Alarm & Communication SYSTEMS LIMITED

SPOT LIGHT ON

High Definition Image Distribution

The rapid expansion of HD devices such as Blu Ray players has led to a corresponding need to be able to distribute HD images from room to room.

Design Considerations

When deciding what type of HD distribution system you want to use several important considerations have to be taken into account:-

- Number of sources that need to be distributed.
- Number of display points needing to receive HD sources.
- Type of HD source to be transmitted e.g. 1080, 3D, deep colours etc.
- Distance between HD source and display point.
- Possibility of using existing data network.
- Budget.

Types of HD Distribution Systems

HDMI Cables	Pre-terminated HD cables can be used to link a source device directly to a TV but are typically limited to 20m in length. It is possible to combine HD cables with HD splitters so that one source can be distributed to multiple TV's.
Baluns	Cat 5e or Cat 6 data cables can be converted to send HD signals with the use of devices called Baluns. The HD source is fed into a Balun which is then linked to a remote Balun through a Cat 5e/6 cable and reconverted into a standard HD signal. 2 data cables are commonly required per Balun to maximise picture quality but distances are typically limited to 50m. Devices usually require an external power source but passive units are available.
Matrixes	Matrixes systems consist of units that take multiple HD inputs which are then distributed to multiple display devices over Cat 5e/6 cables. Commonly available matrixes have 4 inputs and 8 outputs but a wide range of units are available. Each input source can be distributed to individual displays as required to give a large degree of flexibility. Control is achieved with the use of a remote control at any TV, RS232 commands or from the matrix itself. As with Baluns, distance limitations of approximately 50m exist.
HD over TCP/IP	HD sources are encoded into a TCP/IP format and connected to a standard network switch. Decoders are then used at the TV to convert the IP stream back into a standard HD format. This option gives great flexibility and scalability with systems from 1x1, to 4,000 x 65,000 (and everything in between). Control is achieved through software installed on a networked computer or third party control devices such as AMX units.

For further information or design advice please visit our website www.acsgroup.uk.com or contact us on 0191 4178882 or sales@acsgroup.uk.com

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- Refuge Area Communication Systems
- Soundfield Systems for Schools, Colleges
- Accessible Alarms for toilets, showers, changing rooms
- Automatic Door Operators

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- Conference Room AV Equipment
- AMX Control Systems
- Electronic Signage & Messaging TV
- Synchronised Clocks