iLive-T Series

ALLEN&HEATH

Accessible Digital Mixing

iLive-T Series

Presenting iLive-T Series

T Series is an evolution of the flagship iLive digital range, with all the performance and power of the original in a newly-styled, compact and affordable package.

For the first time, distributed audio digital mixing has been made accessible to everyone, from rental companies to houses of worship, schools to theatres, stadia to media centres – without breaking the bank.

T Series provides distributed audio and control, various configuration possibilities, an intuitive instant access analogue-style user interface, and features the same great-sounding 64x32 RackExtra DSP mix engine as our highly successful iLive range.

2 new control surfaces and 2 new mixracks use compact construction with non-modular classic format I/O, new proprietary Audio and Control over Ethernet (ACE)™ digital snake and the latest dual core DSP technology to make iLive accessible to new digital users.

There is a slot for optional plugin cards to interface with popular audio networking standards, as well as a host of control options.

iLive-T Series: digital mixing at its most flexible.

Accessible Digital Mixing

Features

- Distributed system - Separate MixRack and Surface
- Choice of two MixRacks (32 or 48 mic)
- Choice of two Surfaces (20 or 28 fader, 4 layers)
- Network and remote control
- Single 120m ACE™ Audio and Control over Ethernet link
- Systems from 40in/24out to 64in/36out sockets
- Local analogue and SPDIF I/O available at the surface
- 64x32 RackExtra DSP engine with 8 stereo FX processors
- Up to 72 sources to the mix
- 3 Dynamics, PEQ, HPF and delay on all 64 channels
- 2 Dynamics, PEQ, delay and GEQ on all 32 mixes
- 8 Stereo FX with emulations of popular devices
- Fully configurable audio bus architecture
- 10 Main mix types including unique Sub mix mode
- Fully-assignable surface strip layout
- User definable channel names and colours

- Monitor capability with engineer's Wedge and IEM strips
- Input, output and insert soft patchbays
- Quick access, analogue style channel controls
- Touchscreen for graphical view and setup
- Channel or mix view of sends on faders or rotaries
- Quick copy, paste and reset of mixes and parameters
- New, high grade, recallable mic/line preamps
- Libraries, Scenes and Show memories with USB transfer
- Get started quickly with built-in Template Shows
- Password protectable user profiles
- Editor software for online or offline PC control
- Carry out independent tasks with laptop and surface
- Compatible with Allen & Heath PL remote controllers
- MIDI interface at both the rack and surface
- Plugin card slot for popular audio network options
- Compatible with components from the flagship iLive range

iLive-T puts the audio and its processing right where it is needed, near to the sources on stage. The rack houses the mic preamps, sends, DSP and digital snake interface for control and local audio at the mix position.

The Mix engine

Both MixRacks feature the same iDR-64 RackExtra DSP engine employed in the flagship iLive Series, providing full processing and mixing for 64 channels and 32 configurable mix buses as well as 8 stereo FX engines based on emulations of popular industry classics. Imagine the gear needed for an equivalent analogue system to provide 64 gates, 96 compressors, 96 limiter/de-ess, 112 fully parametric EQs, 96 delays, 32 graphic EQs and 8 effects!

Mic inputs

The MixRacks differ only in the number of input and output sockets available. The smaller iDR-32 provides 32 mic/line preamps and 16 XLR outputs, while the iDR-48 has 48 preamps and 24 outputs. Built-in patchbays enable the user to split, cross-patch and map channels and sends, requiring fewer sockets than equivalent fixed architecture consoles. A new high quality mic preamp with 80dB/1dB resolution gain range, exceptionally low latency and optimised audio signal path ensure the superb performance and sound quality for which iLive has become renowned.

Networking and distributed control

The iDR rack and T surface are connected over a single CAT5 cable up to 120m long using Allen & Heath's proprietary ACE™ digital snake - an affordable, point-to-point multi-channel bi-directional audio and control link. An option slot allows a plugin card to be added for more audio networking possibilities, such as digital mic splitting, audio distribution and digital recording. The MixRack can also be controlled using a networked PC or laptop running iLive Editor software, MIDI, the Allen & Heath PL Series of remote controllers, and, it is fully compatible with the surfaces from the flagship iLive range.

