Instruction Bulletin

63249-420-328A2
02/2010

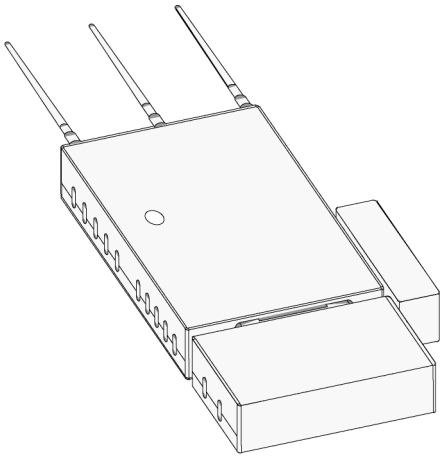
Wiser™ Home Controller

Installation Instructions

INTRODUCTION

The Wiser™ Home Controller provides an easy-to-use graphical user interface (GUI) to access the C-Bus™ network and other applications. The Wiser Home Controller lets you monitor and control your home environment locally or remotely over the Internet.

Figure 1: The Wiser™ Home Controller



About this Bulletin

This bulletin provides instructions for:

- Assembling the Wiser™ Home Controller hardware components
- Configuring software for the Home Controller router
- Using C-Bus™ Toolkit software to collect project information
- Using PICED software to create and transfer the project

This bulletin also provides:

- An introduction to navigating the user interface
- Additional information for TCP/IP set up
- MS-DOS command prompt programs
- FAQ's
- Release notes
- Glossary
- Specifications and standards

Before You Begin

Before you begin to set up a unit, verify that your order is complete by comparing the contents of the package with the appropriate items in the table below. Also verify that the catalog number on the box label matches your order.

Table 1: Contents of the Box

Item	Quantity
Wiser Home Controller router	1
C-Bus Network Interface (CNI)	1
Busbar assembly	1
USB thumb drive (includes installation and user documentation)	1
Power supply	1
Cat.5e network cable [Approximately 80 in. (203 cm)]	1
Link and support stand	1
Wiser Home Controller Setup Guide	1

Related Documents

Refer to these documents for more information about the Wiser Home Controller.

Document Title	Document number
Wiser Home Controller Set Up Guide	63249-420-327
Wiser Home Controller User's Guide	63249-420-329
C-Bus Toolkit Software Help	–
PICED Software Help	–

Product Description

The Wiser Home Controller™ is the missing piece of the smart home puzzle, enhancing the capabilities and connectivity of the C-Bus™ network. Its easy-to-use graphical user interface (GUI) provides access to the home C-Bus™ network and all of your electrical, multimedia, and telecommunication needs. This same GUI can be installed across multiple control devices, such as mobile phones, TVs with Microsoft® Windows® Media Center™, personal computers, and web tablets, in addition to the C-Bus range of touch screens and keypads. No matter where you are, the Wiser Home Controller allows you to monitor and control your home environment locally or remotely over the Internet.

- Ethernet and Wi-Fi based controller for your C-Bus system
- Built-in Ethernet router
- Built-in Wi-Fi access point
- Support for lighting, air-conditioning, multi-room audio, alarms, cameras, and other equipment
- Easy to understand Wizard-based user interface graphics
- Built-in scene, scheduling, and logic programming modules
- Allows remote reprogramming from outside the home/building by installers
- Common, intuitive interface for all devices
- Operates using C-Bus TAG descriptions, Locations, and Function Groups
- Configured and commissioned using C-Bus Toolkit and PICED software
- Control via your mobile phone or other web-enabled devices
- Displays up-to-the-minute news, weather, and more

Table 2: Component Descriptions

Component	Description
Home Controller router	The Home Controller router provides: • A wired connection to the customer's Internet. • A wired connection to the CNI for C-Bus network access. • A wireless 802.11 LAN set up for WPA encryption. • Four wired LAN ports (one is reserved for the CNI).
C-Bus Network Interface (CNI)	The inline CNI connects to: • A Home Controller router LAN port. • The C-Bus network using a Cat.5e cable, twisted pairs It provides the same function as the DIN Mounted C-Bus Ethernet Network Interface (SLC5500CN).
1 GB USB drive	Includes: • readme.htm, • Installation Instructions • User's Guide • Wiser Skins Application Guide
Power supply	Provides AC power for the router and CNI
Busbar	Provides a simplified power and signal connection for the Home Controller router and CNI.
Cat.5e network cable (Approximately 80 in.[203 cm]).	Connects the customer's broadband device to the Home Controller's router. Do not use this cable for C-Bus connections.
Link	Attached to the CNI and locks the Home Controller and CNI together to form a single unit.
Support stand	Optional stand is useful when placing the Home Controller on a table or desk.

Required Software

When installing the Home Controller, you must use the downloaded versions of the following software applications:

- PICED setup software, version 4.7, or later.
- C-Bus Toolkit setup software, version 1.10.8, or later.

Pre-Installation Guidelines

Read the guidelines below before installing any software.

- Using software not provided by Schneider Electric for C Bus operation may cause unpredictable results. Keep the PC network (Ethernet) and C-Bus network isolated from each other. Do not connect the pink C-Bus network cable to an Ethernet LAN or telephone lines.
- Using software not provided by Schneider Electric for C-Bus operation may cause unpredictable results.
- If you install the CNI unit in a different location from Home Controller, you must provide a 6 12 V d.c. power supply for the LAN side of the CNI. You will also use a network cable in place of the extender (busbar). For information on the polarity for the CNI power socket refer to the section "Selecting a Location".
- You must use the latest PICED software to obtain the latest firmware and the automatic firmware update feature. If you are unsure about the correct software versions to use, contact Technical Support.
- The PICED setup software contains the latest Home Controller firmware .IMG file. The latest firmware is loaded automatically as part of transferring your PICED project to the Home Controller. The setup packages also include the latest CNI configuration software, C Gate and transfer utilities. Refer to Section 4.3.
- The PICED project for the Home Controller should be configured before arriving at the site. Update the C-Bus project by using a backup of the .cbz file and the latest version of C-Bus Toolkit. Any projects developed or updated with the latest C-Bus Toolkit version are not compatible with older versions of the program.

Network Topology

Carefully consider the site's existing network layout before installing the Home Controller. Minimize the amount of configuration required. Follow these guidelines before installing the Home Controller.

- The Home Controller is not a modem. You must connect the router to an Internet connection, NOT a telephone line. A broadband modem is not provided as part of Home Controller.
- The Home Controller has wired and wireless LAN capabilities. The CNI uses one wired router LAN port. The three remaining wired ports are for IP connections to the local LAN.

INSTALLATION

This section describes how to:

- Connect a C-Bus™ Cable to the CNI
- Assemble the Home Controller hardware components
- Select a location for the Home Controller
- Configure software for the Home Controller router

Mapping an Existing Network

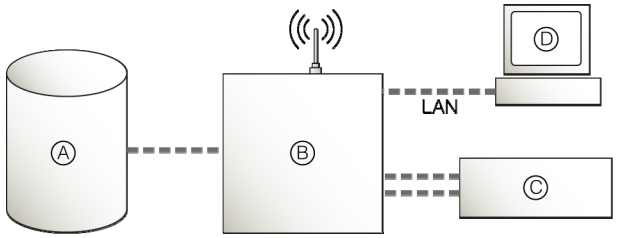
Mapping an existing network makes easier to see what cabling and configuration tasks must be performed when installing the Home Controller.

The figure below shows a typical basic network configuration. The network might use:

- Automatic IP addressing (DHCP)
- Static IP addressing
- A combination (DHCP and Static IP)

Figure 2: Typical Basic Network Configuration Before Installing the Home Controller

KEY:
A. Internet
B. Existing modem/router (IP 192.168.1.1)
C. IP connected devices
D. DHCP client or static IP (192.168.1.2)



In the figure above, the static IP address of the modem/router can be easily accessed to set wireless security parameters.

Selecting a Location

Follow these guidelines when selecting a location:

- Provide easy access to the unit.
- Avoid water, humidity, direct sunlight, and heavy dust.
- Leave the unit uncovered to allow adequate ventilation.
- Only use the Wiser Home Controller indoors.
- Adhere to all specifications in this manual.

