LexCom Home Network

Connect and go.

Transform your new home into an entertainer's dream with **LexCom** Home Network technology

a brand of Schneider Electric

PDL

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The **LexCom** Home Network Product Overview and Installation Guide has been compiled to assist installers and consultants with the understanding, design, installation and testing of the **LexCom** Home Network system.

This document is, however, not intended to be a comprehensive guide to all aspects of network cabling systems for residential buildings. The information contained in this document is advisory only. It is the responsibility of the installer to be adequately trained and aware of the relevant standards and regulations pertaining to the installation practices and requirements for these types of home network products.

Schneider Electric NZ Ltd (hereafter referred to as “PDL”) reserves the right to change specifications, designs or wording included in this document without notice and without obligation.

A Structured Network for the Home

LexCom Home Network is a unique and flexible network suitable for houses and apartments. It provides a universal installation for telephone, data and television connections. LexCom Home Network can, for instance, be connected to broadband internet, making it possible to use all the services offered by that technology throughout the home.

LexCom Home Network can be adapted for everything from small installations in individual houses to several installations in an apartment building or complex. In apartments, every dwelling can be equipped with its own LexCom Home Network connected to the incoming telephone/TV/data network of the building. Essentially, LexCom Home Network is the new home network for IT, communication and entertainment.

Built-in Flexibility

LexCom Home Network is a 'structured' installation in which a number of outlets of the same type are connected by cables to a distribution centre. Incoming cables for telephone, data, television, etc. are connected at the distribution centre, and patch leads are used to route the incoming signals to individual outlets around the home.

This gives LexCom Home Network amazing flexibility, as it is simple to reconnect any outlet in any room to receive whichever incoming signal you require.

A telephone outlet can easily be switched to receive TV, radio or internet signals within seconds.

Easy to Install

LexCom Home Network is quick to install, thanks to its well thought out assembly methods. It has been developed to achieve high performance and reliability, with the best products on the market chosen and tested to ensure that the system works properly without compatibility problems. The network provides an infrastructure for three forms of media (data, telephone and television) **all on the same cable**, instead of a specific type of cable that would be needed for each medium.

High Capacity

LexCom Home Network has been designed to satisfy present and future transmission speed demands. The system has a very high capacity, with a frequency range of up to 900 MHz, that exceeds the frequency currently used for free-to-air analogue and digital television. Its data components satisfy and exceed the requirements for Category 6 networking. The data transfer speed depends on which data units are connected to the system. The standard data module offers speeds of 10/100 Mbit/s, and as the system is modular, it is easy to replace parts to obtain even higher speeds.

Design for the Future

LexCom Home Network is designed with future home needs in mind. Its modular design makes it easy to use and easy to upgrade, allowing you to replace parts to obtain higher speeds or to add new functionality as technology moves forward.

Just connect and go>

Complete Flexibility

LexCom Home Network
Connect and go.

All the outlets in your home are identical, irrespective of the device that you wish to connect. These high quality outlets provide the means for you to make maximum use of your **LexCom** Home Network system. Plug in TVs, computers, entertainment systems or video cameras anywhere in the house.
The connecting cables have been adapted to suit the device, with three types of connecting cables for telephones, computers, and TVs. These connection cables follow the devices when they are moved from the outlet in one room to another. The function of each outlet is easily defined and redefined at the distribution cabinet.
With LexCom Home Network, you

just connect and go>

Think ahead. It is impossible to predict today what requirements a home network will have to meet in five years' time. There are many experts but they don't always agree. One thing is certain – electronic communication is increasing to an extent that we can scarcely imagine.
Using it will call for high capacity and we will probably want to have access to the network almost everywhere in the home. So we are not likely to have too many network outlets. The best approach would be to have a few extras from the outset.
With a LexCom Home Network you can furnish your home so that the computer fits in. In days gone by, it had to be close to a spare phone outlet. And with a home network you can have more than one computer in your home, so that you can share files, your internet connection, printer and all of your digital media files.

Easy to Change the Function of the Room Outlets

1. 

The distribution cabinet is similar to a computer patch panel. For every outlet in a room there is a corresponding port at the distribution cabinet with the same numbering.

2. 

Using a patch cable, the room outlet is connected with either the TV, telephone or data module, depending on your intended use. The outlet has now been defined.

3. 

If you want to alter the function of a TV outlet in a room to enable a computer to be used, simply disconnect the cable from the TV module and insert it into the module marked 'data'. The outlet is now reconfigured for computer use.

LexCom Home Network is a structured network

LexCom Home Network is designed as a star network, which connects all the outlets to a central hub. Active modules are installed at the centre of the network to accept input signals for telephone, TV and data. These elements are linked together at the specially developed distribution cabinet.
From the distribution cabinet, the signals are distributed via the network cable to the individual wall outlets as required. The outlets can be connected by means of patch leads to the input signal you need at a particular wall outlet in the home, i.e. either data network, one or more telephone lines, radio/TV or other forms of video sources. This gives unprecedented flexibility.

Needs

It is important to define at an early stage what is required of the infrastructure. In a typical installation up to 26 outlets can be connected to the distribution cabinet. If you need more outlets, you can upgrade to a high-density patch frame with ports for up to 40 outlets. Furthermore, future needs for new functions/applications can easily be met by changing or adding a DIN rail active module.

Cable Lengths

To maintain full capacity between the distribution cabinet and the wall outlets, no installation cable should be more than 40 metres long. To avoid over-driving the TV signal, no installation cable should be less than 8 metres long. To ensure the maximum and minimum runs are installed the cable is metre marked.

Positioning the Distribution Cabinet

Position the distribution cabinet as central as possible in order to achieve optimal cable lengths to the outlets (i.e. between 8 and 40 metres as mentioned above). Ensure an electrical power supply back to the circuit board is supplied to run the Apollo Power supply. Position the distribution cabinet at a convenient height for operation and maintenance. The ambient temperature should be between ±0 and +40°C.

Positioning Outlets

Plan for at least two outlets in each room to meet future demands and to provide flexibility. Typically, there will be a telephone network outlet in rooms such as the hall, lounge and master bedroom, and an antenna outlet in the main living areas, bedrooms and the kitchen. A distribution cabinet with telephone, data and TV modules can be used for up to 26 outlets.

Other Considerations

Please refer to the sections on “Connection to External Networks” and “Connection Examples” on pages 9-14 for more details to be considered when connecting the LexCom Home Network installation to other systems and devices (both external networks and internal home appliances) that are not supplied by PDL.

Typical Layout and Requirements

Kitchen

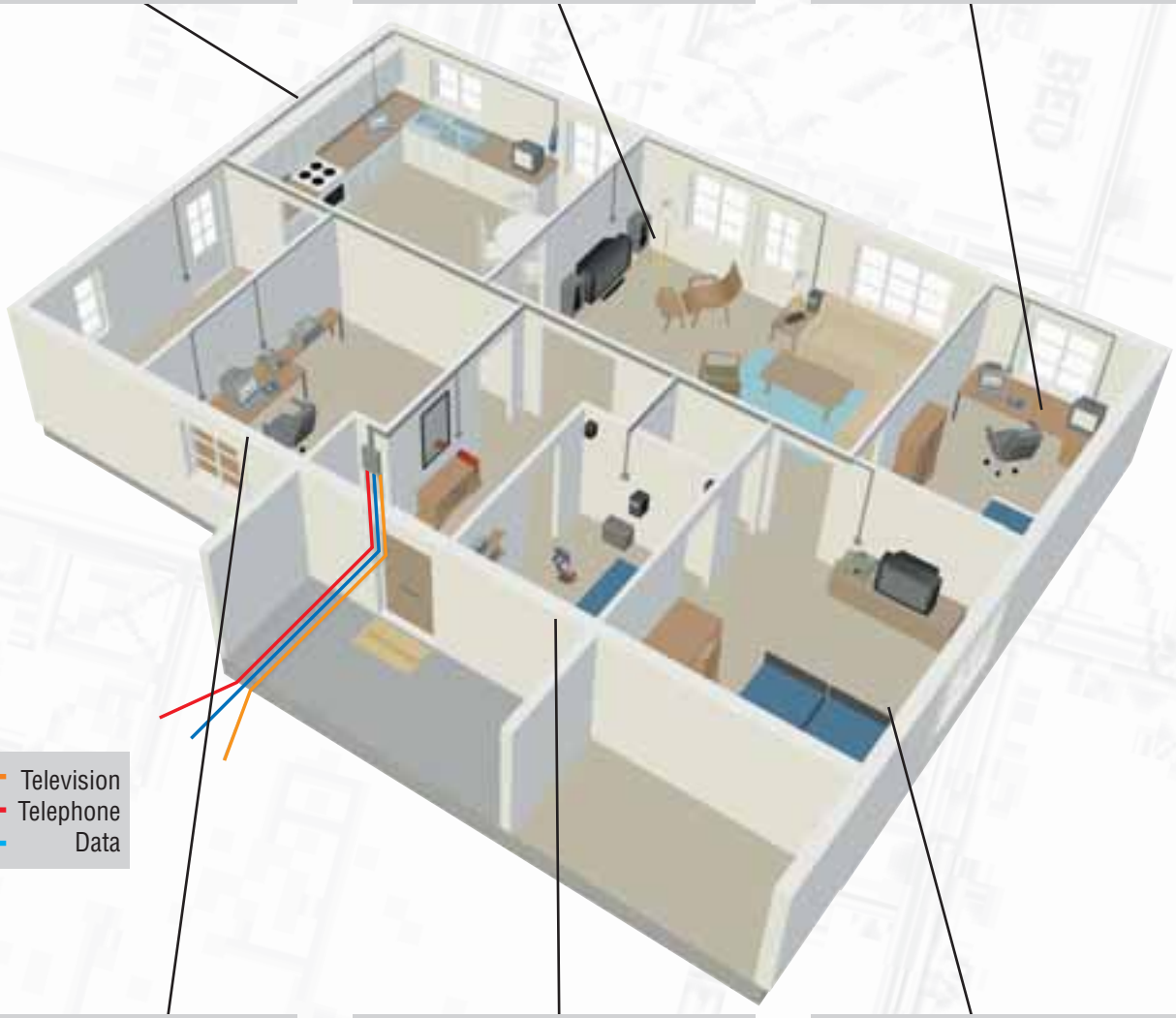
Commonly the hub of the home, there is often a telephone, TV and radio.
Two outlets

Living Room

Typically an entertainment centre for watching TV, DVD and VCR, it can also be a place to play computer games or to plug in a laptop PC.
Six outlets

Spare Room

Convert a spare room into a study, with phone line and internet, or a bedroom with access to Pay TV or the DVD.
Two outlets



Television
Telephone
Data

Study or Home Office

Telephone, fax, computer, scanner and printer access can be achieved from other rooms.
Four outlets

Children's Room

Requirements change as children grow, TVs and computers are often needed for games as well as homework and projects.
Two outlets

Master Bedroom

A telephone and TV connection are usually a requirement in any master bedroom, with the possible requirement for adding a computer and remote control of DVD or pay TV.
Four outlets

LexCom Home Network is made up of a number of separate modules. This makes maintenance and upgrading easier as technology develops and new standards reach the market. All active modules are powered and they satisfy Australian and New Zealand electrical safety and telecommunications requirements.

The distribution cabinet is the heart of the **LexCom** Home Network system. It is made up of a distribution cabinet equipped with various modules that handle incoming signals (telephone, TV and data) and a patch frame comprising ports to which all outlets in the rooms are connected using RJ45 wideband connection jacks. Upgrading and adding new functions is simply a matter of replacing or adding modules in the distribution cabinet.

Distribution Cabinet

The distribution cabinet is used to house centralised components of the LexCom Home Network system. It is available in two sizes of height 22" and 14", and can be either surface or flush mounted. The 22" distribution cabinet can accommodate up to 6 modules and 26 patched out RJ45 jacks. The 14" distribution cabinet can accommodate up to 4 modules and 16 jacks.
(Number of jacks can be increased with high density patch frames).

Cables entering the building are connected to the modules in the distribution cabinet. Patch leads are then used to make further connections via the ports of the patch frame and the network cables to the outlets in the rooms.

Power Supply

A 12V DC transformer is provided to supply power to the active modules.
(The TV amp module and data switch require 12V supply.)

Data Module

The data module is a switch with four ports to connect computers, printers and other hardware with network interfaces. The module also has an expansion port for connection to an external network such as a broadband internet network.
The module supports data rates of 10/100 Mbit/s.

Telephone Modules

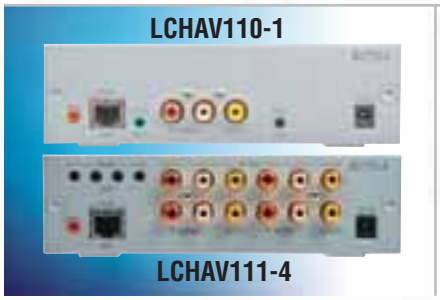
Incoming telephone lines are connected to the telephone modules. The two versions distribute between two and four incoming analogue lines and both have eight ports for connection through to telephone and fax outlets. The LCHT100 has several settings for grouping the two analogue lines to the outlets to accommodate changing priorities.

TV Amplifier Module

The TV amplifier module distributes television and radio signals throughout the network. The LCHA110 module has an input port for the incoming antenna cable and six ports for patching through to the rooms. It also features an AV input port for connection to an AV modulator or PC player. There are two modules available. LCHA110-R has cable TV return path and LCHA110 standard module with no return path function.

AV Combiner

The AV combiner allows 2 or 3 AV modulators or PC players to be connected into the AV input port of the LCHA110 amplifier module. It combines the 3 AV signal inputs and forwards the combined result to the single output port, supporting infrared remote control on all devices as standard.