Port B: Audio Network Options

The T Series surfaces feature the same intuitive layout that has delighted iLive users around the world. Its instantly accessible analogue-style rotary controls, switches and dials, visually informative channel labelling and colour coding, comprehensive metering, graphical colour touchscreen, and logical layout allows the user to avoid fiddly menus and instinctively find controls. The jump from analogue to digital has never been so easy.

The mix layout

Each bank of faders has four layers, so even the small T80 provides no fewer than 80 control strips. These can be freely assigned as mono or stereo inputs, group, aux, main, matrix mix masters, DCA masters - and even engineers Wedge / IEM monitor - giving total freedom in the design of the surface layout.

Local audio

The rear of the surface provides a host of connections for local sources, sends and inserted devices, so there is no need for a second I/O rack at mix position.

Networking and control

The T Surface connects to the iDR MixRack using the ACE™ link, which combines control and remote audio over a single cable. A built-in network switch allows connection of other network devices such as a laptop running iLive Editor software. MIDI and USB ports are also available.

The bigger 48 mic, 112 fader strip system

This example shows the bigger iLive-T112 surface with 28 faders and 4 layers (112 strips) at FOH mix position and the iDR-48 rack on stage near the sources. You get a massive 72 sources to the mix including 48 mics on stage, 16 local line inputs at the surface and 8 stereo internal FX returns. The ACE™ digital snake replaces the traditional heavy copper multicore that would be needed with a conventional console. This single CAT5 cable provides the network link for the surface to control the rack and also transports local audio to and from the mix position. Audio available at the rack includes 24 XLR line out, while the surface provides 12 line out (8 TRS, 2 RCA, 1 spdif).

The compact 32 mic, 80 fader strip system

This system combines the more compact iLive-T80 surface with 20 faders (80 strips) and the smaller iDR-32 rack with the ACE™ digital snake linking control and audio. You get 48 sources to the mix including 32 mics on stage, 8 local line inputs at the surface and the 8 stereo FX returns, but the channel count doesn't stop there... Using the same 64x32 DSP mix engine as the larger iLive you still have the full 64 channels of processing available and enough strips on the surface to control them. You could split inputs for separate FOH and monitor processing, or add more inputs via the audio network option slot. Audio available at the rack includes 16 XLR line out, while the surface provides 8 line out (4 TRS, 2 RCA, 1 spdif).

MIX & MATCH

ACE

ACE

FOH / Monitor system – Two engineers, two systems linked

Here, two systems are linked using a digital mic split to share the same preamps. This saves you the cost and weight of an analogue splitter and means you could use the smaller iDR-32 rack at FOH but still mix the full 48 mics plus the additional local inputs. Each is fully configurable to match its application so providing properly equipped dedicated FOH and monitor architecture and layouts.

FOH

EDITOR

ACE

LOCAL INPUTS

WiFi

FOH RETURNS

DIGITAL MIC SPLITS

ACE

NETWORK LINK

MONITOR

Leave your surface at home – run using a laptop

For those situations where space is very tight or you need to mix discreetly, you can mix your show using just a laptop running iLive Editor software. Standard network technology provides the benefit of wireless and touch tablet operation giving you total freedom to tuck the rack away on stage and mix from anywhere in the room or on stage. Add a PL Series controller if you want to provide physical controls for certain key functions, for example important channels or DCA masters.

PL10

EDITOR

PL-ANET

WiFi
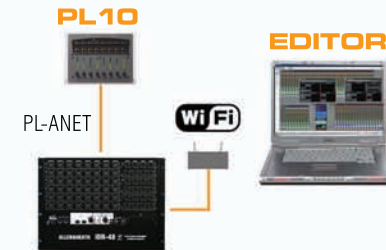
FOH / Monitor system – Two engineers, one system with laptop monitors

Here, two engineers can independently mix FOH and monitors using just one system. iLive-T makes this possible by allowing networked surface and laptop operation, and providing the full 64 channels of processing so that you could even split your sources into two sets of channels, one for FOH, the other for monitors. Not only does this make dual operation very affordable but it also saves space whether at the side of stage or FOH depending on where you decide to put the surface.

