







**ACE FAQs**

Q: Can I use ACE over network routers or WiFi?

A: ACE is not compatible with network routers or WiFi.

Q: Can I record from ACE?

A: Not directly; ACE is 'point to point' so is used to transport audio between two A&H ACE devices such as MixRacks, control surfaces or GLD mixers. These could provide analogue or digital outputs for recording depending on the options fitted.

Q: Can I extend the ACE connection using a network switch?

A: Network switches can be used to 'bridge' the ACE link between systems. The maximum cable run is 100m (333ft) to / from an Ethernet switch so could provide up to 200m (666ft) between racks or surface. ACE complies with 802.3 IEEE (Ethernet) Data Link Layer 2 standards and therefore works with other network devices<sup>1</sup>. We suggest you try an Ethernet switch and check for errors / cable-length before you buy it<sup>2</sup>.

1. Some IEEE layer 3 & 4 protocols can interrupt ACE data or cause audible clicks. We recommend turning of layer 3 & 4 functions in a managed switch or use a layer 2 switch. The following protocols can interfere with ACE: Spanning Tree, Tagged egress packets, Broadcast storm protection. No other network devices can be plugged into a switch carrying ACE data unless a dedicated VLAN is set up exclusively for ACE.

2. Suitable managed switches are: Netgear FSM726S, Level One GSW-0841 Web Smart switch (with fibre optic option).

Q: Can the Surface to rack ACE link connection have redundant auto-back-up?

A: With iLive modular surfaces (iLive80/122/144/176) and MixRacks (iDR0 and iDR10) equipped with RAB-2, the M-ACE-A option module provides auto change-over redundant feature (zero packet-loss). This means two cables can be run between MixRack and Surface, each carrying Audio and Control. Should one cable connection be broken, the audio and control will continue to run seamlessly. Status and error information will be displayed on the surface touch-screen home page.

Q: Can 3<sup>rd</sup> party Ethernet data e.g. DMX-over-Ethernet, amplifier/speaker control systems / compressed video be 'tunnelled' down ACE?

A: Any 100 Mbit/s Ethernet device can be plugged into the network ports which form part of the AH-Net control network. In the case of fixed format surfaces and MixRacks, these sockets are already connected internally to the ACE primary link. In the case of M-ACE option modules, the 'Bridge Control Network' port will typically be connected to the MixRack network switch by a short CAT5 patch lead (included with ACE module). Either way, 3<sup>rd</sup> party devices can communicate with each other through the ACE link. Network control bandwidth is limited to about 10Mbit/s.

Q: What cables would you recommend for a touring iLive system using ACE?

A: Allen & Heath can supply 80m touring grade reel of Neutrik Etherflex cat5e (AH7000) and a 120m touring grade reel of Klotz (AH8721). Please refer to our website for a list of tested and approved cables which meet the required EMC standards and connect ACT up to 120m.

Q: How do the xDR expanders connect to the iLive system?

A: An M-ACE option card is fitted to the port-B of the master MixRack of the iLive system. A short Cat5 jumper cable is used to bridge the network on the MixRack to the M-ACE network bridge port. One xDR-16 expander can be connected using a Cat5 cable (<120m) to Link 1 of the M-ACE card. This operation is 'plug-n-play'. A second expander can be connected to Link 2 but its IP address will need to be set accordingly. MixRack port-B ACE redundancy should be set to OFF. xDR expanders have dedicated ACE ports to connect them to the M-ACE card in the master MixRack. They also have a port-B option slot for further system integration. Please consult the xDR-16 Getting Started guide AP8331 for further information.

Q: What are the ACE 'Redundancy' settings and what do they mean?

A: These are found in the MixRack Preferences on the iLive touch-screen and Editor menus, or Setup menu in GLD.

**Redundancy On** is used for two cable redundant backup with automatic switch between 1&2 on cable error. It is typically used for a 64ch digital mic split, iLive Dual-Rack setup or Surface to MixRack link (modular iLive only).

**Redundancy Off: In1-64 from Link1** - Link 1 on the card can be used for a one-cable 64ch digital mic split, iLive Dual-Rack setup or connection of an xDR-16 with 48 inputs coming from the expander's Port B. Link 2 can be used for 64ch daisy chain to other ACE devices.

**Redundancy Off: In1-32 Lnk1, 33-64 Lnk2** - Link 1 on the card can be used for a once-cable 32ch mic split, iLive Dual-Rack setup or connection of an xDR-16 with 16 inputs coming from the expander's Port B. Link 2 can be used for 64ch daisy chain to other ACE devices or connection of a second xDR-16 with 16 inputs coming from its Port B.