AN INTRODUCTION TO SYSTEMLINE MODULAR AUDIO & VIDEO MULTI-ROOM SYSTEMS

Systemline
M O D U L A R

Systemline Modular is the world's first true high fidelity audio & video multi-room system entirely wired using ordinary CAT-5 UTP data cable.

Modular by name, modular by nature - the possibilities are as simple or complex as you and your client choose....

- Single source or multi-source
- Full control, with or without in-wall keypads
- Integrated 5.1 surround sound options
- Active in-ceiling speakers or conventional speakers
- Audio and video distribution solutions

Systemline
MODULAR

SIMPLE WIRING INFRASTRUCTURE

Uses standard CAT-5 UTP wiring throughout - already used in many homes for telephones and data networks.

CONTROL

Infra-red (IR) pass-through, built into the keypad and the ceiling speaker, enables control of the sources connected from any zone, using the appropriate handset. This system also has spare capacity, so you can control a device not directly connected to Systemline Modular such as a Satellite receiver.

SCALABLE AND FLEXIBLE

Thanks to the modular design, the system can be as simple or comprehensive as desired. The use of CAT-5 UTP wiring and simple infrastructure makes Systemline Modular the ideal choice for pre-wiring developments at the lowest cost and least fuss. At the single source level there is no programming and only minimal configuration required. These same benefits also mean it can be retro-fitted more easily than other systems on the market.

HI-FI SOUND

Using specially matched amplifiers and drivers the system delivers hi-fi quality sound from ceiling speakers, even over long cable runs. Alternatively conventional speakers can be used via the unique Zone Amplifier Module (ZAM-40).

INTEGRATED VIDEO DISTRIBUTION

The VM8 video hub offers high quality video distribution of six independent video sources seamlessly integrated with the Systemline Modular multi-source audio distribution system and all using standard CAT-5 UTP cable.

CUTTING EDGE POWER TECHNOLOGY

Modular uses 'patent applied for' technology to deliver the optimum amount of power to each active speaker, whatever the cable run*. This ensures consistent high fidelity audio performance is maintained throughout an installation.

COMPACT AND EFFICIENT

All hubs are designed to be as small as possible and easily fit with the rest of the data services or in a structured wiring cabinet. They do not need to be located in the same room as the source components.

Although the active speakers have built-in 20 W RMS stereo amplifiers, the high efficiency Class D design ensures that no excess heat is generated. The design is more compact than many built-in speakers, requiring only a 95mm mounting depth.

EXPANDABILITY

Each hub has sufficient power to distribute either audio or video to 6 zones. On the multi-source system, additional power can be added to expand to 8 zones and 8 sub-zones. On the single source system, up to three hubs can be daisy chained to allow for 18 main and 18 sub-zones. A zone will normally consist of a pair of speakers, but it is possible to use up to 3 pairs within a single zone. These can be configured to enable all speaker pairs to work together (for example in a very large room) or work independently (as might be required for a master bedroom, dressing room etc).
Each additional speaker pair requires an additional power supply.

CINEMA SURROUND SOUND

With a source such as a DVD player or another AV source with built-in 5.1 decoder, you can use Systemline Modular ceiling speakers to reproduce 5.1 cinema surround sound, using a dedicated Home Cinema Connection Plate.
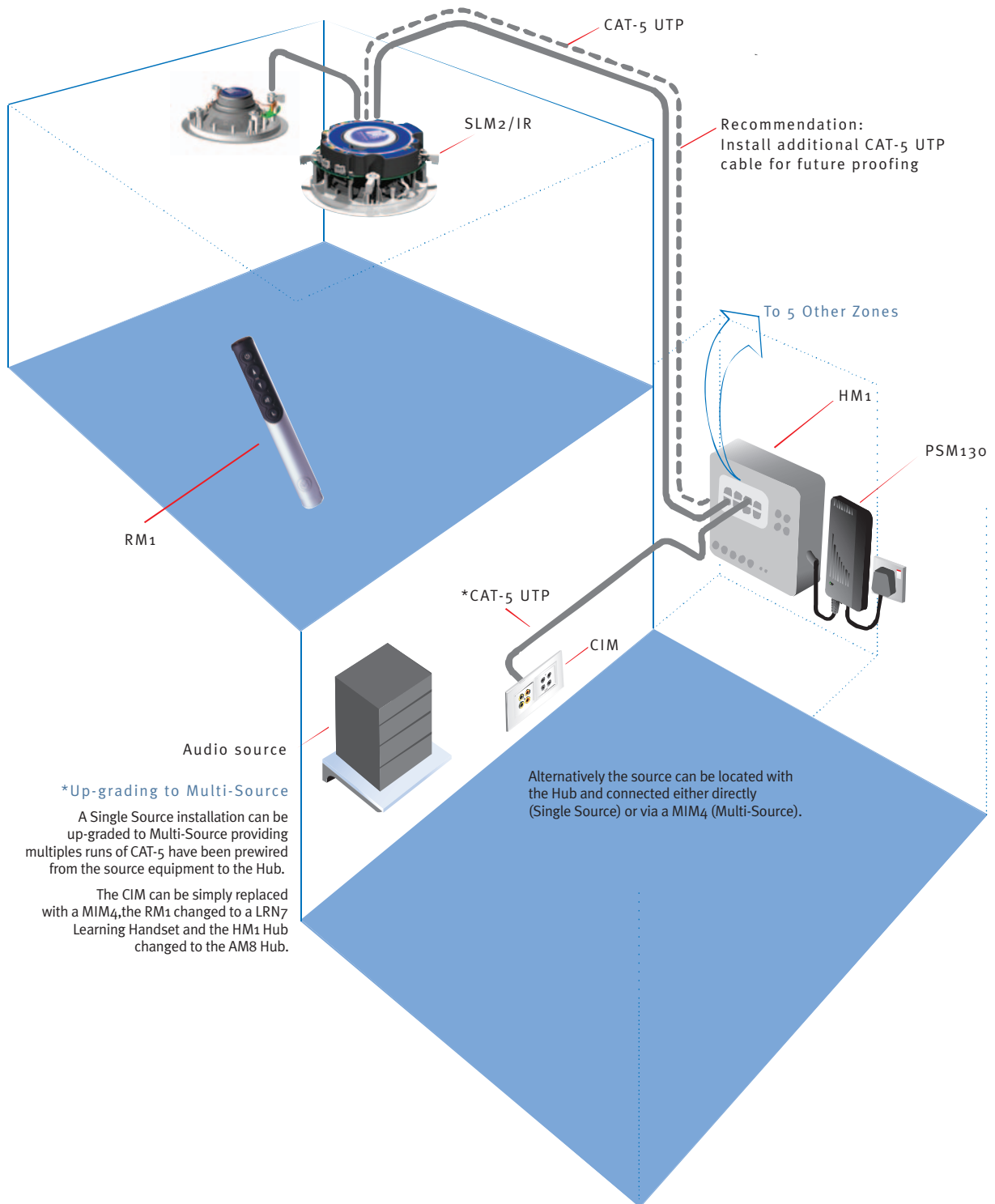
PROGRAMMABLE VOLUME, BASS & TREBLE