EDITOR

FOH

WiFi

ACE

FOH / Monitor system – Personal monitoring

Single system with FOH engineer and monitors controlled by the musicians on stage
Daisy chained PL Series controllers, one for each musician
Wireless tablet for the engineer to set up and adjust the system while on stage

EDITOR

ACE

WiFi

PL10

PL-ANET

Mixing on iLive-T

Controlling a mix with the iLive-T couldn't be easier. Its logic and simplicity get the user up to speed and navigating the system in minutes. The SEL buttons are used to instantly access all the processing for each strip, whether input, output or FX, with no menus involved at all, while the MIX buttons provide access to the levels, sends, assignments and other mix parameters. Selecting the MIX button on an output strip will immediately bring up the contributions to that mix from the inputs on the faders (or encoders, if preferred), while selecting the MIX button on an input strip shows the send levels to each mix.

With these 2 quick select buttons, the whole system can be easily navigated under the pressure of a live performance.

Processing Strip

The iLive-T Surface features the proven and popular 'Processing Strip' found on our flagship iLive system. It's a combination of dedicated functional controls for Gain and Preamp, HPF, Gate, Parametric EQ, Compressor and Limited/De-Esser, which can be applied to any DSP channel in the iLive system, with full metering within each processing block. In addition, every processor features a SEL button for parameter copy and reset, or for headphone monitoring of any point in the channel signal path including the side-chain filters. All processing is available on each DSP channel all the time so you can never run out of DSP power!

Graphic EQ

All 32 mix outputs have a 1/3 octave graphic EQ as well as the parametric EQ. The graphic can be set up on the touch screen or viewed on the surface with the motorised channel faders controlling the bands and the related frequency and dB cut or boost displayed on the LCD strip. There is even an RTA display on the meters above the frequency bands.

Surface Mixing controls

Further controls on the iLive-T surface provide copy & paste of settings across strips, navigating between layers and scenes, and a selection of monitor and talkback options. To help identify channels, colour-definable 'Write-On Blocks' for channel naming are provided, where the background of the channel LCD can be set to suit the user's preferences – for example, green for inputs, light blue for auxes, red for DCAs, or to highlight specific inputs.

Control & Viewing

The TouchScreen is used to set up and manage iLive's system configuration and data, and also supports general operations with a graphical display of the signal processing. To get started quickly a variety of Show templates for different classic console set ups is available, or the user can build his preferences for the layout and set up of inputs, masters, DCA groups, routing, etc. from scratch.

Scenes, Shows & Libraries

iLive can store all, or a selection of, parameters within the console as 'Scene' memories. These can be used, for example, to store bands' settings at sound check, make effects changes during songs, cue changes during a theatre production, or to store preferred layouts for different operators. Scenes are then archived with the current configuration and settings into a 'Show' file for future use. Personal processing and effects preferences can be named and stored as 'Libraries'. Show and Library memories are easily transported between systems or archived to computer using a USB key.

iLive-T FX

iLive has an array of built-in 'rack' FX options modelled on simulations of the best products available, and these are represented graphically on the TouchScreen, from where the FX parameters can be edited. With 8 DSP engines available, there are plenty of options for system effects, such as delay and reverb, as well as inserted effects such as chorus and double tracking. Each of the effects units has a 'back panel' where I/O routing is set up.

SMR Reverb - designed for live sound reverb processing, with emulations of industry standard units based on 4 complex models: Classic, Hall, Room and EMT.

2-Tap delay - a comprehensive delay processor providing separate L and R tap delay outputs with onscreen tap tempo for fast and simple set up.

ADT Double Tracker - creates short echo and chorusing effects, classic double tracking and 'slapback' tape delay loops.

Chorus - emulates classic chorus units with additional stereo field enhancement, providing effects from 'shimmer' to deep stereo pitch modulation.

Electric Flange – provides options from 'ambient' tape machine flanging through 'vintage' classic sounds to 'wild' untameable flange effects.