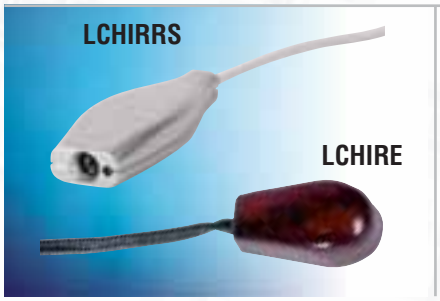


AV Modulators

Two options of AV modulators (either single channel or four channels) are available for the distribution of AV signals (DVD, VCR, security video cameras or Pay TV decoders) to multiple locations in the LexCom Home Network. The AV modulators convert composite video signals from these entertainment devices into TV channels and send them to the LCHA110 TV amplifier module for further distribution. Both AV modulators support remote infrared control of the connected entertainment devices.

PC Player

The PC player has a built-in FM stereo modulator and has been designed for the distribution of MP3 music, internet radio, etc. throughout the home. It creates a FM radio channel for the sound signal connected to its input, allowing the stereo sound from any source to be transmitted into the LexCom Home Network via the LCHA110 TV amplifier module. This signal can then be made available at any stereo receiver in the home. (Source can be a PC, portable CD player, MP3 player etc.)



Infrared Link

The infrared link, in conjunction with the LCHA110 TV amplifier module, makes remote control of entertainment devices like a DVD, VCR or Pay TV decoder possible from all TV sets around the home.
The infrared link consists of component IR emitters and receivers. Receivers are located at the TV where the remote control is to be used. Emitters are located over the IR eye of the entertainment device to be controlled and are linked either to an AV modulator or directly to the LCHA110 TV amplifier module.

Termination Plug

The termination plug provides a 100 ohm termination of the conducting twisted pair wires for radio/TV/audio-visual applications. It is a requirement that termination plugs are inserted into unused output ports of the TV amplifier module, to provide better response stability of the amplifier and minimise RF emissions. Any unused input of AV combiner and AV input of TV amplifier module should also be terminated by this plug to prevent noise being introduced into the system.

LCHITA15

Attenuator

The attenuator is a plug-in unit for outlets to compensate for short link problems with TV signals. Three options are offered, providing different levels of attenuation to the TV signals and thus simulating different lengths of the cable link.

LCHLTVP

Patch Leads

Patch leads are used only at the distribution cabinet to connect the incoming signals to the required outlet. These leads are available in either fully shielded (STP) used for only TV/video or unshielded (UTP) used for only telephone and data.

LCHLTVWH

Connecting Cords

Three types of connecting cords are used to connect TV/radio, data and telecommunication devices to the wall mounted outlets.
TV/radio cord: Shielded, RJ45-coax, with built-in balun for impedance conversion from 100 ohm symmetrical to 75 ohm asymmetrical.
Data cord: Shielded, RJ45-RJ45, Category 6.
Telephone cord: Unshielded, RJ11-RJ45.

LCHC300

Network Cable

Used for the fixed installation in the distribution network. The cable connects the outlets to the ports of the patch frame in the distribution cabinet. With its exceptional bandwidth and high signal capacity, the cable can handle all types of traffic (telephone, data, radio/TV). The copper cable is made up of individually screened 'twisted pair' wires with a common copper braid shield. Its outside diameter is 7.5mm. Supplied on 300 metre drums.

LCHRJ45

Modular Connection Jack

The modular connection jack (LCHRJ45) is used at both the wall outlet and the patch frame in the distribution cabinet. It can allow very fast and easy termination of the installation cable without using any punch down tool. Category 6 data performance and high quality TV transmission can be achieved with this connector.

To fit the LCHRJ45 connector to PDL wall plates, you need to order the 500/600/800 series module adaptor 611M and is available in black and white.

Outlets

Outlets are located where needed. Normally, two or more outlets are installed in every room. The same type of outlet is used throughout the installation. The function of each outlet is controlled from the distribution cabinet. Different cords are used to connect different devices, depending on the function chosen for the outlet in question. Outlets are available in different colours to match PDL 800, 600 series switches, socket outlets, dimmers, etc. The outlets are always fitted with RJ45 modular connection jacks.

(Note: the RJ45 jacks shown are purchased separately as is the 611M module adaptor)

Connection Examples

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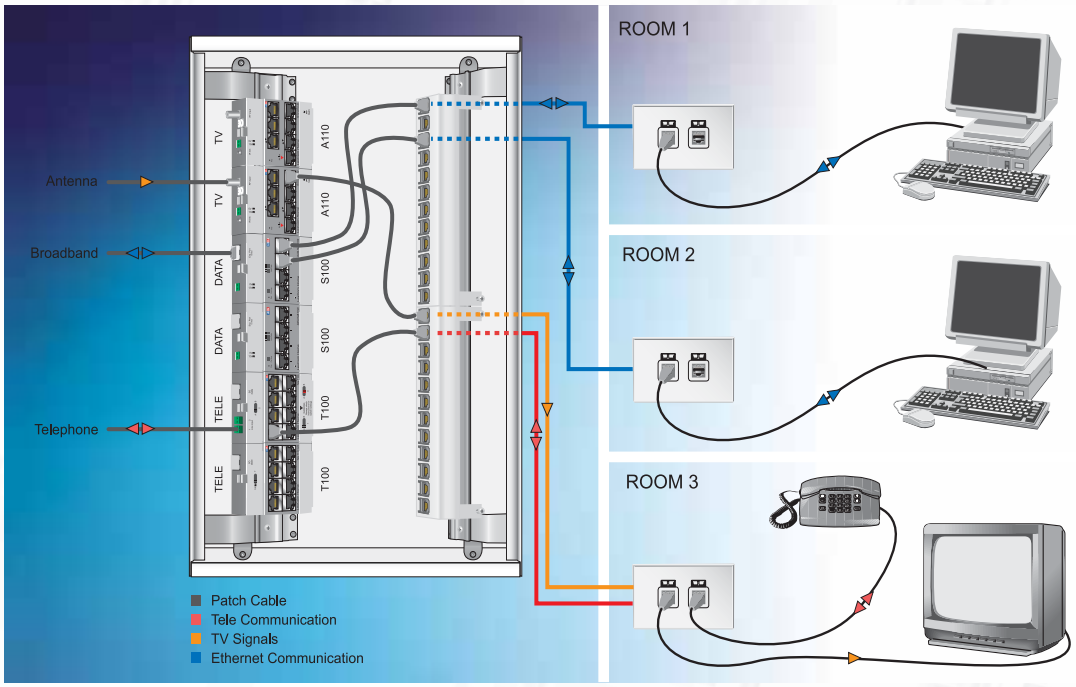
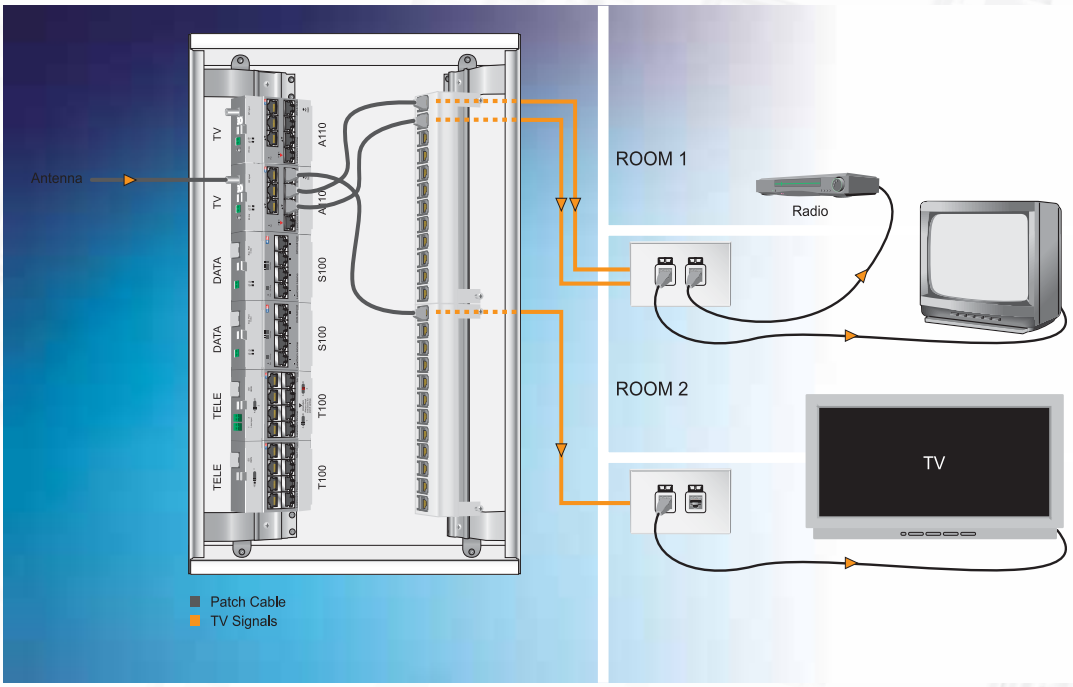
Note: In the following connection examples, all systems and devices that are not part of the **LexCom** Home Network installation, are to be procured by the home owner or installer from other suppliers and/or service providers.



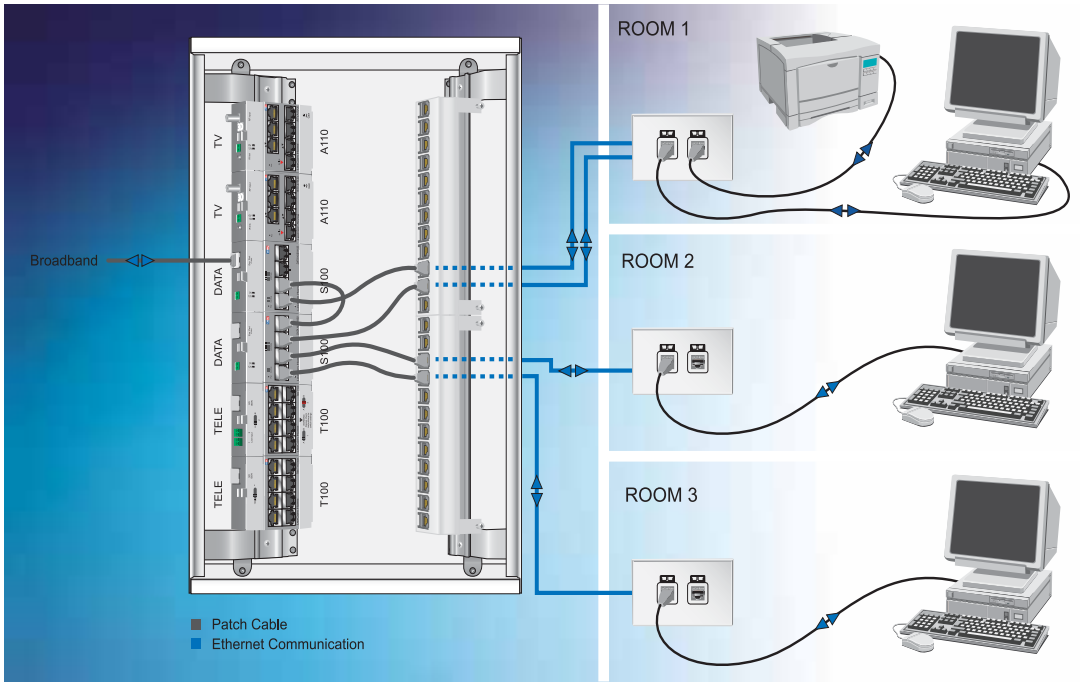
Distribution of Telecoms, TV and Data

LexCom Home Network gives an infrastructure for several types of media on a network. In this example, incoming signals for data, telephone and television are connected to the active modules of the distribution centre and patched to the required outlets.



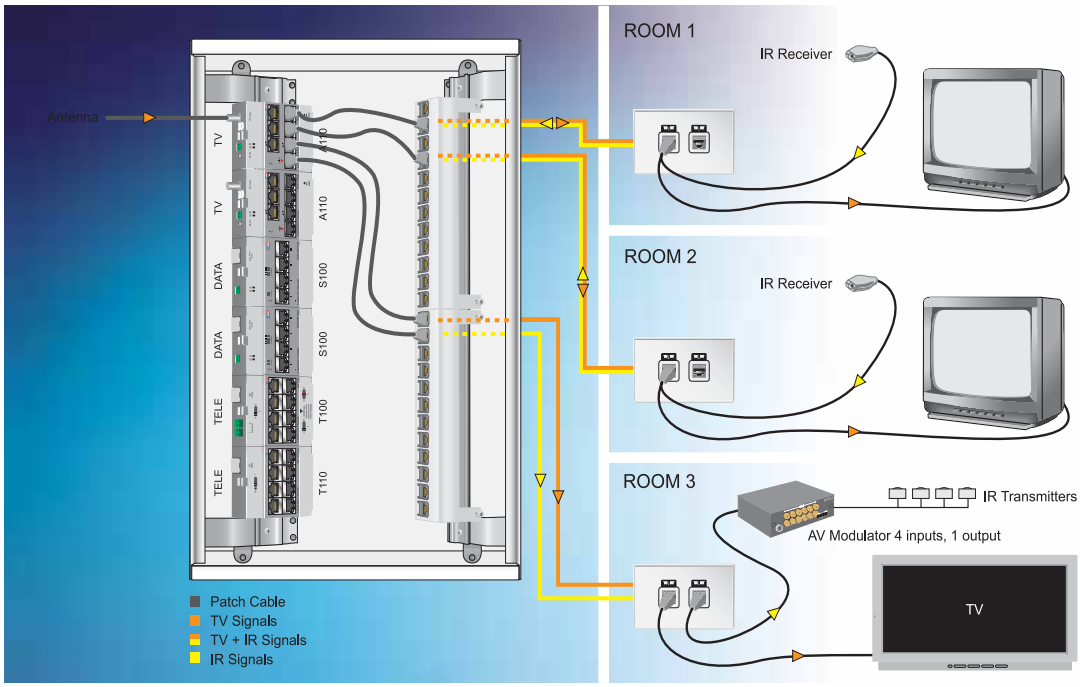
Simple TV Antenna Distribution

Here, LexCom Home Network connects all TV sets to the TV antenna. In addition, a radio is connected to the antenna system using the female adaptor supplied.