Each active speaker can be programmed to suit you or your client's needs. Adjustments to bass or treble can be made to suit the listening environment. Soft start for main and local sources can be programmed along with maximum volume level – ideal for a child's bedroom!

* Up to 50m CAT-5 UTP.

SINGLE SOURCE AUDIO DISTRIBUTION

CAT-5 UTP

SLM2/IR

Recommendation:
Install additional CAT-5 UTP
cable for future proofing

To 5 Other Zones

HM1

PSM130

RM1

*CAT-5 UTP

CIM

Audio source

Alternatively the source can be located with
the Hub and connected either directly
(Single Source) or via a MIM4 (Multi-Source).

*Up-grading to Multi-Source

A Single Source installation can be
up-graded to Multi-Source providing
multiples runs of CAT-5 have been prewired
from the source equipment to the Hub.

The CIM can be simply replaced
with a MIM4,the RM1 changed to a LRN7
Learning Handset and the HM1 Hub
changed to the AM8 Hub.

SYSTEM COMPONENTS

SLM2/IR
Active Loudspeaker
Drive units are carefully matched
to a high efficiency built-in
class D amplifier to deliver high
quality hi-fi sound. Mono/Stereo
switchable. Integral IR receiver
on SLM2/IR model.

ALM2
Passive Left Speaker Addition
Matching passive speaker for
partnering with SLM2 or
SLM2/IR active speaker.

RM1
Handset
Remote control handset for use
with either IR enabled speakers
or via KPM1.1 keypad. Controls
volume, zone on, zone off and
mute. If local source is fitted it
allows selection of local or main
system audio.

KPM1.1
Keypad
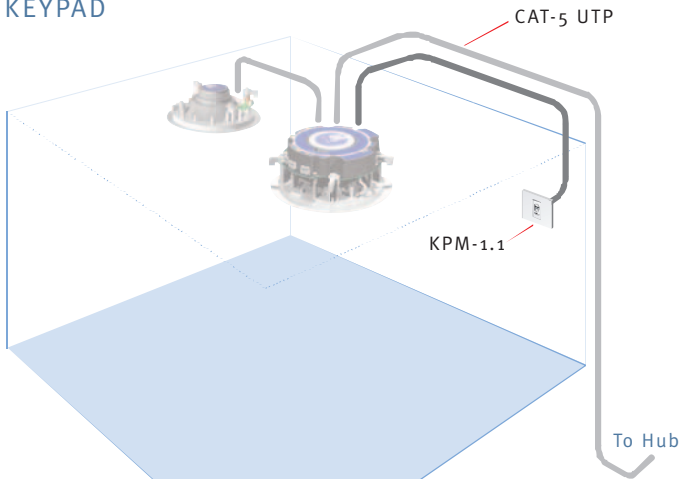Easy to use keypad with integral
IR receiver.

SIM
Source Input Module
Audio input with loop through.

IRM
IR Module output plate
This allows remote control in other
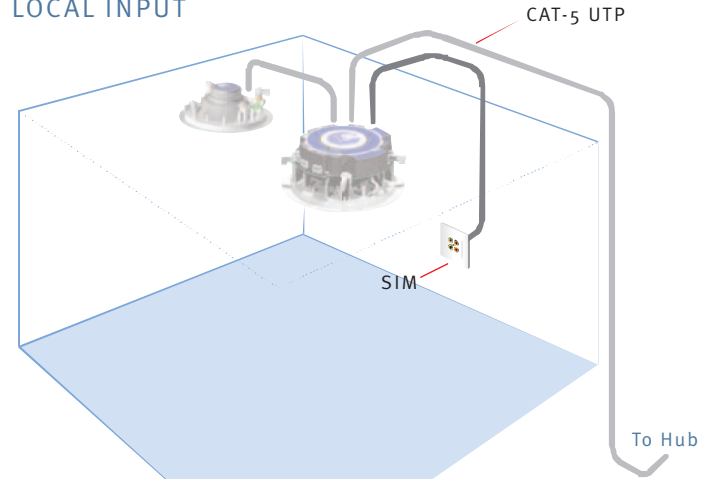zones to control the main audio
source for PLAY commands etc.

ZONE CONFIGURATION OPTIONS
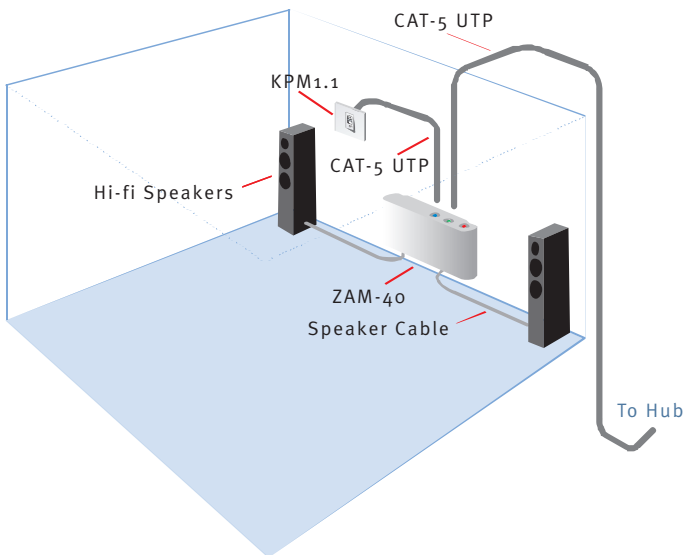
KEYPAD

CAT-5 UTP

KPM-1.1

To Hub

The KPM1.1 Keypad Module can be added to any main zone or sub zone. It enables system input selection, volume, zone on/off and local input (if fitted). It also features a built-in IR sensor.

