SD5

DiGiCo

The DiGiCo SD5

Ten years on - from D5 to SD5

When it was first launched back in 2002, the DiGiCo D5 took the professional live audio market by storm and subsequently went on to be used across the world in every conceivable type of performance. Engineers were immediately at home with the D5 — its intuitive, analogue style layout, coupled with the power and flexibility of a digital console gave a feeling of confidence as more and more people embraced digital in the live environment.

Now, ten years on, DiGiCo introduce the SD5. A brand new console designed and built in the UK, that fits effortlessly into the space created by the D5, but with the addition of our unique Stealth Digital Processing™ and advanced features seen throughout the DiGiCo range of SD digital consoles. Sitting comfortably above the SD10 and below the SD7, the SD5 is a perfect addition to our growing range of digital mixers.

As standard the SD5 is fitted with a 2GB fibre optic network and can run up to 448 channels of I/O at 96KHz across up to 14 SD Series racks with the addition of 56 console-to-console tie lines. Three redundant MADI ports complete the line up.

And it's even quieter. No more fans on power supplies, instead we have replaced them with large heat sinks making the SD5 one of the quietest consoles we have ever made.

Three large touch sensitive display screens dominate the console, providing fast and easy access to all of the SD5's functions. The centre section of the desk has been redesigned — the screen now sits recessed, bringing it, and access to the macro, snapshot, headphone and talkback controls nearer the operator.

The large TFT screens coupled with familiar Hidden Till Lit (HTL) rotary controllers and Quick Access Function Buttons allow either seasoned users or those new to DiGiCo consoles the ability to run the desk confidently and easily in a very short space of time.

Of course a mixing console is all about audio and the two large Interactive Digital

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Meters (IDM) provide instant visual cues regarding signal level on every channel and output as well as compressor and gate operation.

The SD5 also makes handling multi-channel audio a breeze. From 5.1 surround up to a multi-channel count of 11, it doesn't matter! Simply fold the channels into one fader for mixing or unfold to individual channels on the console surface to tweak relative levels, dynamics or EQ.

In a similar vein, the new Set Spill feature allows any collection of channels to be 'spilled out' via one of the Smart Keys to the work surface. If you need to see the brass section, its group master fader and FX returns, allocate them all to a Spill Set and at the press of a button they appear in front of you. Close the Spill and you are back to where you left the console.

Internally the move from the DSP internal architecture of the D5 to the Super FPGA (Field Programmable Gate Array) of the SD5, built around Stealth Digital Processing™ and Tiger SHARC™ effects chips, ensures the quality of the audio throughout the processing path is maintained. Accurate and musical EQ, controllable compression and gating affect the audio how you want it to and not because 'that's just how digital sounds.'

The SD5 has a smaller footprint than its predecessor and is also totally self contained with all of the processing being completed within the console itself. As with the rest of the SD range, the SD5 is compatible with all of DiGiCo's remote stage racks including the SD-Rack, MINI-Rack and NANO-Rack. Rack connectivity is via 56 channel MADI or Optical connections. This coupled with local I/O on the back of the console makes the SD5 extremely flexible and quick to configure in any situation.

Now with 124 channels routable into 56 busses, DiGiTuBe and De-Essers selectable on every input channel, 24 Dynamic Equalisers, Multi-band Compressors and Digital FX instances, coupled with 32 Graphic Equalisers and a 24 x 24 channel matrix, the SD5 is truly a worthy successor to its older brother. Here's to the next ten years!

Stealth Digital Processing™ Engine

The latest generation of advanced digital signal processing and audio quality.

At the heart of every SD5 is the Stealth Digital Processing™ mixing and routing engine. Based on Super FPGA technology and Tiger SHARC™ processors it gives you one of the most powerful, dynamic and flexible digital mixing consoles available today.

Stealth is unlike any other audio processing technology. Just one chip gives you access to a maximum of 124 input processing channels, 56 auxiliary or group busses running in mono, stereo, LCR or 5.1, plus stereo LCR or 5.1 master, a 24 by 24 matrix and up to 24 VCA style Control Groups. 32 Graphic EQs give you full control of your FOH or monitor system. Sweeten your mix with a powerful array of internal effects powered by Stealth Digital Processing™ providing you with a suite of delays, reverbs, choruses and much more.