Symphonic Chorus - the popular 80's chorus with vox and strings presets

Hypabass - a sub-harmonic synthesis unit to generate infra and sub-bass spectrum from a weaker bass programme.
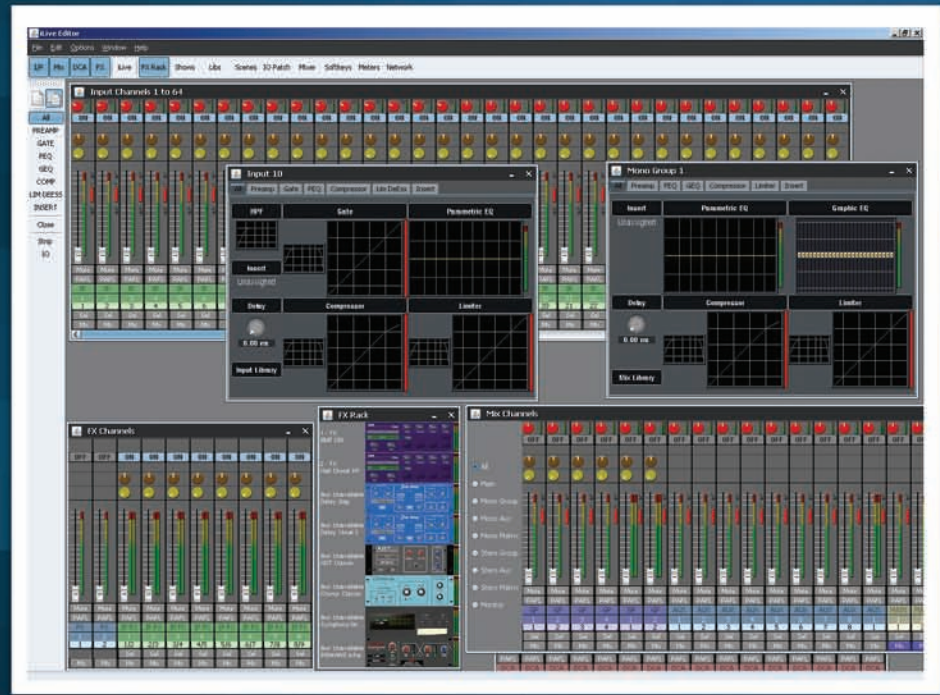
Control Options

iLive Editor control software offers all of the key facilities of the iLive-T surface, as well as the convenience of a high resolution display to see multiple information panels simultaneously. The Java-based program enables the user to easily configure show settings or make changes to existing shows online, or offline to save and upload later. TCP/IP connectivity makes live channel mixing and processing possible over CAT5 or WIFI, so different tasks can be managed in the Editor software and the iLive-T Surface simultaneously.

Using Allen & Heath's range of PL remote controllers with an iLive-T system expands control possibilities. Connected to the Surface and MixRack via CAT5 cable and configured from the TouchScreen, the 'plug 'n play' devices can control mixes, mutes, levels, scene recalls and selections.
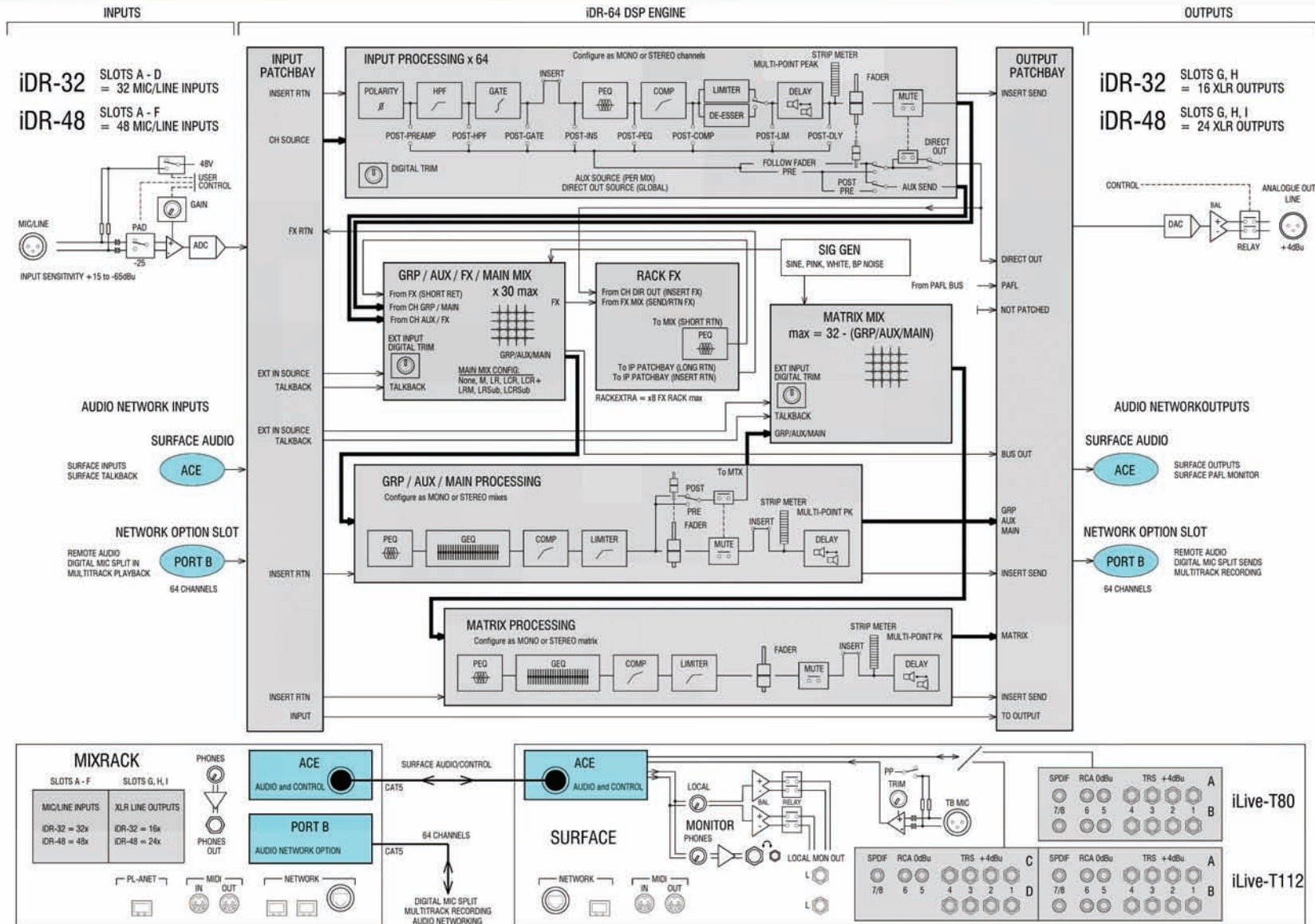