Figure 3: CNI Power Socket Polarity Diagram

NOTES:

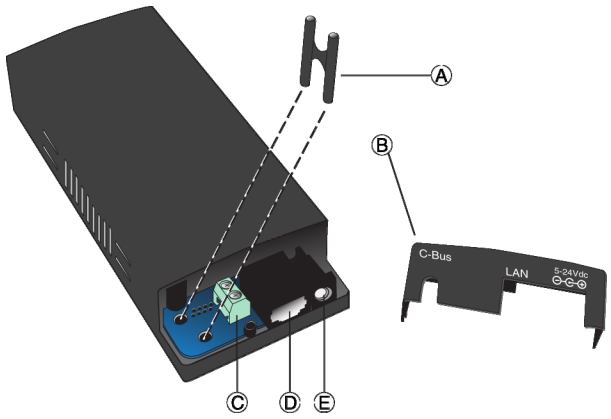
- *Using software not provided by Schneider Electric for C-Bus operation may cause unpredictable results.*
- *If the CNI unit is installed in a different location from Home Controller, you must provide a 6-12 V d.c. power supply for the LAN side of the CNI. You will also use a network cable in place of the extender (busbar). Polarity for the power socket of the CNI is illustrated in the diagram below.*

Connecting the CNI to the C-Bus Network Cable

Open the cable access cover on the CNI. Follow the instructions below for making the proper C-Bus connections. Refer to the figure "Connecting the CNI to the C-Bus Network Cable".

Figure 4: Connecting the CNI to the C-Bus Network Cable

KEY:
A. Plastic Strain Relief
B. Cable Access Cover
C. C-Bus Terminal Block
D. Ethernet (LAN) RJ-45 Socket
E. AC Power Supply Connection



Connection to the C-Bus Network

The Home Controller is connected to the C-Bus network through a C-Bus network cable that uses unshielded twisted pair (UTP) Category 5 data cable.

For optimal performance, use the connections recommended below for each end of the cable. Attach the bootlace terminals to the twisted pairs of the C-Bus network cable.

NOTE: The C-Bus network connection is polarity sensitive. The polarity is marked on the unit beside the terminals.

NOTE: Do not solder wires used to connect the unit to the C-Bus network through the terminal block connections.

⚠ WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not connect line voltage to any C-Bus terminal.

Failure to follow this instruction can result in personal injury or equipment or property damage.

Figure 5: C-Bus Wiring Connections

KEY:
A. C-Bus positive (+)
B. C-Bus negative (–)
C. Remote OFF: brown + brown-white*
D. Remote ON: green + green-white*

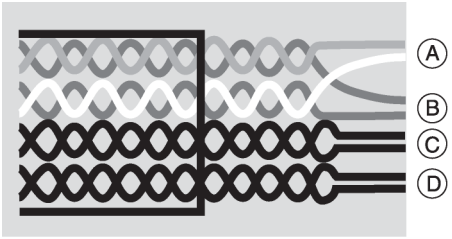


Table 3: C-Bus Cable Conductor Assignments

Terminal	C-Bus Network Connection	Cable Color
Not connected	Remote ON*	Green-White
Not connected	Remote ON*	Green
C-Bus Neg (–)	C-Bus Neg (–)	Orange-White
C-Bus Neg (–)	C-Bus Neg (–)	Blue-White
C-Bus Pos (+)	C-Bus Pos (+)	Blue
C-Bus Pos (+)	C-Bus Pos (+)	Orange
Not connected	Remote OFF*	Brown-White
Not connected	Remote OFF*	Brown

*Not internally connected.

CAUTION

HAZARD OF UNSTABLE OPERATION OR NETWORK OVERVOLTAGE

- Do not connect C-Bus network to a PC communications port.
- Do not Megger® test C-Bus or Ethernet data cabling or terminals.

Failure to follow these instructions can cause damage to the equipment.

NOTE: Wireless C-Bus devices require a C-Bus Wireless Gateway unit. They do not communicate directly with the Wiser Home Controller's wireless LAN.

Installing the Plastic Strain Relief

Install the plastic strain relief piece as shown in the figure "Connecting the CNI to the C-Bus Network Cable". Replace the Cable Access cover. The CNI is now ready for attachment to the router and busbar.

Assembling the Router, CNI, and Busbar

Follow the instruction below to assemble the Home Controller's router, CNI and busbar to form a single unit. Refer to the figures "The Home Controller Components" and "Connecting the Bus Bar to the Router and CNI".

CAUTION

HAZARD OF UNSTABLE OPERATION OR INTERNAL WIRELESS TRANSCEIVER DAMAGE.

Install all three antennas to the Home Controller router box. All three antennas must be installed for proper operation.

Failure to follow these instructions can result in damage to the equipment.

1. Install all three antennas on the Home Controller's router box.
2. Connect the CNI and the router together using the plastic link provided.
3. Carefully attach the busbar (power and network cable connector) to the sides of the Home Controller's router and the CNI. Be sure that the RJ-45 plugs make good connections.
4. The assembled unit is ready for wall-mounting or desktop placement.

Figure 6: The Home Controller Components

KEY:
A. Home Controller
B. LAN ports
C. Busbar
D. Power supply connection
E. From the internet
F. C-Bus network cable access
G. Optional support stand attachment location
H. C-Bus Network Interface (CNI)
I. Plastic link (shown attached to CNI)
J. Antennas

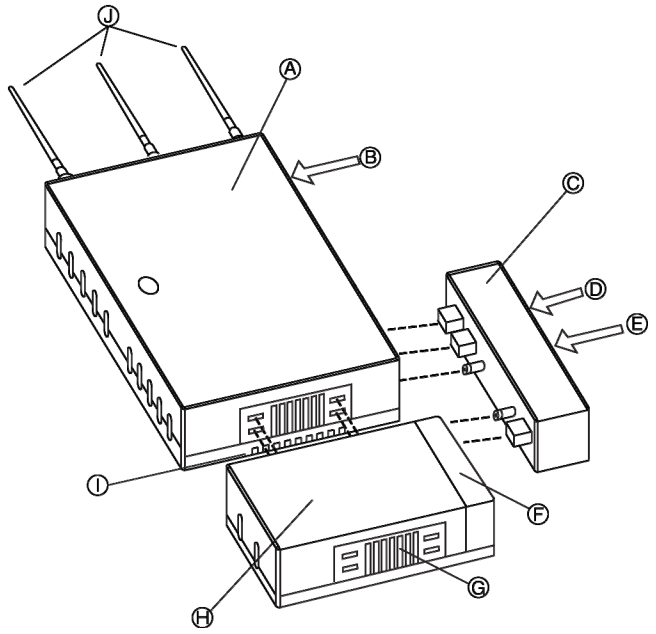
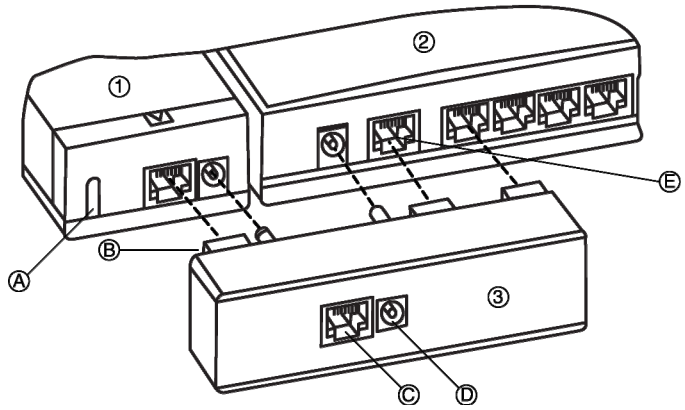


Figure 7: Connecting the Bus Bar to the Router and CNI

KEY:
1. CNI
2. Home Controller Router
3. Bus bar

A. Provision for C-Bus cable connection
B. C-Bus connection plug (CNI)
C. Bus bar WAN connection
D. Bus bar AC Power supply connection
E. WAN feed through



Mounting the Home Controller Unit

Choose a suitable location for the Home Controller.

