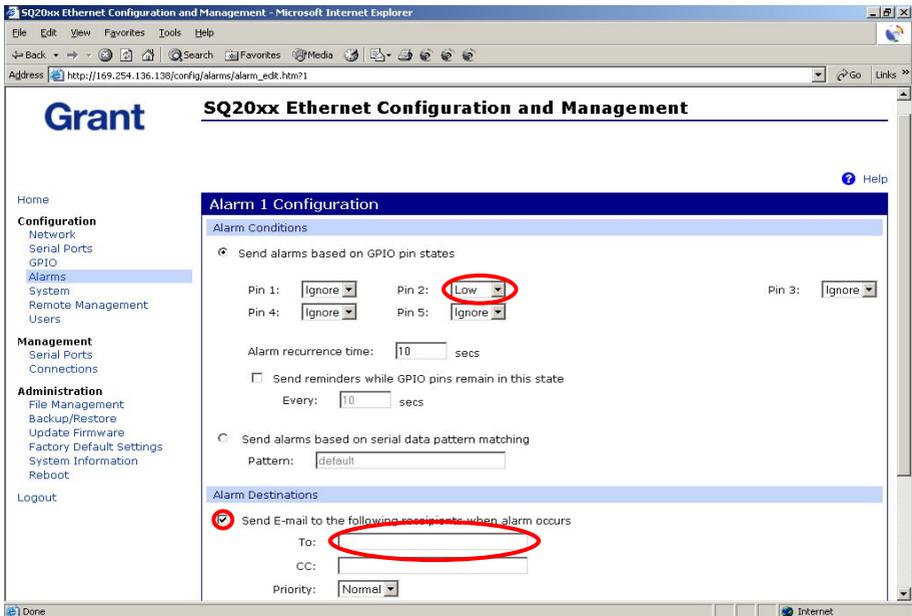
Mail Server Address (SMTP):

From E-Mail Address:

Alarm Conditions

Enable	Alarm	Type	Trigger	SNMP Trap	Send To	Email Subject
<input type="checkbox"/>	Alarm 1	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 2	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 3	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 4	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 5	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 6	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 7	gpio	x x x x x	disabled		
<input type="checkbox"/>	Alarm 8	gpio	x x x x x	disabled		

- In the 'Pin 2' pull down box select the 'Low' option
  - Ensure that all other pins are set to 'Ignore'
- Tick the 'Send E-mail to the following recipients when the alarm occurs' tick box
- Type in the email address you wish the notification to be sent to
- Type in the text you wish to appear in the subject field of the email.
- Finally click on the 'Apply Button' then logout of the 20xx device setup page.



**NOTE: It is important to follow the instructions above as written as other configuration options are not supported.**

**Once configured as described, an email will be sent upon *any* Squirrel alarm becoming active.**

# 4. The SQ20xx Applet

---

## 4.1 Prerequisites

Before proceeding with the installation you will require all of the following:

- You must complete the previous section(s) in this document i.e. the device must be configured and communicating with SquirrelView.
- The users browser must have the latest Java Virtual Machine from Sun Microsystems installed. (See following section)

## 4.2 Checking the browser JVM Version

Before running the SQ20xx Applet the Java Virtual Machine (JVM) of the browser should be upgraded to the latest version from Sun Microsystems. To check the JVM on a machine running Microsoft Internet Explorer perform the following steps:

1. Start Microsoft Internet Explorer browser.
2. Select the 'Tools' menus and then the 'Internet Options..' menu item.
3. In the next dialog click on the 'Advanced' tab.
4. Scroll through the list of items and check for an entry with the title 'Java (Sun)'. If this does not exist or the version number is less than 'Java 2 v1.4.2\_04' then you should carry out the steps in the 'Updating the Java JVM' section.

## 4.3 Updating the Java JVM

The latest JVM can be downloaded from the web site [www.java.com](http://www.java.com). From this site select the 'Manual Download' link and then download the appropriate file for your operating system. If you are using Microsoft Windows use the 'Windows (Offline Installation)' link and double click on the downloaded file to install the JVM.

## 4.4 Execution Over an Intranet

You may now run the SQ20xx applet by entering the IP address of the SQ20xx device in a browser.

This will bring up the SQ20xx Ethernet Configuration and Management window.