Audio networking options
A selection of options for recording and audio networking can be fitted. See website for an up-to-date list.

Technical Specifications

System

Format	Separate MixRack and Surface with control & audio over a single CAT5 ACETM cable
DSP	iDR-64 RackExtra 64x32 mix engine located in MixRack
Audio Network Port A	Local audio to/from Surface - ACE™ up to 120m CAT5 cable
Audio Network Port B	Network option plug-in cards available - see website for details
Control Network	TCP/IP Ethernet (links to Surface via Port A ACE™), built-in switch
PL-Anet	At MixRack for A&H PL Series remote controllers and GPIO
MIDI	In/Out.Can tunnel between Surface and MixRack via network
USB	x2: Data transfer, archiving and firmware update, external touchscreen, keyboarc
VGA	For connecting an external monitor to the TouchScreen
Mains Power	Internal, 100-240V.AC, 47-63Hz, 160W max per unit

Architecture

Input Channels	64x with HPF, Insert, Gate, PEQ, Compressor, Limiter/De-esser, Delay
Output Mixes	32x with Ext-in, Insert, PEQ, 1/3 oct GEQ, Compressor, Limiter, Delay
Mix Types	Any combination of Groups, Auxes, Internal FX, Mains, Matrix (mono or stereo)
Main Mix Types	Mono, LR, LCR, LCRplus, LRSub, LCRSub, LRM, LCRM, None (monitors)
Mono / Stereo	Channels and Mixes may be configured as mono or stereo
Patchbays	Virtual patching of: Inputs, Inserts, FX, Mix Ext in, Outputs, Port B audio channel I/O
Inserts	Inserts assignable on all inputs and mixes, patch to any sockets
FX Engines	8x internal stereo 'RackExtra' FX racks, each capable of DSP emulations of industry classics
FX Patching	Inserted or Send/Return loop. Mono or stereo sends, stereo returns
FX Returns	8x extra 'short' stereo return paths (PEQ) or use IP channels (full processing)
Max Sources to the Mix	72x (64 IP channels and 8x stereo internal FX returns)
DCAs	16x can be used as DCA or Mute groups
Other processing	64x Gates, 96x Compressors, 96x Limiters, 112x PEQ, 32x GEQ

