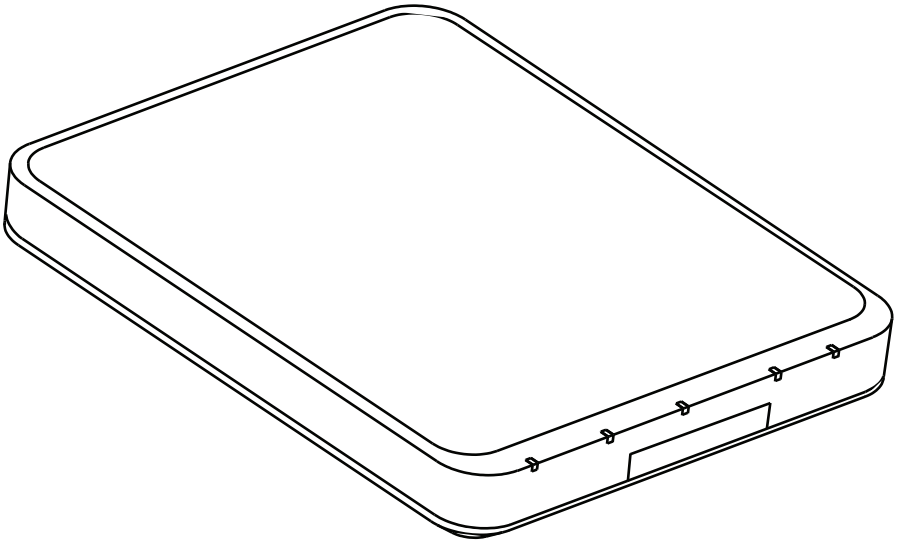


5200WHC2

Wiser Home Controller 2



C-Bus®

The logo for Wiser Home Control, featuring the word 'wiser' in a lowercase, sans-serif font with a stylized house icon above the 'r'. Below it, the words 'HOME CONTROL' are written in a smaller, uppercase, sans-serif font.

wiser
HOME CONTROL

CE



FC

Installation Instructions

Thank you for your purchase of the Wiser Home Controller 2. This installation document provides the configuration information needed to set up the product. Use this document in conjunction with the *Setup Sheet* (provided with the Wiser) and the Help files included in the software products from Schneider Electric.

Be sure to follow all safety information included in the documents and on the product.

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Safety Notice

The Wiser Home Controller 2 (Wiser 2) is designed for indoor use in residences and businesses. The Wiser 2 operates continuously over long periods without attention from the user. Therefore, it is important to install and locate the equipment where it will be protected from heat, dust, moisture and physical damage.

A 'WARNING' in this document alerts you to a hazard that, if ignored, could cause serious injury or a dangerous condition and also tells you how to prevent problems.

A 'Caution' warns you that certain actions could cause damage to the equipment or nearby property. Note that damage to the equipment might not be immediately detected.

WARNING Connected Equipment Can Turn On and Off Unexpectedly.

The Wiser 2 Graphical User Interface (GUI) can control motors, heaters and relays that are switched automatically. These devices can turn on or off unexpectedly and could cause serious injury. Always remove power from connected devices before performing maintenance.

WARNING Battery Safety

Replace the battery only with the type specified in this instruction. Do not dispose of the old battery in fire. There is a risk of an explosion that could cause serious personal injury.

Caution Do not connect C-Bus to the Ethernet LAN.

The C-Bus network and the Ethernet LAN are NOT electrically compatible. Wiring errors will cause damage to the equipment and erratic network performance. This could cause a potentially dangerous condition.

When installing the Wiser Home Controller 2, follow these guidelines:

- Do not disassemble or attempt to modify the unit.
- The battery is the only user serviceable part inside. It is accessible from the cover on the underside of the Wiser 2 (refer to the Warning above).
- Do not block air ventilation around the Wiser. Allow 25mm space at sides and top.
- Clean the unit with a soft cloth; Do not use any solvents or cleaners.
- Keep the Wiser 2 away from water or other liquids.

Technical Support

For further assistance in using this product, consult your nearest Schneider Electric or Clipsal by Schneider Electric (CIS) Sales Representative or Technical Support Officer.

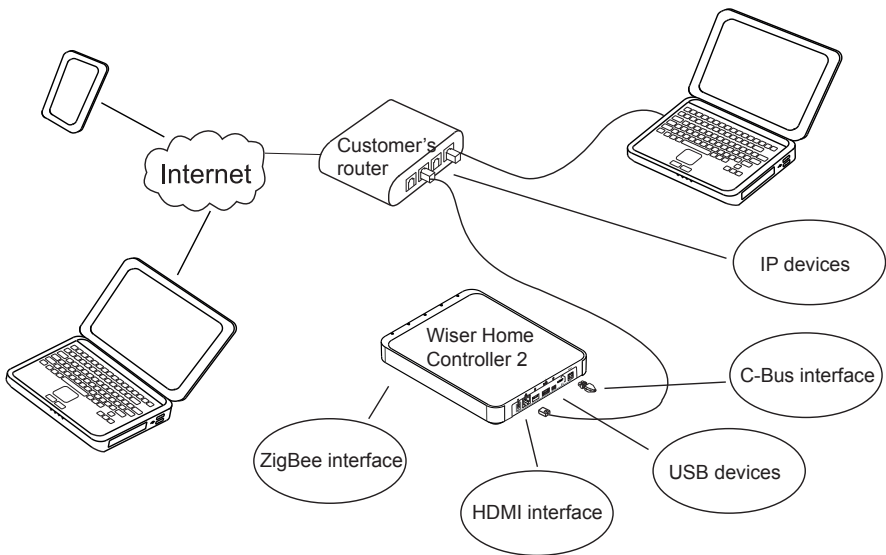
Technical Support Contact Information

Technical Support email: cis_support@clipsal.com.au

Introduction

Thank you for purchasing the Wiser Home Controller 2, catalogue number: 5200WHC2. The Wiser 2 controller provides a central point for managing many electrical and electronic devices in your home or business. The Wiser 2 product is a (1) controller device and (2) Graphical User Interface (GUI) software:

- **Wiser Home Controller 2 (Wiser 2).** The Wiser 2 is an intelligent interface that connects to the Local Area Network (LAN), the C-Bus network, a ZigBee network, USB devices, and IP devices on the LAN. The figure below shows the connectivity of the Wiser 2. The Wiser 2 can use a wired or a Wi-Fi connection to the LAN.