- Enter username and password
  - o Username – 'root' (default)
  - o Password – 'dbps' (default)

Click on the 'Set as Default'

This will enable a connection straight to the SQ20xx applet in future when the IP address is entered into the browser. The Username and Password will need to be enter each time.

To enter the SQ20xx Ethernet Configuration and Management window after this you will need to type in the IP address of the 20xx logger followed by /home.htm to the browser.

- o e.g. <http://192.168.1.237/home.htm>

#### **4.5 Execution Over the Web**

Once the SQ20xx Applet is working over the intranet the user must get access to this from the internet to view the applet from the web. To do this the users I.T. department should allow access to the devices IP address from an IP address or URL external to the companies.

# 5. Setting Up a Wireless Ethernet Logger

## Prerequisites

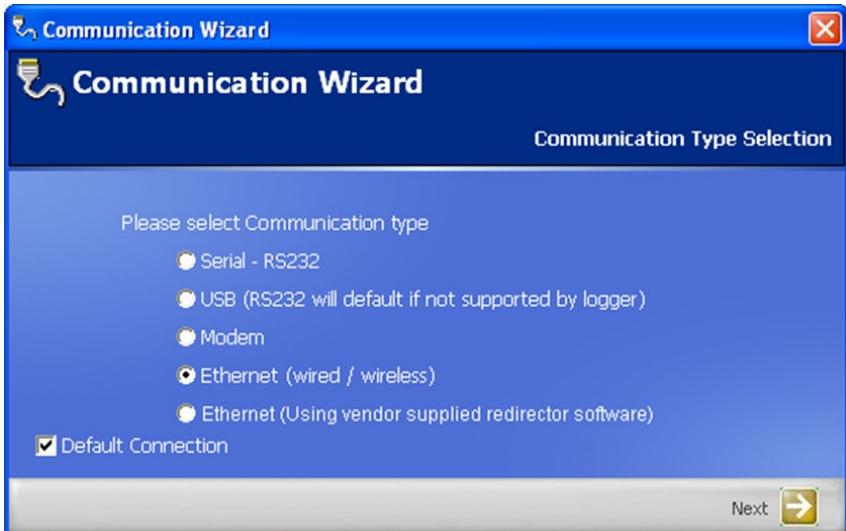
Before proceeding with the installation you will require the following.

- A 20xx Data Logger with wireless Ethernet and external Power Supply
- A wireless router that is either connected to a Network or direct to the PC
- Before proceeding you must speak to your network administrator to get the following information regarding the network you will be connecting the SQ20xx logger to
  - Network SSID Name
  - Network Channel Number
  - Network Encryption Key

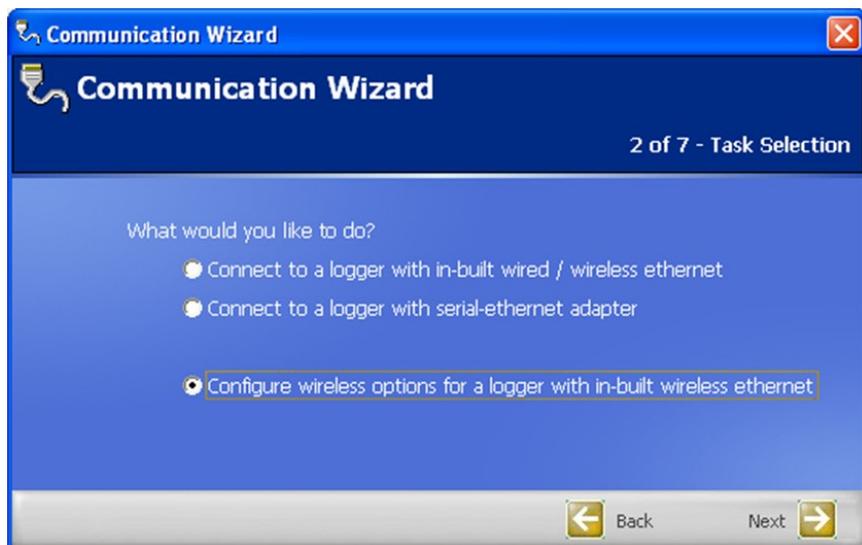
## 5.1 Configuring the Wi-Fi connection

Attach the logger to the PC via USB and click on the **Communication Wizard** button in the SquirrelView software.

Choose the **Ethernet (wired / wireless)** option and click **Next**.