Yet it's not just numbers. The Stealth Digital Processing™ engine gives you high resolution audio clarity. It can run at 48kHz and 96kHz giving you the full number of simultaneous signal paths.

Stealth allows you to take full advantage of the 896* simultaneous optical, 168 MADI, 16 Analogue I/O and 8 AES/EBU (Mono streams) connections making even the most complex show a breeze.

Yet, it's not just the power – it's the size. The high density architecture of the FPGA and Tiger SHARC™ chips mean that the complete processing engine fits easily within the worksurface of the SD5.

Stealth Digital Processing™ — power you can hear.

*When two loops are connected.

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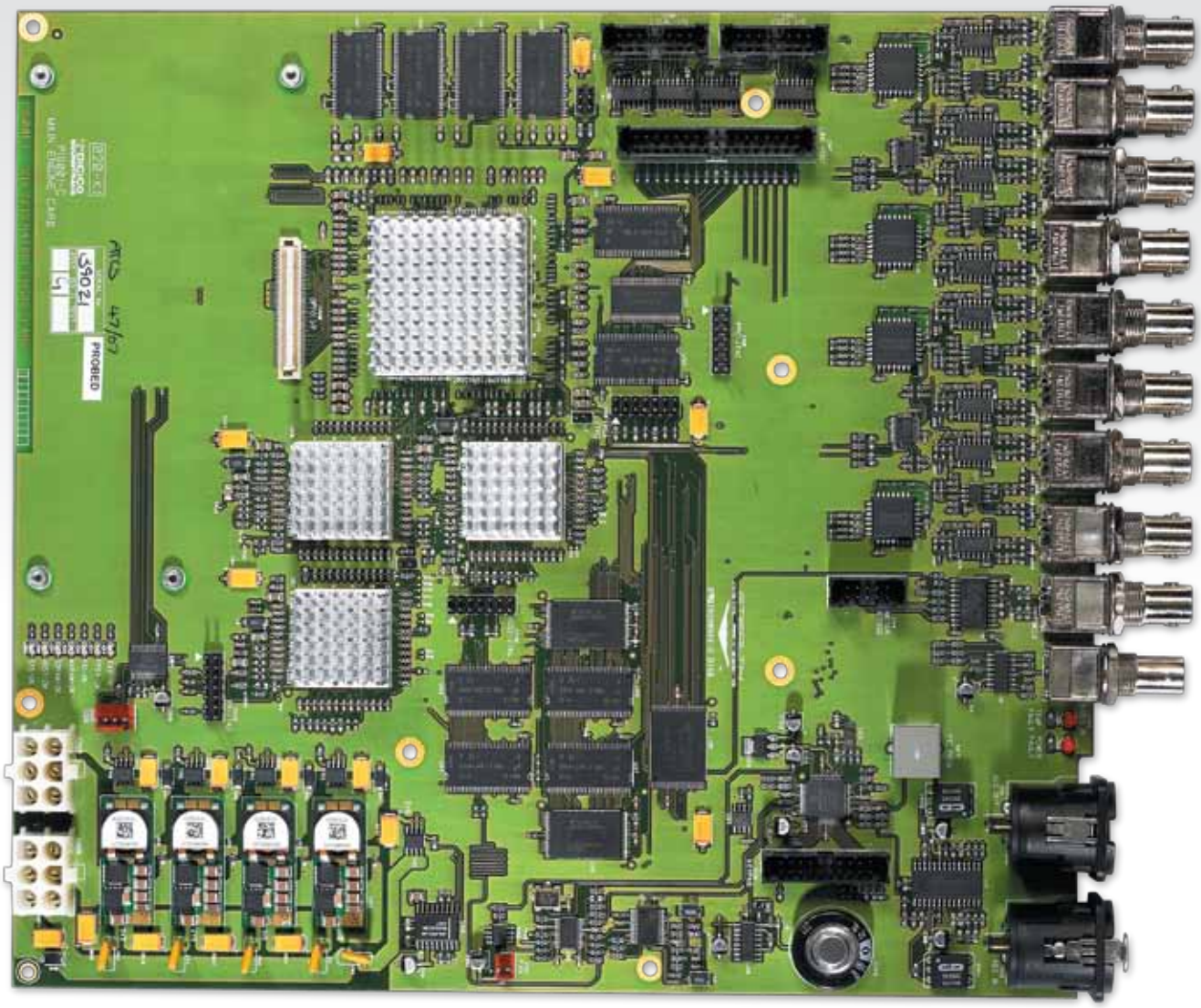

STEALTH™
DIGITAL PROCESSING

HTL (Hidden Till Lit)

Find what you want at the speed of light.