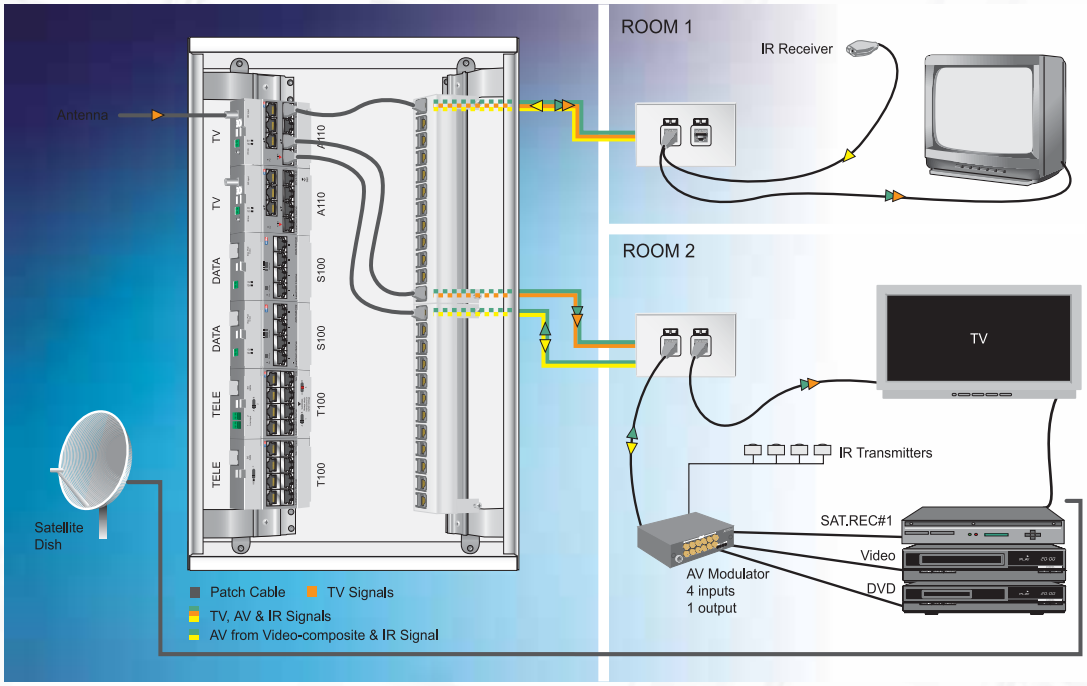
Network with Computers and Printers and a Connection to an External Network (e.g. Broadband)

In this example, LexCom Home Network is used to set up an internal data network of computers and a shared printer. The outlets are patched to the data module of the distribution centre to allow communication between these outlets. Connection is also made to an external network, e.g. broadband or a permanent internet connection. This internet service is then also available at all outlets connected to the data module.



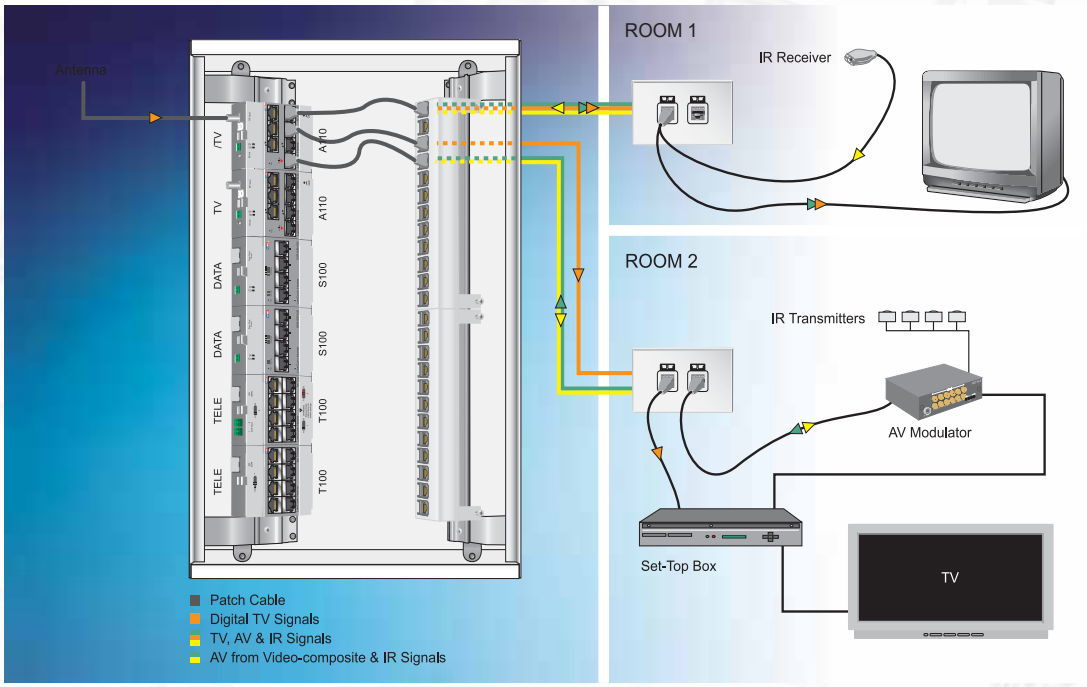
Infrared (IR) Link

This example shows a TV antenna connected to the LCHA110 TV amplifier module. In this installation, there is an AV modulator which can accept signals from four video sources (video, DVD, etc.). These video sources can be controlled from all rooms via IR receivers. The AV modulator must be connected to the AV link port on the LCHA110 TV amplifier module via an outlet and a patch module. All six outlets on the TV amplifier module can receive IR control signals. IR control signals are always sent on the AV port and IR output of the TV amplifier module.



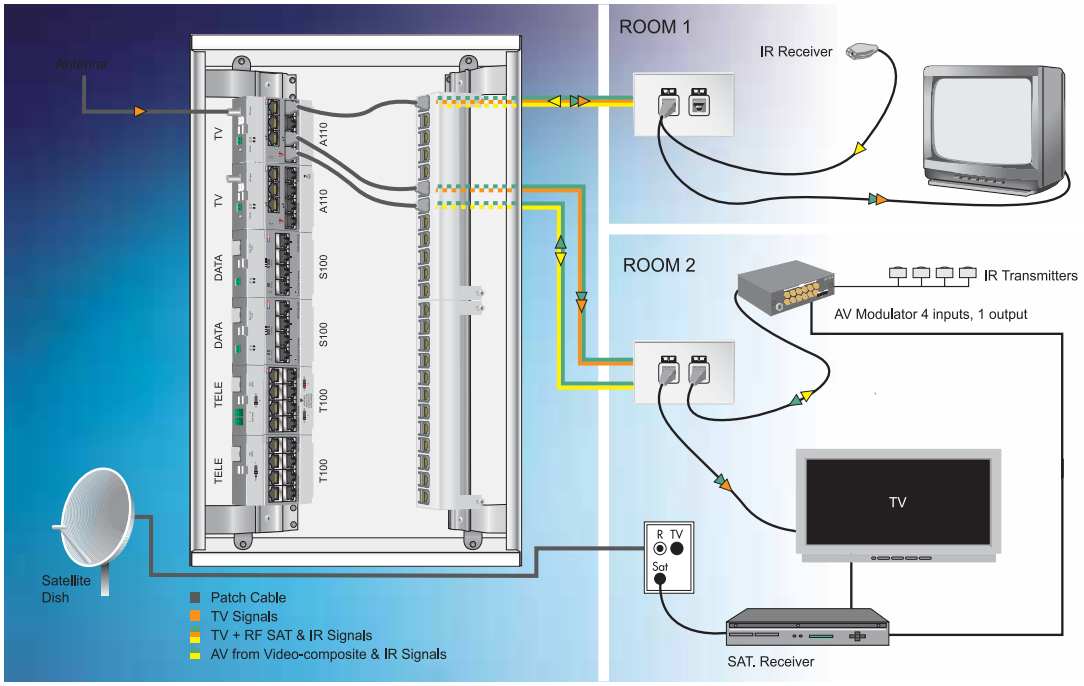
AV Link

LexCom Home Network is connected to a TV antenna and a satellite receiver. At the same time, there are DVD and video devices. The TV antenna is connected directly to the LCHA110 TV amplifier module. Satellite receivers and video/DVD devices are connected to an AV modulator which is located at the main TV set. The main TV set can still be connected directly to a satellite receiver or video/DVD devices via a scart, RCA or S-Video cord if required. These signals can be mixed and sent to all outlets when the AV modulator is connected to the AV link port on the TV amplifier module. It is also possible to control satellite receivers/video devices from all TV sets via an IR link in the TV amplifier module and the AV modulator.



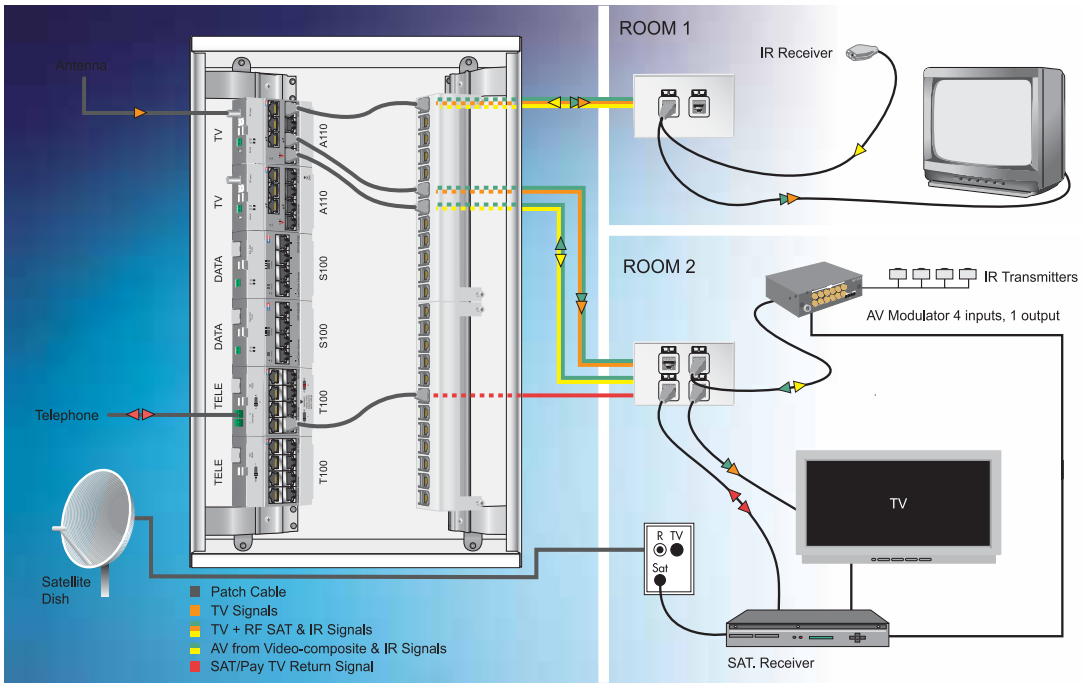
Free-to-air Digital TV

LexCom Home Network can be connected to high definition digital TV. This example shows the connection arrangement with digital TV and set-top box. TV programmes from the set-top box can be viewed on other TV sets via the AV link. The set-top box can also be controlled from other TV sets if the IR system is connected to IR link.



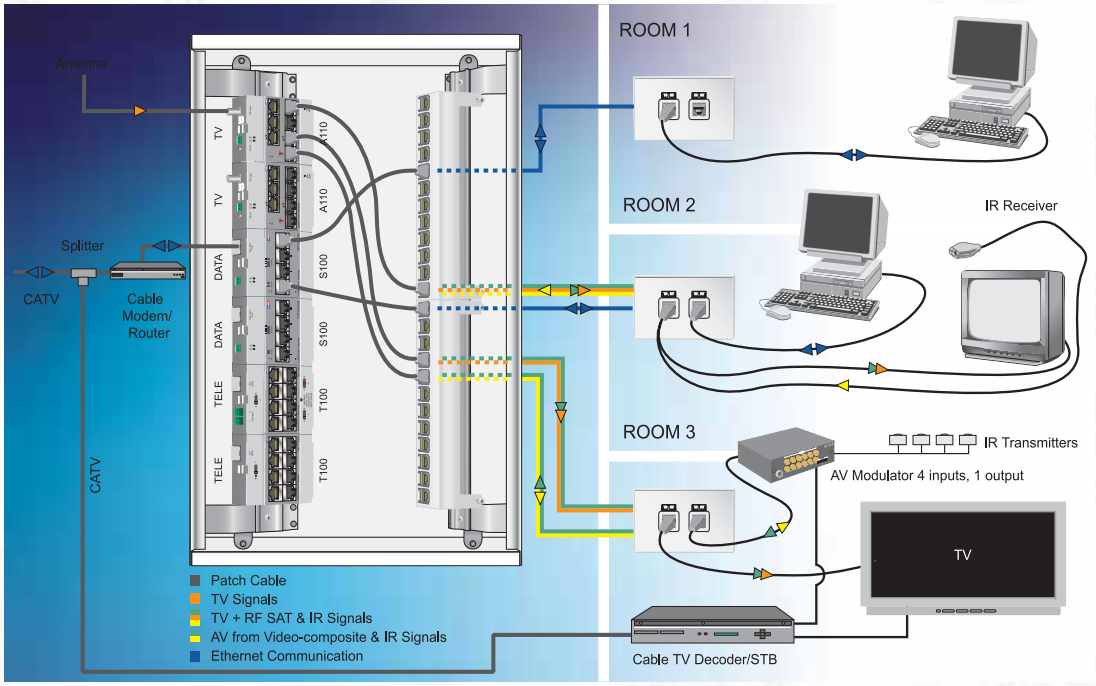
Satellite/Pay TV

LexCom Home Network can be connected to both terrestrial TV (via antenna) and Pay TV (via satellite dish), with the satellite receiver located close to the main wide screen TV set. By connecting an AV modulator (which is linked to the AV link port on TV amplifier module LCHA110 via the wall outlet and patch module), other TV sets can show both terrestrial TV and the channel to which the satellite receiver is set. The satellite receiver can also be operated and controlled from all TV sets via IR link in the TV amplifier module and AV modulator.



