How To Configure a Comfort II System

Introduction

Comfort is a very powerful and flexible system able to meet the needs of the most basic, providing just Intruder Alarm, to a very comprehensive integrated home automation and security system with touchscreens, web control, and interfaces to computers and other systems. The key to design is understanding the capabilities and architecture of Comfort. This note shows how to design and configure a Comfort system to provide Intruder alarm and Home Automation for a home. This guide can be used by system integrators in deciding which and how many modules are needed to achieve the desired results for the customer and thus determine the cost of the entire system. For wiring recommendations, refer to the Comfort Wiring Guide.

Note: The information in this document is general advise only to be used at the recipients own risk. Cytech Technology takes no responsibility for any consequences resulting in the use of this information. Please contact the manufacturers of any third party equipment, lighting system, alarm sensors etc. for details on the use of the aforementioned equipment.

Basic System - Control Panel

Any Comfort installation will require a Comfort Control Panel and a keypad. Choose one of the following models of Control Panel;

1. Comfort CP9000-OPT: 8 inputs and 8 outputs, expandable to 64 inputs and 64 outputs using Slaves and LEMs, 10 Home Control Menus, 128 Responses, 16 Time Programs, can be interfaced to Comfort Webserver Module, C-Bus, EIB, Touchscreen, GSM. Comfort Optimum is an advanced alarm system with some home automation capabilities
2. Comfort CP9000-ULT: 8 inputs and 8 outputs, expandable to 64 inputs and 64 outputs using Slaves and LEMs, further 64 non-alarm inputs and 64 outputs using Remote Input/output Modules (RIO), 60 Home Control Menus, 1023 Responses, 32 Time Programs, can be interfaced to Comfort Webserver Module, C-Bus, EIB, Touchscreen, GSM. Comfort ULTRA is a full Intruder alarm and home automaton system

All Comfort models come with built-in answering machine with 8 mailboxes, 16 users, remote dial-in control through telephone and comprehensive voice menu, intruder alarm, dial out to 8 telephone numbers, event log, 16 or 32 Time Programs, X10 2-way capability, Infrared transmission to any output. It comes with a transformer and has a built-in battery charger for a 12V sealed lead acid 7 AH battery. For more details about the features and differences between the models refer to the table below.

Model	**Comfort II ULTRA**	**Comfort II OPT**
File System Memory (U4)	FS34 (256 k)	FS31 (64k)
Max Alarm Inputs	64	64
Max Non-alarm Inputs (RIO)	64	0
Max Outputs	128	16
Control Menu Groups	6	1
Control Devices per Group	10	10
Control Actions per device	10	10
Total Commands on Home Control Menu	600	100
Dialout for Alarm	8 phone numbers, incl 2 CMS	
SMS	UCM/GSM	UCM/GSM
Voicemail	8 Mailboxes	8 Mailboxes
Record Time	10 minutes	10 minutes
X10 House Codes (Send)	16	16
Receive X10 Responses (Housecodes)	16	1
Extended X10 codes (Send)	Yes	Yes
Reminder Messages	16	8
Time Programs	32	16
User Sign-in Codes	16	16
Remote Phone Access	Yes	Yes
Local Phone Control	Yes	Yes
Alarm Types	31	31
Zone Types	31	31
Vacation Programs	8	8
IR Code Memory (Send)	4096 bytes (120 codes)	540 bytes (16 codes)
Event Log (events)	250	250
Responses	1,023	128
Codes per Response	8	6
Full Duplex Intercom Phone/KP/DP	Yes	Yes
Branch Instructions	Yes	Yes
IR Receive Codes	128	0
RC01 Keypad simulation	yes	No
RC01 Rooms/Scenes	Yes	No
Counters	256	128
Flags	64	64
User Timers	64	16
RS232 Commands	Yes	Yes
Voice Download	Yes	Yes
LCD	yes	yes

Model	Comfort II ULTRA	Comfort II OPT
DP	3	3
SEM	3	3
RIO/SCS	15	0

Keypad

At least one keypad is required in the system, either KP03 or KP04 LCD keypad. Up to 8 keypads can be installed in a system with each having a unique ID. Keypads can be used to arm and disarm the security system, to record and playback messages, intercom with other keypads, control lights home appliances via the Home control voice menu and to listen in to sounds in the vicinity in the event of alarms. Keypads have a built-in microphone and speaker. The KP03 and KP04 has an IR receiver which can be used with a RC01 handheld remote control or any universal remote control like the Philips Pronto.
It is recommended to have at least 1 keypad per floor in a home for convenience of arming and disarming. One should be mounted near to the front door.

KP03

KP04

KT01

Door Station

The Door station DP03 is mounted at the gate or door. When a visitor presses the doorbell, the internal phones in the house ring, and any phone can be used to talk to the visitor and open the main gate for cars or side gate for pedestrians. When the system is armed to AWAY mode, pressing the doorbell will cause the system to call to one of the programmed mobile phones so the user can talk to the visitor, and also open the gate to let the visitor in. This works very well in conjunction with autogate control.
When no one answers the door, the door station can be programmed to take a message from the visitor.