Performance

Digital processing	48kHz sampling, up to 48-bit processing
System Latency	<1.4mS MixRack IN to OUT, <1.6mS Surface IN to OUT
ADC	24-bit multi-bit delta sigma, 108 dB dynamic range
DAC	24-bit multi-bit delta sigma, 117 dB dynamic range
Frequency Response	20-20kHz +0/-0.5dB
THD+Noise (analog in to out)	0.0018% (-94dBu) @ +16dBu output (mic pre unity gain)
Residual Output Noise	-94dBu typical

Audio Inputs and Outputs

XLR Mic/Line Inputs	Recallable, Balanced, -15 to +65dBu, 1dB resolution, 25dB pad, +48V
Preamp Performance	>4kΩ, +32dBu max input, Noise EIN (150Ω) -127dB
TRS Jack Line Inputs	+/-24dB trim, >6kΩ, +4dBu nominal, +22dBu max
RCA Phono Line Inputs	+/-24dB trim, >10kΩ, 0dBu nominal, +18dBu max
XLR Line Outputs	Balanced, Relay protected, <75Ω, +4dBu nominal, +22dBu max
TRS Jack Line Outputs	Balanced, Relay protected, <75Ω, +4dBu nominal, +22dBu max
RCA Phono Line Outputs	Unbalanced, Relay protected, <75Ω, 0dBu nominal, +18dBu max
RCA Phono Digital	SPDIF (2 channel) 48kHz

Audio Connections

iDR-32 MixRack	32x XLR mic/line in, 16x XLR line out
iDR-48 MixRack	48x XLR mic/line in, 24x XLR line out
iLive-T80 Surface	Inputs 8x [4xTRS, 2xRCA, 1xSPDIF], Outputs 8x [4xTRS, 2xRCA, 1xSPDIF]
iLive-T112 Surface	Inputs 16x [8xTRS, 4xRCA, 2xSPDIF], Outputs 12x [8xTRS, 2xRCA, 1xSPDIF]
Local Monitor	TRS L and R available at the Surface
Headphones	MixRack: 1/4" jack. Surface: 1/4" jack and minijack

Control

iLive-T80 Surface	20x faders, 2 banks (12,8), 4 layers = 80 control strips
iLive-T112 Surface	28x faders, 3 banks (12,8,8), 4 layers = 112 control strips
Strip Assign	Assign any strip as Input, FX, Mix master, DCA, engineer's Wedge/IEM
TouchScreen	800x600 backlit, colour, touch with on-screen keyboard, data encoder
Processing Strip	Instant access to all processing, Illuminated encoders, meters, PFL access
Soft Keys	8x user assignable
Faders	100mm motorised, GEQ fader flip mode
Meters	3 colour, 12 LED meter on every strip, PAFL, proc block and TouchScreen
Edit Functions	Copy, Paste, Reset of processing and mix parameters
Monitor Functions	PFL/AFL selectable, PAFL tools, Local/Phones outputs, Dual Wedge/IEM
Talkback	TB mic with 48V, assignable to any mix, patching, Latch function
Additional Surface Functions	Freeze in Layers, Alt View, Screen and LED dimmer
Other control	MIDI, A&H PL Series remote controllers
iLive Editor software for laptop	Java based on;ine/offline editor and live control, connect via TCP/IP network

Memories

Libraries	Name and store setup, processing, FX and channel parameters
Scenes	250x Store all or selected parameters, editable tree structure, Recall Safes
Shows	Stores current settings, preferences, all Scenes, Libraries
User Profiles	Administrator and up to 7 Guest users, Permissions, Password protectable
USB	Transfer and archive Shows and Libraries, USB Show Scene filter

Weights and Dimensions

iDR-32 MixRack	6U rack, 482mm (19") x 265mm (10.4") x 250mm (10"), 12kg (26.4lbs)
iDR-48 MixRack	8U rack, 482mm (19") x 353mm (14"") x 250mm (10"), 16kg (26.4lbs)
iLive-T80	770mm (30.2") x 280mm (11") x 640mm (25"), 20kg (44lbs)
iLive-T112	1090mm (42.6") x 280mm (11") x 640mm (25"), 27kg (59.4lbs)
Operating Temperature Range	5deg - 30deg Celsius. Below: preheat prior to operation Above: cooling during operation required