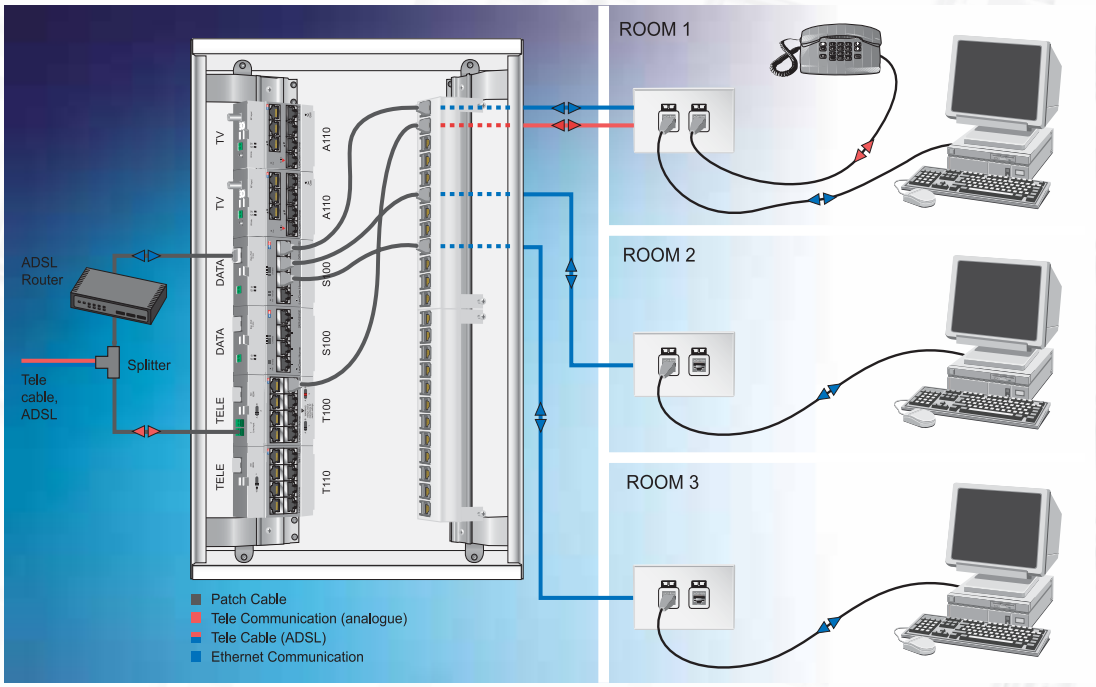
Satellite/Pay TV, with Return Traffic

LexCom Home Network can be connected to Satellite/Pay TV with possibility to communicate with the Pay TV system operator. The return traffic in this example goes from the satellite receiver via the LexCom Home Network's telephone module to the Pay TV system operator. An application of return traffic is 'pay per view'. Pay TV programmes can be viewed on other TV sets via the AV link. The satellite receiver can also be controlled from other TV sets if the IR system is connected to IR link.



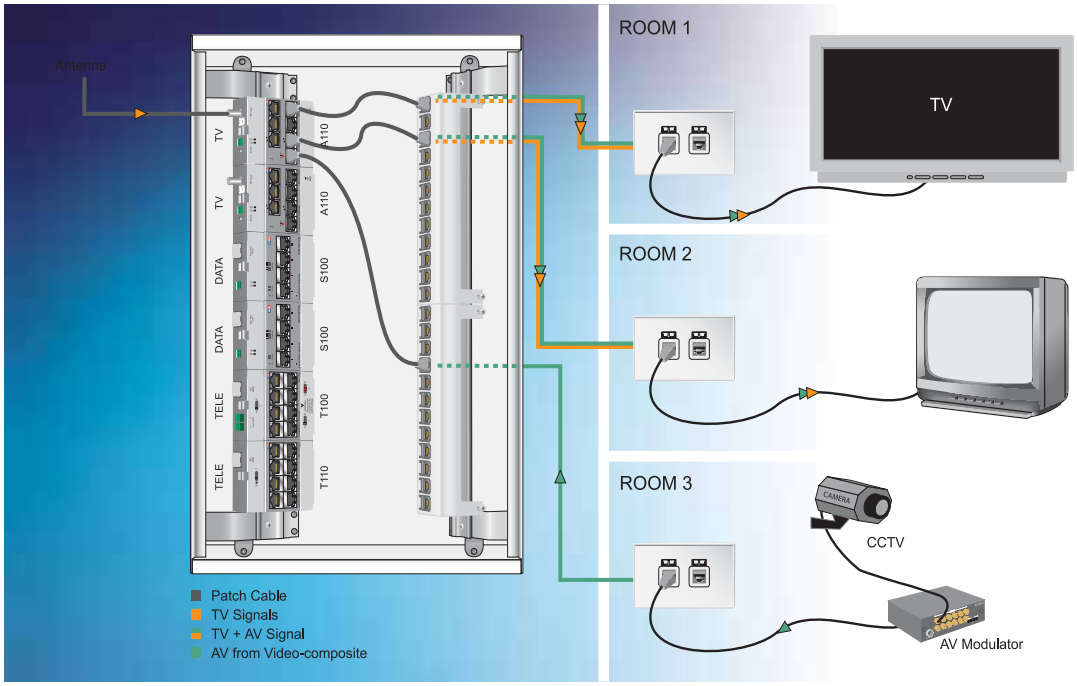
Cable TV with Internet Connection

This example shows a connection providing both cable TV and internet services. A splitter is used to separate the incoming data and cable TV signals. The data signals are fed via the cable modem/router to the LexCom Home Network's data module to provide internet service to all the outlets connected to this data module. The cable TV signals are fed to the cable TV decoder/set-top box located close to the main wide-screen TV set. With the LexCom Home Network's AV link, other TV sets can show both terrestrial TV and the channel to which the cable TV decoder is set. The cable TV decoder can also be operated and controlled from all TV sets with the IR link.



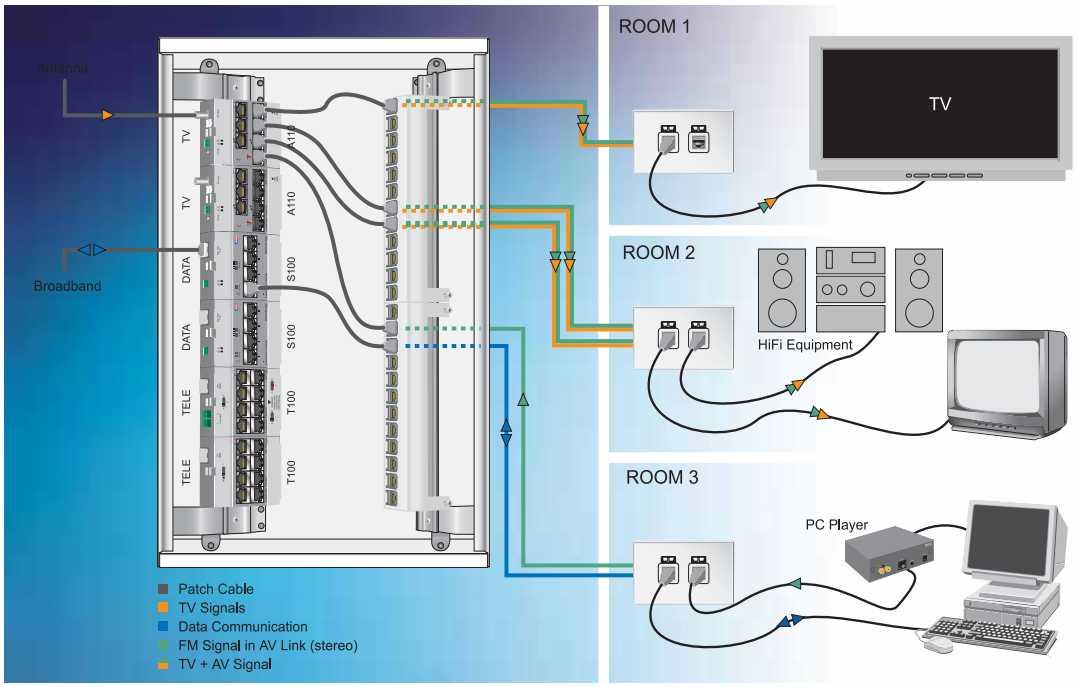
ADSL

Incoming ADSL lines are terminated by the system operator at the splitter. The analogue port of the splitter must be connected to the telephone module, e.g. the T100. The ADSL port of the splitter must be connected via the ADSL router to the data module (S100 data switch). The computers can now surf the internet simultaneously using shared internet access via the ADSL router. At the same time, the analogue port can be used for conventional telephones. The splitter and ADSL router are both obtained from the telecommunication service provider.



CCTV Camera Monitoring

In the example, LexCom Home Network is used to transfer signals from the CCTV cameras to all TV sets connected to the system. The signal from the video camera is placed on a channel and can be viewed by selecting that channel on the TV set. The camera and AV modulator can be moved and connected to a spare outlet on the system.



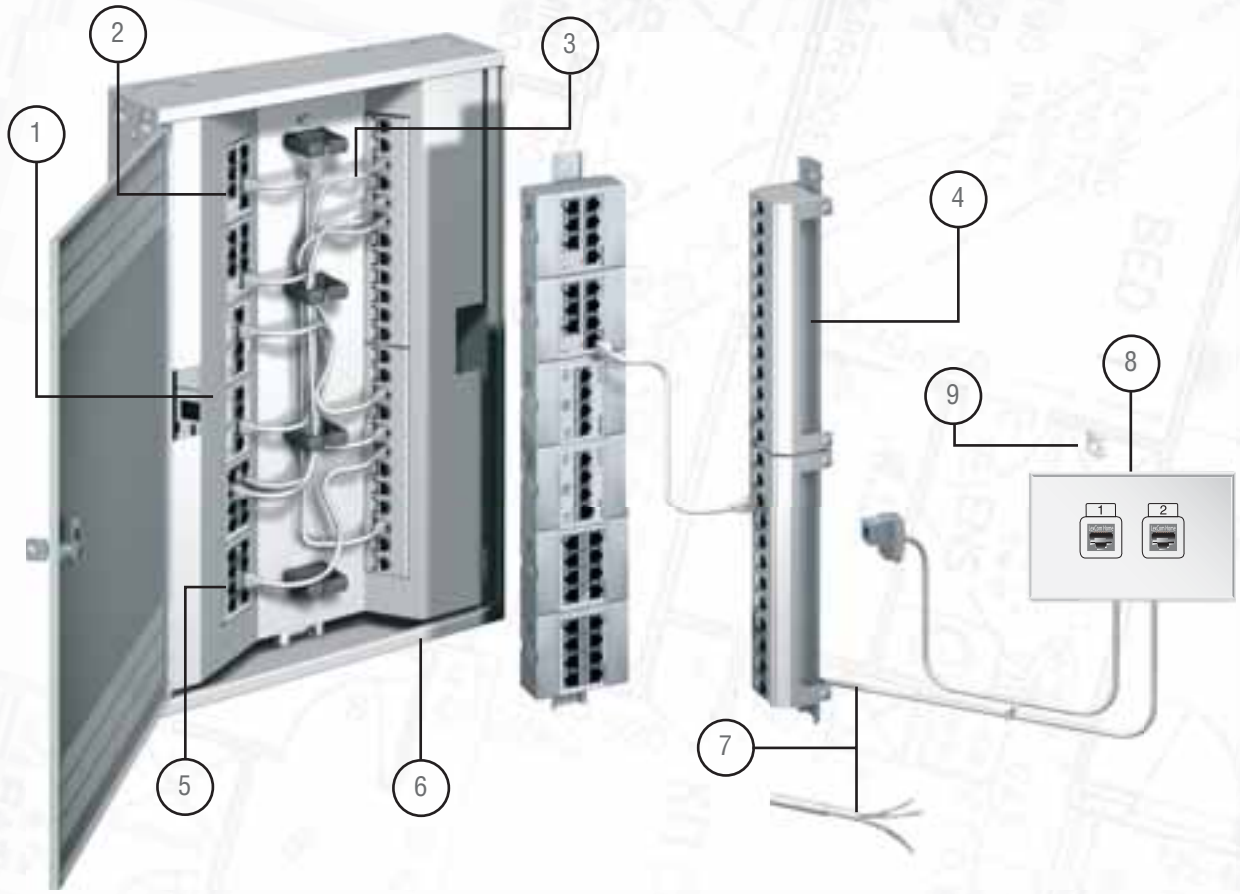
PC Player

The PC player is the FM stereo modulator for LexCom Home Network. It is used when there is an audio source that is not centrally located and where the signal from this source is required to be distributed via LexCom Home Network to the stereo and hi-fi installations in the home. In this example, the computer receives broadband internet radio, which goes from the computer's sound card to the PC Player. The PC player modulates the frequency to a pre-set selectable FM channel, and then send the modulated signal to the AV input of the LCHA110 TV amplifier module. Any of the hi-fi stereo amplifiers can then receive the signal and play it over the loudspeakers. Similarly, MP3 audio stored in the computer can be played back on any of the sound systems in the home.

This section describes how **LexCom** Home Network should be installed. Detailed information about the components and how to install them is given in the documentation supplied with the products.