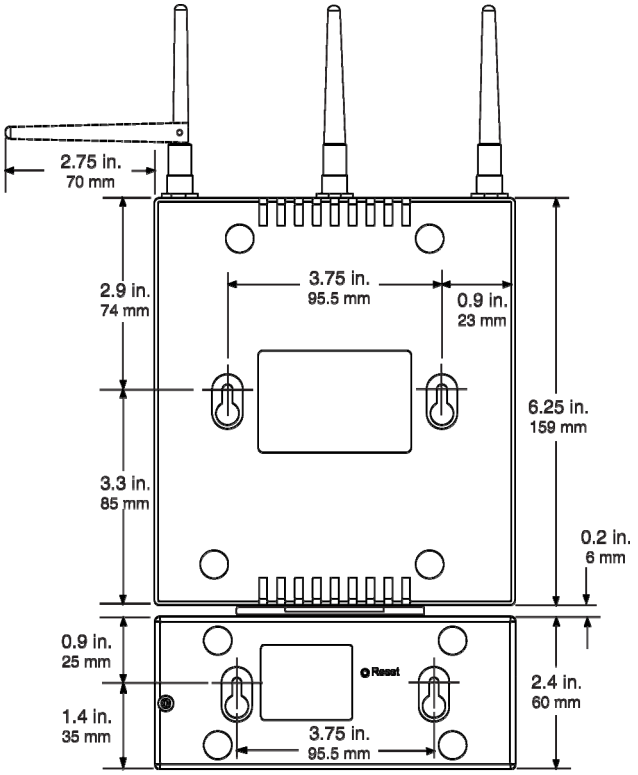
Mount the equipment on a wall using the two keyhole screws on the back of the router. Refer to the figure, "Wiser Home Controller Dimensions". You can also place the unit on a desk or table.

Adjust the antennas. The equipment generally performs better the higher it is mounted.

NOTE: If you are using the Home Controller's wireless LAN, do not place the router within 7.9 in. (20 cm) of the operator.

Dimensions

Figure 8: Wiser Home Controller Dimensions



Setting up a Wireless LAN

You can use wireless devices connected to the wireless LAN on the customer's ADSL modem/router. The Home Controller provides a wireless LAN that should be used for wireless-connected devices. Install the unit as close as possible to the wireless devices on the LAN.

The IP address of the Home Controller wireless LAN is the same as the wired LAN, 192.168.2.1.

The Home Controller is delivered with the wireless LAN enabled and WPA security is in place.

SSID:	WiserHomeControl
Security:	WPA-PSK (WiserHomeControl)

See Option A for an example of a Home Controller using a wired or wireless LAN.

NOTES:

- *You can use the Home Controller's wireless LAN as the connection to the PC being used to setup the installation.*
- *The Home Controller's wireless LAN does not communicate directly with the customer's wireless C-Bus devices. The data path to these devices uses the inline CNI and a C-Bus Wireless Gateway unit.*

Adding the Home Controller and CNI to the Existing Network

Select one of the options from the table below.

Table 4: Options for Adding the Home Controller and CNI to the Existing Network

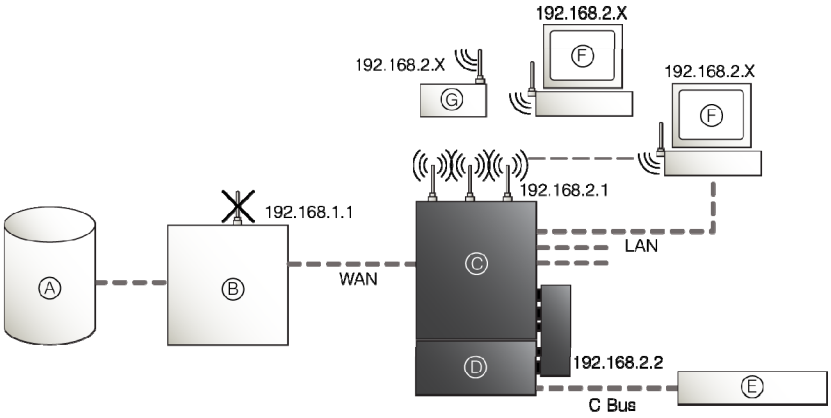
Option A	Connect the Home Controller's WAN port to the output of the customer's modem/router as shown in Figure 3. In this configuration, all network traffic passes through the Home Controller's wired and wireless LANs.
Option B	Place the Home Controller on the existing customer LAN as shown in Figure 4. This configuration allows you to make minimal changes to the customer's equipment setup.
Option C	Connect the Home Controller to an ADSL modem in bridge mode. In this configuration, the Home Controller is the direct gateway to the customer's ISP.

Option A - Home Controller as the Connection Point for the LAN

Figure 9: Network Connection Option A

KEY:
A. Internet
B. Existing modem/router (not supplied)
C. Home Controller router
D. CNI
E. C-Bus Units
F. PC – connected to a wired or wireless LAN during Home Controller set up
G. Existing wireless network devices

NOTE: WAN - Auto IP Address DHCP



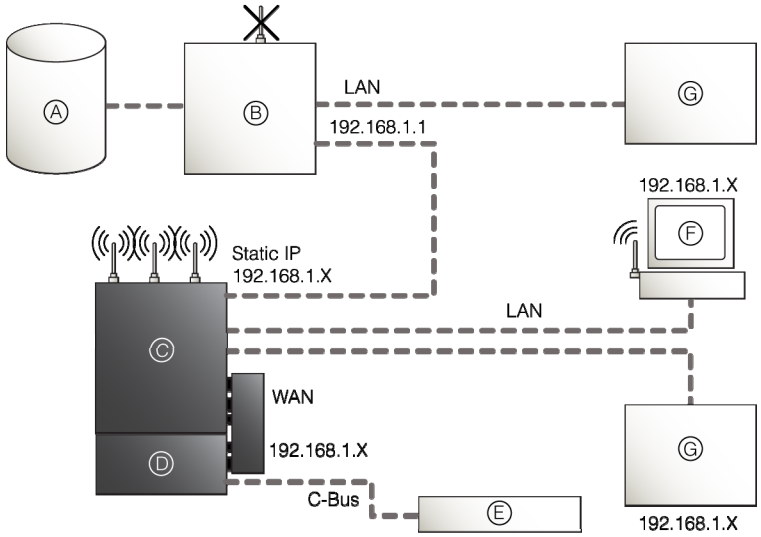
When using Option A, you must re-establish the IP addresses of the IP connected devices to subnet 2. Configuring static IP addresses may be required. If you are using wireless devices, you must also configure the wireless LAN on the Home Controller.

If the Home Controller does not provide enough physical connections for IP connected devices, a switch (not provided) must be added.

Option B – Home Controller Placed On the LAN

Figure 10: Network Connection Option B

KEY:
A. Internet
B. Existing modem/router (not supplied)
C. Home Controller router (WAN is not connected)
D. CNI
E. C-Bus Units
F. PC – connected to a wired or wireless LAN during Home Controller set up.
NOTE: Use the PC to set up the IP address of the router from 192.168.2.1 to an available address on subnet 1
G. Existing IP connected devices



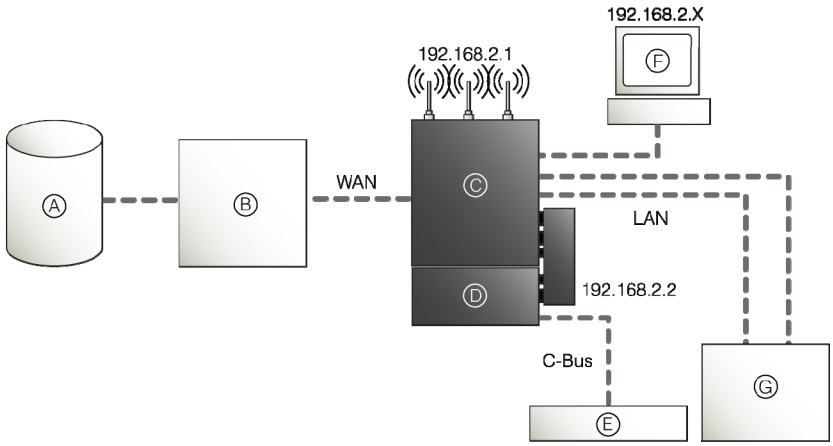
Option B requires changes to the existing network configuration. After adding the Home Controller, move the cable connection to the existing wireless equipment to the controller's wireless LAN. Be sure to set up security on the new wireless LAN, if used.

