



## iDR-8 Technical Specifications

### Audio

<b>Performance</b>	Noise Bandwidth	22Hz to 22kHz
	Frequency Response	20Hz to 20kHz +/- 0.5dB
	Inter-channel Crosstalk	<-80dB @ 1kHz, 0dB gain
	THD + noise	<0.01% @ 1kHz, 0dBu
	Residual output noise	<93dBu
	Input to Output noise	<87dBu @ 0dB, -73dBu @ 50dB
<b>XLR Mic/Line Inputs</b>	Quantity	8 (expandable to 16)
	Connections	Female XLR 3 Pin
	Type	Electronically Balanced, pin2+
	Impedance (pad out)	2k ohm
	Impedance (pad in)	>10k ohm
	Gain	Control in 3dB steps, 20dB pad
	Sensitivity (pad out)	-50 to -5dBu
	Sensitivity (pad in)	-30 to +15dBu
	Max Input	+33dBu
	Limiter	Pre-ADC opto - 6dBFS, switchable
	Phantom Power	+48V switched
<b>TRS Jack Line Inputs</b>	Quantity	2
	Connections	TRS Jack (balanced/stereo Jack)
	Type	Electronically balanced, tip+
	Impedance	>30k ohm
	Sensitivity	0dBu
	Max Input	+18dBu
<b>XLR Line Outputs</b>	Quantity	8 (expandable to 16)
	Connections	Male XLR 3 Pin
	Type	Electronically balanced, pin2+
	Impedance	<75 ohm
	Max Output	+18dBu
<b>TRS Jack Line Outputs</b>	Quantity	2
	Connections	TRS Jack (balanced/stereo Jack)
	Type	Electronically balanced, tip+
	Impedance	<75ohm
	Max Output	+18dBu
<b>Headphones</b>	Quantity	1
	Connections	TRS Jack, Tip L Ring R
	Type	1/4" Stereo Jack
	Impedance	For Headphones >30ohms
	Control	Front Panel Trim Control
<b>DSP</b>	DSP	2x Motorola 24bit
	Processing	56bit mix accumulator
	Sampling Rate	48kHz
	Audio matrix (48kHz)	16 x 16 channel processing
	Latency XLR in to XLR out with Processing	<2.3ms
<b>A/D Converters</b>	Resolution	24bit
	Dynamic Range	109dB A-weighted, 106dB unweighted
<b>D/A Converters</b>	Resolution	24bit
	Dynamic range	115dB A-weighted, 112dB unweighted

<b>Expander Input Port</b>	Application Connection Protocol Cable	adding remote inputs (iDR-in) and linking iDR units on 8 channel digital bus RJ45 Proprietary 8 Channel Digital Audio CAT5 STP upto 250m (825 feet)
<b>Expander Output Port</b>	Application Connection Protocol Cable	adding remote Outputs (iDR-out) and linking iDR units on 8 channel digital bus RJ45 Proprietary 8 Channel Digital Audio CAT5 STP upto 250m (825 feet)

## Control & Communications for iDR-8

<b>Always Active</b>	TCP/IP (Ethernet) Network	DR-Link
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### iDR offers two internal Ports (A,B) which can be set to the following combinations

	<b>PORT A</b>	<b>PORT B</b>
<b>Combinations</b>	RS232 RS232 RS232 RS232 Sys-Net Sys-Net MIDI Custom Serial Custom Serial	Sys-Net MIDI PL-Anet Custom Serial PL-Anet MIDI PL-Anet MIDI PL-Anet
<b>RS232</b>	Port Select Front Panel Connector Rear Panel (Modem) Connector Baud Cable Length	Front panel switch to select either front or rear RS232 connector 9pin D Female 9 Pin D male 115200, 8N1 <3 Metres (10feet)
<b>Network</b>	Application Connection  Settings PPP Setup Cable	iDR System Manager, PL Designer/Client, Telnet RJ45 Ethernet MDI/X Switch For Hub or Direct connection DHCP, IP address, Net mask, Gateway Host IP, client IP, user name, password CAT5 UTP up to 100metres (330 feet)
<b>MIDI</b>	Application Connection Protocol	Remote Parameter Control via MIDI sequencer/Interfaces, Show Automation Opto isolated MIDI IN, OUT, THRU 5 pin DIN Note on/off, program change, NRPN, Custom Strings
<b>Sys-Net</b>	Application Connection Protocol Baud Rate Cable	Remote Parameter Control, Third Party Controllers (e.g. AMX) RS232 9pin D Female Allen&Heath Sys-Net, Custom Serial Strings Custom settings available <3 Metres (10feet)
<b>PL-Anet</b>	Applications Connection Protocol Cable	Network for Allen&Heath PL Series intelligent remote controllers RJ45 Proprietary Allen&Heath - RS485 with +20VDC Phantom Power CAT5 STP (Refer to REN table lengths)
<b>DR-Link</b>	Application Connection Protocol Cable	iDR-Switch and iDR audio expander logic control RJ45 Proprietary Allen&Heath CAT5 STP up to 250 metres (825 feet)
<b>Front Panel (face plate fitted)</b>	Display Type Display content Keys LEDs Headphones	2 x 16 Character Backlit LCD Day/Time, unit name, user defined text, Menu/operating control data 16 user programmable, 2 scroll 32 user programmable tri-colour Recessed Socket and Level Trim
<b>Front Panel (face plate removed)</b>	Menu Keys	Menu item select using: scroll, esc, enter

