## iDR-8 Architect's Specification

**Specification Note:**

This specification refers to the iDR-8 unit with software version 3.40 or later.

The unit shall be a digital mix processor with 10 analogue inputs and 10 analogue outputs on the main unit chassis, capable of expansion to 18 analogue inputs and 18 analogue outputs, achieved by connecting separate 8-analogue-input and 8-analogue-output expander modules via proprietary 8-channel digital audio input and output ports. Of the 10 analogue inputs and outputs on the main chassis, 8 shall be mic/line inputs on balanced XLR's with level trims, 8 shall be line-level outputs on balanced XLR's. The remaining inputs and outputs shall be stereo ripple through monitor inputs that consist of separate electronically balanced Left and Right TRS jack inputs, and active monitor bus outputs that consist of separate electronically balanced Left and Right TRS jack outputs. The monitor inputs and outputs shall be able to be assigned as extra channel inputs and outputs.

The system shall have a full 16x16 crosspoint matrix allowing any input, or combination of inputs, to be routed to any output or combination of outputs. All crosspoints shall have variable level, level grouping, and muting capablity. The 8 mic/line inputs and 8 line level outputs on the expander units shall also be on balanced XLR's. Comprehensive ducking, paging, automatic microphone mixing, signal equalisation, dynamics processing, ambient noise sensing and system time alignment capability shall be provided.

The mic/line inputs shall have -20dB pad and +48V phantom power selection controlled through software assignment and a switchable pre-converter soft limiter. The mic/line gain range shall be -15dB to +50dB with input impedance of 2kohms (no pad) or 10kohms (padded). The inputs shall accept a maximum of +33dBu and be converted using a 24 bit analogue-to-digital converter with a dynamic range of 109dB A-weighted, 106dB unweighted.

The XLR outputs shall have a maximum output of +18dBu with an output impedance of less than 75ohms. The conversion shall be by a 24 bit digital-to-analogue converter with a dynamic range of 115dB A-weighted, 112dB unweighted.

The unit shall be configured either over a standard RJ45 TCP/IP Ethernet port or RS232 serial connection using a proprietary software application with a Graphical User Interface. The unit shall have the ability to be accessed over the internet or via modem. Configurations shall be editable both on and off-line. The configuration shall contain up to 250 presets which determine the settings for the inputs, routing of input signal to output channels, levels, mutes, signal equalisation, dynamics processing, and polarity reverse. The unit shall have the ability to cross-fade between presets for smooth transition between settings. After configuration, the unit shall be capable of running standalone without an external computer. Signal processing resources available shall include compressors, gates, limiters, parametric equalisers and crossovers. An internal real-time clock shall allow scheduling of timed events. Two independent internal pager systems shall allow communication to selected output zones.

The SysNet port shall allow communication with industry standard remote controllers to provide remote control of its levels, mutes and preset recall using the Allen & Heath message protocol. Alternatively the SysNet port shall be configurable in software as a Custom Serial Interface for controlling external RS232 equipment.

The MIDI ports shall allow communication with industry standard MIDI controllers and devices to provide remote control of its levels, mutes and preset recall using the Allen & Heath MIDI protocol, and also control of MIDI equipment.

The front panel shall feature 16 installer-definable function keys for user control of volume levels, mutes and patches, and also 32 installer-definable function LEDs for 3-colour signal metering, mute and status indication. There shall also be a backlit LCD for indication of setup menus, patch status and user-defined information.

The unit shall be compatible with the iDR-Switch unit which caters for external contact closures to be read by the unit and for tally/LED outputs to be triggered by the main unit. Up to three iDR-Switch boxes may be connected to the system, providing a total of 72 contact closures and 48 tally/LED outputs.

The unit shall be compatible with the PL-Anet Series of panels and controllers.

The unit shall weigh no more than 15.4 lbs in a 2U rack-mount chassis. The chassis shall be constructed from zintec steel and be fully earth bonded.

The unit shall meet IEC60065, UL6500 (second edition 2000) and Can/CSA-E60065-00 safety standards.

The unit shall meet European EMC directive 89/336/EEC.

The unit shall be the Allen & Heath iDR-8 digital audio mix processor.