Option C – Home Controller Connected to a Bridging Modem

Figure 11: Network Connection Option C

KEY:
A. Internet
B. Existing ADSL modem in bridge mode (not supplied)
C. Home Controller router
D. CNI
E. C-Bus Units
F. PC – connected to a wired LAN during Home Controller set up
G. Existing IP connected devices

NOTE: WAN - Auto IP Address DHCP.



Choosing a Network Set Up Option

Use the table below as a guide when choosing a network set up option.

Table 5: Network Set Up Option Guide

Feature	Option A	Option B	Option C
WAN access for programming and configuration	Yes	Yes[1]	Yes
All traffic is routed through the controller unit.	Yes[3]	No	Yes[3]
Minimal disruption to customer's network	No	Yes	No
Can use all switch ports on the customer's router	No	Yes	No
Requires changing customer devices IP addresses	Yes [2]	No	Yes [2]
Migrate the customer's wireless devices to the controller's LAN	Yes	Yes	Yes
Requires changing the controller unit's IP address.	No	Yes	No
Requires port forwarding for remote access.	Yes	Yes	No
Need to disable one DHCP server	No	Yes	No
Single router in system	No	No	Yes
Dyn DNS	No	No	Yes
Requires the ability to put modem/router in bridge mode	No	No	Yes
Single IP network (subnet)	No	Yes	Yes

NOTES: 1. Requires port forwarding.
2. Unless the controller is changed to use 192.168.1.x
3. This might create problems if the customer is using VOIP or other settings, such as port mapping that are not supported by the controller.

Connecting a PC to the Home Controller for Configuration

1. Connect the PC to one of the open RJ-45 LAN connectors on the Home Controller. You may also use the Home Controller's wireless LAN, if preferred.
2. Connect the power supply wire to the bus bar power port. Plug the power supply unit into a wall power outlet.

CAUTION

HAZARD OF IMPROPER OR UNSTABLE OPERATION

Use only the power supply provided with the Home Controller. Using a different power supply unit may cause equipment damage or erratic network performance.

Failure to follow these instructions can result in damage to the equipment.

After the PC is connected the C-Bus network, verify LAN and C Bus network connections by examining the LEDs on the Home Controller's router and CNI. Refer to the figure "Home Controller Indicator LEDs". If problems occur, check all signal and power connections.

LED Status

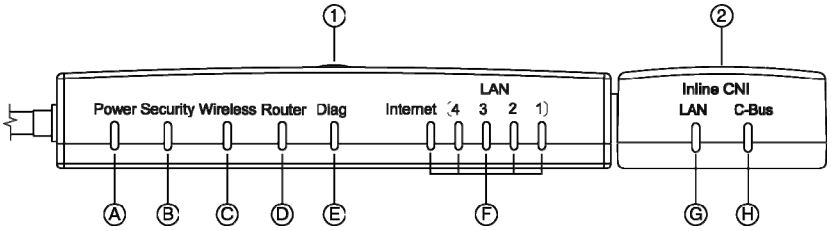
The Home Controller and C-Bus Network Interface figure show the locations of each LED.

Figure 12: Home Controller Indicator LEDs

KEY:

1. Home Controller Router
   - A. Power
   - B. Security
   - C. Wireless signal
   - D. Router
   - E. DIAG
   - F. LAN (Internet 1, 2, 3, 4)

2. CNI
   - G. LAN (Internet)
   - H. C-Bus



LED on the Home Controller Router	Meaning
Power	The Power LED is ON when the unit is receiving power.
Security (Orange LED)	Not Used.
Wireless	The Wireless LED is ON when wireless is available. The LED blinks when receiving or transmitting data.
Router	The Router LED is ON when the unit is working as a router.
DIAG (Red LED)	The DIAG LED is ON during unit self tests and a few moments after the self test is complete. If the light stays ON it indicates a problem.
Internet	The Internet LED is ON when the Wireless Area Network (WAN) Ethernet port is connected to a WAN. The LED flashes when data is transferred.
LAN	The Local Area Network (LAN) LED is ON when the Ethernet port is connected to a LAN. The numbered LEDs indicate which ports are active.

LED on the C-Bus Network Interface (CNI)	
Ethernet (LAN) Indicator Status	**Meaning**
Green	Communication link is good
Orange/Green flash	Link is good with active data transfer
Red	Non-existent or problematic link
OFF	Power issue, for example no power connection
C-Bus Indicator Status	**Meaning**
Orange	C-Bus clock signal is present, voltage is good
Orange/Green flash	Good, active communication between C-Bus and Ethernet
OFF	No C-Bus connection
Red	Issue with C-Bus communication
Red/Orange flash	C-Bus clock is present, voltage is marginal

SOFTWARE CONFIGURATION

Follow the steps in this section to configure the Home Controller.

Getting Started

Verify the following:

- Connection to the LAN or wireless networks
- Connection to the C-Bus network
- The latest versions of PICED and C-Bus Toolkit are installed on the PC being used for configuration
- The C-Bus project is loaded on the PC being used for configuration
- The IP address of the router unit is 192.168.2.1 and the inline CNI is at port 10001

NOTE: The CNI IP address is 192.168.2.2

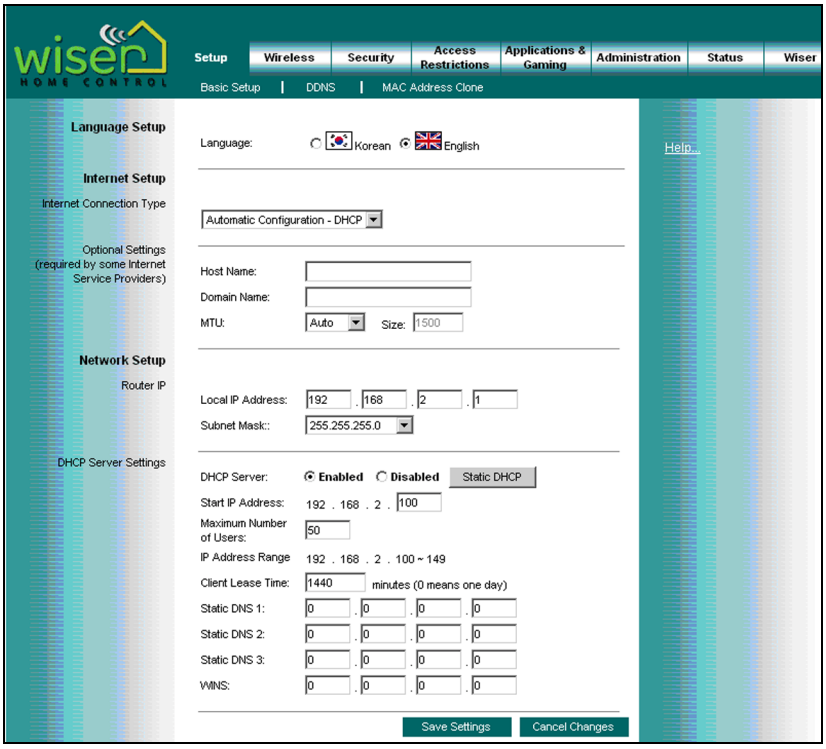
Using a web browser, configure the Home Controller's router. Access the GUI at 192.168.2.1, username is **admin** and password is **admin**.

STEP 1: Configuring the Home Controller

Follow these steps to make changes to the router configuration:

1. To access the user interface (GUI) and router configuration pages, enter the following address: http://192.168.2.1/SetupDHCP.htm in your internet browser.
   Username: "admin"
   Password: "admin"
2. Click the toolbox icon (screwdriver and spanner/wrench).
3. Select "Configure Router". The Home Controller's main Setup window is displayed.