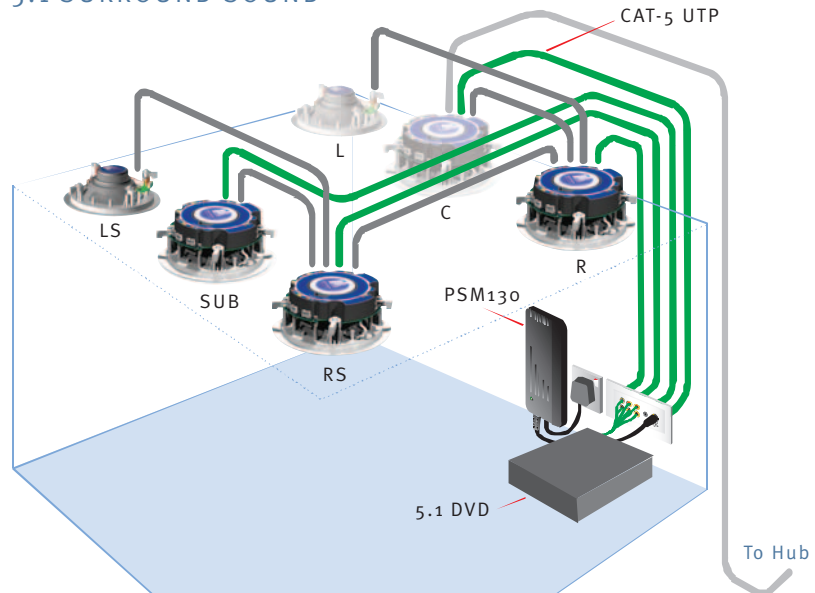## LOCAL INPUT

CAT-5 UTP

SIM

To Hub

Installing a SIM module and running a CAT-5 cable to the SLM2 within the zone permits a Local audio source to be played back as well as the main system audio source. Simply connect a local source to the SIM and select using the 'L' button on the remote control or from the keypad.

ZONE AMPLIFIER

CAT-5 UTP

KPM1.1

CAT-5 UTP

Hi-fi Speakers

ZAM-40

Speaker Cable

To Hub

The Zone Amplifier Module (ZAM-40) provides similar functionality to the SLM in-ceiling speakers, but allows a wider choice of speakers - from passive in-ceiling, in-wall to free-standing hi-fi speakers. The ZAM-40 connects to the Hub in much the same way as the SLM speakers, but it has stereo outputs for powering external speakers using conventional speaker cable. It can also be upgraded to provide a higher output by connecting a PSM130. The KPM1.1 Keypad may also be added.

5.1 SURROUND SOUND

CAT-5 UTP

L

LS

C

R

SUB

PSM130

RS

5.1 DVD

To Hub

Unique to Systemline Modular, any zone can be upgraded to feature local input 5.1 surround sound by just adding more speakers and CAT 5 cable wired to a Home Cinema Connection Plate within the zone. Just plug in a local source with 5.1 pre-outs and the user can switch seamlessly between local 5.1 surround sound and 6 speaker stereo audio from the Single Source system input.

CIM
Combined Input Module
Connection plate for audio input from hi-fi/home theatre system and IR control output.

HM1
Single Source Audio Hub
Distribution hub supplies pro-balanced audio, IR and power via CAT- 5 cable, to up to six zones.

NEW HCCP
Home Cinema Connection Plate
5.1 Input Module, IR output and input power for additional modular speakers.
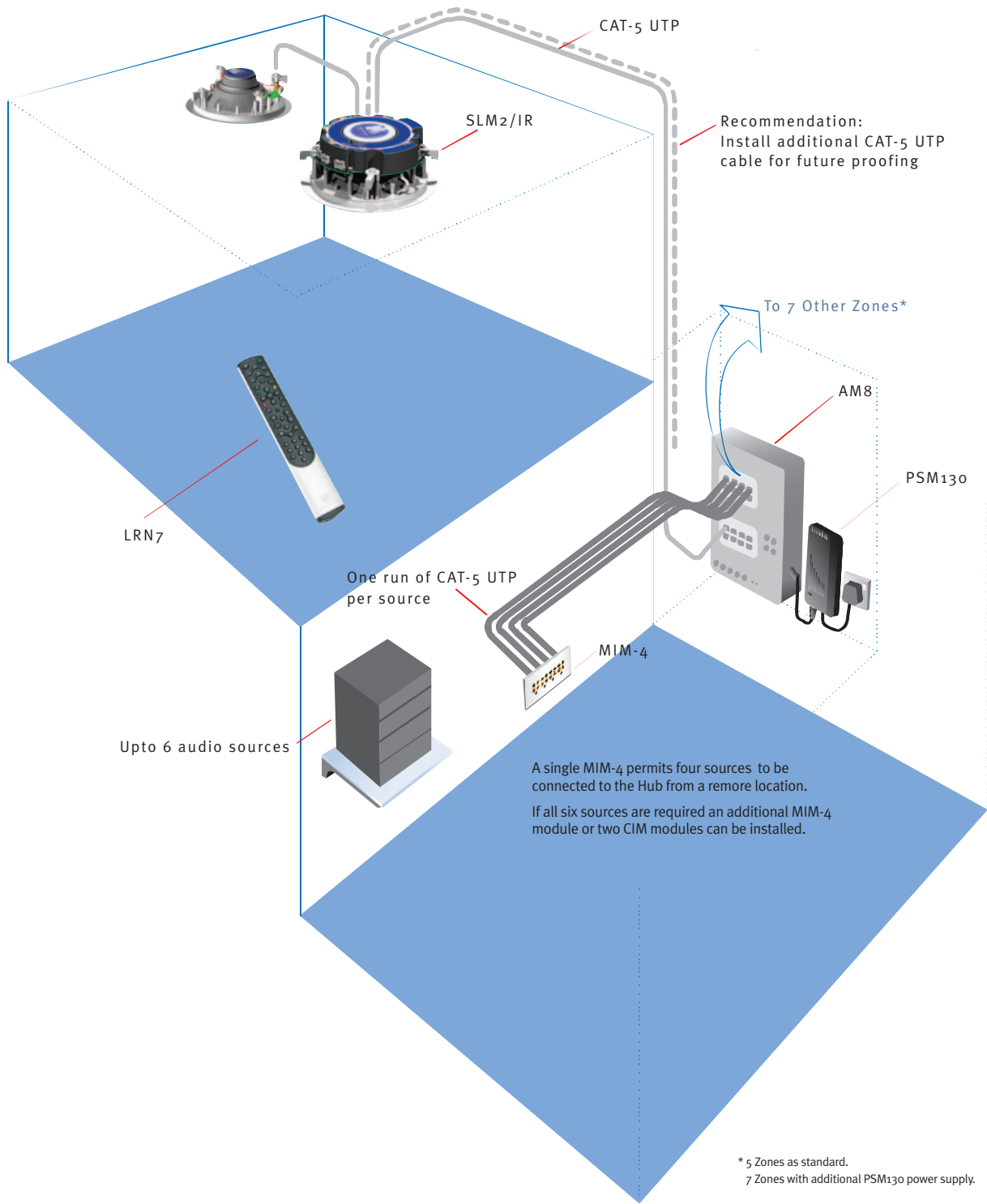
NEW ZAM-40
Zone Amplifier
Zone Amplifier Module to drive passive in-wall, in-ceiling or freestanding hi-fi speakers. Powered from central Hub or can be powered locally using PSM130 for higher power output.