Menu Items	Preset Recall, Monitor Select, date/time, unit name, network, diagnostics
Status LEDs	Slave, Ext. Sync Lock, 96kHz
RS232 Connector	9 pin D Connector - Mirrors Port A protocol setting, front/rear selection switch
Code Update	Updates iDR operating system code
Label Strip	Behind widow user label/markup strip

## Power Supply

Type	Universal Input Switched Mode
Connector	IEC 3pin
Power Lead Supplied	Country Dependent
Power Switch	Rear panel mains on/off
AC mains input	100-240V AC 50/60Hz
Power Consumption (Max)	80VA
Internal Fuse	T1.6A 20mm

## Mounting

Desktop or 19" x 2U Rackmount

## Mechanical Specs

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### Desktop

Width	440mm (17")
Height	92mm (3.5")
Depth	350mm (14")

### Rackmount (2U)

Width	486mm (19")
Height	88mm (3.5") = 2U
Depth	350mm (14")

### Max depth with connectors

Depth	430mm (17")
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## Software Specifications for iDR-8

### Operating System

iDR-8 Unit Software, Internal	Update using TCP/IP via system manager, RS232 via Hyperterminal
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### System Configuration

iDR System Manager software	PC compatible running online or offline session Includes all iDR and PL unit simulators for complete setup and test
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### Virtual Controllers

PL-Designer	for installer configured GUI
PL-Client	for restricted operator control

### Source Patchbay System

Selectable physical source for each input channel  
Eliminates the need for a physical patchbay and signal splitters  
Output channel feed selectable for each physical output  
Eliminates the need for a physical patchbay and signal splitters

## Delay

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### Input Delay (x16)

Time	0 to 340ms per channel
Units	ms, metres, feet
Temperature	Global Adjust Coefficient for -20 to +40 degrees C

### Output Delay (x16)

Time	0 to 340ms per channel
Units	ms, metres, feet
Temperature	Global Adjust Coefficient for -20 to +40 degrees C

## PEQ

### Input (x16)

PEQ Type	4 band fully parametric
Band Type	HF shelf, LF shelf, Bell, HPF, LPF, notch
Range	+/-15dB cut/boost, +/-12dB makeup gain
Width, Q variable	0.5 to 6, constant Q on/off (notch width 10Hz to 100Hz)
Display	frequency response curve, meter
Controls	in/out, reset

### Output (x16)

PEQ Type	8 band fully parametric including crossover filter type
Band Type	HF shelf, LF shelf, Bell, HPF, LPF, notch, crossover filters
Range	+/-15dB cut/boost, +/-12dB makeup gain
Crossover filter	upto 24dB/oct, Butterworth, Linkwitz-Riley, first order
Width, Q variable	0.5 to 6, constant Q on/off (notch width 10Hz to 100Hz)
Display	frequency response curve, meter
Controls	in/out, reset