Figure 13: Home Controller Setup GUI



If a broadband router has been previously configured, the Home Controller configuration procedure is very similar. During the configuration session, set up the following:

- Change password on Administration page (recommended)
- Host Name and Domain Name on Setup page (optional)
- Wireless Settings on Wireless page and Wireless Security page
- Remote access on Administration page or User UI

Changing the password is recommended for security reasons. You can change the password, but you cannot change the username. Passwords are limited to 30 characters. Do NOT use spaces or any of the following in your router password: ' " \ < > &

Setup Page Window

Follow the steps below during your configuration session.

1. In the Setup page window, add a Host Name and Domain Name if needed. Proceed to other pages (e.g. Wireless Security, Applications & Gaming, Administration, Status, etc.). Make the changes on a page and select Save Settings. The router will reboot and the new information will be captured for future sessions. Allow about 90 seconds for each reboot. The following messages will appear to indicate that the system is rebooting: "Your changes have been saved. System Rebooting…Please wait…"
2. Go to the Administration tab and change the password. Select Save Settings.
   NOTE: This is highly recommended for security purposes.
3. Select the Wireless tab and set up the wireless parameters.

Wireless Page Window

In the Setup window, click Wireless to view the options for the Home Controller's wireless LAN. It is highly recommended setting up security at this time. Refer to the section, "Setting up a Wireless LAN".

STEP 2: Using C-Bus Toolkit to Collect the Project's Information

Access the C-Bus network with C-Bus Toolkit software using the Home Controller and the CNI to date the project and gather information for the PICED project.

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

To use C Bus Toolkit with the Home Controller and CNI, do the following:

1. Open the C-Bus Toolkit application. Verity that the current interface settings are:
   Type: CNI
   Address: 192.168.002.001
   Port: 10001
   If the IP address shown is the same as the Home Controller (not the CNI) IP address, then press the Scan Network button on the toolbar.
2. If the information on the Welcome screen is not correct, go to the File menu and select Set Default Interface. Follow the steps to define the interface.
3. Use the tools provided to scan the network, search for networks, or refresh the list of projects, as needed.
4. If you have difficulty accessing the C-Bus network using C Bus Toolkit, check all signal and power connections for the C-Bus network and CNI. Look for indicator LED indications of a problem.
5. Update the Tag database using C Bus Toolkit then shut the program down before opening PICED. Refer to the help files for more information.

NOTE: When using C-Bus Toolkit and PICED simultaneously and creating group addresses with either application, you must refresh the other applications or stacking group addresses will occur (e.g. If creating a group address in C-Bus Toolkit, then you must refresh the project in PICED)

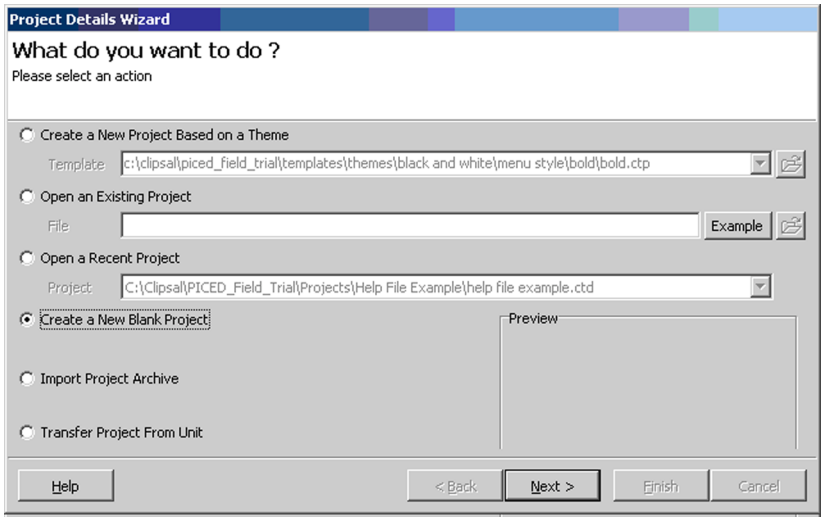
STEP 3: Using PICED to Create and Transfer a Project

Refer to the PICED software Help file. It contains information specific to the Home Controller.

Setting Up a New Project in PICED

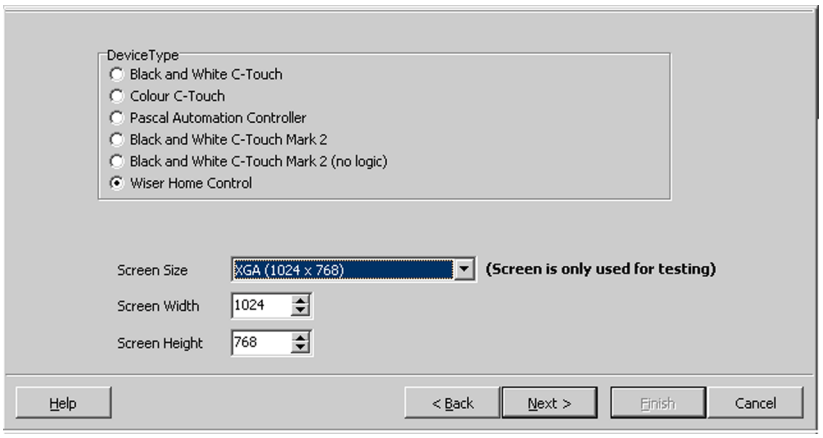
1. Start PICED.
2. Select Create a New Blank Project. Click Next.

Figure 14: Creating a New Blank Project



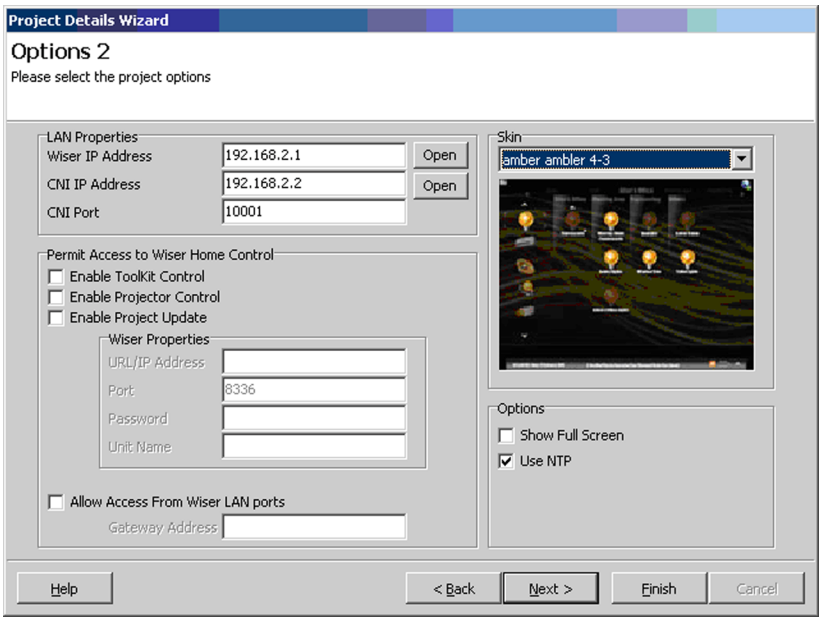
3. Select Wiser Home Controller. Click Next.

Figure 15: Select the Device type – Wiser Home Controller



4. Enter details for all other C-Bus products.
5. On the Options 2 tab, select a Skin (use the drop down menu for options).
6. Verify that the Home Controller and CNI are connected correctly, or to configure them, click the respective Open buttons.
7. Click Next. Enter details for all other C-Bus products. Click Finish to display the Widget Manager.