Before installation, it is important to prepare and plan so that you know where the outlets and the distribution cabinets are to be installed and which components the network will include.

Basic Components of the Home Network



Basic components of the Home Network:

1. Data module, with 4 ports for computer networks.
2. TV amplifier module, with 4 or 6 ports for TV connections.
3. Patch leads.
4. Patch frame, with 26 ports for connection to room outlets.
5. Telephone module, with 8 ports for telephone/fax/modem connections.
6. Distribution cabinet, where incoming cables from UHF/VHF antenna, telephone and the building network are connected to the home network.
7. Network cable, 8 wires (4 twisted pairs).
8. Universal outlet with 2 or more jacks to be mounted in PDL's Wiring Accessory product.
9. 611M module adaptor clip.

Cable Installation

Cables must be run from all outlets to the distribution cabinet in accordance with the relevant data wiring standards. The number of cables must be equal to the number of outlets required in the particular room. The bending radius of installed cable must not be less than 25mm.

Modular Connection Jack Termination

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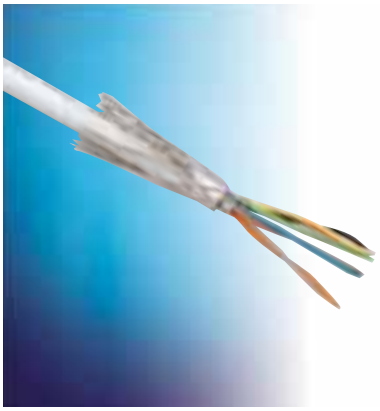
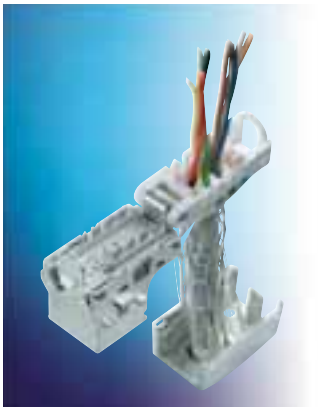
The RJ45 modular connection jack allows very fast and easy termination of the installation cable.

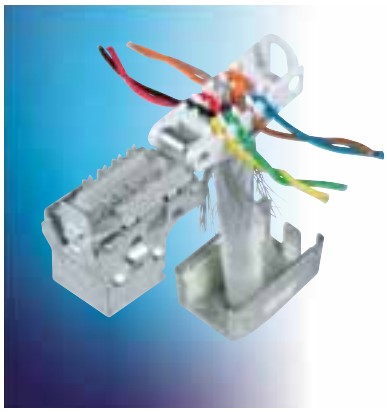
1. Cut and strip the cable as shown.



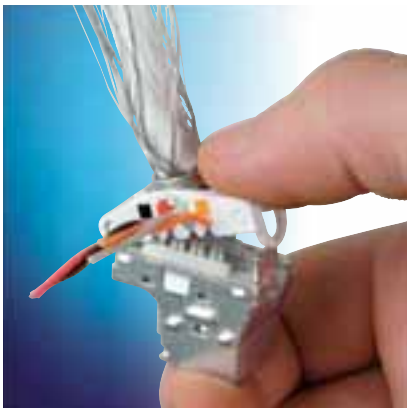
2. Pull back the shield over the insulated cable to at least 30mm.



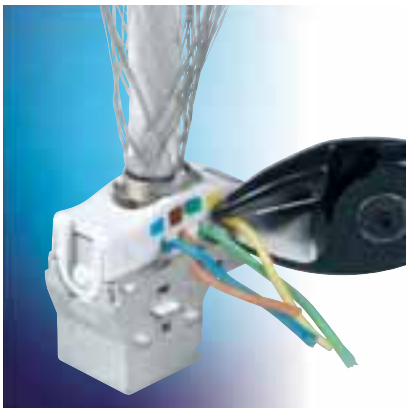
3. Insert the cable through the cover and upper part of the modular jack.



4. Insert the wire pairs into the correct slots in accordance with the colour coding as marked. Do not strip them. The slots penetrate the insulation to give a perfect contact.



5. Firmly press on the upper part of the modular jack until it locks with a “click” sound.



6. Cut off the protruding wires flush with the modular jack.

7. Move the cover of the modular jack into place.

8. Firmly press the cover until it locks with a “click” sound, securing the cable and shield.

9. Cut off the excess shield.

Distribution Cabinet Mounting

LexCom Home Network
Connect and go.

This example involves a flush-mounted 22" distribution centre.

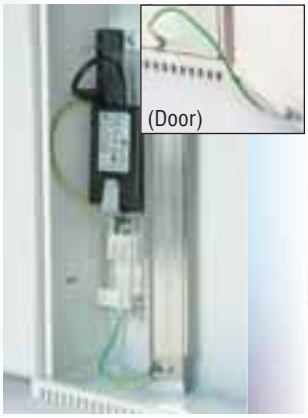
1. Position the distribution cabinet in the wall cut-out such that its front surface is flush with the wall, and then fasten it to a supporting frame installed around the cabinet inside the wall cavity.

2. Terminate all the installation cables with RJ45 modular connection jacks in accordance with the procedure as described on page 16.

3. Insert the terminated RJ45 connection jacks into the ports of the patch frame, and keep track of the numbers (1-26) as marked on the patch frame.

4. Install and connect all the wall outlets in the rooms using the same RJ45 modular jacks. Mark each room outlet with the same number as that on the distribution cabinet.

5. Install the power supply unit on the left side of the distribution cabinet. A power supply should be run to the distribution cabinet from the circuit board.



6. Terminate the earth wire from the internal power supply to the DIN rail spade connection point at either end of the DIN rail. The door has to be earthed with the supplied jumper wire in addition to the DIN rail.

7. Install the active modules (telephone, data and TV amplifier) on the DIN rail provided in the distribution cabinet.

8. Connect the incoming cables/ wires to the active modules. Connect the 12V DC power supply to the data and TV amplifier modules.

9. Position the internal cover over the active modules and patch frames, and then fasten with screws.

10. Connect patch leads between the patch frame and the TV amplifier, telephone and data modules.

11. Place the patch leads neatly in the middle of the distribution cabinet with the help of guides provided.

12. Close and lock the door of the distribution cabinet.

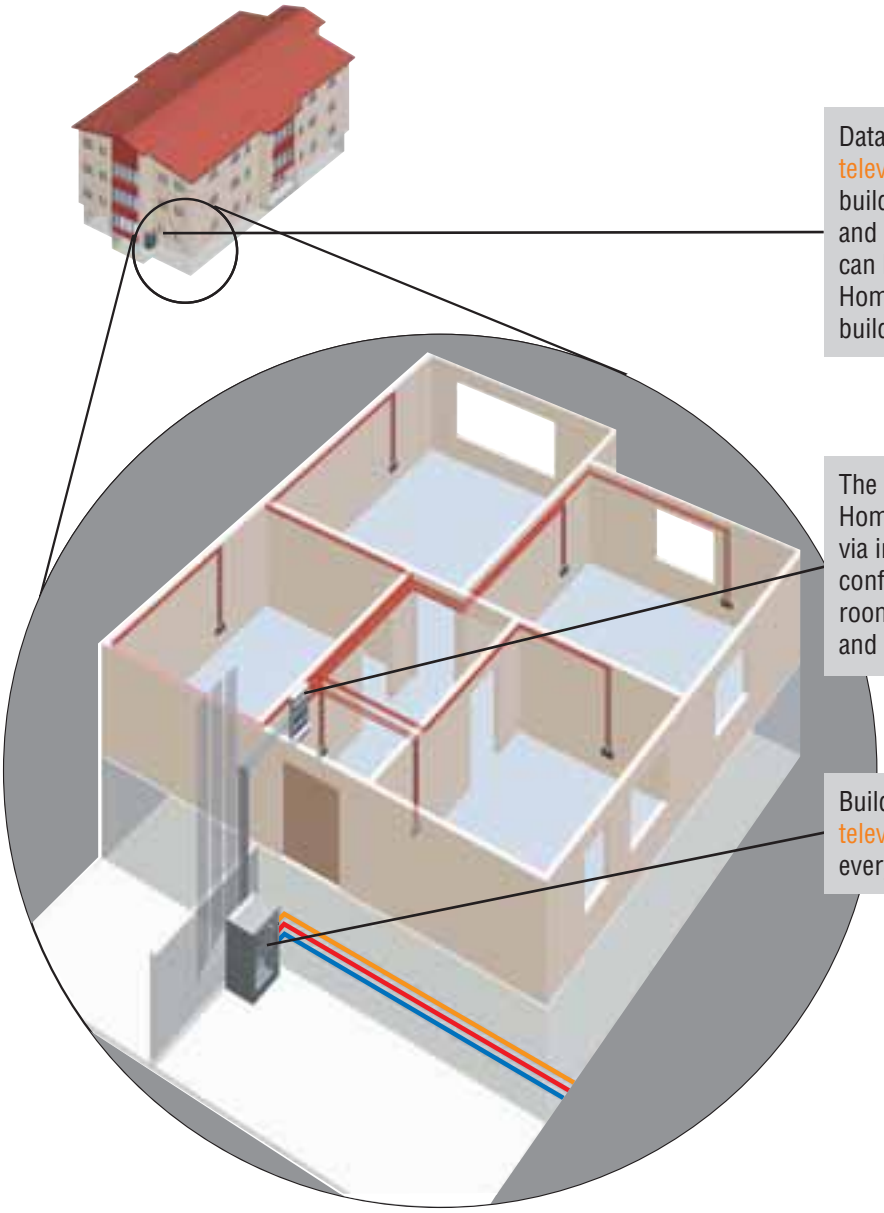
Connection to External Networks

LexCom Home Network
Connect and go.

In an apartment building or complex, it is very common for a master telephone, MATV and data network to be installed in the building to distribute these external services to the individual apartment units. Each apartment can then have an internal **LexCom** Home Network system that connects to the master/external network via a distribution cabinet.

An example is the connection of a broadband internet network to the **LexCom** Home Network system. Here, additional features and devices such as firewalls, routers and modems should be carefully considered and included to ensure security and proper communication between the external network and the **LexCom** Home Network system.

This installation guide does not cover the planning and installation of external network interconnections that may be provided separately by others. There are several organisations in the market offering services for the integration of such networks with one another.



Data (broadband), telephone and television signals supplied to the building by companies that build and own broadband networks can be connected to the LexCom Home Network system via the main building infrastructure.

The distribution centre in LexCom Home Network is connected via installation cables in a star configuration to outlets in every room for connecting TVs, telephones and computers.

Building networks distribute television, telephone and data to every home.

Television
Telephone
Data

When a **LexCom** Home Network installation is completed, it is highly recommended the network be tested. This will ensure all connections have been correctly made and that the installation complies with all regulatory requirements.

The LexCom Home Network installation must comply with AS/NZS 3086, AS/NZS 3080:2003 (11801 Ed2) and PTC 225:2003. The network should be tested with a **level 3** hand-held field tester that is capable of recording and storing the test data. The results may be required for system certificates or extended warranty claims.

Minimum network testing that should be performed will include wire mapping, return loss, cable lengths, and NEXT/FEXT with the Category 6 permanent link standard. This will ensure the network will operate at its optimum capacity without compromising any of the design features.

Testing of TV/Video Network

The LexCom Home Network installation must also be tested to ensure adequate TV/video quality at every outlet. This testing should be performed with a RF field strength meter.

As a minimum requirement, a video test signal (from the LexCom Home Network AV Modulator or equivalent) should be injected into the system, and level measurements should be taken at the shortest and longest cable runs. The strength of these test signals needs to be measured and documented (should be within the range of 60 - 80 dB microvolt).

It is recommended that an external TV antenna is already properly installed (for optimal reception of terrestrial TV signal) and connected to the LexCom Home Network system at the time of testing. The signal strength of all the TV channels should be within the range of 60 - 80 dB microvolt throughout the home. The difference in signal strength between the strongest and weakest TV channels at any outlet should not exceed 12 dB microvolt.

The LexCom Home Network installation amplifies and distributes the TV signal inside the home, but does not improve the quality of the incoming TV antenna signal. If the incoming TV antenna signal results in poor TV reception (e.g. due to weak signal strength or too much interference), this problem should be checked and rectified by a TV antenna installation specialist.

There is a big difference between installing high-speed data networks and conventional electrical and telecommunication installations. Capacity will be reduced if the installation work is not done properly, e.g. cables must run in smooth curves at corners, they must not be strapped too tight, and so on. Therefore it is important for installers to have sufficient theoretical and practical knowledge about networks.

Training

PDL will provide training courses for installers and consultants to ensure professional installation and technical support of LexCom Home Network. These training courses increase the competitiveness of installers and consultants as they can offer their customers the latest technology that is available today for home networking solutions.
Installers who sign up for the PDL LexCom Home Network training courses should have prior knowledge and experience working with networks as both theoretical and practical exercises will be included in the training.

LexCom Home Network Warranty:

LexCom Home Network is provided with the standard 1-year SENZ warranty on all active components. (Refer to the SENZ standard terms and conditions of supply for further details)
If the installation is tested using a level 3 Category 6 network analyser and the test results meet PDL's minimum certification requirements, the standard warranty may be extended a further two years.

Antenna Amplifier

LCHA110-R, LCHA110 (standard)

Description

Shielded DIN “multimedia” antenna amplifiers with 6 x RJ45 output parts and one main input (F-conn) and one AV input (RJ45).
The TV/FM amplifiers forward the incoming signal to all outputs adding the necessary gain to compensate for the signal loss in the LexCom Home cabling. The level/profile on the incoming TV signal should be flat, ie no tilt.
If tilted, it must be levelled by an external equaliser unit.
The LCHA110-R amplifier supports return path on 2 of the output ports (one with the two black arrows).
IR link is supported on all output ports and distributed to a dedicated IR link output on the top and to the AV link part. The AV link port is connected to AV link modulators/PC players, making these AV signals available on all outputs. When supplied, the AV input of the amplifier is terminated by a Termination plug to prevent noise pollution if the AV port is not used.
Once installed, unused output ports should be terminated by 100 Ohm termination plugs (LCHTERMPLUG).
Power is supplied from the 12V DC power supply. Gain is adjustable on the front.
Tilt is fixed (pre-set slope) LED indication: Green when power is on.