› Keep anything instantly accessible. Here the second row, in violet, gives constant access to auxillary settings. You decide what you want where.

› It's not just the processing you need at your fingertips. A group of channels selected on the touch screen have their specific parameters available to grab and control, highlighted by HTL.

When it comes to operating a console in a live, or other high pressure environment, it is fundamentally important that the desk works with the operator to provide the fastest and simplest way to create the mix you want.

Fast access to channels, easy control of gain and quick intuitive management of all of the sends, dynamics, effects and EQ is where HTL comes in to its own. Even operators with little or no experience of digital consoles will instantly be able to see which control on the desk alters which parameter, as HTL dynamically colour codes each rotary encoder to reflect the colour scheme of EQ, processing or sends currently displayed on the screen.

Bring up your dynamics on a channel and watch as the two rows of rotary encoders directly below change colour exactly mirroring the controls on the screen.

HTL - The guiding light

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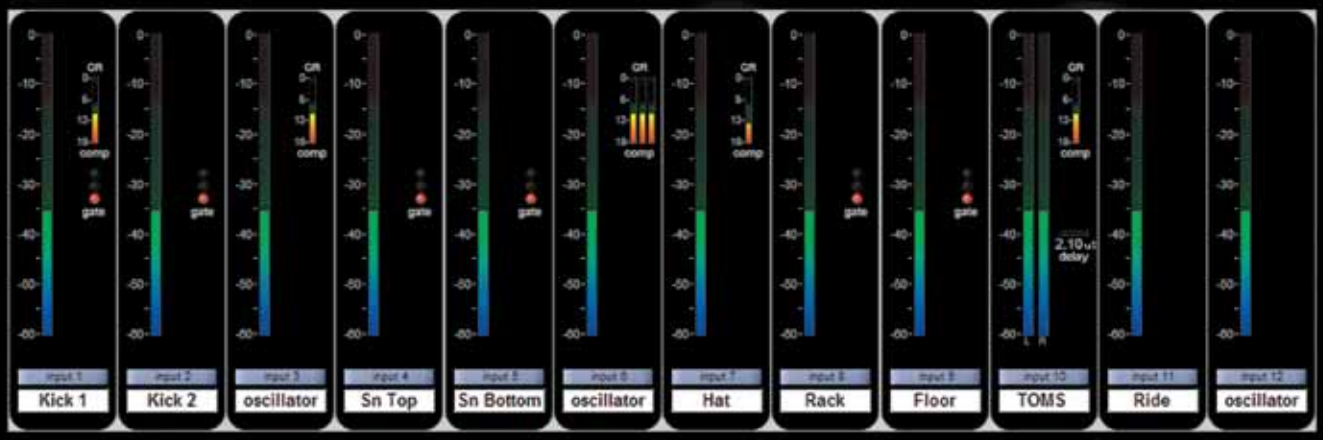
- All of your auxiliary sends available all the time. HTL mirrors the colour coding on the screen ensuring you easily identify the right controller.

- Compressor and Gate controls displayed on screen are instantly colour coded by HTL guiding you to the relevant parameter quickly and easily.

- Multiple bands of Dynamic EQ are no problem either as HTL matches the display on the touch screen for each band. It's fast and intuitive, making your job simpler.



› IDM shows you DiGiTuBe processing, on both mono and stereo input channels, in addition to easy monitoring of compressor gain reduction and input signal levels at a glance.

› IDM makes input signal monitoring flexible. Mono, stereo, LCR and 5.1 are all right there in front of you. Clearly displayed giving you the information you need when you need it.