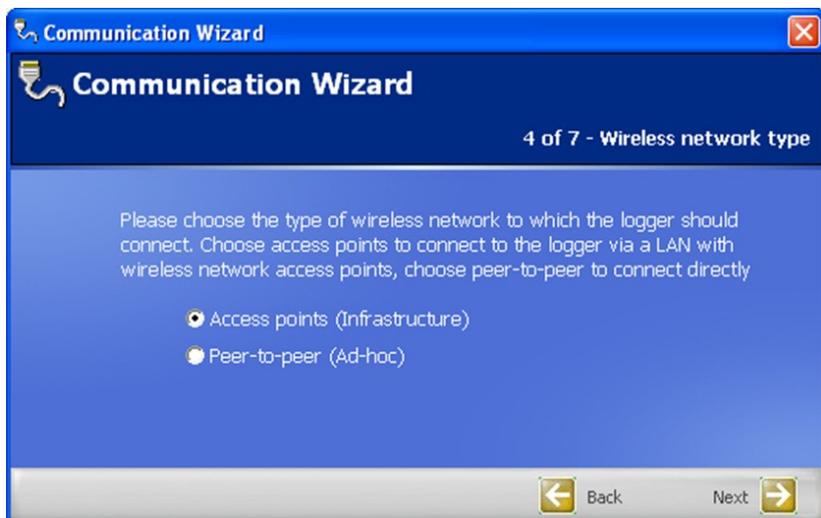
Then choose **Configure wireless options for a logger with in-built wireless Ethernet**  
And click on **Next**



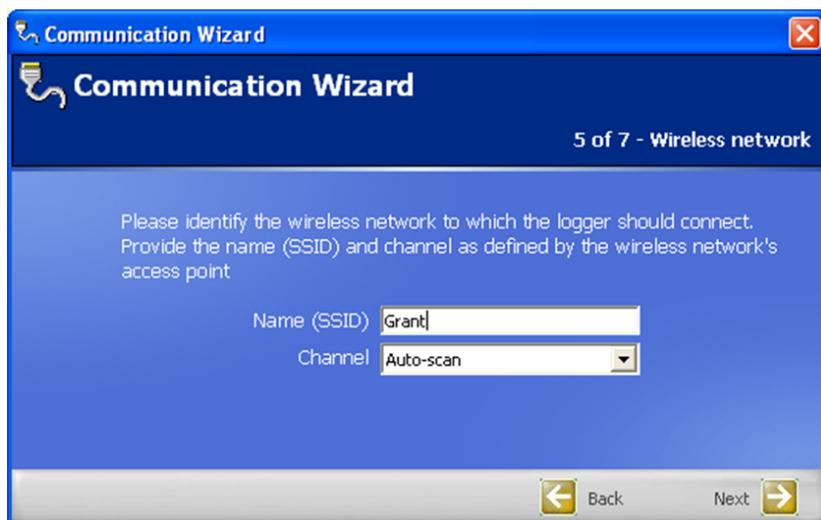
With the logger connected via USB the logger should be displayed as below. Click on **Next**



For setting up a connection with a wireless router on a network select the Access points (Infrastructure) option.



The SSID name of the wireless access network point is now entered. For a WPA connection you will require the network name assigned by your IT department or network administrators. For a WEP connection the SSID may be left blank and any available network will be found. The Channel number can be left as Auto-scan or entered if it is known.



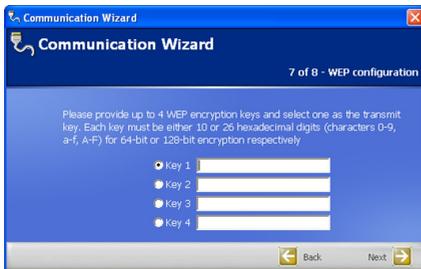
Choose the type of security your wireless network is using, if not known it should be supplied by your IT department or network administrators. Click on **Next**



On the next screen fill in the encryption key as supplied by your IT department and click on **Next**.