- **Graphical User Interface (GUI).** The Wiser 2's GUI is an easy-to-use interface for accessing, monitoring and controlling your residential or office environment locally, or remotely over the Internet. You can access the GUI of new Wiser Home Controller 2 (Wiser 2) with a range of personal computing devices, including hand-held phones and tablets. The Wiser 2 installation can include wireless devices in your home or business.

The control interface is set up by the installer/integrator. The user selects:

- (1) a location, such as a bedroom or lounge room,
- (2) an application, such as lighting, heating or window shades and
- (3) a device or function such as a lamp or curtain relay.

When you change the state of a device, the screen widget shows the change.

The installer sets up a profile for the user that allows access to certain functions and devices.

Product Features

The Wiser Home Controller 2 (Wiser 2) includes firmware and documentation. The most recent versions of the configuration software packages are downloaded from the Internet.

Product Number	Description
5200WHC2	Wiser Home Controller 2, interface unit for local and remote monitoring and control of electrical devices. Includes controller, power supply, battery, C-Bus connector plug and a network patch cord.

The figure below shows the packaged components.

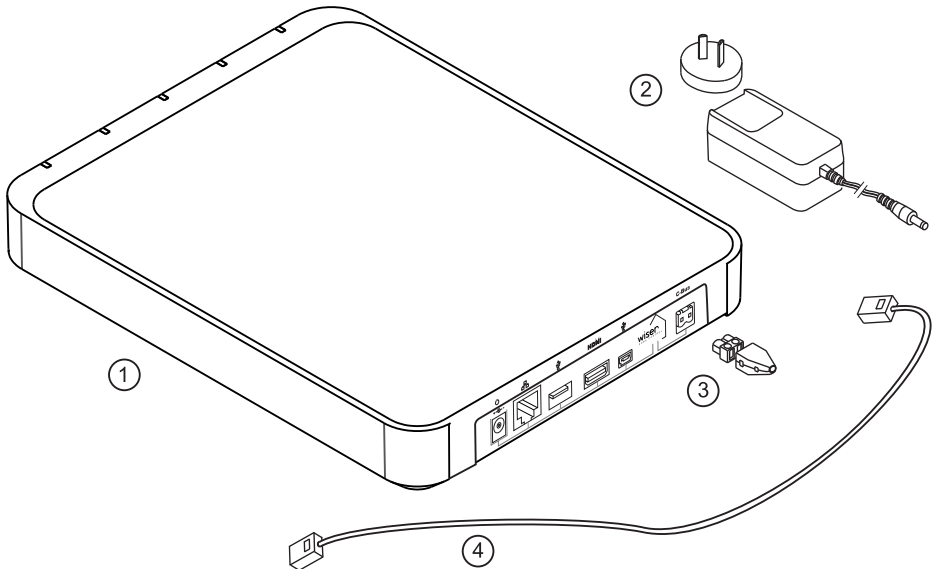


Figure Ref.	Component Description
1	Wiser Home Controller 2 (Wiser 2)
2	AC/DC power supply
3	C-Bus connector and cover
4	Ethernet patch cable
	Battery (not shown), accessible from the door on the bottom of the unit (see the safety Warning on Page 3).

Clipsal by Schneider Electric software products. In order to program the Wiser 2, you MUST have the latest versions of C-Bus Toolkit and PICED software from Schneider Electric. C-Bus Toolkit contains the C-Gate Utility and the Control System IP Utility. Install Toolkit to ensure that you have all required software available on the PC. PICED sets up the Wiser Home Controller environment to provide a Graphical User Interface (GUI) that monitors and controls devices in a home or commercial site.

The Wiser 2 is configured by the installer using software tools. There are no controls or switches that require user attention. With the exception of the Power LED, the front panel LED indicators can be turned off by the installer, if desired.

The system connections are made at the back panel of the Wiser 2. Your installation might not use all of the available ports. The figure below shows the location of the indicators and ports on the Wiser 2.

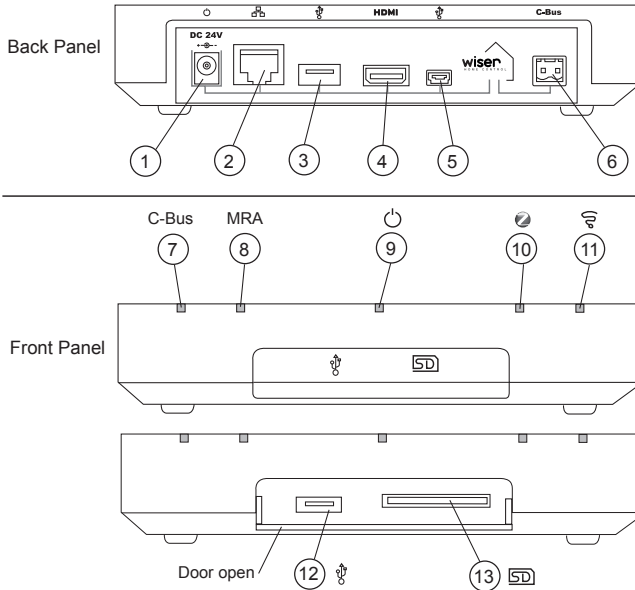
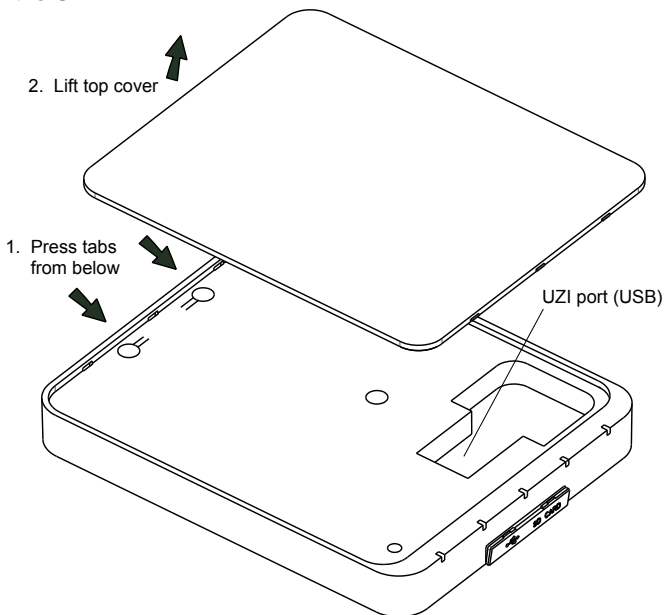