› IDM centre display shows all bussing, masters, outputs plus control groups and solos.

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IDM (Interactive Dynamic Metering)

Instantly see all the meters you need on every channel

When mixing live sound in any context one of the most important aspects of a digital console is ease of use. That is why we at DiGiCo go to great lengths to ensure that our desks work effortlessly in any situation — and that's what Interactive Digital Metering is all about. We believe a digital console should give you all the information you need when you need it and IDM provides it.

All metering on the SD5 is via the two dedicated TFT displays making the information they can display infinitely flexible. The high resolution, backlit displays provides fast, clear and accurate readings. All this coupled with their 180 degree viewing angle means wherever you are on the desk the display is crystal clear.

So, why is it interactive? Because it adapts to the situation as you need it. IDM is not just limited to signal level indication - it works with you as you build your channel from level to all of the associated dynamics processing, instantaneously displaying the information you need.

Need a stereo channel? IDM switches to a stereo pair of meters. 5.1 channel? No problem, IDM gives you all the meters you need right in front of you. If you want to add dynamics to your mix simply insert a compressor on your channel and up pops your gain reduction meter alongside your other metering. Multi-band compression is also no problem, everything you need is there. Gating shows you the status of the gate, open or closed, and IDM can even display your direct channel output levels and channel delay time.

Interactive Digital Metering — all of your meters all-of-the time.

› The bright, high resolution, backlit displays dynamically adapt to represent any kind of input or output channel on the desk, ensuring all the information you need is right in front of you.

› Across the desk, IDM shows you all of your meters all of the time, no matter where you are on the console, IDM reflects the relevant input and output meters instantaneously.

FX and Graphics

Enhance and control your mix with the power of Stealth Digital Processing™

The SD5's in-built effects are powered by a single Super FPGA chip and two Tiger SHARC DSPs giving you instant access to all the processing you need. There has never been a better reason to ditch your FX racks and instead build them virtually, taking advantage of effects including lush choruses, warm reverbs, accurate pitch shifters and much more. You can even take the studio with you by taking advantage of the optional Waves SoundGrid® giving access to all of your favourite Waves plugins. What's more you don't have to worry about all of your processing diminishing your channel count or overwhelming the other capabilities of the desk or vice versa.

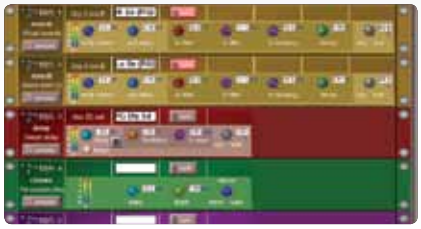
You will always have up to 24 stereo effects across the desk without reducing any other audio capabilities of the SD5. These 24 effects consist of up to 16 stereo 'floating point' reverbs and up to 24 stereo delay/chorus/pitch/enhancers.

Effects can be directly inserted into channels or routed as normal and, of course, all of the parameters are directly accessible via the HTL (Hidden Till Lit) controls or via the touch screen – quickly and easily. To give you even more flexibility, and to ensure simplicity during a complex mix, all the effects parameters can also be included in your snapshots, recalling all your settings and routing, at the press of a button.

Snapshot recall also applies to the 32 graphic equalisers that are built directly into the console. Being DiGiCo we have thought of everything to ensure that the control surface is as user friendly as possible. So, when you're controlling the graphics via the fader banks the fader becomes centre-detented. Even when you're not looking you will always know where 0dB is. It's just like being at home!

So whether it is mixing a large band, orchestra or a multi-input television production you can rely on the SD5 and the power of Stealth Digital Processing™ to give you all the processing you need effortlessly.

Stealth effects - Hidden power to enhance your mixes.



› Up to 24 stereo effects can be loaded into each rack and all auxiliary or group assignments can be instantly seen.

› Build your FX racks simply using the central touch screen and select from a wide range of powerful, built in, natural sound effects including reverbs, delays, choruses, pitch shifting and more.

› Altering the graphic by the faders in the centre of the console. The on screen highlight shows which faders are effecting which frequencies. In graphic mode the faders also become centre detented ensuring you always know where 0dB is.