Window for WEP 64 and 128 encryption Key

Window for WPA and WPA2 encryption key



On the next screen click on **Finish**



# 6. Setting Up a Direct Connection to PC

## Prerequisites

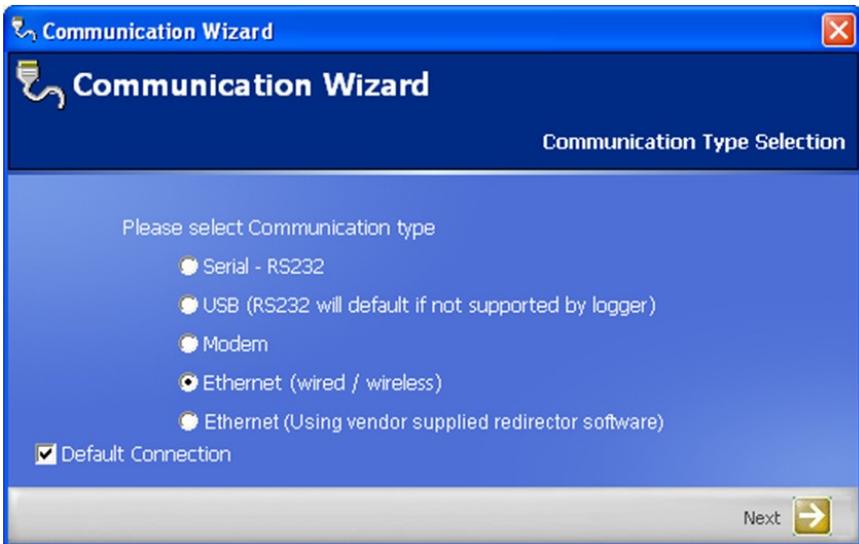
Before proceeding with the installation you will require the following.

- A 20xx Data Logger with wireless Ethernet and external Power Supply
- A wireless connection on a laptop or PC

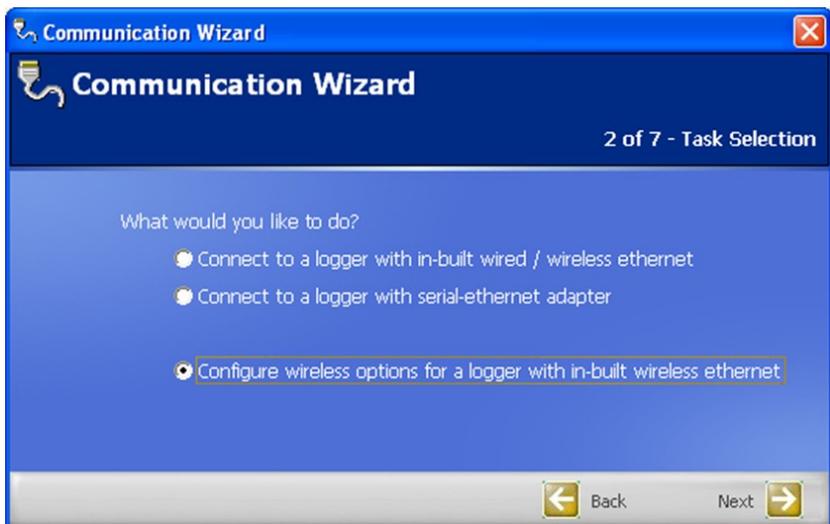
## 6.1 Configuring the Wi-Fi connection

Attach the logger to the PC via USB and click on the **Communication Wizard** button in the SquirrelView software..

Choose the **Ethernet (wired / wireless)** option and click **Next**.



Then choose **Configure wireless options for a logger with in-built wireless Ethernet**  
And click on **Next**



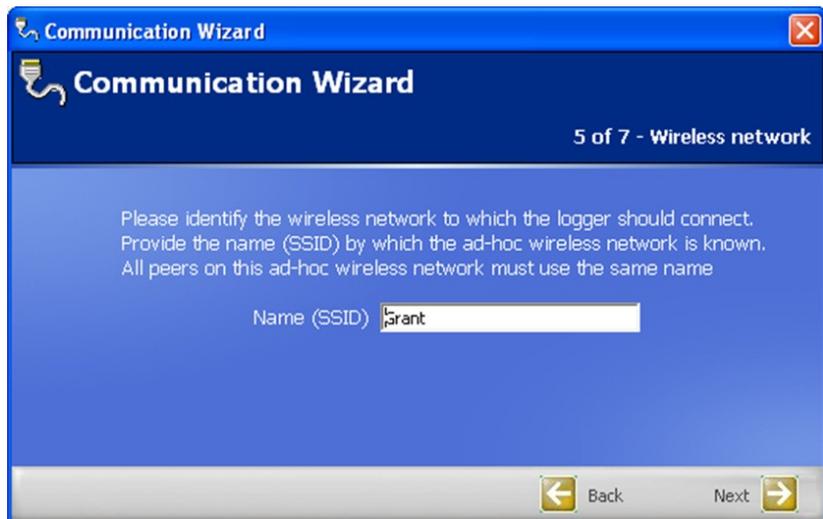
With the logger connected via USB the logger should be displayed as below. Click on **Next**



For setting up a direct connection to a laptop or PC select the Peer-to-peer (Ad-hoc) option.