Figure Ref.	Connector or Indicator
1	AC/DC power supply connector
2	Ethernet LAN RJ socket connector (also supports 802.af POE)
3, 5, 12	USB connectors
4	HDMI connector
6	C-Bus connector
7	C-Bus network activity indicator LED
8	MRA activity indicator LED
9	Power indicator LED
10	ZigBee network activity LED
11	Wireless LAN activity LED
--	ZigBee UZI port (under top cover)

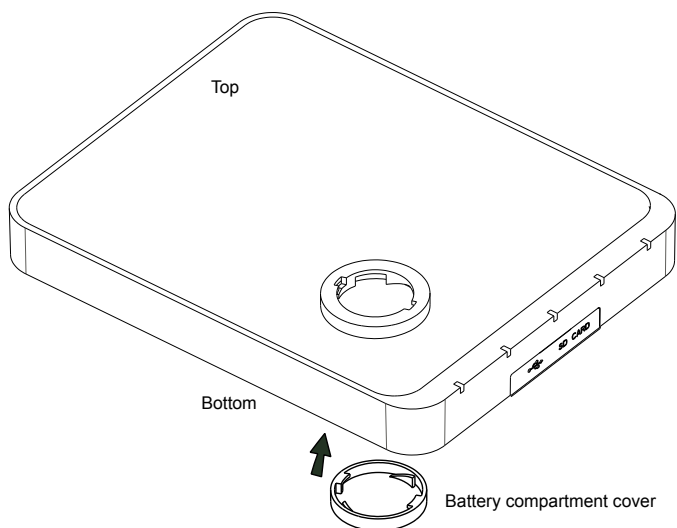
Top Cover Removal and USB port for an Optional ZigBee Adapter

To remove the top cover, (1) press the release tabs on the rear panel and then (2) lift the cover. The USB Zigbee Interface (UZI) is an optional feature. Refer to the instructions included with the UZI.






Battery Location

The battery is located on the underside of the Wiser 2. The battery is installed prior to shipping and should last for several years before requiring replacement (refer to the safety Warning on page 3).



Indicator LEDs

The operation of the LEDs is shown in the table below.

Symbol	LED Name	Operation
	Power	On when power is applied to the unit using the supplied AC/DC power supply or Power Over Ethernet (PoE) when connected to the appropriate power source; 802.3af PoE device.
C-Bus	C-Bus	Yellow (green+red) = initializing (e.g., during boot-up) Green = good connection to C-Bus (updated every 30s) Red = C-Bus connection not functional (updated every 30s) Off = LEDs disabled
	Wi-Fi	Green = connected Yellow = connecting / authenticating / obtaining IP address Red = blocked / failed / suspended / disconnected / disconnecting
MRA	MRA (Ripple)	Green = matrix switcher connected, database ready (not cataloguing) Orange = matrix switcher connected, database scanning (cataloguing music) Red = matrix switcher not connected (due to invalid TCP address, network error or USB plugged into matrix switcher)
	ZigBee	Yellow (green+red) = initializing (e.g., during boot-up, ZigBee attribute discovery) Green = good connection to ZigBee network (updated every 10s) Red = ZigBee network not connected or error condition Off = LEDs disabled

LED sequence during firmware upgrade:

A full-firmware upgrade or *rootfs* upgrade initiated by placing a media (USB/SD) with the upgrade image will ripple all the front LEDs once it finds the upgrade file. If there is no upgrade blocker (ie: file on media such as `Wiser2firmware_upgrade.remove_this_file_to_upgrade.00_22_33`), then it will ripple the LEDs twice more before beginning the unpacking process.

If the unpack is successful then LEDs will ripple 3 times. It will then ripple 4 times 5s before rebooting if it is initiating a full-firmware upgrade.

The 2nd stage of the upgrade is indicated by continuous blinking of the ZigBee LED (indicating reading/writing from/to microSD/NAND). Once it is complete, all the LEDs will blink 10 times. Please note that the upgrade takes **9 minutes** and that since this is a full upgrade, you should **avoid interrupting the upgrade** as there is a risk that the unit can be bricked.

In the *rootfs* upgrade, there is only 1 stage and upon completion, the system will reboot and run through normal initialization.

Installation

The Wiser Home Controller 2 must be programmed by a competent installer before the control and monitoring functions are available!

Download the Required Software Tools

The software applications for Wiser 2 (C-Bus Toolkit, Zoolkit and Piced) from Schneider Electric can be freely downloaded from the Clipsal.com CIS portal:

<http://www.clipsal.com/CIS>

Select Technical and then navigate to Downloads


Each of the software products that you download from the CIS web site has its own setup file. The setup file is self-extracting and includes an installation wizard. It is recommended that you **SAVE** the downloaded file to your hard drive in a folder that is easy to access. Normally, the default location for program files will work, but you can specify another location.

Piced Configuration Software from Schneider Electric is required for all Wiser 2 Installations. Piced is the tool that sets up the following:

- Locating the Wiser 2 on the network and setting the IP address.
- The monitoring and control functions for all included devices.
- Graphical User Interface (GUI) for local and remote communication.
- User profiles that control visibility and access to devices.

The steps needed to configure the Wiser 2 with Piced vary depending on the types of devices that are connected to the system. Schneider Electric provides software tools to set up the Wiser 2. Your installation might not require all of the tools mentioned below:

Will you be configuring ZigBee® devices?