Technical information

Electrical and Technical Data

Carrier to Noise Ratio	>46 dB at 60 dBµV input, min. gain Typ. 57 dB at 76 dBµV input – output
Balancing of Outputs	Within +/- 1 dB
Power Supply	12V DC
Power Consumption	4 W
Current	325 mA
Bandwidth	47 – 862 MHz (LCHA110-R), 44-862MHz (LCHA110)
Return Path	5 – 30 MHz (LCHA110-R)
AV Link Bandwidth	88-862 MHz
Output Level	6 x 112 dBµV (DIN45004B)
CSO	88 dBµV (measured @ 42 Channels)
CTB (>60dB)	94 dBµV (measured @ 42 Channels)
Gain Forward	34 dB ± 2dB @ 860 MHz on all outputs 23 dB ± 2 dB @ 110 MHz on all outputs
Gain Return	Nom +3.5 dB in pass band
Attenuation	0 – 20 dB (adjustable)
Tilt (Equaliser)	+ 11 dB Pre-set Slope
Slope Tolerance	±3 dB (110 – 862 MHz)
Input level	60 – 80 dBµV
AV Input Level	80 – 90 dBµV
TV Channels	60
Impedance Output	100 Ohm, balanced
Impedance Input	75 Ohm, unbalanced
Noise Figure	<5.5 dB @ 860 MHz < 4.0 dB @ 85 MHz
Return Loss	–14 dB@ 40 MHz/-9.5 dB@860 MHz
Isolation	>25 dB standard outputs, >20 dB return path outputs
Group delay	13 nSec @ 48.25 MHz 5.5 nSec @ 55.25 MHz
Stopband Attenuation	>55dB

Emission	<12 dBpW/30-1000 MHz (acc.to EN50083-2)
Temperature, Operation	0°C –40°C (ambient)
Temperature, Storage	–15°C – 60°C

Construction and Material Data

Output Connector	RJ45 STP
IR Out Connector	2.5 mm jack
Material	PC – ABS housing
Shielding	Plated 3 µm Sn over 20 µm Cu, double sided
Module Dimension	72 x 37 x 86 mm
Weight	160 grams
RF Input Connector	F-connector (connector Ø: max 1.2 mm)

Packaging Data

Quantity	1pcs
Carton Size	11.3 x 5.7 x 8.1 cm
Weight	0.190

Data Switch

LCHS100

Description

Shielded DIN Switch for 10/100 Mbps data transmission with 4 RJ45 ports plus one RJ45 port for uplink connections.
The switch module is supporting 10 Base-T Ethernet and 100 Base-T Fast Ethernet on all 5 ports and is an easy- installation, plug and play unit.
Further, on all ports the data switch comprises the following features:
- N Way 10/100 Mbps ports
- Auto MDI/MDI-X ports (Auto cross over detect)
- Store and forward switching
- Back-Pressure-Base flow control on half-duplex ports
- Pause-Frame-Base flow control on full-duplex ports
- Non-blocking and full wire speed forwarding rate
- 1 MB memory buffer sharing

Green LED indication for Link/Data and 100 Mb mode for each port and a general Power on indication.
Power is supplied from the 12V DC power supply
The data switch has a reset function on power up.

Technical information

Electrical and Technical Data

Power Supply	12V DC
Current	140 mA max
Shielding Attenuation	>55 dB
Temperature Operation	O° C to 45° C
Transmit (Tx)	Auto sensing MDI/MDI-X
Receive (Rx)	Auto sensing MDI/MDI-X
Data Rate	10/100 Mbps
Protocol	CSMA-CD
Forward Rate	Max 14.880 pps for 10 Mb Max 148.800 pps for 100 Mb
MAC Address	4K
Data Buffer	1MB
Back Plane Bandwidth	1 Gbps
Humidity	10% to 90% (non-condensing)
Management	None
Latency	83.36 µSec

Construction and Material Data

Shielding	Plated 3 µm Sn over 20 µm Cu double sided
Dimension	WDH = 72 x 37 x 86 mm
Weight	125 grams
No. of Ports	5 (4+1)
Material, Housing	PC-ABS

Standards and Approvals

Performance	IEEE 802.3 10 Base-T IEEE 802.3u 100 Base-Tx IEEE 802.3x N-Way
EMI	FCC Class B, CE mark

Packaging Data

Quantity	1 pcs
Size	11.3 x 5.7 x 8.1 cm
Weight	0.140 kg

Telephone Modules

LCHT100

Description

Shielded DIN telephone module for 1 or 2 analogue lines or 1 ISDN SO bus together with 1 analogue line.
The module is a passive splitter with 8 RJ45 output ports. The outputs can be configured in various groups supporting different combinations of inputs (see instructions for the module)
All outputs in each group are linked in parallel. Using the 3 switches on the front set all configurations.
Note: Only 1 output port can be used for ISDN.

Technical information

Electrical and Technical Data

Shielding Attenuation	>55 dB
Temperature, Operation	0 – 40° C
Temperature, Storage	-15 – 60° C
ISDN Format	SO
ISDN Tx	Pair 4/5
ISDN Rx	Pair 3/6
Analogue	Pair 4/5
Return ISDN A	Pair 1/2
Return ISDN B	Pair 7/8
Return Fax	Pair 1/2

Construction and Material Data

Input Connector	STP RJ45/ISDN
Output Connector	STP RJ45
Material	PC-ABS housing
Shielding	Plated 3 µm Sn over 20 µm Cu, double sided
Dimension	72 x 37 x 86 mm
Weight	130 grams

Packaging Data

Quantity	1 pcs
Size	11.3 x 5.7 x 8.1 cm
Weight	0.160 kg

Telephone Modules

LCHT104

Description

Shielded DIN Tele module for 1 to 4 analogue phone lines. On the top of the module, 4 input connectors are found clearly marked 1 to 4. These connectors are considered as the delivery points for the Telecom connection from the DTP inside the cabinet. The module is a passive splitter with 8 RJ45 output ports. The output ports are all “fully loaded” and connected in parallel. This means, all 4 lines are distributed by each output port allocating a separate pair in the RJ45 for each line. At the wall outlet, it is determined by use of different connection cords which line is tapped. Also a splitter unit can be used as interface to the wall outlet. Dedicated connection cords for line 1, 2, 3, and 4 are necessary. The module can be used in a PABX configuration as well, offering 4 lines intercom. In the bottom of the module, there is a security jack, RJ31X, which is connected directly to line 1, offering direct access to line 1. When mated, the security jack interrupts the routing of line 1 to the module outputs. From the RJ31X, line 1 will be looped to the output ports again by the security system connection when in idle mode.

Technical information

Electrical and Technical Data

Isolation	>1500 Vrms; Breakdown Voltage
Shielding Attenuation	> 55 dB
Temperature, Operation	0 - 40°C
Temperature, Storage	-15 - 60°C
Analogue	Line 1 to pin 4 & 5 Line 2 to pin 3 & 6 Line 3 to pin 1 & 2 Line 4 to pin 7 & 8
Security Port	Forward line 1 to pin 4 & 5 Return line 1 to pin 1 & 8

Construction and Material Data

Input Connector	4 x 2 Pole connector
Output Connector	8 x RJ45 1 x RJ31X (Security)
Shielding	Plated 3 µm Sn over 20 µm Cu, double sided
Dimension	72 x 37 x 86 mm
Weight	0.130 kg
Material, Housing	PC-ABS

Standards & Approvals

Application Standard	EN 50098-1 (IT-cabling / ISDN in private buildings and households) IEC 512-2, 1985 Test 3A Method 3C
Safety	TS008: Australia A-tick marked

AV-Combiner

LCHC110

Description

A fully shielded DIN module enabling the user to connect 2 or 3 AV-Modulators/PC Players to the AV link input of the multimedia amplifier LCHA110. The AV-Combiner LCHC110 is mixing the AV signal on the 3 input ports and forwarding the result to the single output port. The LCHC110 is working in the full frequency band up to 860 MHz and supporting IR link as well.
The module should be installed in the distribution cabinet of the LCHA110 amplifier. All interfaces are RJ45 jacks and all connections up to and from the AV-Combiner must be made by LexCom Home shielded patch cords only.
The AV-Combiner is supplied with a termination plug (RJ45) that must be connected to the potential unused input of the LCHC110.

Technical information

Electrical and Technical Data

Return Loss	min 10dB
Isolation	> 18 dB (between all inputs)
Shielding Attenuation	> 65 dB
Temperature, Operation	0°C to + 40°C
Temperature, Storage	-20°C to +60°C
Insertion Loss	6.5 dB @ 470 MHz 8 dB @ 862 MHz
No. of Matings	min 500
Impedance Output	100 Ohm Balanced
Impedance Input	100 Ohm Balanced
AV Link Bandwidth	80 – 862 MHz
IR Link	Transparent

Construction and Material Data

Input Connector	3x RJ45 STP Jack
Output Connector	1x RJ45 STP Jack
Material	PC-ABS housing
Shielding	Plated 3 µm Sn over 20µm Cu, double sided
Module Dimension	72 x 37 x 86 mm
Weight	110 grams
Quantity	1 pcs
Carton Size	11.3 x 5.7 x 8.1cm
Weight	0.140 kg

Power Supply

LCHPSA

Description

This LexCom Home power supply kit is dedicated to the APOLLO 14" and 22" steel cabinets for Vertical integration.
It is a compact all-in-one solution installed in the cabinet and providing power to all the active LexCom Home modules.
The Power Supply Unit (PSU) provides a 12V DC output for the active modules and via the 4-way junction unit and its 12V plug-in cords, up to 4 active modules can be powered inside the cabinet. The power input of the PSU accepts 100 – 250V AC voltage (50-60Hz), making the power supply kit a universal and global solution. The mains receptacles offer good strain relief and screwless terminals for easy installation (only solid conductors). An additional cover provides a physical segregation of the receptacles to the rest of the installation environment.
Safety earth must always be connected to the installation.
Once installed, the power supply kit is a class 1 construction that ensures good grounding and earthing continuity to the steel cabinet.
Within the kit comes the necessary fixing bracket, segregation cover, 5-way magazine and 4 pcs 12V jumper cords.

Technical information

Electrical and Technical Data

Power Consumption	max. 20 W (depending on modules connected)
Temperature, Operation	0°C to 40°C ambient
Temperature, Storage	-20°C to 80°C ambient
Output Voltage	12V DC
Type	ELV, Switch mode, fully regulated output
Permissible Load	max. 18 W
Input Voltage	90 – 264 Vac/47-63 Hz
Safety Classification	Class 1
Tolerance	max. 5 %
Ripple	0.1 Vp-p (20 MHz bandwidth)
Protection	Overvoltage: 15V max. Overcurrent: built-in Short circuit: Auto recovery
Tracking Resistance	PTI 600

Construction and Material Data

Conductor Ø	Mains: 0.5 mm² to 2.5 mm² Solid
Material, Bracket	Alu-Zink 1.25mm
Cord Length	12V plug-in Cords: 0,5 m
Size	PSU: 85 x 56 x 25.5mm Kit: 278 x 56 x 28 mm
Material, Receptacles	Polyamid 6.6
No. of Outputs	4
Cable Ø	Mains: 6.5 mm – 12.5 mm
Quantity	1 pcs

PC Player

LCHPCP110

Description

A key element in the LexCom Home Multimedia Package. An audio unit that creates Radio FM channels from the sound signal connected to its input. This enables the stereo sound from any source to be transmitted into the LexCom Home system via the LCHA110 amplifier and makes it available at any stereo receiver of HI-FI installation in the building.
The PC Player has a built-in FM stereo modulator where the user selects the radio channel. The PC Player is intended specially for the distribution of MP3 music, Internet radio etc from the sound card of a PC.
IR Link supported if remote control of the connected unit should be available. Connection cord for PC sound cards and external power adaptor included in the package.
The PC Player will also work with iPod docking stations via the RCA output plate.

Technical information

Electrical and Technical Data

Power Supply	12V DC (external)
Output level	85 dBµV
Input level	775 mVRms/(0dBm)
Temperature, Operation	0 - 55°C
Temperature, Storage	–10 - 80°C
Consumption	70 mA max.
Channels	84 preset selectable
Modulation	FM
Sound Format	Stereo
Shielding	>55 dB
Frequency Band	89 – 106 MHz
Pre-Emphasis	50µ/Sek
Distortion	0.4%
Signal-To-Noise	66 dB
Channel Separation	28 dB
Impedance Output	100 Ohm (balanced)
Impedance Input	47 kOhm
Audio Bandwidth	30 Hz – 18 kHz

Construction and Material Data

Input Connector	2 x RCA phono
Output Connector	RJ45 STP
Material	Aluminium Typed 606045-T6
Dimension	169 x 84 x 49 mm
Weight	0.65 kg
Colour	Black
Paint Type	Powder paint
LED's	Red

Standards and Approvals

CE marked according to	EN 55020
EMC	89/336/EEC

Packaging Data

Quantity	1 pcs
Size	24.2 x 21.9 x 5.8 cm
Weight	1.0 kg

Bang & Olufsen Modules

Master Link Module LCHBO100ML

Description

The Master Link module LCHBO100ML enables Bang & Olufsen products to run Master Link applications over the LexCom Home network. All Bang & Olufsen products in the Master Link installation are connected to this module.
LCHBO100ML contains 8 ports, supporting 8 Bang & Olufsen units linked over the same module. The Bang & Olufsen Master Link application supports in general up to 16 units in the same link, why two LCHBO100ML modules can be stacked; providing in a total of 16 ports.
Standard LexCom Home S/STP Patch Cords must be used in the distribution centre.
Dedicated Master Link connection cords from LexCom Home wall outlets to the Bang & Olufsen products can only be acquired from Bang & Olufsen dealers.