PSM130 & PSM45
PSM130 Power supply
- Powers main hub and 6 zones.
PSM45 Power supply
- Powers expanded zones and sub zones.

MULTI-SOURCE AUDIO DISTRIBUTION

CAT-5 UTP

SLM2/IR

Recommendation:
Install additional CAT-5 UTP
cable for future proofing

To 7 Other Zones*

AM8

PSM130

LRN7

One run of CAT-5 UTP
per source

MIM-4

Upto 6 audio sources

A single MIM-4 permits four sources to be
connected to the Hub from a remore location.

If all six sources are required an additional MIM-4
module or two CIM modules can be installed.

* 5 Zones as standard.
7 Zones with additional PSM130 power supply.

SYSTEM COMPONENTS

SLM2/IR
Active Loudspeaker
Drive units are carefully matched
to a high efficiency built-in
class D amplifier to deliver high
quality hi-fi sound. Mono/Stereo
switchable. Integral IR receiver
on SLM2/IR model.

ALM2
Passive left speaker Addition
Matching passive speaker for
partnering with SLM2 or
SLM2/IR active speaker.

NEW **LRN7**
Learning Handset
Remote control handset for use
with either IR enabled speakers
or via KPM7 keypad. Offers
comprehensive AV control of
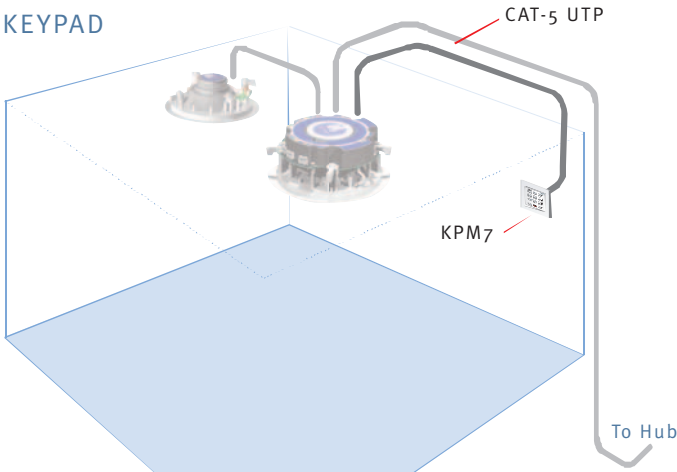up to seven sources.

NEW **KPM7**
Multi-Source Keypad
Easy to use keypad with integral
IR receiver. Allows selection of
seven sources and zone
volume control

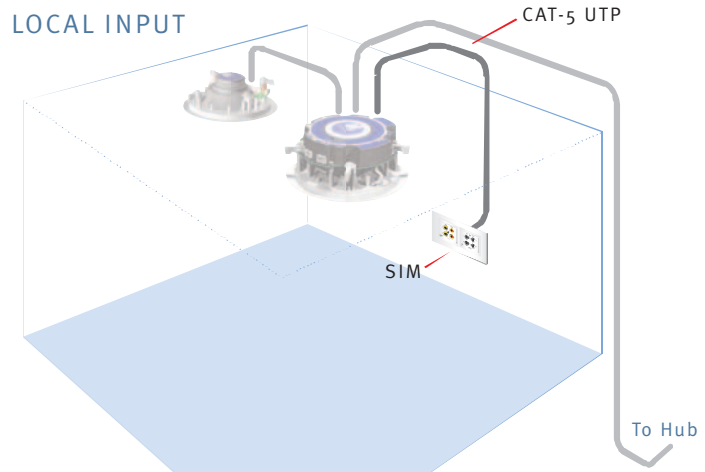**SIM**
Source Input Module
Audio input with loop through.