	<p>Use Zoolkit (ZigBee Configuration Software) from Schneider Electric to collect information about your existing ZigBee network.</p> <p>Using (1) a PC, (2) a UZI / EZI Zigbee adapter and (3) Zoolkit software, you can map the ZigBee network before or after connecting the Wiser 2.</p> <p>Refer to the instructions provided with the ZigBee adapter and Zoolkit Help files.</p>
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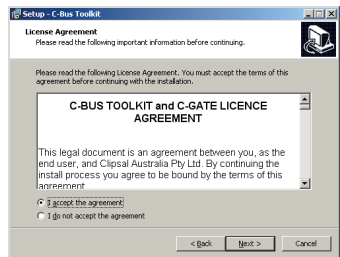
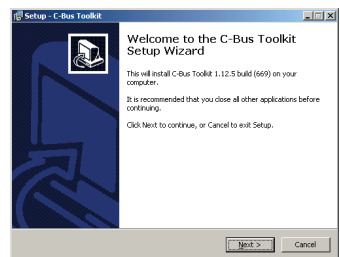
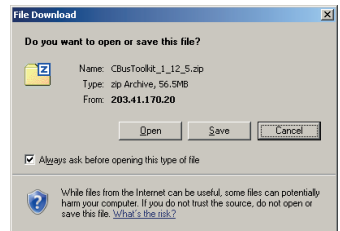
Will you be configuring C-Bus devices?

C-Bus	<p>Use C-Bus Toolkit software from Schneider Electric to map the existing C-Bus network.</p> <p>If you are not using C-Bus, you can install the Wiser 2 by de-selecting C-Bus features during programming in Piced. Later, if you add a C-Bus network, you will use Toolkit to assist you.</p>
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The following table lists the software programs from Schneider Electric that are applicable to the Wiser Home Controller 2

Software Product	Purpose	Rev. Level
Wiser 2 Software	Operational software supporting the Wiser features and user interface.	Installed at the factory
C-Bus Toolkit Software	Configures the C-Bus network and creates project files that are used by PICED.	Latest (see Note)
Zoolkit Software	Locates components on the ZigBee network and creates a file that is used by PICED.	Latest
PICED Software	Configures the Wiser Graphical User Interface (GUI) and creates the project files that are transferred to the Wiser 2 unit.	Latest

- When you download the software from the Internet, you have several options. It is recommended that you 'Save' the zipped file to your hard drive.
- IMPORTANT!** Make a backup copy of any current Toolkit project files and PICED project files before you open the setup program.
- Shut down any running sessions of Toolkit or PICED before opening the setup program. You might have to shut down antivirus software on your PC. If you do not have permission to add or remove programs log in as a user with administrative privileges.
- In your file manager, select the zipped file and open it. Then select and open the setup.exe file. The Setup Wizard appears in a dialog box. Select Next to continue.
- On the Licence Agreement page, click the 'I accept the agreement' radio button and then click Next.
- Follow the prompts that allow you to decide on file locations. You can usually accept the defaults. It is best to perform a 'full installation' to make sure that you have the latest drivers and components.
- Be sure to access the HELP files, sample projects and tutorials in the software programs as you use them.



Security

It is very important to set proper levels of security to protect the unit from unauthorised persons. In applications that use Wi-Fi and Remote Access functions, use these recommendations:

- Use Secure Wireless Access
- Use WPA2 Personal Security Settings
- Leave Toolkit and Projector Updates disabled by default (enable them only on an as-required basis).
- Define a unique User and Password for projects. Do not use the default...
user: admin admin password: admin.

Connectivity

The basic connections for the initial setup programming stage are provided in the in the *Setup Sheet* document that is provided with the Wiser 2. Follow the recommendations below.

Out of the box, it is recommended that you use a wired Ethernet connection for programming and setting up access and control. Later, other interface options such as Wi-Fi and HDMI can be configured. An Ethernet patch cable is provided.

Please...Read Me First



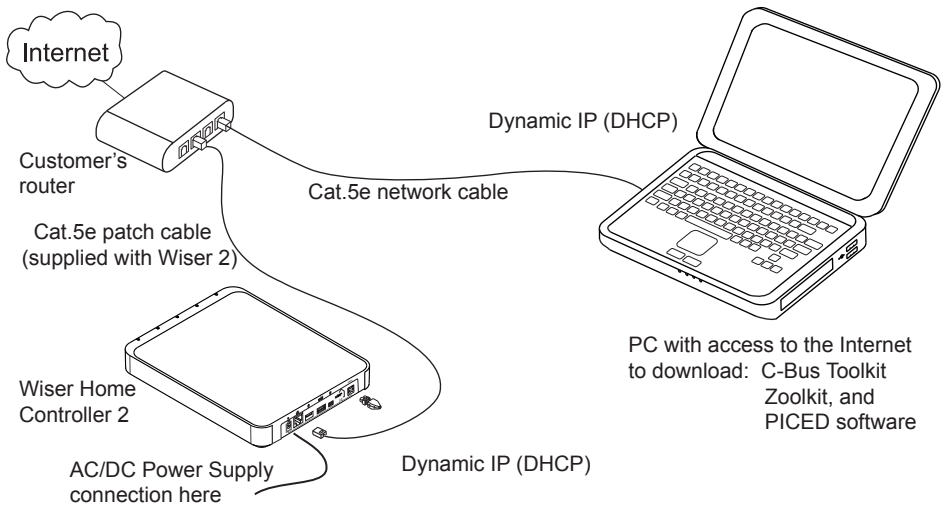
Set Up the PC for Configuration Tasks

You need a PC to configure a Wiser Home Controller. 2 After the configuration tasks are done, you may disconnect the PC from the network, if desired. Refer to Figure 4 in the *Setup Sheet* for cable connections. At this time the PC must have the following characteristics:

- Windows operating system, i.e., XP, Windows 7, Vista.
- Adequate disk space for setting up the software applications from Schneider Electric
- Internet access using a browser such as Internet Explorer or Firefox
- The logged on user should have administrator-level permissions

For best results:

- The PC and the Wiser 2 should reside on the same subnet in a wired local area network (LAN) as shown the figure below.
- Allow the PC and the Wiser 2 to use dynamic IP addressing via DHCP.
- The customer's ADSL modem needs to provide the PC with access to the Internet for software downloads.