› See all of your graphics in one place as well as their gang status. Graphic EQs ganged together ensure that what happens on one happens on the other. Perfect for stereo pairs or groups of loudspeakers.

› Dynamic EQ is perfect for dealing with those troublesome frequencies that only rear their head as the band really get going. Control the high-mid on an electric guitar as the passion of the solo starts to become uncomfortable or deal with unexpected sibilance on a vocal mic automatically.

› Multi-band compression is perfect for use with in ear monitor mixes, keeping the artist safe from damaging high frequencies or just smoothing out the tonal balance of the mix simply and effectively allowing you to concentrate on mixing the show.

› Warm up the sound of your input channel with DiGiTuBe tube emulation. Easily create the quality of yesterday today without using any additional console resources.

Dynamic EQ, Multi-band Compressor, Gate, DiGiTuBe and De-Esser

Take full control of your mix

Creating a great sounding mix requires a combination of skill and the right tools. Inside every SD5 is a winning combination of powerful, flexible and great sounding dynamics and EQ that allows you to express your creativity with ease.

Experienced engineers know that after the mic pre-amp the next most important thing to consider is the accuracy and quality of your EQ section, and the SD5 provides one of the most flexible, dynamic and musical sounding EQ sections of any digital desk. Yet, we are not just talking standard EQ here, this is dynamic EQ, giving you the real opportunity to shape your mix and alter your EQ settings in real time — automatically.

Every channel on the SD5 offers four band fully parametric equalisation, or you can select to use one of the 24 Dynamic EQs giving you threshold, attack, release and to control the amount of EQ applied in each of the four bands. The ability to make each band either static or dynamic is further enhanced by the ability to set the threshold to be triggered by either an over or under signal level.

Every output has eight bands of fully parametric equalisation and even has the capability of dynamic EQ on four of the bands.

Every input and output channel also comes with its own compressor and gate but with the latest software, loaded on every SD5, you have the option of standard compressor, or one of the 24 multi-band compressors or De-Essers. The multi-band compressor setting gives you full control over the dynamics of your mix across three frequency bands as well as the option of auto makeup gain and variable cross over frequencies. This coupled with the ability to turn each band on or off independently provides the widest possible control of channel dynamics.

Additionally, every input and output channel has its own fully independent gate, which can also be switched to be used as a ducker or an additional frequency conscious compressor.

If all this control wasn't enough you can enhance the already great sounding input channel with the warmth of DiGiTuBe tube emulation. Simply switch it on and you can alter the drive and bias giving your input signal that characteristic glow!

The SD5 provides all the tools you need to create the mix you want.

› Four band Dynamic EQ is displayed on the touch screen, giving options to control frequency, EQ and gain as well as threshold, attack, release, ratio as well as minimum or maximum threshold levels. Each band can also be independently activated on each channel.

› Multi-band compression over three selectable frequency bands gives you full control of the dynamics of your mix. With tunable crossover frequencies, gain makeup as well as standard threshold, attack, release and ratio control, dynamic compression is as flexible as you want it to be.

› The large, multi-line, multi-colour programmable Smart Keys make anything accessible quickly and easily. Simply create a your own Smart Key functions to trigger an effect, bring channels to the surface or access Spill Sets. And with four banks of ten Smart Keys available, you're spoilt for choice!

› Use the centre screen to setup your Smart Key functions. Select the name, colour and location of the button and with a few clicks of the mouse you can access any function or group of functions on the desk. Assign to a key and you're away. Smart Keys give you the control you need at the touch of a single button.

Smart Keys

Immediate access

As with other consoles in the SD range the SD5 includes Smart Keys, something that its predecessor did not. The ten large, multi-colour backlit LCD keys are positioned to be easily reachable in the centre section of the console and can be programmed to run any macro you have programmed into the desk. If for example you need to trigger a sound effect via MIDI you can assign your macro to a Smart Key, or if you want fast access to your Set Spill groups, bringing all the channels you need to you in one button press, you can also allocate them to Smart Keys.

In fact, Smart Keys can basically be allocated to any pretty much anything on the desk. Simply program your macro, assign to a Smart Key and you're done. You're one easily reachable button press away from getting what you need when you need it.