ZONE CONFIGURATION OPTIONS
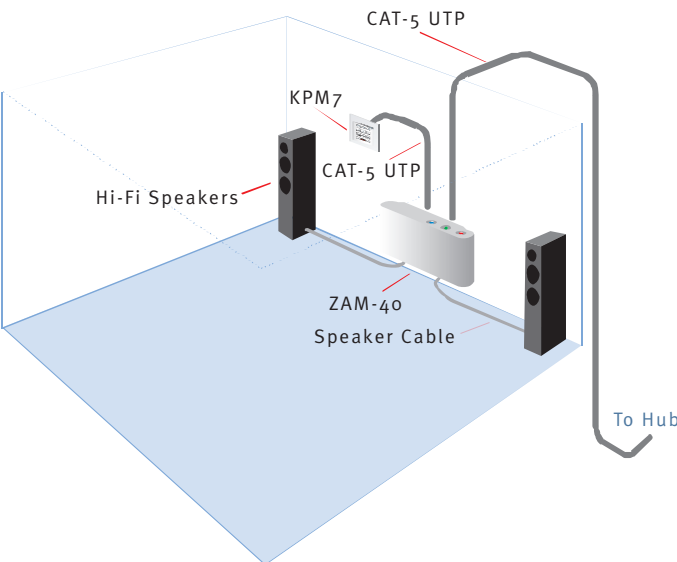
KEYPAD

CAT-5 UTP

KPM7

To Hub

The KPM7 Keypad Module can be added to any main zone. It controls input source selection, volume, zone on/off and mute. It also features a built-in IR sensor.

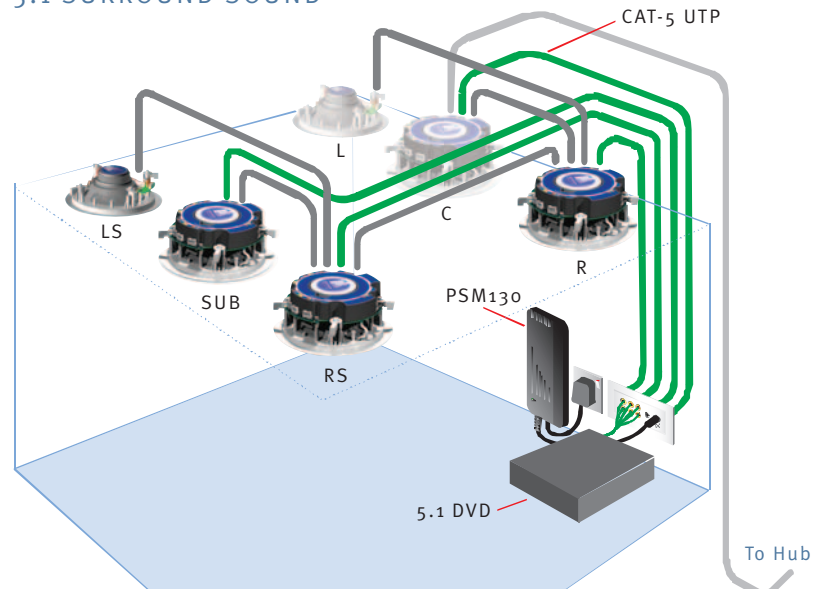### LOCAL INPUT

CAT-5 UTP

SIM

To Hub

Installing a SIM module and running a CAT-5 cable to the SLM2 within the zone permits a local audio source to be played as well as the main system audio source. Simply connect a local source to the SIM and select using the 'L' button on the remote control or from the keypad.

ZONE AMPLIFIER

CAT-5 UTP

KPM7

CAT-5 UTP

Hi-Fi Speakers

ZAM-40

Speaker Cable

To Hub

The Zone Amplifier Module (ZAM-40) provides similar functionality to the SLM2 in-ceiling speakers, but allows a wider choice of speakers - from passive in-ceiling, in-wall to free-standing hi-fi speakers. The ZAM-40 connects to the Hub in much the same way as the SLM2 speakers, but it has stereo outputs for powering external speakers using conventional speaker cable. It can also be upgraded to provide a higher output by connecting a PSM130. The KPM7 keypad may also be connected.

5.1 SURROUND SOUND

CAT-5 UTP

L

LS

C

R

SUB

PSM130

RS

5.1 DVD

To Hub

Unique to Systemline Modular, any zone can be upgraded to feature local input 5.1 surround sound by just adding more speakers and CAT 5 cable wired to a Home Cinema Connection Plate within the zone. Just plug in a local source with 5.1 pre-outs and the user can switch seamlessly between local 5.1 surround sound and 6 speaker stereo audio from the Single Source system input.

NEW MIM-4
Four Source Connection Input Module
Connection plate for up to four audio sources from hi-fi/home theatre system and IR control output.

NEW AM8
Multi-Source Audio Hub
Distributes six pro-balanced audio sources, IR and power via CAT-5, cable to up to eight zones.

NEW HCCP
Home Cinema Connection Plate
5.1 Input Module, IR output and input power for additional modular speakers.

NEW ZAM-40
Zone Amplifier
Zone Amplifier Module to drive passive in-wall, in-ceiling or freestanding hi-fi speakers. Powered from central Hub or can be powered locally using PSM130 for higher power output.
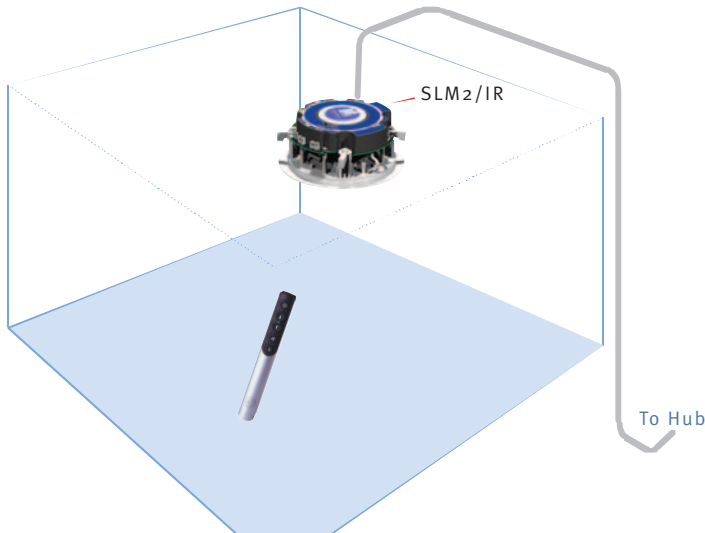
PSM130 & PSM45
PSM130 Power supply
- Powers main hub and 6 zones.
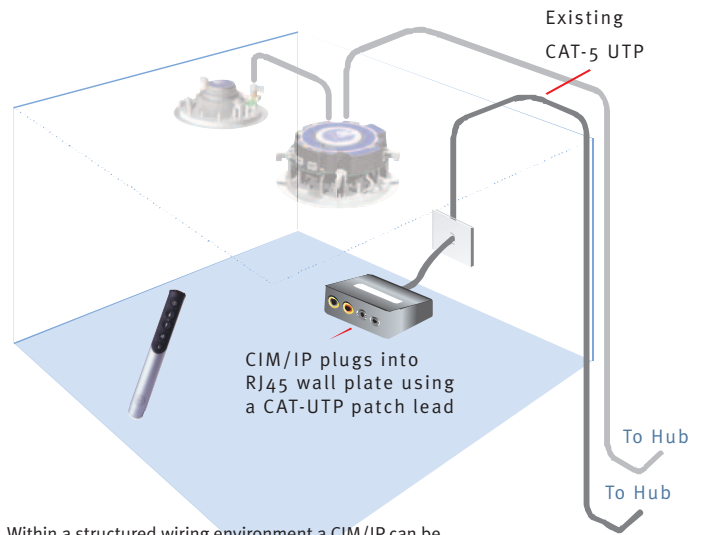**PSM45 Power supply**
- Powers expanded zones and sub zones.