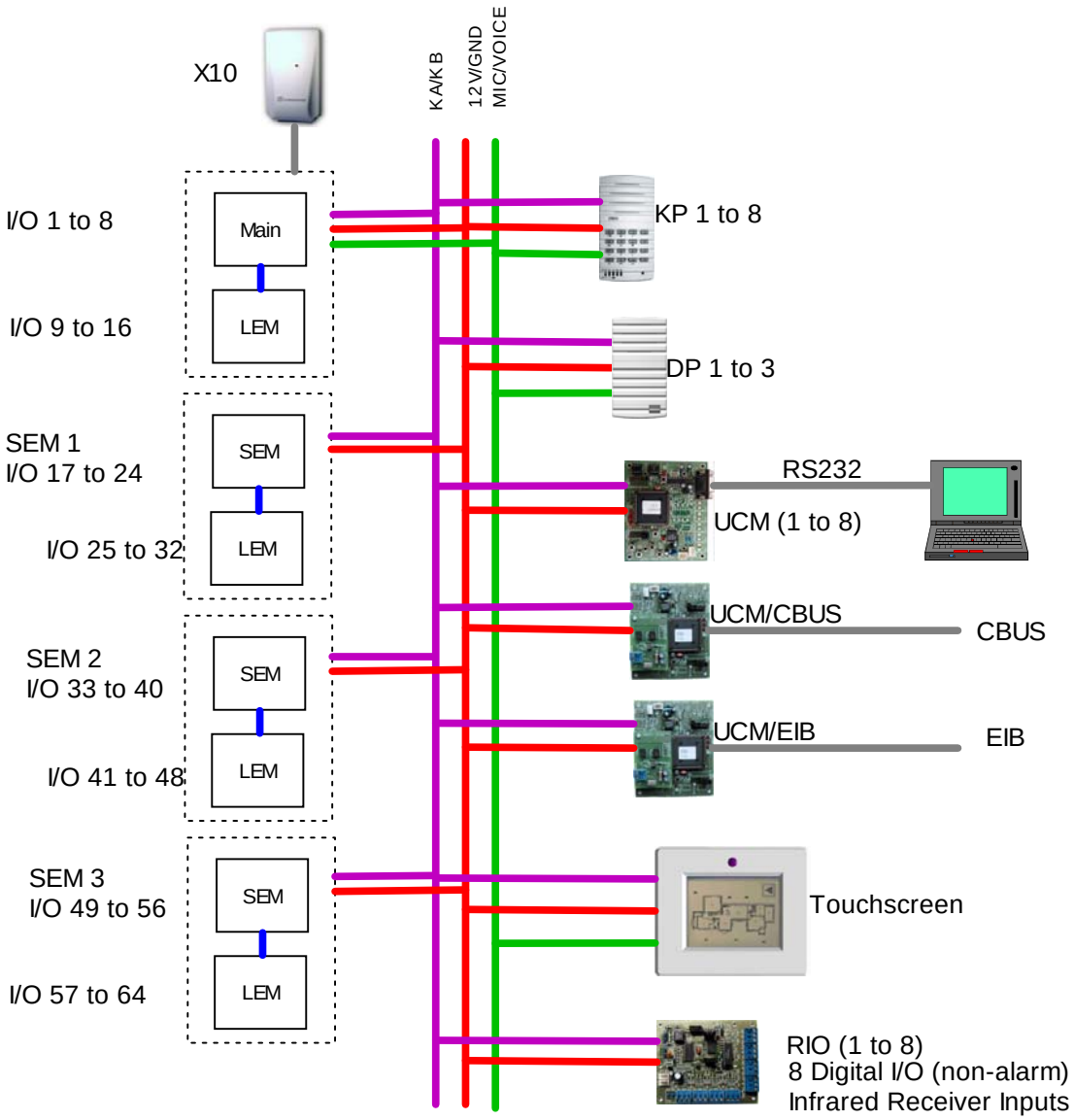
Input/output Expansion

All Comfort models come with 8 inputs and outputs. To increase the number of inputs and outputs, use Local Expansion Modules or Slave Expansion Modules, as shown in the table below;

Expansion Module	Description	Inputs	Outputs
LEM01	Local Expansion Module	8	8
LEM02	Local Expansion Module	8	0
LEM03	Local Expansion Module	16	0
SEM01	Slave Expansion Module	8	8
SEM02	Slave Expansion Module	8	8

Local Expansion Modules are connected directly to either the Comfort Control Panel or a Slave Expansion Module (SEM01 or SEM02) via a short ribbon cable. Only one LEM01 or LEM02 can be connected to each CP9000 or SEM. The LEM03 can only be connected to the CP9000 Control panel and not to a Slave. When a LEM03 is used with the CP9000, no Slaves can be connected. A CP9000 and LEM03 gives 24 inputs and 8 outputs.
Slave Expansion Modules have 8 inputs and 8 outputs, and can be connected remotely (up to several hundred meters away). The SEM01 has its own transformer and battery charger and requires a standby 12V lead acid battery just like the main Comfort Panel. The SEM02 does not have a transformer or battery charger and is powered by the Main Comfort panel. Otherwise the two types of slaves have the same function. Each Slave can be connected with either an LEM01 with 8 inputs and 8 outputs, or LEM02 with 8 inputs. Hence each Slave with LEM01 can have 16 inputs and outputs. Up to 3 SEMs can be connected to a CP9000. With an LEM01 connected to the CP9000 and SEM, the maximum system capacity will be 64 Inputs and 64 outputs. Remote Input/Outputs can extend this by providing up to 64 non-alarm inputs and 64 outputs to a Comfort system.
SEP01 is the SEM01 PCB with metal enclosure and transformer.
Slaves and RIOs cannot be used with Comfort ENTRY