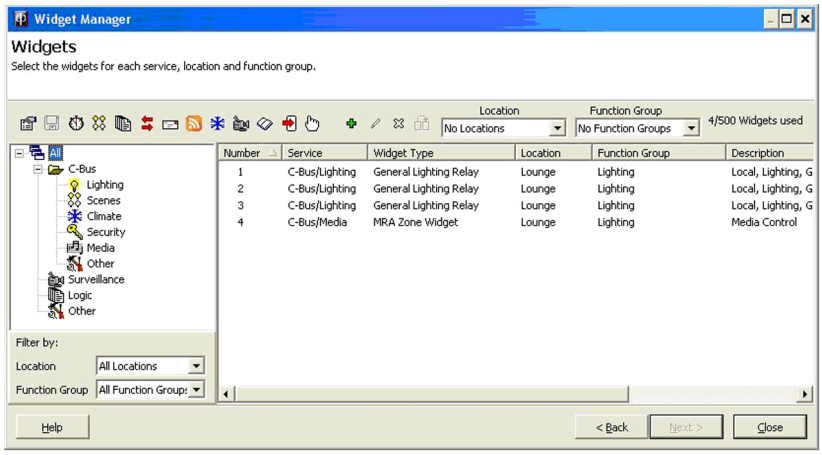
Figure 16: Selecting a Skin – Options 2 Tab



Adding Locations, Functions, and Widgets using The Widget Manager

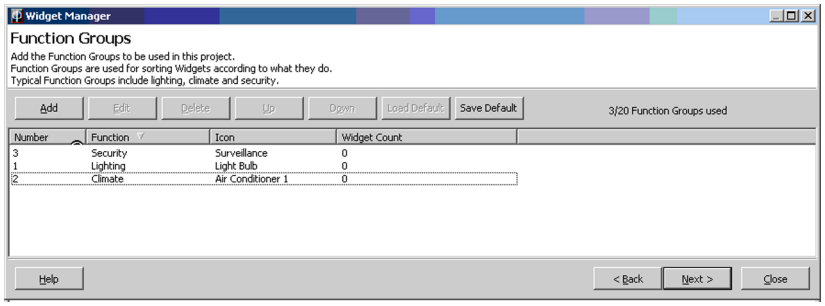
1. Adding locations: Click the Help button to open the PICED help file for details. Click Next when complete.

Figure 17: Adding Locations



2. Adding Function Groups: Refer to the PICED Help file for details. Most projects will include Lighting, Security and Climate Control. Click Next.

Figure 18: Adding Functions



3. Adding Widgets: Refer to the PICED help file for details.

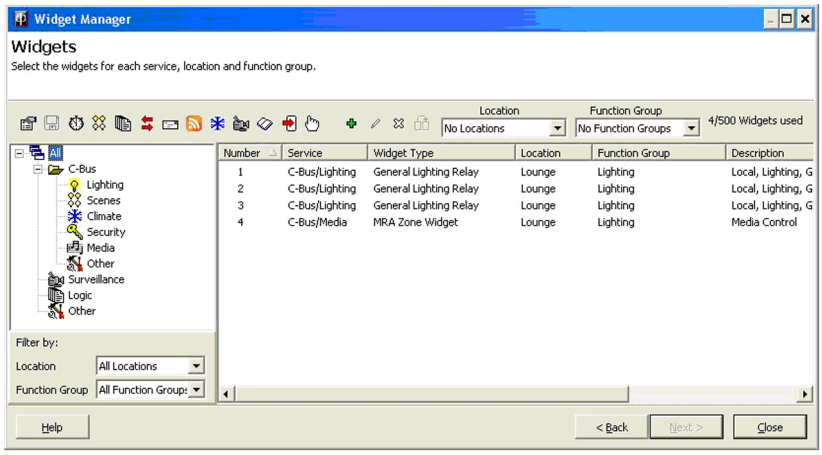
   NOTE: Using the drop-down lists to modify the properties of selected Widgets is much quicker than opening each Widget separately.

If needed, add:

- Scenes
- Schedules
- Logic
- User System IO Variables
- E-Mail Accounts

Refer to PICED help files for details.

Figure 19: Adding Widgets

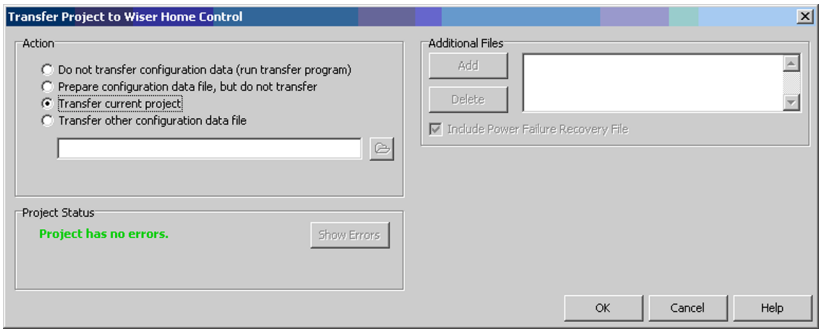


Transferring the Project to the Home Controller

1. When the project is complete, click on the Transfer button (box with a red arrow). The Transfer Project to Wiser Home Control form will appear.

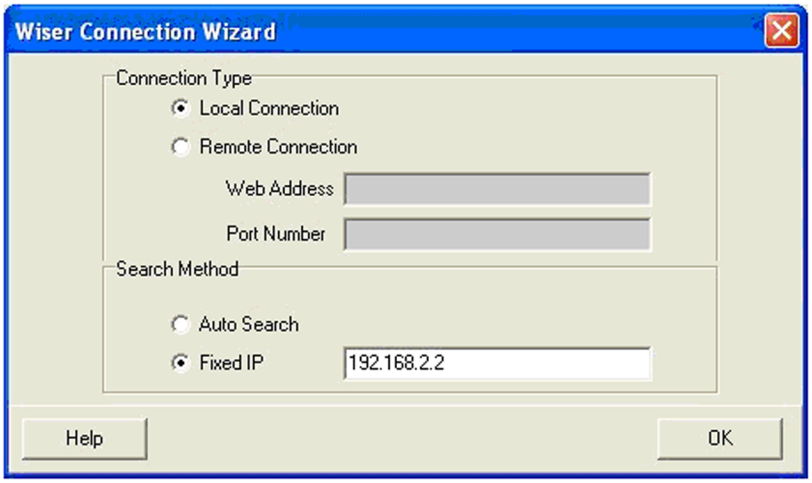
2. Click OK. The Wiser Connection Wizard will be displayed.

Figure 20: Transfer Projects Screen



3. Select Fixed IP and enter the IP Address of the Home Control (192.168.2.1 by default).
4. Click OK.
5. If the unit has out of date firmware, the Firmware tab will be displayed. Enter a password (admin by default) and click on Transfer Firmware. Wait for the unit to re-start, then repeat steps 1 to 4.
6. If the firmware is up to date, the Transfer tab will be selected. Click on Start. Wait for the unit to re-start.
7. Open a web browser and enter the IP Address of the unit (192.168.2.1 by default). The project will be visible and operational.
8. Use simulation mode in PICED (the button with a picture of a hand on it) to test further changes to your project without the need to transfer the project each time. Some aspects of Simulation mode can only be used once a project transfer has been done.

Figure 21: The Wiser Connection Wizard Screen



Refer to the PICED and Transfer Utility help files for additional information.

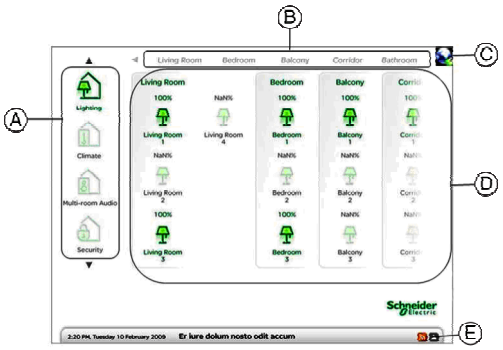
HOME CONTROLLER WEB INTERFACE

The appearance of the Wiser Home Controller is often customized depending on the specific functionality and unique scenes of the system.

The web interface shown below represents a typical screen.

Figure 22: Typical Web Interface

KEY:
A. Function Groups
B. Locations
C. Status Icon
D. Widgets
E. RSS Feed



Name on the Web Interface	Meaning
Widgets	A graphical icon used to control or display the state of something. Widgets include controlling lighting, controlling a home audio system, and displaying a web camera.
Locations	Arrange widgets by their physical location in the home. Locations include dining room, bedrooms, and outside. Click on a location name to view the widgets associated with that location. Use the right and left arrows to view more locations.
Function Groups	Arrange widgets according to their usage. Function groups include lighting, security, and climate control. Click on a function group to view all widgets associated with that grouping. Use the up and down arrows to view more locations.
Status Icons	Indicates the connectivity status of the Wiser System to the C-Bus network. Refer to the "Messages" section for the meanings of each status icon.
RSS Feeds	If the RSS feed option is set up by the installer, information and news headlines are displayed at the bottom of the screen. Click the UP triangle beside the RSS feed icon to expand the window and view the full text.