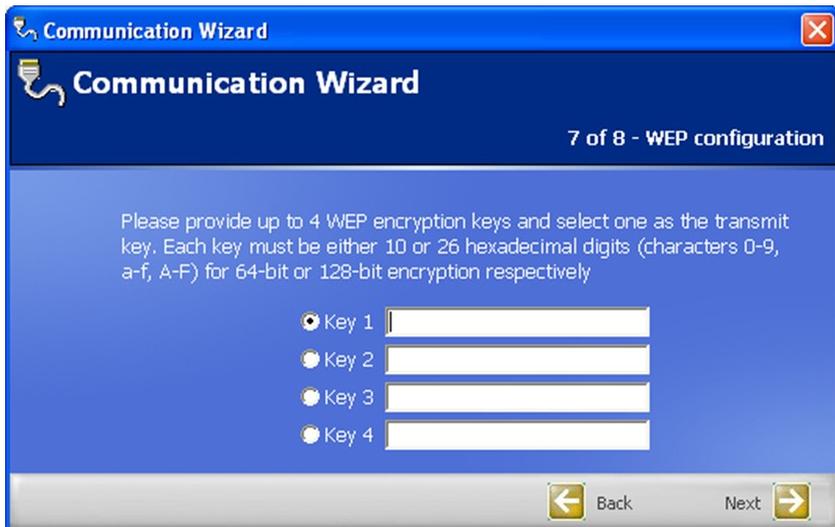
The SSID name of the wireless access network point is now entered.



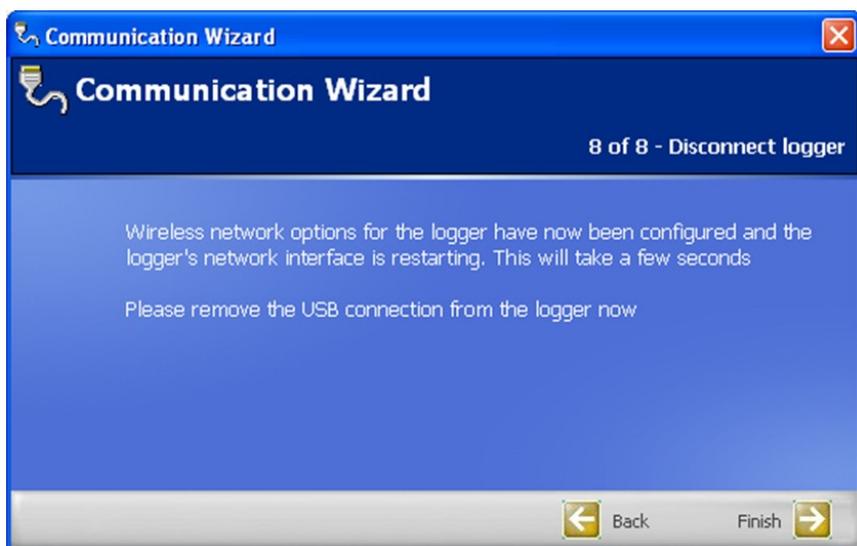
Choose the type of security your wireless network is using, if not known it should be supplied by your IT department or network administrators. Click on **Next**



On the next screen fill in the encryption key as supplied by your IT department and click on **Next**.



