



iDR-4 Technical Specifications

Audio

Performance

Noise Bandwidth	22Hz to 22kHz
Frequency Response	20Hz to 20kHz +0/- 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

XLR Mic/Line Inputs

Quantity	2 (expandable to 10)
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

TRS Jack Line Inputs

Quantity	4
Connections	TRS Jack (balanced/stereo Jack)
Type	Electronically balanced, tip+
Impedance	>10k ohm
Sensitivity	0dBu
Max Input	+18dBu

XLR Line Outputs

Quantity	4 (expandable to 12)
Connections	Male XLR 3 Pin
Type	Electronically balanced, pin2+
Impedance	<75 ohm
Max Output	+18dBu

TRS Jack Line Outputs

Quantity	2
Connections	TRS Jack (balanced/stereo Jack)
Type	Electronically balanced, tip+
Impedance	<75ohm
Max Output	+18dBu

DSP

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

A/D Converters

Resolution	24bit
Dynamic Range	109dB A-weighted, 106dB unweighted

D/A Converters

Resolution	24bit
Dynamic range	115dB A-weighted, 112dB unweighted

Expander Input Port

Application	adding remote inputs (iDR-in) and linking iDR units on 8 channel digital bus
Connection	RJ45
Protocol	Proprietary 8 Channel Digital Audio
Cable	CAT5 STP upto 250m (825 feet)

Expander Output Port

Application	adding remote Outputs (iDR-out) and linking iDR units on 8 channel digital bus
Connection	RJ45
Protocol	Proprietary 8 Channel Digital Audio
Cable	CAT5 UTP upto 250m (825 feet)

Control & Communications for iDR-8

Always Active	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

Combinations	PORT A	PORT B
	RS232	Sys-Net
	RS232	PL-Anet
	RS232	Custom Serial
	Sys-Net	PL-Anet
	Custom Serial	PL-Anet
RS232	Port Select	Front panel switch to select either front or rear RS232 connector
	Front Panel Connector	9pin D Female
	Rear Panel (Modem) Connector	9 Pin D male
	Baud	115200, 8N1
	Cable Length	<3 Metres (10feet)
Network	Application	iDR System Manager, PL Designer/Client, Telnet
	Connection	RJ45 Ethernet MDI/X Switch For Hub or Direct connection
	Settings	DHCP, IP address, Net mask, Gateway
	PPP Setup	Host IP, client IP, user name, password
	Cable	CAT5 UTP up to 100metres (330 feet)

Sys-Net	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)
PL-Anet	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)
DR-Link	Application Connection Protocol Cable	iDR-Switch and iDR audio expander logic control RJ45 Proprietary Allen&Heath CAT5 STP up to 250 metres (825 feet)
Front Panel (face plate fitted)	Display Type Display content Keys LEDs	2 x 16 Character Backlit LCD Day/Time, unit name, user defined text, Menu/operating control data 8 user programmable, 2 scroll 16 user programmable tri-colour
Front Panel (face plate removed)	Menu Keys Menu Items Code Update Label Strip	Menu item select using: scroll, esc, enter Preset Recall, Monitor Select, date/time, unit name, network, diagnostics Updates iDR operating system code user label/markup strip
Power Supply	Type Connector Power Lead Supplied Power Switch AC mains input Power Consumption (Max) Internal Fuse	Universal Input Switched Mode IEC 3pin Country Dependent Rear panel mains on/off 100-240V AC 50/60Hz 75VA T1A 20mm
Mounting	Desktop or 19" x 1U Rackmount	

Mechanical Specs

Desktop	Width Height Depth	440mm (17") 48mm (2") 350mm (14")
Rackmount (1U)	Width Height Depth	486mm (19") 44mm (2") = 1U 350mm (14")
Max depth with connectors	Depth	430mm (17")
Software Specifications for iDR-4		
Operating System	iDR-4 Unit Software, Internal	Update using TCP/IP via system manager, RS232 via Hyperterminal
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
Virtual Controllers	PL-Designer PL-Client	for installer configured GUI 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

Output Delay (x16)	Time Units Temperature	0 to 340ms per channel ms, metres, feet Global Adjust Coefficient for -20 to +40 degrees C
PEQ Input (x16)	PEQ Type Band Type Range Width, Q variable Display Controls	4 band fully parametric HF shelf, LF shelf, Bell, HPF, LPF, notch +/-15dB cut/boost, +/-12dB makeup gain 0.5 to 6, constant Q on/off (notch width 10Hz to 100Hz) frequency response curve, meter in/out, reset
Output (x16)	PEQ Type Band Type Range Crossover filter Width, Q variable Display Controls	8 band fully parametric including crossover filter type HF shelf, LF shelf, Bell, HPF, LPF, notch, crossover filters +/-15dB cut/boost, +/-12dB makeup gain upto 24dB/oct, Butterworth, Linkwitz-Riley, first order 0.5 to 6, constant Q on/off (notch width 10Hz to 100Hz) frequency response curve, meter in/out, reset
Gate (x16)	Threshold Depth Attack Hold Release Display Controls	-72 to +18dBu 0 to -80dB 20us to 300ms 50ms to 5s 50ms to 1s Level response curve, gate active, in, out, sidechain meters Gate in/out, sidechain in/out
Sidechain Filter (x16)	Source EQ	Switch into either compressor and/or gate 1 Band, type and parameter control as PEQ