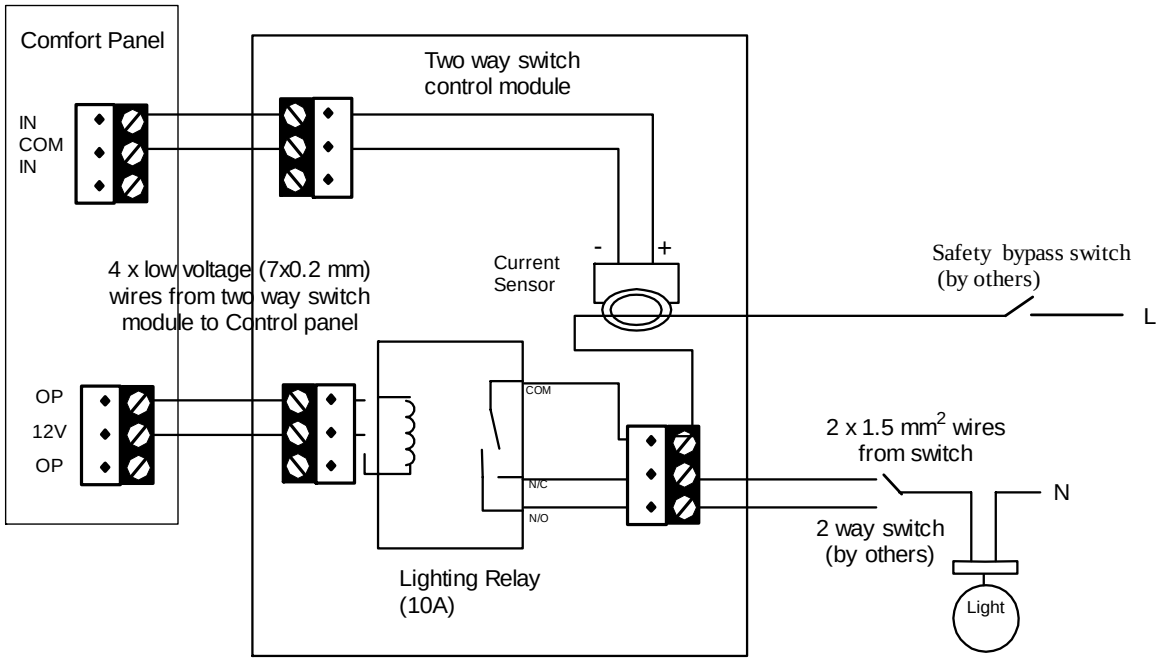
Comfort Architecture



The above diagram shows the Comfort Architecture and how the various modules are connected to the RS485 bus.

Lighting Control (On/Off)

Comfort is able to switch lighting loads and monitor their status using the TWS01 Single Lighting module for a single lighting switch or the TWS02 Dual lighting module for two lighting switches.



A TWS Module is located next to the Comfort control panel, containing a Current sensor and mains-rated lighting relay. The Live wire to the light is passed through the coil of the current sensor as shown in the above connection diagram

4 low voltage wires are needed from the Control panel to the Lighting control module.

2 mains wires are needed from the two way switch control module to the switch. The Live wire from the supply is passed though the current sensor coil before connecting the terminal block shown. The lighting switch should be a two way switch. The circuit ensures that the light can always be controlled by the switch even if Comfort is not working.

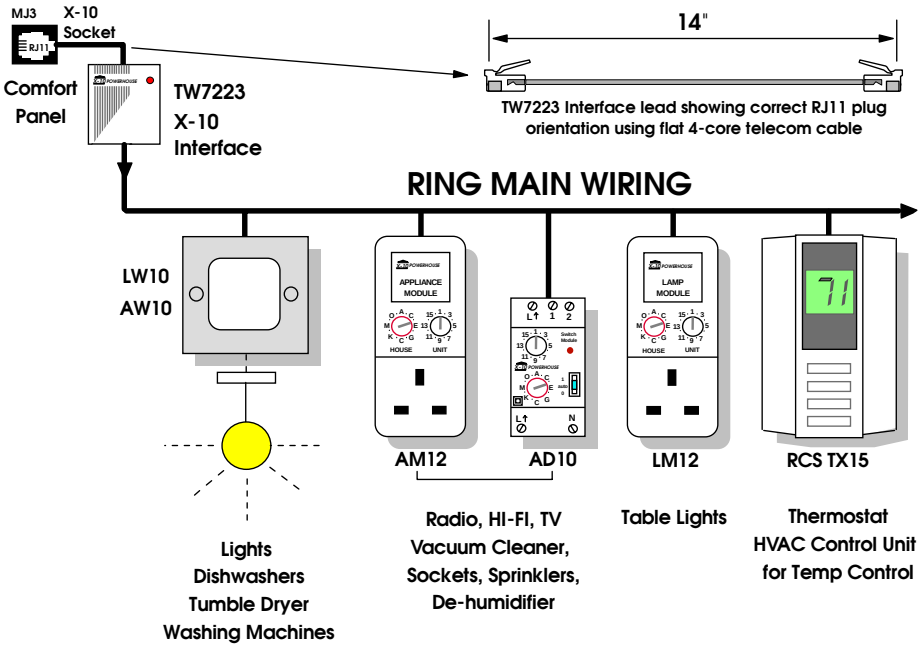
For TWS-controlled lighting, each two way switch must be connected by two way electrical switch wires back to the TWS module which is next to the Comfort control panel.

Each lighting switch requires 1 input and 1 output

Third Party Lighting Systems

Comfort does not dim lights, as it is not designed to be a lighting system. Instead Comfort is able to interface with 3rd party lighting systems, like X10, EIB, CBUS, Lutron, and Ulti. These are discussed in the section following. Only Comfort PRO or Ultra is able to interface to lighting systems

X10

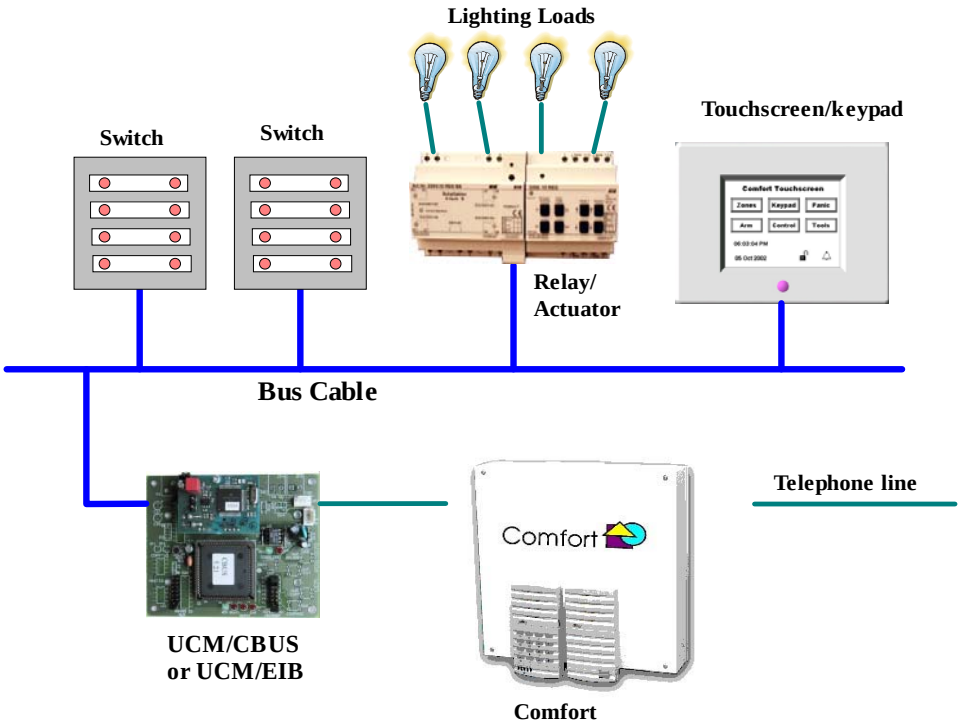


The Two way X10 interface XM10/PSC05/TW523 connects Comfort to the Power Line to control other X10 appliance and lamp modules. The LD11 dimmer can be dimmed to any preset level.