Technical information

Electrical and Technical Data

Temperature, Operation	0 - 40°C
Temperature, Storage	-15 - 60°C
Impedance	100 Ohm
Screening Attenuation	>55 dB
Port Configuration	Master Link Application Interface

Construction and Material Data

Material	PC-ABS housing
Shielding	Plated 3 µm Sn over 20µm Cu, double sided
Dimension	72 x 37 x 86 mm
No. of Ports	8xRJ45 STP + 1 x RJ45 STP for stacking

Packaging Data

Quantity	1 pcs
Size	113 x 57 x 81 mm
Weight	0.155 kg

Bang & Olufsen Modules

Power Link Module LCHBO100PL

Description

The Power Link module LCHBO100PL enables Bang & Olufsen music centres and active speakers to run Power Link applications over the LexCom Home Network. All Bang & Olufsen speakers and the source music in the Power Link installation are connected to this module.
LCHBO100PL contains 8 ports, supporting 8 Bang & Olufsen units linked to the same module. Bang & Olufsen Power Link applications can drive up to 10 speakers, only two LCHBO100PL modules can be stacked; providing a total of 16 ports (max. 11 to be used).
Standard LexCom Home S/STP Patch Cords must be used in the distribution centre into the module.
Dedicated Power Link connection cords from LexCom Home wall outlets to the Bang & Olufsen products can only be acquired from Bang & Olufsen dealers.

Technical information

Electrical and Technical Data

Shielding Attenuation	>55 dB
Temperature, Operation	0 - 40°C
Temperature, Storage	-15 - 60°C
Impedance	100 Ohm
Port Configuration	Power Link Application Interface

Construction and Material Data

Material	PC-ABS housing
Shielding	Plated 3 µm Sn over 20µm Cu, double sided
Dimension	72 x 37 x 86 mm
Weight	125 grams
No. Ports	8 x RJ45 STP + 1 x RJ45 STP for stacking

Packaging Data

Quantity	1 pcs
Size	113 x 57 x 81 mm
Weight	0.155 kg

Stereo AV Modulators

LCHAV111-4

Description

A key element in the LexCom Home Multimedia Package. The modulators connect DVD-/VCR-/PC-/Sat. Receiver-units etc. to the LCHA110 amplifier by converting the composite video outputs from these into TV-channels.
Signals from the AV-units are available on all TVs connected to the system. The LCHAV111 is a dedicated UHF modulator offered in a 4 channel version; supporting the IR link having 4 IR outputs. The input signal is allocated to a TV channel selected and configured by the user. Unused inputs can be disabled (LCHAV111 –4). Test-picture on all channels makes tuning of TVs easy.
The LCHAV111 modulators support European PAL TV standards G, L, and I) and Australian/NZ PAL B version.
External power adaptor and basic connection cords are included in the package.

Technical information

Electrical and Technical Data

Power Supply	12V ac (external)/5 Watt
Output Level	Max. 114 dBµV @ 860 MHz
Input level	1 Vpp Comp Video/75 Ohm 0.5 Vrms Audio/10 kOhm
TV Channels	Ch 21 – Ch 68 (Selectable)
Noise Figure	< 5 dB
Temperature, Operation	0 –35°C
Temperature, Storage	-10°C - 60°C
Consumption	600 mA max.
Output Impedance	100 Ohm Balanced
Channels	AV111-4: 4 Channel Operation
Modulation	Double sideband
TV Standard	PAL
System	PAL B
*Sound Format	A2 Stereo
Screening Attenuation	>55 dB
Frequency Band	470 MHz – 862 MHz
Gain Attention	0 dB – min. 20 dB
12V DC Output	Max. 200 mA (AV111-1 Only) (+ at centre pin)
Carrier to Noise Ratio	>50 dB
Harmonic Suppression	>50 dB (2. and 3. order)

Packaging Data

Quantity	1 pcs
Size	39.5 x 21.9 x 5.8 cm
Weight	1.40 kg

*Note: Television set must be able to accept either A2 or Nicam stereo formats in order to obtain stereo sound output.

AV Modulators

LCHAV110-1, LCHAV110-4

Description

A key element in the LexCom Home Multimedia Package. The modulators connect DVD-/VCR-/PC-/Sat. Receiver-units etc. to the LCHA110 amplifier by converting the composite video outputs from these into TV-channels.
Signals from the units are available on all TVs connected to the system. The LCHAV110 is a dedicated VHF modulator offered in a 1 channel and 4 channel versions; both supporting the IR link having 1 or 4 IR outputs. The input signal is allocated to a TV channel selected and configured by the user. Unused inputs can be disabled (LCHAV110-4)
Test-picture on all channels makes tuning of TVs easy. 1 input version incorporates a 12V DC output for a surveillance camera.
AV-modulators support all European PAL TV standards (B, L, I and D).
External power adaptor and basic connection cords are included with the modulators.

Technical information

Electrical and Technical Data

Power Supply	12V ac (external)
Power Consumption	<5 Watt (LCHAV110-1) <8.5 Watt (LCHAV110-4)
Output Level	85 – 92 dBµV @ 130 MHz 85 – 100 dBµV @ 470 MHz
Input level	1 Vpp Comp Video/75 Ohm 0.5 Vrms Audio/10 kOhm
TV Channels	Ch 05 – 12/S5 – S41 (PAL B) (Selectable)
Noise Figure	<5 dB
Temperature, Operation	0-40°C
Temperature, Storage	–10 - 60°C
Output Impedance	100 Ohm (balanced)
Channels	LCHAV110-1 : 1 Channel Operation LCHAV110-4 : 4 Channel Operation
Modulation	Double Sideband
TV Standard	PAL
System	PAL B
Sound Format	Analogue Mono
Shielding	>55 dB
Frequency Band	VHF : 130 – 470 MHz
Gain Attenuation	0-15 dB @ 470 MHz 0-7 dB @ 130 MHz
12V DC Output	Max. 100 mA (LCHAV110-1 Only) (+ at centre pin)
Carrier to Noise Ratio	>50 dB
Hum Modulation	<0.5%
Harmonic Suppression	>50 dB (2. and 3. order)

Construction and Material Data

Input Connector	RCA-phono (2 Audio + 1 Video per input)
Output Connector	RJ45 STP
Material	Aluminium Type 606045-T6
Dimension	169 x 164 x 49mm
Weight	0.80kg
Colour	Silver Grey
Paint Type	Powder Paint
Power LED's	Blue

Packaging Data

Quantity	1 pcs	
Size	39.6 x 5.8 x 21.7 cm	-
Weight	1.30 kg	

Patch Cords, Leads & Connecting Cords

Patch Lead S/STP - Video/TV

LCHLTVP (Video Coms)

Description

The patch leads are exclusively dedicated for use in the LexCom Home distribution cabinet to connect between the active modules and patch units.
The patch cords are universal by means of the applications they support (TV, telephony, data etc.).
Further, they are characterised by very high bandwidth and shielding attenuation.

Technical information

Electrical and Technical Data

Bandwidth	0 – 862 MHz
Shielding Attenuation	>80 dB
Crosstalk Attenuation	>45 dB @100 MHz

Construction and Material Data

Material	LSOH
Colour	Light Grey
Cord Length	50cm

Packaging Data

Quantity	1pcs
Size	150 x 260 x 10 mm
Weight	0.031 kg

Telephone/Data Patch Lead

LCHLUTP

Description

The UTP patch leads are used in the distribution cabinet for telephone and data applications only. Colour coding clips are included in the package to ensure correct patching.

Technical information

Electrical and Technical Data

Contact Resistance	<20 mOhm
Insulation	>500 MOhm/100 Vdc
Insertion Loss	<0.5 dB @ 100MHz (1m) 1.5 dB @ 100 MHz (5m)
NEXT	<-40 dB @ 250 MHz typ.
Impedance	100 Ohm nom.
No. of Matings	Min. 2500
Bending Radius	Min. 5 x overall diam.
Operating Voltage	Max. 125 V
DC Resistance	Max. 89 Ohm/km
Transfer Impedance	< 50 mOhm @ 1 MHz
Coupling Attenuation	> 75 dB typ
Temperature, Ambient	-10°C to +60°C

Construction and Material Data

Material	LSOH
Dimension	Ø: 5.5 mm
Contacts	1.3 µm Gold (AU) plated phosphor bronze
Colour coding	Red and Green
Construction	UTP with tensile strength centre element
Conductors	4 x 2 x AWG24 Stranded
Cable Colour	Light Grey RAL 7035

Packaging Data

Quantity	1pcs
Size	250 x 400mm
Weight	0.084 kg

AV Connecting Cords

LCHLAV02, LCHLAV03

Description

A double shielded patch cord to connect AV modulators and PC players to the LexCom Home wall outlet. RJ45 to RJ45 interface. Offers very good shielding performance and low signal loss. Available in 2 lengths; 2 metres and 3 metres.
Cable jacket in Light Grey.

Technical information

Electrical and Technical Data

Contact Resistance	<20 mOhm
Insulation	>500 Mohm/100V DC
Insertion Loss	<0.5 dB @100MHz (1m) <1.5 dB @100MHz (5m)
Impedance	100 Ohm nom.
No. of Matings	Min. 2500
Bending Radius	min. 5 x overall diam.
Operating Voltage Ueff	Max. 125V
DC Resistance	Max. 150 Ohm/km
Transfer Impedance	<50 mOhm @ 1 MHz
Coupling Attenuation	>75 dB typ.
Temperature, Ambient	-10°C to +60°C

Construction and Material Data

Material	LSFROH
Dimension	Ø : 6.2 mm
Contacts	1.3µm Gold (AU) plated phosphor bronze
Colour coding	Blue
Construction	S/STP (pairs in aluminium fail with overall tinned copper braid)
Conductors	4 x 2 x AWG26 Stranded
Caloriefic Value	0.50 MJ/m
Length	2 Metre/3 Metre
Cable Colour	Light Grey

TV Connecting Cords

LCHLTV, LCHLTVIR

Description

Connecting cords between wall outlets and TV sets/radios converting the 100 Ohms balanced cabling to the 75 OhmsTV/R input connector. Built-in balun in the cable plug.
2 types available; 1 simple interconnection cable between outlet and TV and 1 for connectivity for IR receivers.
LCHLTVIR TV cables are available in white and black and are 3 metres long.
LCHLTV connecting cords are available in white only.
Adaptors are included in each package.

Technical information

Electrical and Technical Data

Bandwidth	1 - 862 MHz
Shielding Attenuation	> 80 dB
Impedance Output	75 Ohm, IEC
Impedance Input	100 Ohm, RJ45

Construction and Material Data

Material	PVC
Weight	0.13 Kg
Colour	Black or White
Connector	IEC 9.5 mm male
Cable Type	Coaxial, double shielded
Length	3 m

Standards and Approvals

EMC	EN 50041

Telephone Connecting Cords

LCHLTELE02, LCHLTELE05

Description

Connecting cords for standard telephones for LexCom Home outlets. Converting phone RJ11 interface to RJ45 interface.
Offered in 2 lengths; 2 metres and 5 metres.
Unshielded 4 conductor flat cable.

Technical information

Electrical and Technical Data

Insulation	>1500 Vrms, Breakdown voltage
Insulation Resistance	>500 MOhm/ 100V DC

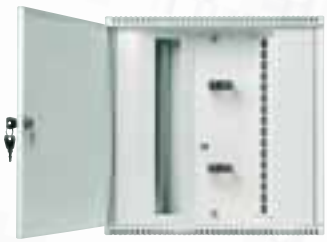
Construction and Material Data

Wire Configuration	Line 1: Pair 4/5 Line 2: Pair 3/6 Line 3: Pair 1/ 2 Line 4: Pair 7/8
Connector	RJ11 – RJ45 UTP plugs
Cord Length	2 and 5 metres
Cable Colour	Silver (Line 1) Purple (Line 2)* White (Line 3) Red (Line 4) Black (Line 1 + 2)
Conductor Ø	AWG 28, stranded
Insulation Material	PVC

*Note: Only available in 2 metre version.

Distribution Cabinet APOLLO 14"

LCHC14



Description

Distribution cabinet in folded sheet steel, textured epoxy polyester powder coat, colour white RAL 9010. Enclosure comprises body, reversible hinged sheet steel door that opens 180°. Vertically mounted DIN rail for active components. Removable vertically mounted connector panel containing 16 connector positions. (Direct Panel Mount) 2"/3" knockouts for cable entry in top/bottom/ rear of the enclosure. Coverplate with cable management. Capacity up to 16 horizontal cable drops and 4 active components. The enclosure is fully prepared for Class 1 power installation, having all units and components safely linked to ground. Build-in CATV test point with 20 dB TAP and additional 11 dB TAP points for apartment backbone break-out. Colour white RAL 9010. Key holes in the rear of the enclosure for surface mounting.