Accessing the Web Interface

Access the Home Controller's user interface with a web browser. Type the following URL into the web browser's address field: http://192.168.2.1/

Username:	admin
Password:	admin, or your changed password

NOTE: If your Home Controller's IP Address is not 192.168.2.1, use the correct IP Address in the URL above.

To navigate within the interface:

- Click one of the Location names to view the Widgets for that location.
- Click a Function Group icon to view the Widgets for that Function Group.
- Click the Widgets to control them.

The Home Controller can be controlled using a 'projector' application running on a device such as a mobile phone or PDA.

USING STATIC TCP/IP SETTINGS ON THE PC (IF NECESSARY)

When possible, use the automatic IP setting feature (DHCP enabled). Use static IP addressing when a fixed IP address is needed. Follow the steps below if static TCP/IP addressing is needed.

Windows® 2000 or Windows® XP

1. Connect the PC cable to an unused LAN port on the Home Controller. Apply power to the router and allow it to initialize.
2. Click Start; click Settings and then click Control Panel.
3. Double-click the Network Connection icon.
4. Right-click the Local Area Connection icon then click Properties. The Local Area Connection Properties window appears.
5. Under the General configuration tab, locate and select TCP/IP with the corresponding network card, and then click Properties. The Internet Protocol (TCP/IP) Properties window appears.
6. Click Use the following IP Address and enter:
   IP Address:192.168.2.10 (see Note)
   Subnet Mask: 255.255.255.0,
   Default Gateway: 192.168.2.1
   NOTE: Provide a unique address that does not conflict with any other device on the LAN.
7. Now your PC is ready to access and configure the Home Controller's router.

Windows® Vista

1. Connect the PC cable to an unused LAN port on the Home Controller. Apply power to the router and allow it to initialize.
2. Click Start, Control Panel, and then Network and Internet: Manage network connections.
3. Right-click the Local Area Connection icon then click Properties. The Local Area Connection Properties window appears.
4. Under the Networking configuration tab, locate and select Internet Protocol Version 4 (TCP/IPv4) with the corresponding network card and then click Properties. The Internet Protocol (TCP/IP) Properties window appears.
5. Click Use the following IP Address and enter:
   IP Address: 192.168.2.10
   Subnet Mask: 255.255.255.0
   Default Gateway: 192.168.2.1
   NOTE: Provide a unique address that does not conflict with any other device on the LAN.
6. Now your PC is ready to access and configure the Home Controller.

DOS COMMAND PROMPT PROGRAMS

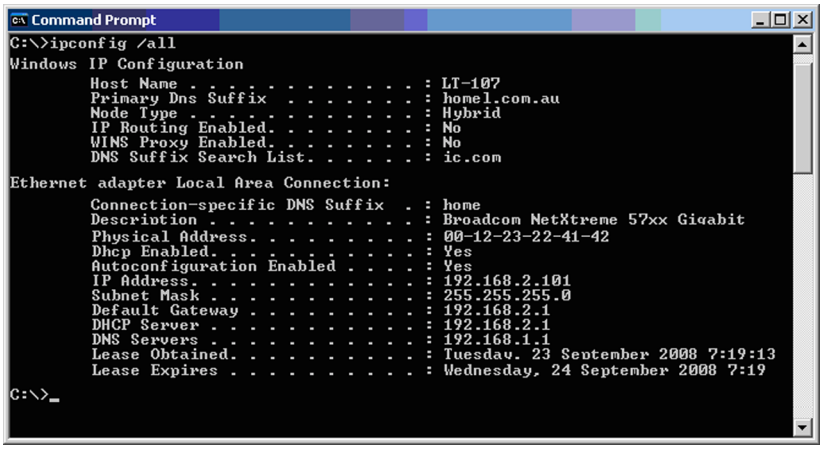
The two DOS programs illustrated here use command lines. These programs can be useful to diagnose some connectivity problems and gather information about IP addresses. Follow the instructions below.

Run ip/config

1. Go to Start menu and select Run
2. Type cmd.exe and click OK.
3. Type ipconfig /all 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.

Figure 23: Typical IPconfig DOS Command Prompt Program Screen

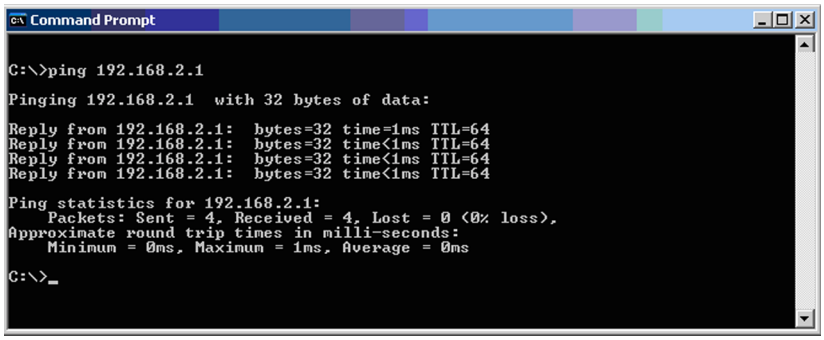


ping<ip address>

1. Go to Start menu and select Run.
2. Type ping <ip address> and then press Enter.

The example below shows a successful ping to the Home Controller unit. You could also ping the other routers or units on the network.

Figure 24: Typical Ping DOS Command Prompt Program Screen



FREQUENTLY ASKED QUESTIONS (FAQS)

Question	Answer
What do I do if I have forgotten my password?	The default username is admin. The default password is admin. You cannot change the username on the router. You can only change the password. If you have changed the default password and have forgotten the new one, you must reset the router back to factory defaults.
How do I reset the router back to factory defaults?	There are two ways to do this. The first is the physical method of inserting a thin paper clip end into the reset button (recessed in a hole) at the back of the unit. (1) Unplug the power connector, (2) insert the clip apply power and hold the button in for 10 seconds, and then (3) remove the clip and wait 30 seconds. The second method is to open the router Setup page (you must know the current user name and password) go to the Administration page and select Factory Defaults. Confirm the selection. Using either method, the router automatically reboots.
How do I apply the latest firmware release?	Schneider Electric recommends using the Transfer Utility because it is less prone to disruption during the data transfer than other methods. Whenever you transfer a project in PICED using the transfer function, the software checks the firmware version with the version on your PC. The latest firmware is automatically updated in the Home Controller's router.
How can I report any problems?	There are several methods: • Phone Technical Support: See the last page of this instruction • E-mail Technical Support: See the last page of this instruction • Use the C-Bus forum: http://www.cbusforums.com/forums/
What details does Schneider Electric require to identify, isolate and solve a bug that I have found?	A detailed bug report is always greatly appreciated and may possibly earn you eternal gratitude from the developers. We encourage users to use the "backup configurations" tool in the router's web user interface (under Administration->Management tab) to generate a config.bin file that will allow us to have exactly the same setup/configuration that you have used on your router. Further, you can also attach the PICED project archive that you used. These two items are valuable to us in diagnosing and working on solving a particular problem. Additional information pertinent to the issue or failure mode you have observed or identified is also essential. For example, if filing a bug about an unexpected mode of behaviour with the GUI affecting C-Bus, it is valuable to record the sequence of steps that you performed.
What are the meanings of the icons at the top right of the graphical user interface? 	This icon reflects the state and stability of the graphical user interface's connection to the router. For example, if you see it going red, this means that it is no longer connected to the router. This can happen for many reasons. Typically, this happens when using the web UI over Wi-Fi and the Wi-Fi is going out of range. It will automatically restore itself to green when it has successfully re-established the connection. Clicking on the icon will provide more detailed information such as "attempted reconnects, watchdog counter, keep-alive signals, and successful reconnections". These will be helpful to report if you encountered any unexpected behaviour.
	The envelope icon reflects the status of a POP3 mailbox if one has been configured in the project. It will report how many emails are in the mailbox and the From/Subject lines of up to the first 5 messages.
	The C-Bus icon with a red slash across it means that the web UI does not have C-Bus connectivity.