Warning: X10 signals are attenuated along the power line and is subject to interference from other sources. Use of repeaters and filters may be necessary.

CBUS and EIB

CBUS and EIB are bus lighting systems which are popular in Asia and Europe. The signals are carried on a single pair of low voltage cable. Comfort interfaces to these two systems by means of a UCM/EIB or UCM/CBUS interface. The concept for both these systems is similar.

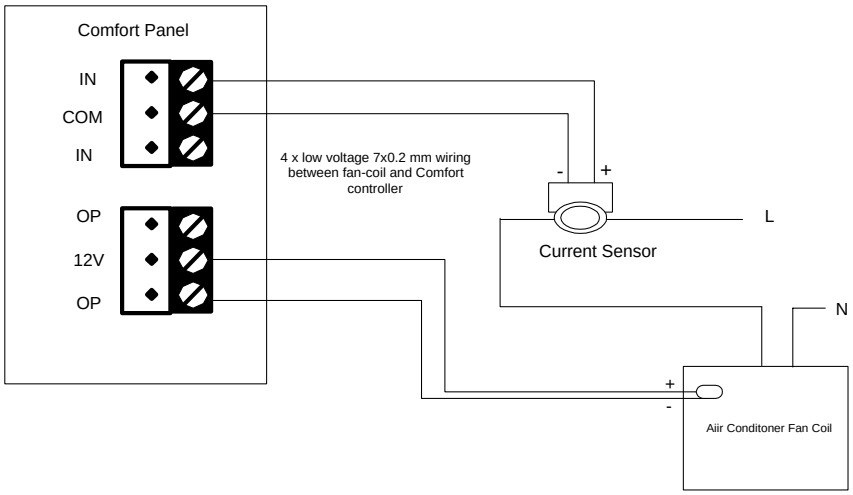


The C-Bus Neo switch is shown below

The UCM interface card interfaces Comfort to EIB and CBUS. The bus cable terminates to the UCM. Comfort can send commands to the bus to control lights or electrical loads, and can receive commands from the switches or sensors on the bus to activate responses. Comfort can also give status indication to the bus switches from a device controlled by Comfort, e.g. air-conditioning. As a guideline, for systems with less than 16 Cbus/EIB addresses, use Comfort PRO. For systems with more than 16 addresses, use Comfort ULTRA.

Control of Air-conditioners

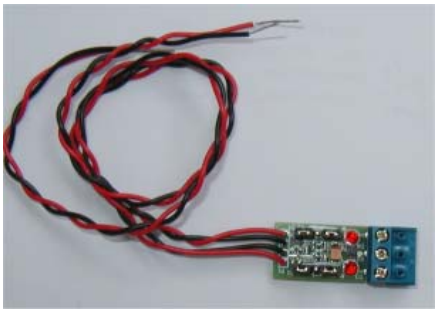
Comfort is able to send Infrared signals to control individual airconditioner Fan Coil Units (FCU). The infrared signals can be learned using the UCM/IR which comes with IR Learner software. This allows any learned signal to control the FCU including temperature and fan speed. The diagram below shows the connection method. This applies only to FCUs which are controlled by Infrared remote control.



An Infrared Transmitter (see picture) is connected to any Comfort output, including RIO output to send the IR signal to the FCU. Any comfort output is capable of sending IR signals

The IR transmitter can be placed within the FCU next to the receiver, so that it can be hidden from view.
To detect the On/Off status of the FCU, a Current sensor CSM03-CT is used (see picture). The supply cable to the FCU runs through the central hole of the current sensor. This gives an ON status to a zone input when there is current flowing.

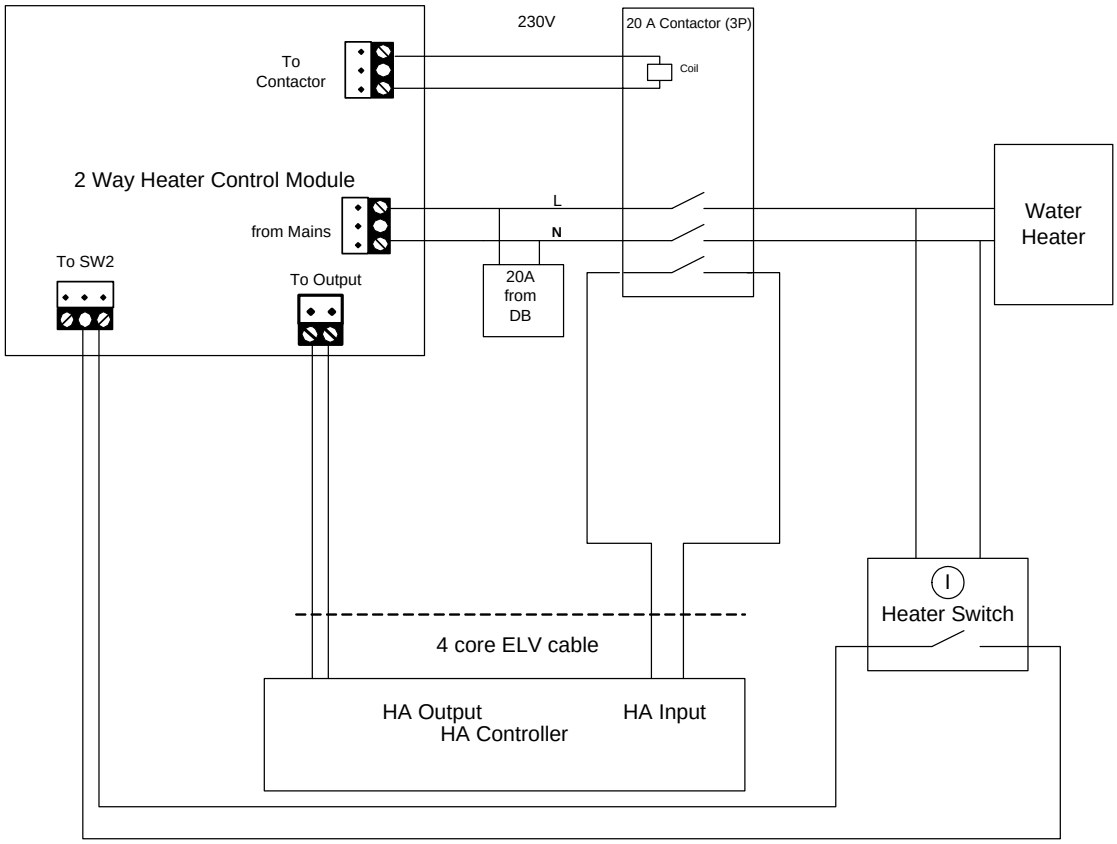
At the Comfort panel, two CSM03-CTs can be connected to a single CSM03-PCB, which is plugged into to two Comfort inputs, including RIO inputs