ZONE CONFIGURATION OPTIONS
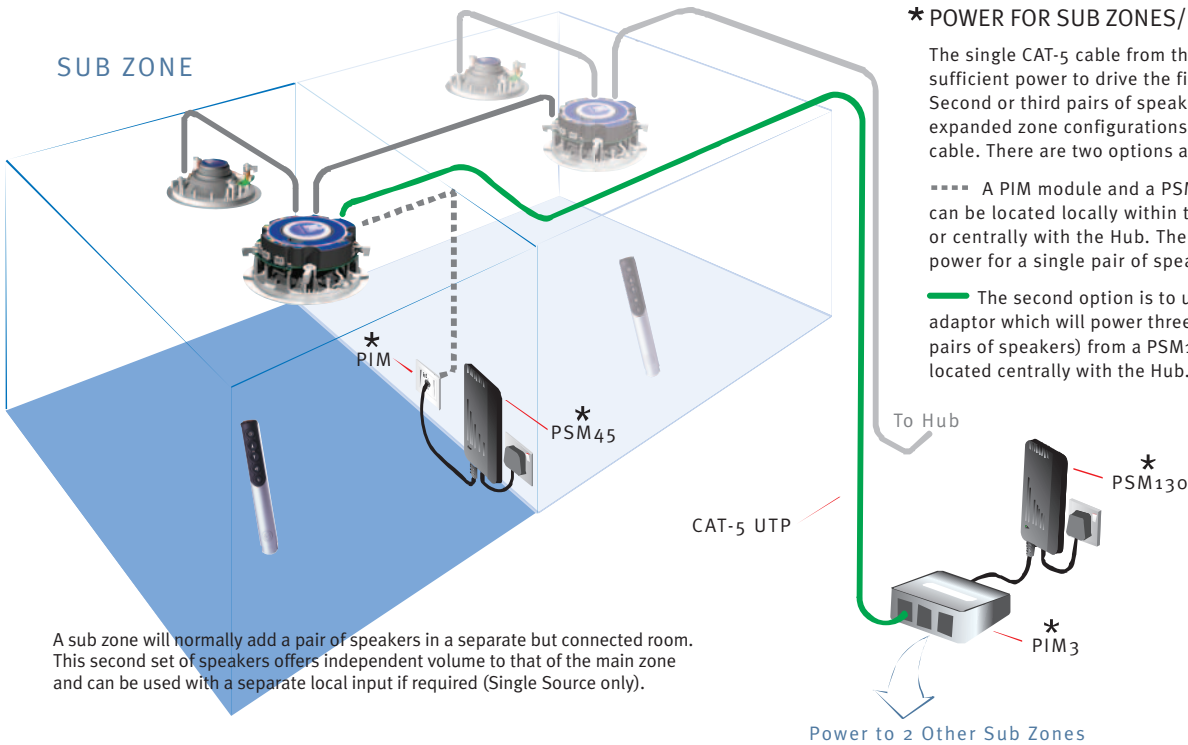
MONO SPEAKER

SLM2/IR

To Hub

In some instances such as a small room or a hallway, a single mono speaker is preferred as a more discreet solution. In this instance simply slide the switch on the active loudspeaker to the mono position.

STRUCTURED WIRING

Existing
CAT-5 UTP

CIM/IP plugs into
RJ45 wall plate using
a CAT-UTP patch lead

To Hub

To Hub

Within a structured wiring environment a CIM/IP can be used to route stereo audio to the Hub and IR control back from the Hub to the zone.

SUB ZONE

PIM

★
PSM45

A sub zone will normally add a pair of speakers in a separate but connected room. This second set of speakers offers independent volume to that of the main zone and can be used with a separate local input if required (Single Source only).

★ POWER FOR SUB ZONES/EXPANDED ZONES

The single CAT-5 cable from the Hub to the SLM2 carries sufficient power to drive the first pair of speakers. Second or third pairs of speakers in either sub zone or expanded zone configurations need an additional power cable. There are two options available:

---- A PIM module and a PSM45 power supply. This can be located locally within the zone itself (as shown) or centrally with the Hub. The PSM45 has enough power for a single pair of speakers.

—— The second option is to use the PIM3 power adaptor which will power three zones/sub zones (three pairs of speakers) from a PSM130 supply. This is usually located centrally with the Hub.

To Hub

★
PSM130

CAT-5 UTP

★
PIM3

Power to 2 Other Sub Zones

SYSTEM COMPONENTS

SLM2/IR
Active Loudspeaker
Drive units are carefully matched to a high efficiency built-in class D amplifier to deliver high quality hi-fi sound. Mono/Stereo switchable. Integral IR receiver on SLM2/IR model.

ALM2
Passive Left Speaker Addition
Matching passive speaker for partnering with SLM2 or SLM2/IR active speaker.