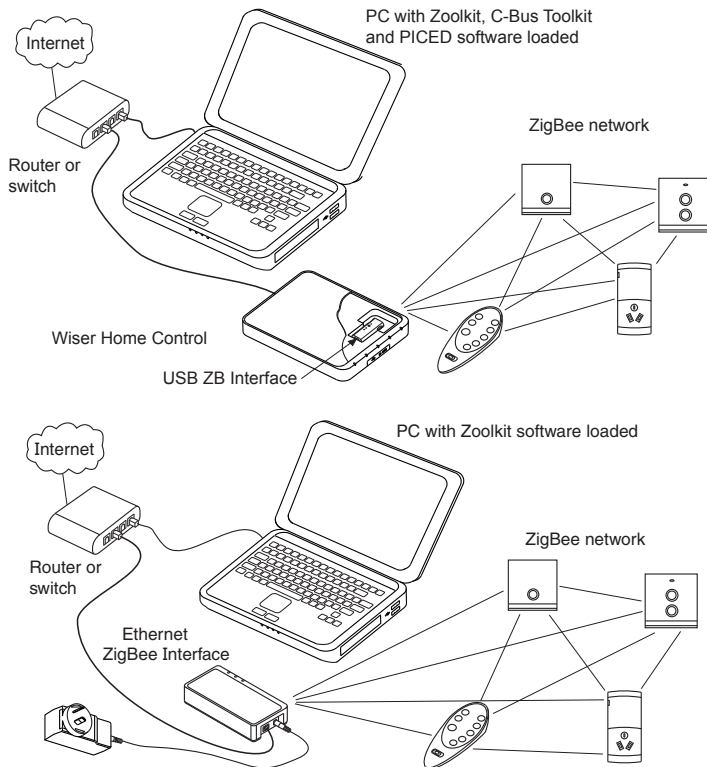


ZigBee Network Devices

You can connect to an existing ZigBee network and have the ability to control devices using the Wiser 2's GUI. Use one of the following interface adapters to provide the wireless connection.

Catalogue	Product Name	Description
5200UZI	USB ZB Interface Unit	Interface adapter between PC or Wiser 2 to an existing ZigBee network. Allows connection in easy mode and is used with Zoolkit configuration software.
5200EZI	Ethernet ZB Interface Unit	ZigBee adapter for Ethernet LAN. Easily accessed by Wiser 2 or a PC running Zoolkit configuration software. Allows connection in easy mode to an existing ZigBee network.

Zoolkit ZigBee configuration software lets you create a definition file for all visible ZigBee devices on the existing local network. Refer to the HELP files in Zoolkit and the instructions that are provided with the UZI and EZI adapters.



C-Bus Network Devices

In order to collect C-Bus network information (for Piced), the Wiser 2 must be connected to an active C-Bus network. Be sure to use Cat.5e UTP cable that is certified for use on C-Bus networks; catalogue number 5005C305B (solid), 5005C305BST (stranded).

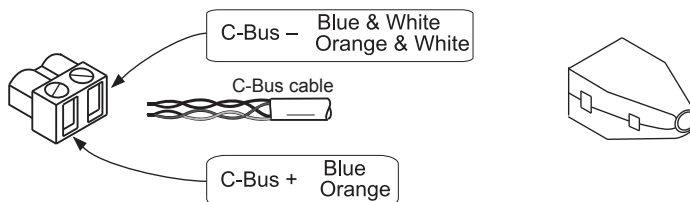
The Wiser 2 uses a 2-terminal plug for C-Bus. This avoids the possibility of wiring the C-Bus network to the Ethernet LAN.

C-Bus Toolkit software (installed earlier on the PC) allows you to get the unit addresses and group addresses that are used by Piced to create a project for device monitoring and control.

Do not run C-Bus Toolkit software and Piced software at the same time on your PC. Both applications use the C-Gate program but in slightly different modes of operation.

To use C-Bus Toolkit with the Wiser Home Controller 2, do the following:

1. If Toolkit cannot find an IP address for the Wiser 2, then press the Scan Network button on the toolbar.
2. Use the tools provided to scan the network, search for networks, or refresh the list of projects, as needed. Refer to Toolkit's help files for more information.
3. If you have difficulty accessing the C-Bus network using C Bus Toolkit, check the cable connection at the rear of the Wiser 2. Look for LED indications of a problem.
4. After you have updated the Tag database using C-Bus Toolkit, save the project and shut Toolkit down before opening Piced.



Use Category 5e Unshielded Twisted Pair (UTP) network cable.

PICED Software Recommendations

Be sure to follow the programming steps given earlier to map your existing network. During the PICED programming session, the following actions are recommended:

Action or Topic	Recommendations
Select or De-select C-Bus	<p>If you are not using C-Bus devices, de-select C-Bus. PICED will use a placeholder project file. In the future, you can add a C-Bus project.</p> <p>If you are using C-Bus, select the option. You can use an existing project file created by C-Bus Toolkit software.</p>
Wiser Home Controller 2	Create a project specifically for the Wiser Home Controller (Wiser 2). PICED needs to know that the device you are programming is a Wiser Home Controller. Some sites may have touchscreens that use PICED projects.
Dynamic IP Address	<p>Use dynamic IP address assignment, whenever possible. The software configuration tools developed for use with the Wiser 2 search for the Wiser unit use DHCP (Dynamic Host Control Protocol). This dynamic method of assigning the IP address for the Wiser unit is recommended.</p> <p>Later, you can assign the Wiser 2 a static IP address if needed.</p>
PICED Help files	Use PICED Help! The help system is provided to answer your questions about selection options and concepts that you might not be familiar with. If you have a problem or question, access Help before calling technical support.
Factory Settings	Select each tab in the Wiser options. Use the factory settings when possible. Be sure to enable the ZigBee option if you want to add the project to the Wiser.
User Profiles	Create user profiles that allow access to functions needed by the end user. Limit those functions that can cause system malfunctions. Use security features if the Wiser 2 might be accessed by unauthorised persons.
Transfer files to the Wiser 2	Save your work in PICED before beginning the transfer job. Make sure the Wiser 2 is not busy when you do the transfer. For example, make sure that the Wiser 2 has completely finished a firmware download (can take several minutes) or file management task.

Using the HDMI Interface

The installer can create a user profile that allows the end user to access the GUI using a digital receiver and its remote control. If the HDMI interface will be used, the distance between the Wiser 2 and the digital receiver will be limited by the length of the HDMI cable.

The HDMI interface is active when the Wiser 2 is operating in normal mode. The HDMI interface is very convenient for controlling and monitoring devices. It is not the preferred interface for configuring your Wiser 2.

If the configuration PC has been disconnected from the LAN, you can use the HDMI interface to view the Wiser 2's local storage.