Each FCU requires 1 Comfort input and 1 Comfort output.

Some Airconditioner manufacturers (e.g. Daikin, Sanyo) supply Interface cards which allow their FCUs to be controlled by dry contact pulses and provide status as dry contacts. The RLY02/8 8 channel relay or RLY02/4 4 channel relay can be used. This also requires 1 Comfort Input and 1 Comfort Output.

Control Of Water Heaters



Comfort can control storage heaters for hot water to showers and bathtubs. This requires a Heater Control Module and 20A Contactor. This is connected to the Heater switch by 2 x 230V wires and to the contactor coil via 2 x 230V wires. A 5A circuit supplies 230V from the DB. The contractor is has 2 pole + auxiliary contact rated at 20A. 4 low voltage wires are connected from the contractor and Heater control module to the Control panel. The Heater control Module and Contactor are housed in a Polycarbonate IP56 enclosure of dimensions 255 x 200 x 110 mm, which can be mounted near the water heater. The Heater switch shall be such that the indicator light and the switch are independent, as the light is connected to the heater power supply directly.
1 Input and 1 output from Comfort is used for each hot water heater

Control of Home Entertainment Equipment

Home entertainment or corporate presentation equipment like TVs, Projectors, Motorised screens, music and video players can be controlled using infrared signals. The UCM/IR is able to learn most IR signals from the manufacturers handheld remote controls. The IRD01 IR Dome (see picture) has 8 transmitters pointed 360 degrees around the room.

The IRD01 also has an IR receiver to receive Comfort IR Codes from the handheld RC01, as well as an IR receiver to receive Comfort IR Codes from the handheld RC01 (see picture) The IRD01 is connected to 1 Input and 1 Output on the RIO01. 1 RIO01 is able to support 8 IRD01s or general purpose I/O

The RC01 is able to arm and disarm the security system as well as control any equipment, lighting etc. connected to Comfort.

Note: The IRD01 is NOT an IR distribution system, i.e. it cannot receive IR codes from other manufacturers remote controls to distribute around the home

Control of Power Points and Lamps

X10 appliance modules (see picture) can be used for control of power points and lamps

X10 Lamp and Appliance Modules are shown
The Two way X10 interface XM10/PSC05/TW523 connects Comfort to the Power Line to control other X10 appliance and lamp modules.
The Two way X10 interface XM10/PSC05/TW523 connects Comfort to the Power Line to control other X10 appliance and lamp modules.

The XM10E Interface is required to connect Comfort to the Power Line. Phase Couplers are required for each phase in the home, and appliance or Lamp Modules
Warning: X10 signals are attenuated along the power line and is subject to interference from other sources. Use of couplers and filters may be necessary. X10 Modules only work in the same electrical phase as the X10 Interface. X10 Phase couplers are required to transmit the X10 onto other phases.

Control of Automatic Gates

Automatic gates work well with the Comfort Door Station DP01
Automatic gates or doors have a switch which opens and/or closes the gate/door. Comfort can control a relay with its contacts connected in parallel to the switch to do the same thing. A 12V relay on the RLY02/8 or RLY02/4 can be used for this. The relay coil is connected to any of Comfort's outputs or RIO outputs. A momentary 1 second pulse is sent to the output to open or close the gate
Normally Automatic gates are toggled by the same consecutive presses, i.e. they alternately open or close. Hence the user may not know whether the gate is being opened and closed if they cannot see the gate. Activating the relay again will close the gate if it is already opened. The gate should be configured so that it closes after a while, but there should be a mechanism to prevent the closing of the gate when the car is still detected by an infrared beam across the gate.

Scene Control Switches

SCS01-AN (Scene Control Switch, Anthracite) and FR1-EV-AL Frame is shown
The Scene Control Switch has 4 buttons and 4 indicator leds which can be programed for any 4 scenes, e.g. Arm to Night Mode, Switch off downstairs lights, On bathroom light, Music Mode. The indicator leds provide status of the scene or controlled items and is fully programmable. The Scene control switches come in various styles and colours to match any decor, and matching electrical switches are also available for the whole house.
Scene Control Switches are suitable for bedrooms and living rooms for convenience where it is desired to control scenes. The SCS01 is a module by itself and does not require and inputs or outputs

Other Equipment

For control of other equipment, please contact Cytech Technology or the local distributor for advise.

Alarm Sensors and Contacts

Comfort does not have its own range of alarm sensors, PIRs, Magnetic contacts etc.. Any normal sensor used in a burglar alarm system can be used for Comfort. Basically all alarm sensors present a contact to Comfort If the contact is Closed, the sensor is inactive, e.g. a closed door. If the contact is open, the sensor is activated, e.g. an open door. Alarm Sensors are usually normally closed, so that cutting the sensor wire back to the control panel gives an sensor activated indication to the controller.
Some of the types of sensors typically used in intruder alarms are:

Magnetic contacts
these are used on windows and doors to detect open and closed. They consist of a magnet which is mounted in the moving part of the window or door, and a fixed part which is connected to the wire which runs back to the input zone in Comfort. Magnetic Contacts require no power, as the magnetic action opens and closes the contact. Hence only 1 pair of wires are required to connect back to the Comfort Input. However it is recommended to have a spare pair of wires in case the original pair is cut or has high resistance. Alarm cables are normally multicore, 7x 0.2 mm (meaning 7 strands of 0.2 mm^2 cable) and come in 4 core, 6 core or 8 core, untwisted.
There are many types of magnetic contact designs depending on where it is to be mounted - flush, surface, outdoor, heavy duty etc.
Magnetic contacts in the same room with the same function, e.g. mounted on windows in the room may be connected in series and connected to one zone input

Passive Infrared Detectors (PIR)
This requires 12V from Comfort to operate as it is electrically powered. The signal to Comfort is a normally Closed contact. Hence 4 wires are required. It is recommended to use a 6 core alarm cable. There are many types of PIRs available, from dual technology (for minimising false alarms), quads, ceiling mounted, pet-immune, outdoor etc.. The choice depends on where the PIR is to be mounted and the surroundings
PIRs should never be connected in series with magnetic contacts as they have different functions.