RM1
Handset
Remote control handset for use with either IR enabled speakers or via KPM1.1 keypad. Controls volume, zone on, zone off and mute. If local source is fitted it allows selection of local or system audio.

CIM/PI

NEW CIM/PI
Connection Input Module
A simple unit to replace a CIM when used in an existing structured wiring environment.
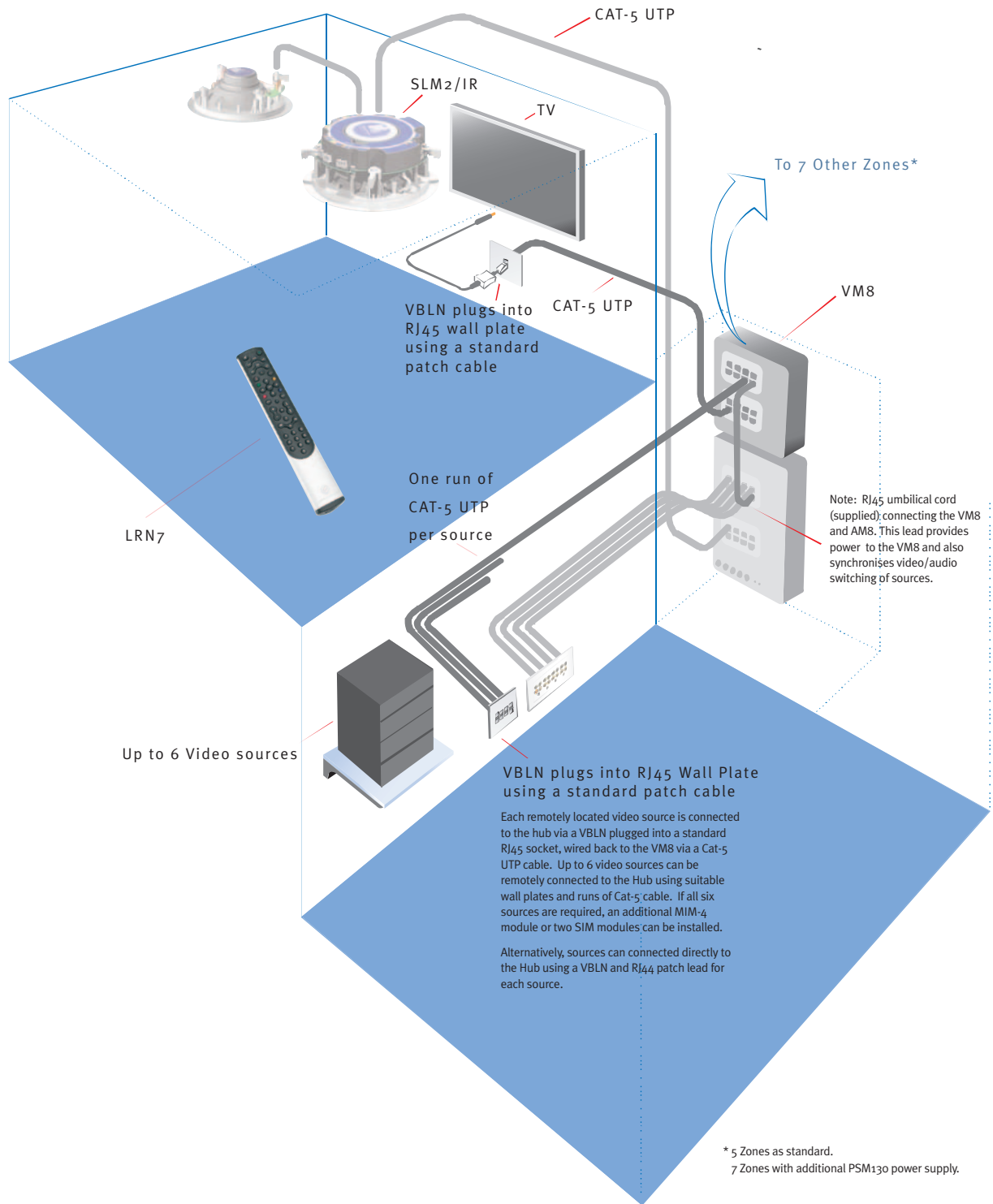
PIM3

NEW PIM3
External Power Input Module
Allows a central PSM130 to Power 3 extended or sub zones.

PIM
Power Input Module
Typically used to allow the connection of a PSM45 locally within a sub zone or expanded zone.

MULTI-SOURCE VIDEO DISTRIBUTION

CAT-5 UTP

SLM2/IR

TV

To 7 Other Zones*

VM8

VBLN plugs into
RJ45 wall plate
using a standard
patch cable

CAT-5 UTP

One run of
CAT-5 UTP
per source

LRN7

Note: RJ45 umbilical cord
(supplied) connecting the VM8
and AM8. This lead provides
power to the VM8 and also
synchronises video/audio
switching of sources.

Up to 6 Video sources

VBLN plugs into RJ45 Wall Plate
using a standard patch cable

Each remotely located video source is connected
to the hub via a VBLN plugged into a standard
RJ45 socket, wired back to the VM8 via a Cat-5
UTP cable. Up to 6 video sources can be
remotely connected to the Hub using suitable
wall plates and runs of Cat-5 cable. If all six
sources are required, an additional MIM-4
module or two SIM modules can be installed.

Alternatively, sources can connected directly to
the Hub using a VBLN and RJ44 patch lead for
each source.

* 5 Zones as standard.
  7 Zones with additional PSM130 power supply.

SYSTEM COMPONENTS

NEW LRN7
Learning Handset
Remote control handset for use
with either IR enabled speakers
or via KPM7 keypad. Offers
comprehensive AV control of
up to seven sources.

NEW VM8
Multi-Source Video Hub
Distributes six composite video
sources via CAT- 5 cable to
up to eight zones.

NEW VBLN
Video Bi-directional Line Node
Converts a composite video
source into a balanced video
source for transmission down
CAT-5 cable or vice-versa.