Compressor (x16)	<ul style="list-style-type: none"> Threshold Ratio Knee Makeup Gain Attack Release Auto Modes Display Controls 	<ul style="list-style-type: none"> -48 to +18dBu Variable 1:1 to 1:infinite Hard, Soft 0 to +18dB 300us to 300ms, auto mode 100ms to 2s, auto mode Live, Music AGC, Vocal, Speech Response curve, gain reduction, in/out/sidechain meters Compressor in/out, Sidechain in/out, auto on/off
Level Control	<ul style="list-style-type: none"> Linear fader range Controls 	<ul style="list-style-type: none"> Input channels, output channels, monitor bus, signal generator Off to +5dB in 51 steps Level, Mute, polarity reverse
Fader Grouping	<ul style="list-style-type: none"> Channel Faders can be assigned to be master faders (DCA) Fader Range Off to 0dB in 51 Steps Quantity of Input Fader Groups Quantity of Output Fader Groups Quantity of Crosspoint Fader Groups Group naming 	<ul style="list-style-type: none"> 8 8 16 upto 8 characters
Stereo Linking	<ul style="list-style-type: none"> Adjacent channels can be linked for stereo operation Presents single channel strip Processing Linked Matrix routing Linked Stereo Metering 	
Metering	<ul style="list-style-type: none"> Input Output Metering Points Input Metering Points Outputs Assignable LEDs can act as meters GUI metering GUI meter styling 	<ul style="list-style-type: none"> Input Meters selectable source, post-EQ, post-dynamics, post-fade Output Meters selectable post matrix, pre-fade, post-fade, post-limiter Source, Delay, EQ, Sidechain, Gate, Compressor, Fader Delay, EQ, Fader, Limiter green from -24dBu, yellow from 0dBu, red from +14dBu (4dB below clipping) Extensive on screen display for all signal points in the signal path Select 1 of 4 meter bar display types
Mix Matrix	<ul style="list-style-type: none"> Input / Output channel crosspoint (X/P) matrix Matrix size Switched routing or variable level fader at each point Fader range Off to 0dB in 51 steps Controls Matrix Groups 	<ul style="list-style-type: none"> 16 x 16 set/clear/mute individual/row/column/all 16 freely assignable groups
Output Limiter (x16)	<ul style="list-style-type: none"> Threshold Attack Release Display Controls 	<ul style="list-style-type: none"> -20 to +18dBu 40us to 400ms 50ms to 1s level response curve, gain reduction, in, out, meters, time versus reduction histogram in/out, fader
AMM (x4)	<ul style="list-style-type: none"> Automatic Mic Mixing Ambient Level Sensing Mic open threshold Hold time NOM Attenuation 	<ul style="list-style-type: none"> NOM and ambient level average of all selected mics 4 to 20dB above ambient level 0 to 5 seconds 1 to 6dB
ANC (x4)	<ul style="list-style-type: none"> Ambient Noise Compensator Ambient Level Metering Point Ambient Level Gain Differential Controlled Gain Element Controlled Gain Operating Range Controlled Gain Response Time Program Gap Metering Point Program Gap Threshold Program Gap Time Display Controls 	<ul style="list-style-type: none"> automatic controlled gain element in step with changes in background noise levels I/P Source/Post-EQ/Post-Fade, O/P Post-Matrix/Pre-Fade/Post-Limiter, Channels 1-16 -18dB to +40dB selects fader for control, I/P, O/P, I/P Group, O/P Group, Routing Gain, stereo operation min -59 to 5dB, max -59 to 5dB, rate dB per Second from 0.1 to 30dB I/P Source/Post-EQ/Post-Fade, O/P Post-Matrix/Pre-Fade/Post-Limiter, Channels 1-16 -62dB to -20dB 0s to 5s Level meters, Ambient Level Sampling Active LED Enable On/Off,
Ducking	<ul style="list-style-type: none"> Type Priorities Threshold Depth Release Controls 	<ul style="list-style-type: none"> 16 channel multi priority selectable 1 (max) to 16 (min) -48 to +18dBu 0 to -60dB 1 to 100dB/s Ducker Enable On/Off
Pager (x2)	<ul style="list-style-type: none"> Type Paging Zone Select Indicators Ducker Depth Controls 	<ul style="list-style-type: none"> 2 independent configurable pagers Activated from Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR Activated from Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR Front Panel, PL-Anet, MIDI, Sys-Net, iDR-Switch, networked iDR 0 to -40dB page mic select, zone select, latching, press to talk, auto cancel
Audio Monitor	<ul style="list-style-type: none"> Ripple through stereo audio monitor Source Select 	<ul style="list-style-type: none"> Outputs 5 and 6 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	<ul style="list-style-type: none"> Source variable frequency Range (sine/band) Controls 	<ul style="list-style-type: none"> sine wave, white noise, pink noise, band pass pink noise 20Hz to 20 kHz Fader, Mute