Streaming Audio

If you have a Clipsal Matrix Controller that supports Ripple (streaming audio), you can listen to program sources coming from the Multi-Room Audio system. The Wiser 2's GUI can be configured to control your Matrix Switcher for radio, CD's and streaming audio. The streaming audio capability of the Wiser 2 requires a connection to the C-Bus network. Refer to the Multi-Room Audio (MRA) documentation for more information.

Accessing Local Storage

If your user profile (as set up by the Installer) allows you to access the local storage on the Wiser 2, you can access the following directory locations/devices:

Local Storage Device	Description and Method of Access
rootfs on the Wiser 2	This local storage area contains the installation documentation. Use a PC on the LAN or use the HDMI interface to access the file system.
USB stick	You can insert a USB stick into one of the USB ports on the back panel or inside the hinged front door on the Wiser 2. The USB must have a FAT file system. You can use a PC or the HDMI interface to access the file system.
External Hard Disk	You can use an external disk drive connected to a USB or mini-USB port on the Wiser 2. The Wiser 2 can provide power to the external disk using the USB link. See the note below for information.

Important Note: If you power an external drive with one of the Wiser 2's USB ports, you should use the AC/DC power supply (provided with the Wiser 2) to power the Wiser. If you power the Wiser 2 using Power Over Ethernet, the POE supply device might not be able to supply adequate power for the Wiser and the external drive.

Using a Wireless LAN

The Wiser 2 supports 802.11 bgn wireless in the 2.4 GHz frequency range. Some installations might use the Wi-Fi LAN for one or more of the following reasons:

- The user wishes to use the HDMI interface and must place the Wiser 2 close to the digital receiver.
- The customer's ADSL modem might be in a location where running a cable from the modem to the Wiser 2 is not practical.
- The user might prefer not to dedicate a physical Ethernet port to the Wiser 2.

Recommendations

1. Configure and test the entire system using a wired LAN connection BEFORE switching the Wiser 2 over to a Wi-Fi LAN.
2. Before enabling the Wi-Fi feature on the Wiser 2, make sure you have all of the needed information, including:

IP addresses

Subnet

DNS Server address

SSID

Security Password

Note: The Wiser 2's wired LAN connection does not operate when Wi-Fi is enabled. In the worst case, the Wi-Fi link might not work properly the first time. The Wiser 2 will have no path to the LAN. You might not be able to re-establish connections without a hard reset of the Wiser 2.

3. Use a dynamic TCP/IP address for the Wiser 2 during Wi-Fi setup.
4. Use the security features described at the beginning of the Installation section of this document! Operating the Wiser 2 in a non-secure environment is likely to compromise the entire installation.

Remote Access

One of the most important features of the Wiser 2 is the ability to access the system from a PC or phone over the Internet. Using this link, the installer can also make modifications to the GUI and can also modify the C-Bus configuration from a remote location.

Installers must change the Wiser 2 Administrator password if remote access is enabled!

Setting Up Port Forwarding

The screen below is a representation of how your modem /router (not the Wiser 2) should be configured to support access to the Wiser 2 from the Internet.

Virtual Server Table							
Application	Time Schedule	Protocol	External Port	Redirect Port	IP Address		
ECHO1	Always On	tcp	8080 - 8080	8080 - 8080	10.176.148.17	Edit	Delete
ECHO2	Always On	tcp	8888 - 8889	8888 - 8889	10.176.148.17	Edit	Delete
CBUS	Always On	tcp	10001 - 10001	10001 - 10001	10.176.148.17	Edit	Delete
CTCT	Always On	tcp	8336 - 8337	8336 - 8337	10.176.148.17	Edit	Delete
ECHOROUTE	Always On	tcp	80 - 80	8080 - 8080	10.176.148.17	Edit	Delete

Note: This setup does not apply if you are using a bridged Modem or have configured your modem/router to work as a bridged modem.

Port Definitions for the Wiser 2

To use the Port Definitions refer to the table.

Application ID	Protocol	Ext		
Port	Int Port	Port Function		
ECHO1	TCP	8080	8080	Port 8080 is the default port used for connecting to the web server of the Wiser 2, When enabled, the Wiser 2 GUI can then be reached at <a href="http://<your URL or External IP>:8080/">http://<your URL or External IP>:8080/ You will be required to authenticate with a username and password to gain access.
ECHO2	TCP	8888 & 8889	8888 & 8889	Ports 8888 to 8889 are used for the command interface between your web application or projector application and Wiser 2. If these ports are not open or are being blocked by your internet service provider then control from the User interface will not be possible.
CBUS	TCP	10001	10001	Port 10001 is the default port for the Wiser 2. This port is only required if you wish to obtain programming access from toolkit to C-Bus, Refer to Note 2 for more details
CTCT	TCP	8336 & 8337	8336 & 8337	Ports 8336 and 8337 are used in the project transfer process to transfer a Project from Piced to the Wiser 2 remotely.
ECHOROUTE	TCP	80	8080	Optional Feature. If your Modem/Router supports port mapping and you are not using Port 80 for any other external services you may use this mapping so you are not required to enter the port address in your URL to remotely connect, at <a href="http://<your URL or External IP>:8080/">http://<your URL or External IP>:8080/

To maintain an ongoing connection to your Wiser 2, you should use either a Fixed IP address for the LAN interface of the Wiser 2, or alternately setup your Modem/Router to always provide the same IP Address to the Wiser 2 (refer to your modem/router manual for further details on how to do this).

The Wiser 2's CNI Port is configurable; the default port address is 10001 (to match toolkit defaults). If the Port address is change from the default it must also be changed in your Wiser 2 project and downloaded to the Wiser. The new port number will also need to be used in your port forwarding rules of your modem/router.

Troubleshooting

If you are having problems with your Wiser 2, try the basic diagnostic steps first.