Smoke and Heat Detectors
These require 12V supply to operate, hence 4 wires are required, but 6 are recommended.. The contact may be normally open or normally closed (changeover). Choose sensors which can be used with intruder alarm systems, i.e. with 12V supply, as fire alarms normally use 24 Volts sensors.

Siren, Strobe
Siren and Strobes are driven by dedicated 12 V outputs. Comfort inputs and outputs are not used. Any 12V siren and strobe used in the industry can be connected to Comfort.

Security/Lighting Integration

Many scenarios can be programmed. The examples below are just some of the possibilities

1. In Vacation Mode, certain lights can turn on at semi-random times of the day or night to give the impression that the home is occupied.
2. In the event of an alarm in Away Mode, the Lights in the home can be turned on to alert everyone (in addition to the siren, strobe etc..)
3. When there is an alarm in Night mode, the lights in the detected area can be turned on so the owner will know where the intrusion is

4. When the front door is opened at night, the Entrance Hall Lights can be turned on to let them see their way around and disarm the system
5. When the outside PIR detects movement in the Entrance area, the Entrance lights can be turned on for a few minutes, to welcome visitors or deter burglars
6. The garden lights can be turned on automatically at programmed times at night
7. When motion is detected say in the staircase at night, the staircase light can be turned on for some time to allow someone going upstairs or downstairs in the night to see
8. When there is no motion in a room for a prolonged period of time, lights and A/C can be switched off
9. When the doorbell is pressed at night, the outside lights can be turned on, and a recorded message (by the owner) can be played on the door station.
10. An Outdoor PIR can cause garden lights to be turned on so lurkers can be seen
11. PIR activation can turn on lights in the room so that DVR recording can be activated or Video monitoring can be effective

Sizing a Comfort System

The following examples are for a basic system for a small home and an advanced system for a larger home with full home automation

Home 1 - Basic System

Security
Front door, Back door, Kitchen Window, Living Room PIR, Panic button in Kitchen and Master Bedroom.

Lighting (On.Off)
Living Room, Dining Room, Master Bedroom, Bedroom 2, Bedroom 3

Airconditioning (Infrared)
Living Room, Dining Room, Master Bedroom, Bedroom 2, Bedroom 3

Keypads
1 KP inside front door

Door Station
1 DP01 mounted outside the gate (must be sheltered)

Scene Control Switch (Optional)
Scene Control Switch SCS01 in the Master Bedroom

Power Point Control (Optional)
3 x X10 Appliance Modules for lamps, fans, radios etc.

Automatic Gate (Optional)
1 Output and 1 relay for control of automatic gate

The alarm sensors require 6 inputs or zones. Note that there could be more than 1 magnetic contact in window zones
The lighting requires 5 inputs and 5 outputs, using 2 x TWS02 dial lighting modules and 1 x TWS01 single lighting module
The air-conditioning requires 5 inputs and 5 outputs using 5 IRW01, 5 CSM03-CT current transformers and 3 CSM03-PCB current sensing modules
The Automatic gate control requires 1 output

Keypads and Door Stations do not require any inputs or outputs, they are directly wired to Comfort
Hence the system requires 16 inputs and 11 outputs.

The equipment needed is

- 1 x CP9000-ULT (Comfort Ultra II controller with 8 inputs and Outputs), with transformer and 12V 7 AH sealed lead acid battery in an enclosure 310 x 350 x 95 mm
- 1 x LEM01-M2 (Local Expansion Module with 8 inputs and 8 outputs) mounted inside the same enclosure as the CP9000
- 1 x KP03. KP04 keypad with RC01
- 1 x DP03 Door Station
- 1 x RGR04 Ringer for Door station
- 2 x TWS02 Dual Lighting Control Module
- 1 x TWS01 Single Lighting Control Module
- 5 x IRW01 Infrared Transmitter Module
- 5 x CSM03-CT
- 3 x CSM03-PCB
- 1 x SCS01-AN - Scene Control Switch (Anthracite)
- 1 x FR1-EV-AL - Event Aluminum Frame for SCS01
- 1 x RLY02/4 with 4 relays for control of gate (only 1 relay used)
- Magnetic contacts, PIRs , Heat detector(s), Panic buttons as required
- Optional - TW723, or XM10E X10 two way Interface (for X10 control)
- Optional - AM12U Appliance Module, LM12U Lamp Modules (for X10 Control)

Home 2 - Intermediate to Advanced System

Security
Front door, Back door, Kitchen Window, Living Room PIR, Living Room Window, Kitchen Heat Detector, Bedroom 1 Window, Bedroom 2 Window, Staircase PIR, Family Room PIR, Panic button in Kitchen and Master Bedroom.

Lighting (ON/OFF)
Gate Pole Light, Car Park Light, Garden Light, Back Yard Light

Lighting (Dimming- CBUS/EIB)
Living Room, Dining Room, Kitchen, Master Bedroom, Bedroom 2, Bedroom 3, Stairs

Airconditioning (Infrared)
Living Room, Dining Room, Master Bedroom, Bedroom 2, Bedroom 3, Bedroom 4, Family Room, Study

Keypads
4 KPs - inside front door, 2nd floor, 3rd floor, kitchen

Door Station
1 Door Station outside front door or gate

Scene Control Switch (Optional)
Scene Control Switch SCS01 in the 4 bedrooms and Living Room

Home Entertainment (Optional)
IRD01 to control TV, Projector, DVD, Screen

RC01 Remote Control

Several RC01 remote controls can be provided. These can be used with the IRD01 and KP03/KP04 keypads.