PRODUCT SPECIFICATIONS

HM1
Single Source Audio Hub
- Distributes a single stereo audio source to 6 zones
- Additionally a local source can be added in each zone
- 1 x Direct stereo audio input (2 x phono)
- 1 x Stereo audio loop through (2 x phono)
- 1 x System input (RJ45 socket)
- 6 x Zone outputs (RJ45 socket)
- 3 x IR outputs (3.5mm Jack)
- 1 x IR loop in (3.5mm)
- 1 x IR loop out (3.5mm)
Dimensions (HxWxD): 132 x 145 x 43mm

Optional wall bracket available

SLM2/IR
Active Loudspeaker
Integrated stereo amplifier
Integral IR receiver + LED feedback
Punch down termination to system
Weight: 1.82kg
Mounting Depth: 90mm
Cutout: 195mm diameter
Dimensions (Depth x Dia): 95 x 228mm

ALM2
Passive Left Speaker Addition
Punch down termination to SLM2/IR
Weight: 1.28kg
Mounting Depth: 75mm
Cutout: 195mm diameter
Dimensions (Depth x Dia): 80 x 228mm

NEW AM8
Multi-Source Audio Hub
- Distributes 6 stereo audio sources to 8 zones
- Additionally a local source can be added in each zone
- 6 x System input (RJ45 sockets)
- 8 x Zone outputs (RJ45 sockets)
- 3 x IR outputs (3.5mm Jack)
Dimensions (HxWxD): 221 x 145 x 43mm

Optional wall bracket available

RM1
Handset
Dimensions (L x Dia): 155 x 21mm
Battery Type: 12V MN21 (supplied)

NEW LRN7
Multi-Source Learning Handset
Dimensions (HxWxD): 248 x 44 x 25mm
Battery Type: 3 x AAA (supplied)
USB Type A port
USB Cable & Windows programming
software supplied

NEW VM8
Multi-Source Video Hub
- Distributes 6 composite video sources to 8 zones
- 6 x Balanced video inputs (RJ45 sockets)
- 8 x Balanced video outputs (RJ45 sockets)
Dimensions (HxWxD): 132 x 145 x 43mm

Optional wall bracket available

Note: No power supply is required. VM8 is powered by AM8.
An umbilical cord is supplied for this purpose.

KPM1.1
Keypad
Integral IR receiver
Punch down termination to system
Requires standard single gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 86 x 40mm

NEW KPM7
Multi-Source Keypad
Integral IR receiver
Punch down termination to system
Requires standard single gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 86 x 40mm

All keypads and modules are supplied with a white wall plate surround as standard.
A range of alternative finishes are available including: Satin Nickel, Brass, Polished Chrome and Black Chrome – ask for details.

SIM
Source Input Module
• 1 x Stereo audio input (2 x phono)
• 1 x Stereo audio output (2 x phono)
Punch down termination to system
Requires standard single gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 86 x 40mm

IRM
IR Module Output Plate
• 4 x IR outputs (3.5mm Jack)
Punch down termination to system
Requires standard single gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 86 x 40mm

CIM
Combined Input Module
• 1 x Stereo audio input (2 x phono)
• 1 x Stereo audio output (2 x phono)
• 4 x IR outputs (3.5mm Jack)
Punch down termination to system
Requires standard double gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 145 x 40mm

NEW **PIM**
Power Input Module
• 1 x Power input (din socket)
Punch down termination to system
Requires standard single gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 86 x 40mm

NEW **HCCP**
Home Cinema Connection Plate
• 5.1 Audio inputs (6 x phono)
• 1 x IR output (3.5mm Jack)
• 1 x Power input (din socket)
Punch down termination to system
Requires standard double gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 145 x 40mm
Supplied with interconnects and IR emitter

NEW **MIM4**
Four Source Connection Input Module
• 4 x Stereo audio input (8 x phono)
• 4 x Stereo audio output (8 x phono)
• 4 x IR output (3.5mm Jack)
Punch down termination to system
Requires standard double gang UK back box (44mm deep)
Dimensions (HxWxD): 86 x 145 x 40mm
Supplied with interconnects and IR emitters

NEW **ZAM40**
Zone Amplifier
• 1 Balanced line system input (RJ45 socket)
• 1 Keypad input (RJ45 socket)
• 1 x IR input (3.5mm Jack)
• 1 x Stereo pre-amp output (3.5mm stereo Jack)
• 1 x Stereo line input (3.5mm stereo Jack)
• 1 x Remote power input (RJ45 socket)
• 1 x Direct power input (Din socket)
• 4 x Screw fix speaker terminals
Dimensions (HxWxD): 39.3 x 186 x 106mm
Supplied with a discreet IR receiver and wall bracket and transparent plastic feet.

PSM130
Power Supply
• Fan cooled, switched mode type
• Drives hubs and HCCP and PIM3
Dimensions (HxWxD): 195 x 86 x 54mm

PSM45
Power Supply
• Used for additional speaker pairs
• Self cooling
• Switched mode type
Dimensions (HxWxD): 146 x 75 x 43mm

NEW **VBLN**
Video Bi-directional Line Node
• 1 Balanced line video input/output (RJ45 socket)
• 1 x Composite video input/output (phono)
Dimensions (HxWxD): 25 x 25 x 45mm

NEW **CIM/PI**
Connection Input Module
• Stereo phono input
• 2 x IR emitter outputs (3.5mm jack)
• 1 x Balanced line audio output (RJ45)
Dimensions (HxWxD): 45 x 60 x 70mm

NEW **PIM3**
External Power Input Module
• 1 x Power input (RJ45 socket)
• 3 x Power output (RJ45 socket)
• Driven by PSM130
Dimensions (HxWxD): 45 x 60 x 70mm

Systemline

M O D U L A R

www.systemline.co.uk/modular

Systemline is Europe's first and leading designer/manufacturer of high quality multi-room entertainment systems for the home.

Systemline has been offering cutting edge multi-room systems since the early 1980's. Today there are 1000's of systems installed across Europe and Systemline enjoys an enviable reputation for outstanding performance and reliability.

All 'Systemline Approved Installers' have attended comprehensive training courses at the Armour Training Academy and are fully qualified to help you design and perfectly install Systemline Modular into your home.

www.systemline.co.uk

Armour

H O M E   E L E C T R O N I C S

CEDIA
MEMBER

AHE235