Basic Problem Diagnosis

Step	Action
Identify and Document	Make notes about any error messages or LED error conditions. If there is a problem with other equipment it could affect the Wiser 2. This is very important if you have to explain the problem to support personnel.
Isolate the Problem	Try to find out what part of the installation is failing. See if any functions are working properly. This can eliminate certain problems right away. The Wiser 2 could be associated with a large number of devices and any one has the potential for disrupting control functions.
Check cable connections	Make sure the power supply is firmly held in place in the power outlet and that the plug is fully inserted in the back panel. Check the power cable for damage. Make sure all network and interface cables are connected properly in the correct locations on the back panel. Avoid disconnecting cables when power is ON.
Remove optional devices	If you have inserted an SD card in the front panel, or if you have attached a USB device, you might want to remove the device and note the effect.
User Interface	Make sure that the device that displays the GUI, an iPhone for example, is working properly and that the GUI software is working. Try to determine whether the problem is a connection problem.
Restart	If the equipment is not responding at all, it may be necessary to reboot or cycle power. Technical Support can advise you if the system does not recover in a reasonable amount of time. Make sure you have collected all of the information you can about the problem before you power off the equipment or reset devices. You could make it harder to fix the problem or see if it is the same if it happens again in the future.
Intermittent Problems	Problems that occur and then disappear are often difficult to identify. Technical Support might ask you to collect information from event logs.

Additional Information

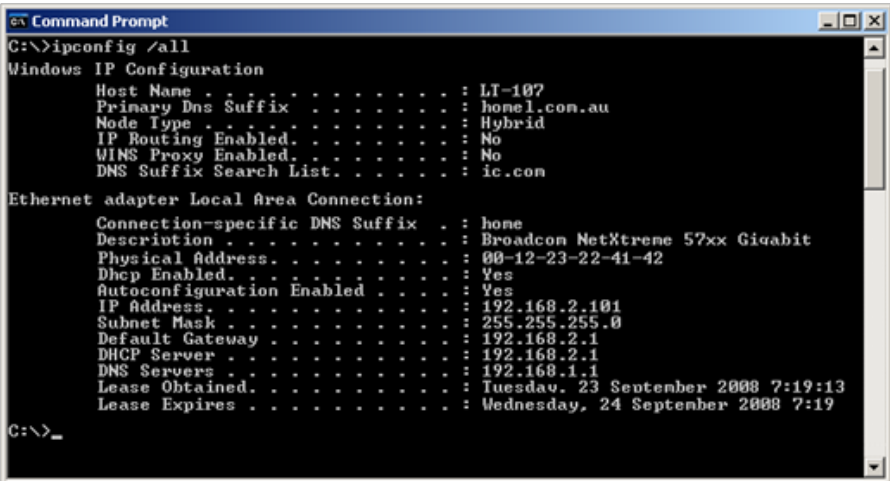
Useful DOS Command Prompt Programs

The two DOS programs illustrated here use command lines. These programs can be useful to diagnose some connectivity problems and gather information about IP addresses. Go to Start/Run and then type:

cmd.exe then click OK type: ipconfig /all and press Enter

cmd.exe then click OK type: ping <ip address> and press Enter

In the example below, the PC is using an automatically assigned address of 192.168.2.101. The default gateway is the customer's modem/router. Note that the wireless LAN is not shown in this example.



```

C:\>ipconfig /all

Windows IP Configuration

Host Name . . . . . : LT-107
Primary Dns Suffix . . . . . : home1.com.au
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : ic.com

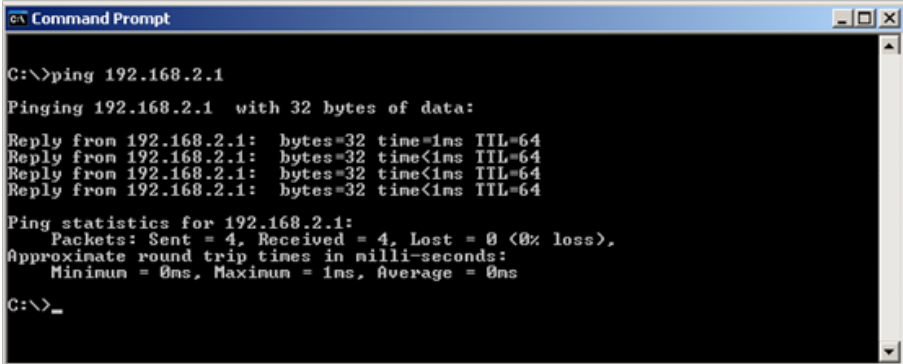
Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : home
Description . . . . . : Broadcom NetXtreme 57xx Gigabit
Physical Address. . . . . : 00-12-23-22-41-42
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IP Address. . . . . : 192.168.2.101
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.2.1
DHCP Server . . . . . : 192.168.2.1
DNS Servers . . . . . : 192.168.1.1
Lease Obtained. . . . . : Tuesdav. 23 September 2008 7:19:13
Lease Expires . . . . . : Wednesday, 24 September 2008 7:19

C:\>_

```

The example below shows a successful ping to the Home Controller unit. You could also ping the customer's modem/router or other units on the network.



```

C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<1ms TTL=64
Reply from 192.168.2.1: bytes=32 time<1ms TTL=64
Reply from 192.168.2.1: bytes=32 time<1ms TTL=64
Reply from 192.168.2.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>_