SCS01 Scene Control Switch (Optional)
4 x SCS01 Scene Control switch in each bedroom with 4 buttons and indicators for convenience, can be programmed for any 4 scenes

Touchscreen 4 " (Optional)
KT01 Touchscreen in Living room to control security and home appliances

Webserver Module (Optional)
CWM01 webserver module to allow monitoring and control of home from any PC on the network or Internet

UCM/Ethernet (Optional)
The Wizcomfort software (free download) can be used to control the home appliances as well as the security system. The UCM/Ethernet can be connected to the LAN in the home so that any PC on the network is able to control Comfort.

GSM Module (Optional)
GSM Module for higher security - wireless dial out to GSM network to 8 telephone numbers including SMS, acting as a back up if the main telephone line is cut. Allows user to use SMS to control home appliances

Power Point Control (Optional)
3 x X10 Appliance Modules for lamps, fans, radios etc.

The alarm sensors require 12 inputs or zones. Note that there could be more than 1 magnetic contact in window zones
The 4 ON/OFF lighting require 4 inputs and 4 outputs using 2 x TWS02 dial lighting modules.
The EIB/CBUS lighting does not require any inputs and outputs as it is controlled by EIB or CBUS. A UCM/CBUS or UCM/EIB is needed. A combination of bus-lighting and hardwired lighting using TWS modules can be used as it is cheaper to use TWS modules than CBUS or EIB lighting.
The air-conditioning requires 8 inputs and 8 outputs using 8 IRW01, 8 CSM03-CT current transformers and 4 CSM03-PCB current sensing modules
The Automatic gate control requires 1 output
Keypads and Door Stations do not require any inputs or outputs, they are directly wired to Comfort

Hence the system described requires 24 inputs and 13 outputs

The equipment needed is

- 1 x CP9000-ULT (Comfort ULTRA II controller with 8 inputs and Outputs), with transformer and 12V 7 AH sealed lead acid battery in an enclosure 310 x 350 x 95 mm
- 1 x LEM01-M2 (Local Expansion Module with 8 inputs and 8 outputs) mounted inside the same enclosure as the CP9000
- 1 x SEP01 Slave Expansion Module with transformer and 12V 7 AH sealed lead acid battery in an enclosure 310 x 350 x 95 mm. This can be mounted on another floor in the home to reduce the wiring runs
- 4 x KP04 keypads in any combination

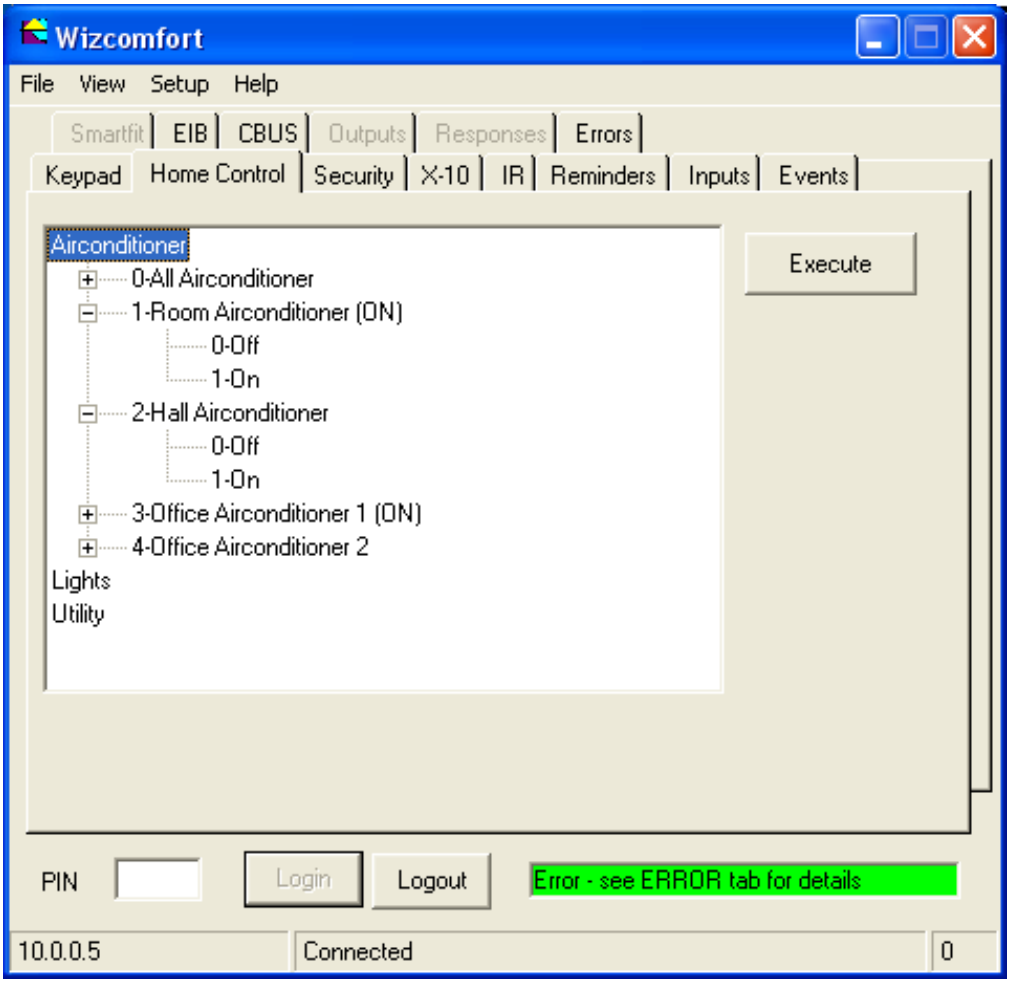
- 1 x DP03 Door Station
- 1 x RGR04 Ringer for Door station
- 4 x SCS01-AN - Scene Control Switch (Anthracite)
- 4 x FR1-EV-AL - Event Aluminum Frame for SCS01
- 2 x TWS02 Dual Lighting Control Module
- 1x UCM/CBUS or UCM/EIB
- EIB or CBUS switches, relays, actuators and dimmers as required
- 8 x IRW01 Infrared Transmitter Module
- 8 x CSM03-CT
- 4 x CSM03-PCB
- 1 x IRD01 Infrared Dome
- 1 x RIO01 Remote Input/output for connection of IRD01. Up to 8 IRD01s can be connected to 1 x RIO01
- RC01 handheld Comfort Remote control
- Magnetic contacts, PIRs , Heat detector(s) as required
- 1 x RLY02/4 with 4 relays for control of gate (only 1 relay used)
- 1 x UCM/Ethernet (Optional)
- 1 x KT01 Touchscreen Keypad (Optional)
- 4 x SCS01 Scene Control Switches (Optional)
- 1 x CWM01 Webserver Module (optional)
- 1 x UCM/GSM GSM Module (Optional)
- Optional - TW723, or XM10E X10 two way Interface (for X10 control)
- Optional - AM12U Appliance Module, LM12U Lamp Modules (for X10 Control)