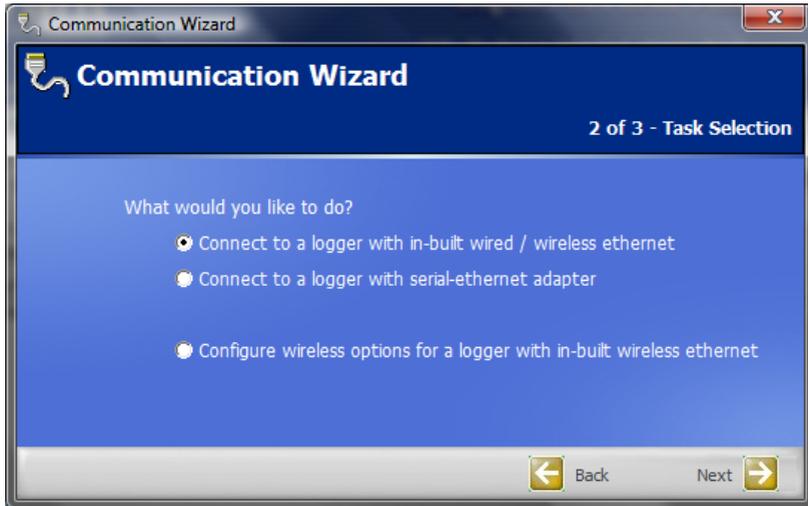
On the next screen click on **Finish**



# 7. Configuring the Data logger Wi-Fi

In SquirrelView Assistant click on the **Communication Wizard** button

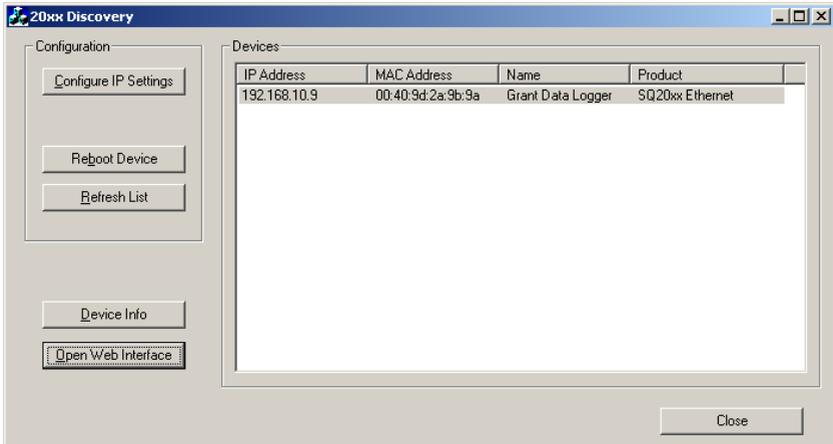
Choose **Connect to a Logger with in-built wired / wireless Ethernet** and click **Next**



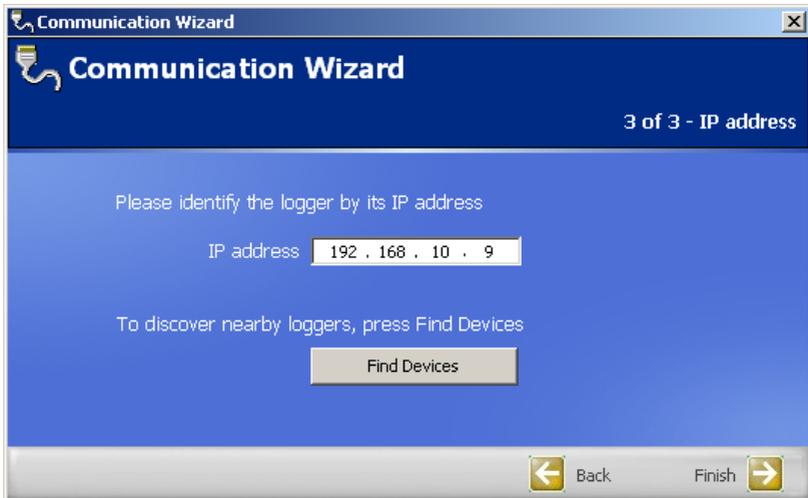
Click on **Find Devices**, or use the logger buttons to find the IP address, under Tools and IP Address.



The 20xx Discovery window will open and locate the IP address(s) for the connected SQ20xx logger(s) to the wireless network. Make a note of the IP address.



Enter the IP address in the box provided and click **Finish**



Direct communication with the Squirrel Data Logger via the SquirrelView software will now be made via a wireless Ethernet connection.



# Grant

**Grant Instruments  
(Cambridge) Ltd**  
Shepreth,  
Cambridgeshire  
SG8 6GB

Tel: +44 (0)1763 260811  
[www.grant.co.uk](http://www.grant.co.uk)  
[acquisitionales@grant.co.uk](mailto:acquisitionales@grant.co.uk)  
Fax: +44 (0)1763 262410