Technical information

Electrical and Technical Data

Return Loss	TAP unit > 18 dB
Isolation	TAP unit TAP to OUT = Nom 37 dB
Insertion Loss	TAP unit <2 dB/11 dB/20 dB
Impedance	Coax units 75 ohm
Frequency Band	Coax units 5-1000 MHz

Construction and Material Data

No. of Ports	16 (standard panel) expandable to 24 ports via high density patch frames
Material	1.25mm, painted aluzink
Dimension	H14" (355.6mm) x W14" (355.6mm) x D4" (100mm)
Weight	3 kg
Colour	White RAL 9010, textured epoxy polyester
Key-lock	Euro lock
Construction	Folded, spot welded
Cable Entry	2 pcs 2" knock outs, top/bottom 3 pcs 2" and 2 pcs 1.5" knock outs, rear 2 pcs 2" knock outs, side
Quantity	1 pcs 40 pcs
Size	365 x 365 x 109 mm
Weight	3.5 kg

Distribution Cabinet APOLLO 22"

LCHC22

Description

Distribution cabinet in folded sheet steel, textured epoxy polyester powder paint, colour white RAL 9010. Enclosure comprises body, reversible hinged sheet steel door that opens 180˚. Vertically mounted DIN rail for active components. Removable vertically mounted connector panel containing 26 connector positions. (Direct Panel Mount) 3"/2" knockouts for cable entry in top/bottom/ rear of the enclosure. Cover plate with patch cord management. Capacity up to 26 horizontal cable drops and 6 active components. The enclosure is fully prepared for Class 1 power installation, having all units and components safely linked to ground.
Built-in MATV test point with 20 dB TAP and additional 11 dB TAP point for apartment back-bone break-out. Flush trim plate available providing stepless depth adjustment available, colour white RAL 9010. Key holes in the rear of the enclosure for surface mounting.

Technical information

Electrical and Technical Data

Return Loss	TAP unit > 18 dB
Isolation	TAP unit TAP to Out = Nom 37 dB
Insertion Loss	TAP unit < 2 dB/11 dB/20 dB
Impedance	Coax units: 75 ohm
Frequency Band	Coax units: 5-1000 MHz

Construction and Material Data

No. of Ports	26 (standard panel) expandable to 40 via high density patch frames
Cable Entry	2 pcs 2" x 3" knock outs, side
Dimension	H22" (556.3 mm) x W14" (355.6 mm) x D4" (100mm)
Weight	6 kg
Colour	White RAL 9010, textured epoxy polyester
Key-lock	Euro lock
Construction	Folded, spot welded
Material	1.25 mm, painted aluzink
Cable Entry	2” x 3" and 2" knock outs, top/bottom 4 pcs 2" and 4 pcs 1.5" knock outs, rear
Quantity	1 pcs 24 pcs
Size	565 x 365 x 109mm
Weight	6.6kg

Trim Frames for Flush Mounting

LCHF14, LCHF22

Description

Trim frames for flush mounting of new vertical 14" and 22" steel enclosures. The frame will cover the edge from the cutout for the enclosure in the wall.
Stepless (floating) adjustment and latch with screw from top/bottom (inside) of the cabinet.

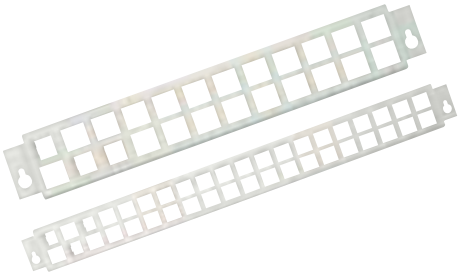
Technical information

Construction and Material Data

Material	1.25mm, painted aluzink
Dimension	14" 22"
Weight	14" 500g 22" 1000g
Colour	White RAL 9010 textured epoxy polyester
Construction	Folded, spot welded
Quantity 14”	1 pcs
Size 14”	420 x 420 x 45mm
Weight 14”	0.75 kg
Quantity 22”	1 pcs
Size 22”	620 x 420 x 45mm
Weight 22”	1.25 kg

Patch Frames (High Density)

LCHC2414, LCHC4022



Description

High Density (HD) patch frames for upgrading of the 14" and 22" distribution cabinets to accommodate more patch out jacks. The HD patch frame offer a high number of ports by providing space for 2 rows of WB RJ45 connectors.
The HD patch frame is made of sheet steel and is mounted vertically in the distribution cabinet by simply replacing the original patch frame. Mounting clips to support installation of the WB connectors are supplied with each patch frame. The HD patch frame is painted white and ports are numbered.

Technical info

Construction and Material Data

Paint Type	Powder
Material, Panel	1.5 mm AluZinc
Colour, Panel	White RAL 9010
No. of Ports	24 for 14" distribution cabinet 40 for 22" distribution cabinet
Colour, Clips	White RAL 9010
Material, Clips	ABS

Plugs & Connectors

Modular Connection Jack

LCHRJ45

Description

A tool-less wide band STP connector is to be used in the LexCom Home Network installation. The RJ45 WB Connector provides a Cat 6 link and is also capable of providing MATV signals up to 900 MHz.
The superior shielding characteristics are obtained by means of the copper and tin-plated die-cast zinc housing.
The LexCom WB connectors can be recognised by the white stuffer cap with its clear colour coding for termination of the LexCom Home WB cable.
The connector offers a high level of installation friendliness and always ensures a proper quality.

Technical information

Electrical and Technical Data

Bandwidth	0- 900 MHz (cat 6)
Isolation	>500 MOhm/100V DC >1500 Vrms; Breakdown Voltage
Shielding Attenuation	>70 dB typ
Contact Resistance	<20 mOhm
IDC Resistance	<2.5 mOhm
Insulation	max. 1.3mm (cable conductors)
Insertion Loss	<0.025 dB @ 100 MHz
NEXT	–58 dB typ. @ 100 MHz -49 dB typ. @ 250 MHz
Impedance	100 Ohm nom.
Transfer Impedance	<0.25 m Ohm @ 1 MHz
Temperature, Ambient	-10°C +60 °C

Construction and Material Data

Material	Tin-plated die-cast zinc and PC/ABS	
Dimension	16.8 x 31.4 x 36.1 mm	
Weight	25.5 grams	
Colour	Metal/White	
Contacts	1.3 µm Gold (AU) over 1.0 µm Nickel (Ni)	
No. of Matings	Min 2500	
Conductor Ø	AWG 22-23 solid	
Quantity	1 pcs	10 pcs
	Size 9 x 9 cm	14.8 x 8.8 x 6.5 cm
Weight	26 g	0.3 kg

Attenuators

LCHITA05, LCHITA10, LCHITA15

Description

A plug-in unit for outlets to compensate for short link problems on TV signals. 3 versions offered providing different levels of attenuation to the TV signals and thus simulating different length of the total cable link.
The Attenuator plugs only support distribution of R/TV signals and the AV/IR link. MATV return path is also supported in the opposite direction.
The attenuators are fully shielded units with a full covering mould in light grey. Each unit is labelled with its specific type and version.

Technical information

Electrical and Technical Data

Attenuation	1.5 dB @ 100 MHz: ITA 05 5 dB @ 800 MHz: ITA 05 1.5 dB @ 100 MHz: ITA 10 10dB @ 800 MHz: ITA 10 2 dB @ 100 MHz: ITA 15 15 dB @ 800 MHz: ITA 15
Impedance	100 Ohm
Return Loss	-14 dB from 5 to 400 MHz -8 dB from 400 to 860 MHz
Shielding Attenuation	Min. 55 dB
No. of Matings	500
Frequency Band	5 – 860 MHz
Insulation Resistance	500V DC/100 MOhm acc. To IEC 512-2 : 1985 Test 3a Method C

Construction and Material Data

Input Connector	RJ45 Plug STP
Output Connector	RJ45 Jack STP
Material	Hotmelt PA
Dimension	18.5 x 45 x 18.5mm
Weight	14 grams
Colour	Light Grey
Contacts	AU over NI

Packaging Data

Quantity	1 pcs	5 pcs
Size	16 x 11 cm	14.8 x 8.8 x 6.5 cm
Weight	0.02 kg	0.22kg

Termination Plug 100 Ohm

LCHTERMPLUG

Description

A termination accessory for RF products. The plug provides a 100 ohm termination of the conducting pair for R/TV/AV applications. The plug is recommended to be installed into unused output ports the antenna amplifiers, leading to better response stability of the amplifier and minimising the RF emissions. Unused inputs of the AV combiners and the AV input on the antenna amplifiers should be terminated by this plug, preventing noise being introduced into the system.

Technical information

Electrical and Technical Data

Impedance	100 Ohm termination (pair 7/8)
No. of Matings	500
Insulation Resistance	500V DC/100 MOhm

Construction and Material Data

Dimension	WxDxH mm
Colour	Black
Connector	RJ45 plug STP
Material, Housing	Hotmelt PA

Packaging Data

Quantity	1 pcs	10 pcs
Size	5 x 5 cm	11.3 x 5.7 x 8.1 cm
Weight		0.05 kg

Network Cable (WB)

LCHC300

Description

A double shielded (S/STP) 4 pair cable that offers very high bandwidth, superior shielding and good installation performance.
In the passive link, the WB (Wide Band) cable connects the patch frame in the distribution cabinet to the wall outlet. The unique colours of the conductors are matching the wire map of the WB connectors.
Each pair is individually shielded in a metal foil and all pairs together are covered by a tinned copper wire braid. The WB cable can be used in both surface and flush mounted installations and shows excellent resistance to damage and reduction of performance due to stress from the installation work.
Available in 300m drums.

Technical information

Electrical and Technical Data

Bandwidth	0 - 900 MHz (CATV)
Attenuation	53 dB @ 800MHz / 100 metres
Insulation	> 5 GOhm/100V DC
NEXT	86 dB @ 100 MHz 78 dB @ 300 MHz 71 dB @ 800 MHz
Impedance	100 Ohm nom.
Bending Radius	Min 3 x overall diam.
DC Resistance	max. 82 Ohm/km
Transfer Impedance	< 5 mOhm/m @ 10MHz
Voltage	Max. 125V
Screening Attenuation	> 70 dB up to 1 GHz.
Interference Suppression	> 90 dB
Signal Velocity	0.8 c
Temperature, Ambient	-20^{0}C to +60^{0}C

Construction and Material Data

Material	LSFROH
Dimension	Ø: 7.5 mm
Weight	70 kg/km
Colour	White RAL 9010
Colourcoding	grey/orange, red/black, yellow/green, blue/brown
Construction	S/STP (pairs in aluminium foil with overall tinned copper braid)
Conductors	4 x 2 x AWG23 Solid

Standards and Approvals

Absence of halogens	IEC 60754-2
Smoke Density	IEC 61034
Flame Retardance	IEC 60332-3 Cat.C
Cabling Standards	EN 50173-1 2. edition ISO/IEC 11801 2. edition EIA/TIA 568

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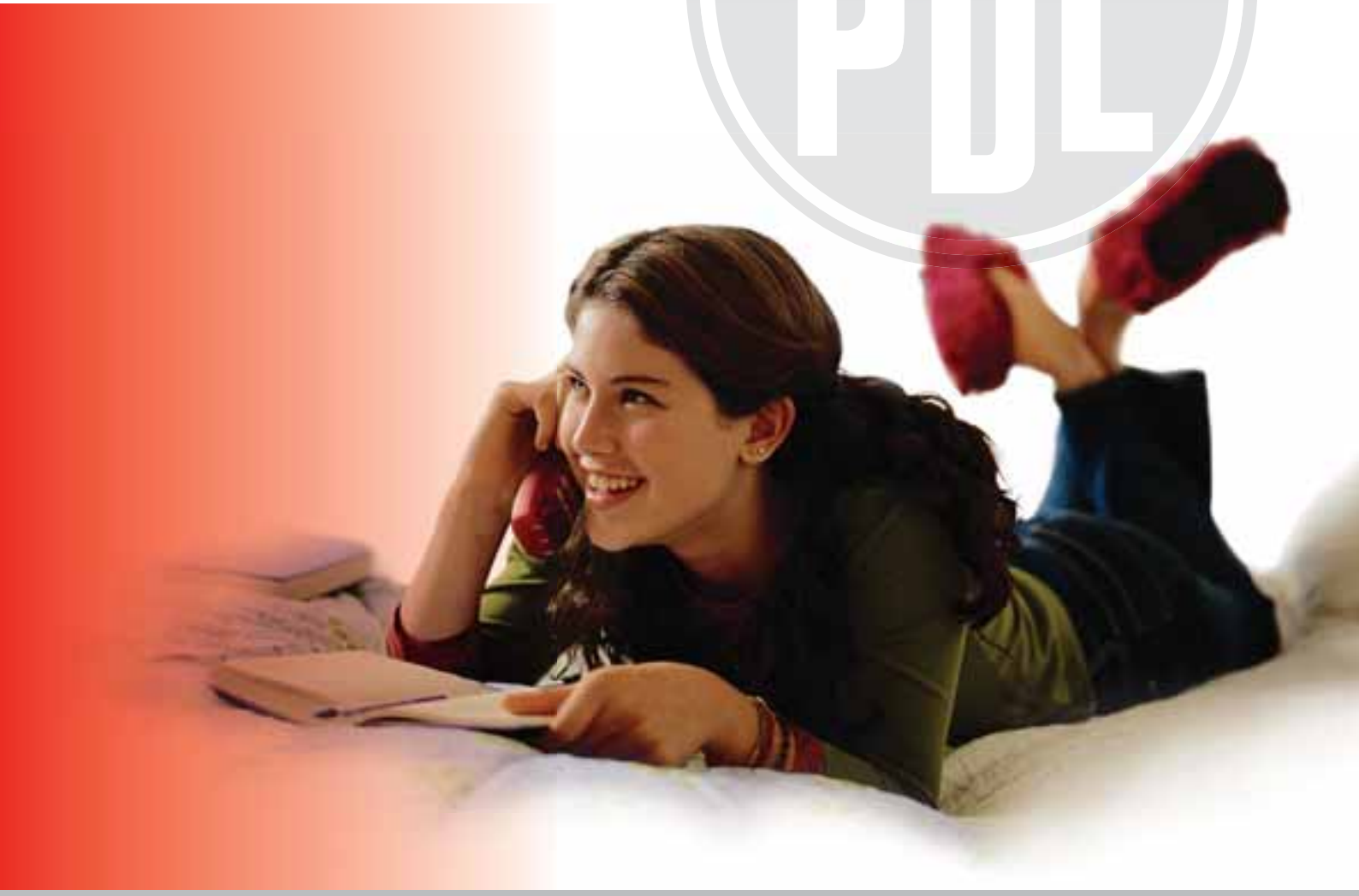

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