```

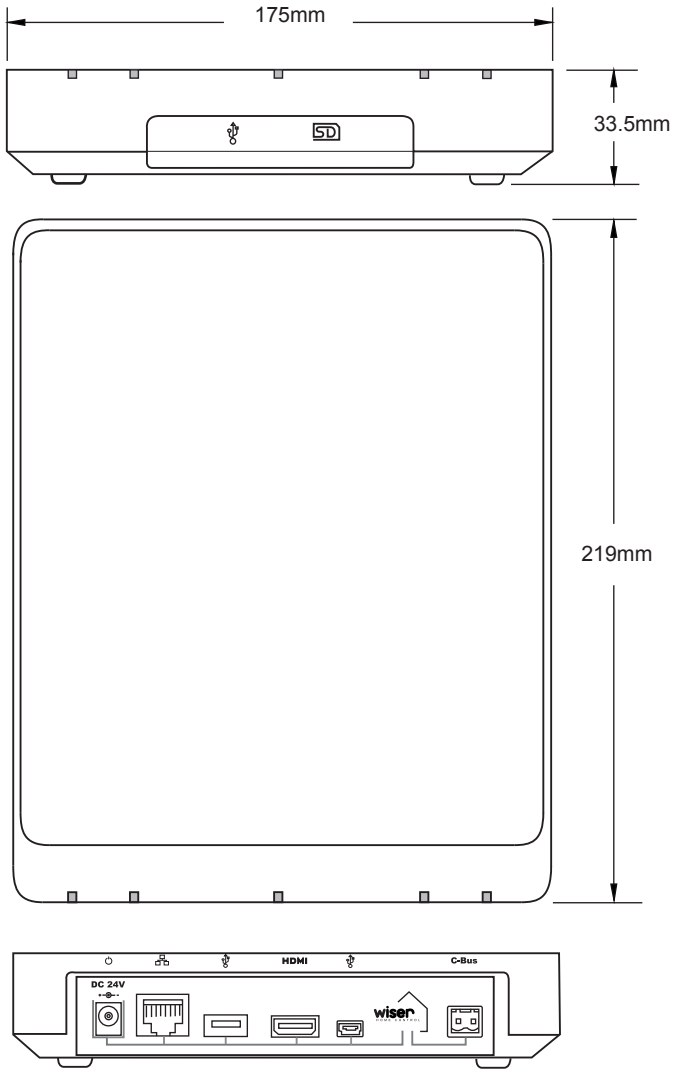
Terms Used in This Document

- **Customer's modem** The hardware component connecting the Wiser Home Controller to the Internet.
- **Default gateway** A network node, for example a router, that serves as an access point to another network.
- **DHCP** Dynamic Host Configuration Protocol. A protocol that assigns IP addresses to client stations on a network at startup.
- **DNS** A network server that resolves Internet Protocol (IP) numeric addresses from domain names and puts them in a readable form.
- **Wiser Home Controller** The router and CNI unit that provides the connection from the customer's equipment to C-Bus and IP devices.
- **ipconfig.exe** A program used to identify the IP connections on a computer. The program is normally run from a DOS command prompt.
- **LAN** Local Area Network is restricted to a small area such as a home.
- **ping.exe** A ping command sends packets of data to a defined IP address and then monitors and reports the returned data. This is useful for testing two way communication between points on a network.
- **TCP/IP** Transaction Control Protocol/Internet Protocol. This protocol uses unique IP addresses to identify devices on the LAN.
- **WAN** Wide Area Network. The data communications network that links the customer to the Internet.
- **WPA** Wi-Fi Protected Access, a modern form of encryption for wireless data. It lacks the vulnerabilities that WEP had,
- **MAC** Media Access Control is a unique address built into Ethernet hardware devices.
- **WEP** Wired Equivalent Privacy is a form of wireless data encryption using a 64-bit or 128-bit shared key algorithm.

Specifications

The Wiser Home Controller 2 is designed as an interface device for monitoring and controlling lights and other devices in residential and commercial locations.

Parameter	Value
Catalogue Number	5200WHC2
Device	Information Technology Equipment, Class 2
Location	Indoors only
LAN Connectivity	Wired: Cat5e Wireless: 802.11 bgn
Wireless frequency	2.4 GHz
Radio frequency power	Less than 100mW
Power supply	Adaptor: 24Vd.c. 1.25A, PoE: 42.5 - 57V d.c. 600mA
Clock battery	Type: Lithium, non-rechargeable CR2032
C-Bus power required	15-36V d.c. 36mA
Rear panel connections	d.c. Power--centre positive C-Bus--2-terminal plug Ethernet LAN--RJ45 USB, mini-USB HDMI
Front Panel connections	USB and SD card (inside door)
Under top cover	USB connector for USB ZigBee Interface Unit



Allow 25mm (1 inch) space above and to the sides of the Wiser 2 to provide for adequate ventilation.

Standards Complied

Declarations of Conformity

Australian/New Zealand EMC & Electrical Safety Frameworks and Standards



Regulation	Standard	Title
Radio Communications	AS/NZS 4268	Radio Equipment and Systems-- Short Range Devices
EMC	AS/NZS CISPR22	Information Technology Equipment-- RF emissions

European Council Directives and Standards



Directive	Standard	Title
EMC Directive 2004/108/EC	CISPR 22,EN 55022	Information Technology Equipment-- RF emissions
	CISPR 24,EN 55024	Information Technology Equipment-- Immunity
R&TTE Directive 1995/5/EC	ETSI EN 300 328	Electromagnetic compatibility and Radio Spectrum Matters--DTE 2.4 GHz band, wideband modulation
	ETSI EN 301 489-1	Electromagnetic compatibility-- electronic subassemblies
	ETS EN 301 489-17	Electromagnetic compatibility and Radio Spectrum Matters--wideband and HIPERLAN equipment
	EN 50385	Radio base stations and fixed terminal stations for wireless ecommunications-- Human exposure to RF electromagnetic fields
Low Voltage Directive 73/23/EEC	EN 60950-1 EN 60950-1/A11	
RoHS Directive 2002/95/EC		Restriction of Hazardous Substances

Changes or modifications not expressly approved by Clipsal could void the user's authority to operate the equipment.

U.S. FCC Regulations

CFR Title 47

Part 15, Subpart B and Subpart C

FCC ID: WZCWHC25918

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

Class B Product

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ZigBee Alliance

ZigBee Certified Product – Home Automation profile



Do not dispose of this product to landfill or by incineration. This product should be disposed of by a licenced electronic waste disposal agency. In some locations it is an offense to dispose of electronic items improperly.

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The software included in this product contains copyrighted software that is licensed under the GNU GENERAL PUBLIC LICENSE Version 2, June 1991. You may obtain the complete Corresponding Source code from Clipsal for a period of three years after our last shipment of this product. Contact Schneider Electric for details.

Include the following on your enquiry:

“Source code for Wiser Home Controller 2 5200WHC2 / WHC2_5918 - 2013”

This offer is valid to anyone in receipt of the product.

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The Wiser Home Controller 2 carries a two-year warranty against manufacturing defects.

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When making a claim, the consumer shall forward the Schneider Electric product to the nearest Clipsal or Schneider Electric office. Provide adequate particulars of the defect within 28 days of the fault occurring. The product should be returned securely packed, complete with details of the date and place of purchase, description of load, and circumstances of malfunction.

For all warranty enquiries, contact your local Clipsal or Schneider Electric sales representative.

The address and contact number of your nearest sales office can be found at <http://www.clipsal.com/locations> or by telephoning Technical Support 1300 722 247 (CIS Technical Support Hotline for Australia only).

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