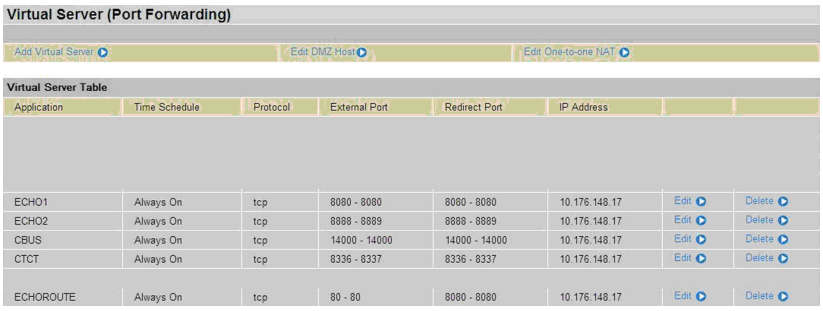
	The wrench icon means that the web UI is currently in CNI mode meaning that the device is being used as a CNI and thus the web UI will not function until the CNI mode is disconnected. Once CNI mode is disconnected, the icon will disappear and the GUI can be used like normal.
	The toolbox icon (screwdriver and wrench) shows a page with Toolkit Remote Enable, Projector Control Enable and Project Update Enable (see below).
What do Toolkit Remote Enable, Projector Control Enable and Project Update Enable mean?	Toolkit Remote Enable allows the device to be used as a CNI over the Internet. This means that anyone on the Internet, if they knew the Internet address of your device, can connect on port 10001 and perform C Bus tasks. Disabling closes this port. The port is closed by default. This feature is intended to allow installers to use C-Bus Toolkit to manage a C Bus network remotely when they need to. *NOTE: It is important to make sure to close the port after use. Leaving it open allows anyone to manipulate your C-Bus network.* Projector Control Enable allows the web user interface to function even when run remotely over the Internet. This feature is intended to allow an end-user or installer to interact with their C-Bus network even when outside of their home or premise. Project Update Enable allows a PICED project to be uploaded to the device over the Internet. This means that anyone on the Internet, if they knew the Internet address of your device, can connect to the device and transfer a project to the unit and/or retrieve a project from the unit. It is important to make sure to close the port after usage as leaving it open will allow anyone to manipulate your C-Bus network.
Can I transfer a PICED project from the router to my PC using the project that I previously loaded on to a router?	Yes, you can transfer a project from the PC to the Home Controller and transfer a loaded program back to the PC.
How do I set up Port Forwarding on my Home Controller?	The screen below is a representation of how your modem /router (Not the Home Controller unit) should be configured to support access to the Home Controller from the Internet.  *NOTE: This setup is only applicable if you are connecting the Home Controller behind your Modem/Router. It does not apply if you are using you're a bridged Modem or have configured your modem/router to work as a bridged modem.*
How do I use the port definitions built into the Home Controller?	To use the Port Definitions refer to the table and the notes that follow: See Note 1 Home Controller Wan IP.

Table 6: Port Definitions

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 Home Controller, When enabled the Home Controller UI can then be reached at 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 Home Controller. 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 CNI currently being used in the field trials. 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 Home Controller remotely
ECHOROUTE	TCP	80	8080	Optional Feature. If your Modem/Router support 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 http://<your URL or External IP>

Note 1: To maintain and ongoing connection to your Home Controller you should use either a Fixed IP address for the WAN interface of the Home Controller or Alternately setup your Modem/Router to always provide the same IP Address to the Home Controller Unit (refer to your modem/router manual for further details on how to do this)

Note 2: The 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 Home Controller Project and downloaded to the Home Controller, the new port number will also need to be used in your port forwarding rules of your modem/router. (Refer to Figure 3 for details on enabling the remote access to your CNI from within the Home Controller.

RELEASE NOTES

Functional product issues listed here are sorted into two main categories. The first category is "Router Issues" and the second is "C-Bus/GUI Issues". Router issues refer to anything to do with the routing/network related functionality of the device. C-Bus/GUI issues refer to anything to do with the C-Bus related functionality of the device.

Router Issues

1. During setup, the web user interface requires save-and-reboot steps that make setting up somewhat time consuming.
2. The firmware upgrade screen sometimes does not return to the web user interface and appears to be stuck. However, returning to the main page shows that the router has upgraded itself.
3. Setting the date and time requires an Internet connection or an external device that provides the time and date.
4. If the unit is not connected to the Internet and has no time source, the router unit starts up with a date of 01-01-1970.
5. If the router hangs or locks-up during normal operation you are no longer able to ping the router or access the GUI or access the router's web user interface. To fix this problem, remove and reconnect the power connector.
6. The router's port forwarding management page does not let you specify a destination port. The router only allows port forwarding but not port mapping. So an internal device such as a camera that you want to forward must be configured to have an identical destination port.

C-Bus and Graphical User Interface Issues

1. In simulation mode, if there is no connection to the Home Controller unit, an error message will be displayed.
2. To transfer a project to a router remotely from Internet, use the 'search by IP' function of the transfer client and enter the external IP address of the router. If you are using a dynamic naming service such as dyndns.org, you can use 'nslookup name' or 'ping name' to get the IP address that can be entered in the 'search by IP' dialog box. Please note that connections over the Internet can be less stable and if disconnected during a transfer, you will need to retry the process. Also the modem must be in bridge mode to use dyn DNS.
3. Search for Home Controller using the transfer client fails when running on Windows Vista. The workaround is to use the search by IP functionality.
4. Slow boot up depending on utilized functionality. If the router is configured to use DHCP to retrieve its IP address boot up can sometimes take longer than expected.
5. Secured POP3 Mail POP3 mail servers that require Encryption such as TLS/SSL are not supported.

GLOSSARY

Term	Definition
Busbar	A passive connector for Ethernet and power connections to the Home Controller and CNI.
CNI	C-Bus Network Interface. The CNI handles Ethernet to C Bus communication and provides electrical isolation between the networks.
Modem	The hardware component connecting the 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.
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	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.
RSS feed	A web link that follows the RSS (Really Simple Syndication) specification to access a location that provides frequently updated information, such as news.
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	WiFi Protected Access, a modern form of encryption for wireless data. It lacks the vulnerabilities that WEP has
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

Parameter	Description or value
Power Source	• Home Controller's router: AC power pack • Inline C-Bus Network Interface: – AC power pack through busbar for Ethernet – C-Bus side is powered by the C-Bus network
Mounting location	• Wall mounted with two keyhole openings • Must be installed indoors
Minimum distance to operator	7.9 in. (20 cm) from nearest antenna
Mounting screw spacing	3.8 in. (95.5 mm) between centers
Operating ambient temperature	32–113° F (0—45° C)
Operating relative humidity	10% to 90%, non-condensing
Types of electrical connection (Suitable for copper or aluminum conductors)	• Disconnectable DC power supply jack on the busbar - 0.04 x 0.12 in. (1 x 3 mm) center positive • Disconnectable WAN connector on busbar 1 x RJ-45 plug • Disconnectable LAN connectors on router 3 x RJ-45 plug • Fixed aux (C-Bus) terminal for 2 x 2.5 mm; for twisted pairs; with strain relief post
Ethernet WAN protocol	TCP/IP
Recommended Internet browsers	Microsoft® Internet Explorer® or Mozilla® Firefox®

STANDARDS

The Wiser Home Controller complies with the following Standards:

Table 7: U.S. and Canadian Product Safety Standards and U.S. FCC Regulations

Standards/Regulations	Title
CSA C22.2 No. 205	Signal Equipment
UL916	Energy Management Equipment
FCC Part 15	Class B Digital Device for Home or Office Use

Class B FCC Statement

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 undesired operation.

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.

Changes or modifications to this device that are not expressly approved by Schneider Electric could void the user's authority to operate this equipment.

FCC Radiation Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 7.9 in. (20 cm) between the radiator & your body.

If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contact the Customer Information Center for technical support by phone at 1-888-778-2733 or e-mail at lightingcontrol.support@us.schneider-electric.com.

You may also find helpful information on our web site at www.Schneider-Electric.us.

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