Further Advanced Options

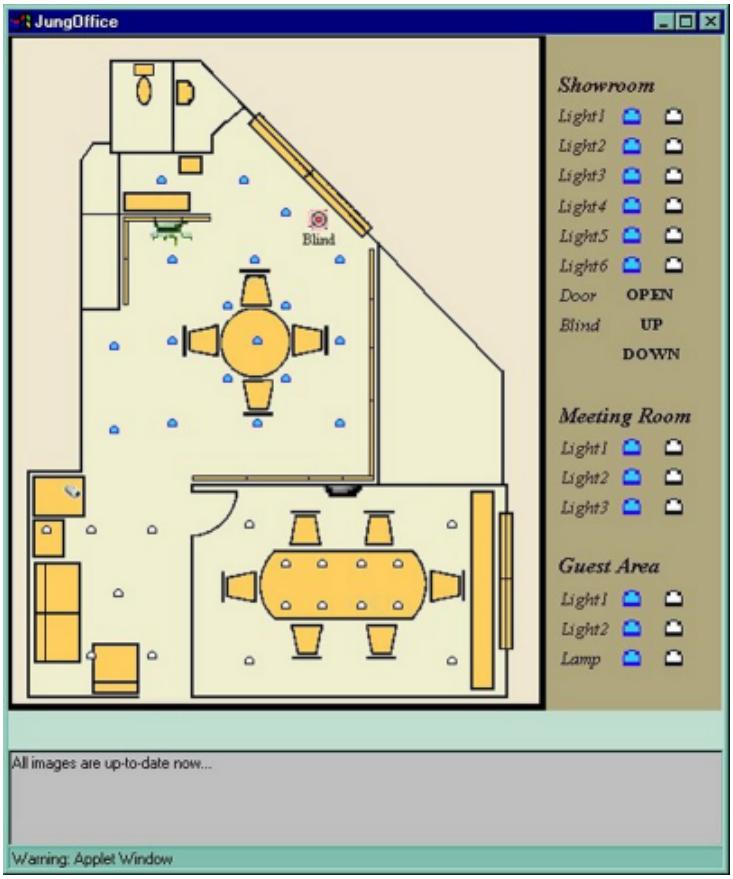
UCM/Ethernet

The UCM/Ethernet is connected to the LAN in the home, to allow any user on the network using the included WizComfort software to control the system and monitor the security areas. Unlike CWM, the UCM/Ethernet does not have a webserver and cannot be accessed using a browser. Viewing of cameras is not supported.

The UCM/Ethernet is not needed if the CWM01 webserver module is installed

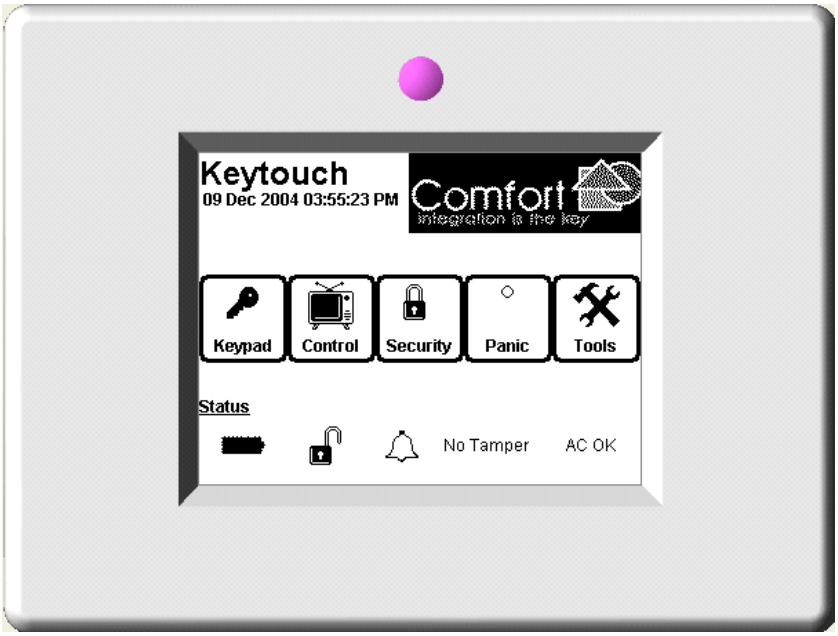


Comfort Webserver Module



The CWM01 module is connected to the LAN in the home which has a broadband router with an Internet connection. It contains a webserver which hosts the web pages, so that any computer in the home or on the Internet can access to the home using just a browser IE5, Netscape, Firefox etc... The webpage can be designed to allow the user to control any lighting, aircon or security in the home, and can also see the status of the appliances and security zones (doors, windows etc..). A IP-based Video camera or DVR system can be used with the system so that the user can click on a link to view any camera.
When the IPR detection causes an alarm, the lights in the room can be switched on so that the camera will be able to pick up and record the scene with light instead of darkness
The CWM does not depend on any computer for its operation. If the CWM is installed, the UCM/Ethernet is not needed. WizComfort can also be used with the CWM as it has its own IP address.

KT01 Touchscreen Keypad



The Touchscreen keypad has a 4” Black&White screen and a built-in speaker and microphone which can be used to control any lighting and appliance, as well as arm and disarm the security system and act as a regular keypad. The built-in IR. receiver can receive IR. codes from the handheld RC01 remote control. The status of the security sensors, doors windows, motion etc.. can be monitored in real time.

The KT01 keypad does not handle video.