<b>Gate (x16)</b>	Threshold	-72 to +18dBu
	Depth	0 to -80dB
	Attack	20us to 300ms
	Hold	50ms to 5s
	Release	50ms to 1s
	Display	Level response curve, gate active, in, out, sidechain meters
	Controls	Gate in/out, sidechain in/out
<b>Sidechain Filter (x16)</b>	Source	Switch into either compressor and/or gate
	EQ	1 Band, type and parameter control as PEQ
<b>Compressor (x16)</b>	Threshold	-48 to +18dBu
	Ratio	Variable 1:1 to 1:infinite
	Knee	Hard, Soft
	Makeup Gain	0 to +18dB
	Attack	300us to 300ms, auto mode
	Release	100ms to 2s, auto mode
	Auto Modes	Live, Music AGC, Vocal, Speech
	Display	Response curve, gain reduction, in/out/sidechain meters
	Controls	Compressor in/out, Sidechain in/out, auto on/off
<b>Level Control</b>		Input channels, output channels, monitor bus, signal generator
	Linear fader range	Off to +5dB in 51 steps
	Controls	Level, Mute, polarity reverse
<b>Fader Grouping</b>	Channel Faders can be assigned to be master faders (DCA)	
	Fader Range Off to 0dB in 51 Steps	
	Quantity of Input Fader Groups	8
	Quantity of Output Fader Groups	8
	Quantity of Crosspoint Fader Groups	16
	Group naming	upto 8 characters
<b>Stereo Linking</b>	Adjacent channels can be linked for stereo operation	
	Presents single channel strip	
	Processing Linked	
	Matrix routing Linked	
	Stereo Metering	
<b>Metering</b>	Input	Input Meters selectable source, post-EQ, post-dynamics, post-fade
	Output	Output Meters selectable post matrix, pre-fade, post-fade, post-limiter
	Metering Points Input	Source, Delay, EQ, Sidechain, Gate, Compressor, Fader
	Metering Points Outputs	Delay, EQ, Fader, Limiter
	Assignable LEDs can act as meters	green from -24dBu, yellow from 0dBu, red from +14dBu (4dB below clipping)
	GUI metering	Extensive on screen display for all signal points in the signal path
	GUI meter styling	Select 1 of 4 meter bar display types
<b>Mix Matrix</b>	Input / Output channel crosspoint (X/P) matrix	
	Matrix size	16 x 16
	Switched routing or variable level fader at each point	
	Fader range Off to 0dB in 51 steps	
	Controls	set/clear/mute individual/row/column/all
	Matrix Groups	16 freely assignable groups
<b>Output Limiter (x16)</b>	Threshold	-20 to +18dBu
	Attack	40us to 400ms
	Release	50ms to 1s
	Display	level response curve, gain reduction, in, out, meters, time versus reduction histogram
	Controls	in/out, fader
<b>AMM (x4)</b>	Automatic Mic Mixing	NOM and ambient level
	Ambient Level Sensing	average of all selected mics
	Mic open threshold	4 to 20dB above ambient level
	Hold time	0 to 5 seconds
	NOM Attenuation	1 to 6dB
<b>ANC (x4)</b>	Ambient Noise Compensator	automatic controlled gain element in step with changes in background noise levels
	Ambient Level Metering Point	I/P Source/Post-EQ/Post-Fade, O/P Post-Matrix/Pre-Fade/Post-Limiter, Channels 1-16
	Ambient Level Gain Differential	-18dB to +40dB

Controlled Gain Element	selects fader for control, I/P, O/P, I/P Group, O/P Group, Routing Gain, stereo operation
Controlled Gain Operating Range	min -59 to 5dB, max -59 to 5dB,
Controlled Gain Response Time	rate dB per Second from 0.1 to 30dB
Program Gap Metering Point	I/P Source/Post-EQ/Post-Fade, O/P Post-Matrix/Pre-Fade/Post-Limiter, Channels 1-16
Program Gap Threshold	-62dB to -20dB
Program Gap Time	0s to 5s
Display	Level meters, Ambient Level Sampling Active LED
Controls	Enable On/Off,

**Ducking**

Type	16 channel multi priority selectable
Priorities	1 (max) to 16 (min)
Threshold	-48 to +18dBu
Depth	0 to -60dB
Release	1 to 100dB/s
Controls	Ducker Enable On/Off

**Pager (x2)**

Type	2 independent configurable pagers
Paging	Activated from Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR
Zone Select	Activated from Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR
Indicators	Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR
Ducker Depth	0 to -40dB
Controls	page mic select, zone select, latching, press to talk, auto cancel

**Audio Monitor**

Ripple through stereo audio monitor	
Source Select	Manual I/P 1-16 source, Delay, EQ, Sidechain, Gate, Compressor, Fader Manual O/P 1-16 Delay, EQ, Fader, Limiter Channel Outputs 1-16 (routed via output patchbay) Follows Mouse / Active Window

**Signal Generator**

Source variable frequency	sine wave, white noise, pink noise, band pass pink noise
Range (sine/band)	20Hz to 20 kHz