But, if ten Smart Keys just aren't enough, do not fear! The SD5 has four banks to use, giving you a huge amount of flexibility and instantaneous access to the functions you use most within the console.

Smart Keys - They're as smart as you are.

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Waves SoundGrid®.

Access the plugins you love

- The SD5 already comes with its powerful Stealth Digital Processing™ powered suite of audio processing – but sometimes you want to access the plugins you know and love from the studio. Now it is so simple thanks to DiGiCo and Waves SoundGrid® giving you access to a wide range of Waves plugins in special bundles.

- The choice doesn't only extend to the range of Waves effects - DiGiCo takes the concept of Waves integration even further than the norm. Unlike all other SoundGrid platforms, DiGiCo provides complete control of plug-in parameters, as well as recall of snapshots, simple loading and saving directly from the consoles' surface.

- Console-based MultiRack software allows you to set up, control, recall, snapshot and save Waves plugin configurations as an integral part of your overall mix setup, while the processing power of the dedicated SoundGrid module allows the SD5's own processing power to remain dedicated to the task of driving the console and its work surface.

- The DiGiCo Waves setup gives you instant access to up to 16 fully integrated, low latency Waves stereo processor racks, with up to eight plug-ins in each rack. Waves TDM plugins collections can be used too.

Plugin Bundles

Bundles and existing Waves plugins available online at www.waveslive.com or from Waves dealer/distributor

SSL-G Channel

Vocal Rider

Waves MultiRack

C4 Multiband Compressor

CLA-2A

Renaissance Equalizer

Recording and UB MADI

Simple 48 track recording and playback to USB

› The UB MADI interface is so small and light you can slip it inside your pocket. No bulky power supply required —just a USB 2.0 cable to connect to your computer, two MADI cables to the desk and hit record.

› The UB MADI works with a PC or a Mac so you won't be limited by your choice of operating system. In addition the UB MADI will work with virtually any digital audio workstation software. **

With the DiGiCo UB MADI USB 2.0 interface it is now even easier to get up to 48 channels of full duplex audio into and out of your PC or Mac. Simply connect the UB MADI to your computer via a USB cable and a MADI stream from the SD5 and you're away. Low latency recording and playback is there for you to complete your virtual sound-check or performance multi-track.

The UB MADI is small and robust and as it is not reliant on the USB's data clock for sync, jitter is not a problem. The device will take the first 48 channels of any 48k AES-10 compliant connected MADI stream or coaxial AES3 (AES/EBU) stereo audio and clock directly to it. With no input connected the UB MADI will switch to its own, highly stable, internal clock.

UB MADI - It doesn't get much simpler than this.

** For more information on compatible DAW software and minimum recommended computer hardware specification please contact your DiGiCo dealer or DiGiCo technical support.

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Multiple Touch Screens

Instant control

One of the defining features of the DiGiCo range of consoles are the large touch screens, bringing all of the information and control to where you need it, quickly and easily. The SD5 is no exception and features three TFT screens, one for each section of the console.

Access to the channel strip and all of its features is just a touch away. Select your inserts or sends and their settings are right in front of you. Then, simply use the relevant Hidden Till Lit rotaries or Quick Select Buttons to alter your required parameters. As you change fader banks, access Set Spills or fold and unfold multi-channel faders the information on the screens changes instantaneously to reflect the channel setup.

The recessed centre touch screen on the SD5 has allowed us to move the screen itself, the Smart Keys, Snapshot recall and headphone monitoring sections closer to the operator. The centre screen is also used to configure the console. An easily navigable menu system gives quick access to routing, macros, matrix and FX rack configuration, an overview of the entire console as well as everything else you might need to setup pre-show.

The three large screens also make multiple user operation simple - no fighting over screen real estate to see what you need when you need it.

Multiple Touch Screens - See, Touch, Hear.

› Instantly identifiable settings, signal indicators, physical, grabbable controls and tactile, responsive touch screens. From the high resolution, context sensitive meterbridge and giant 15" LCD displays to the touch sensitive motorised faders and colour-coded electronic scribble strips, you always know exactly where you are.

› The central touch screen provides all the information you need to configure your SD5 before the show and setup your graphics, load your FX racks, access the matrix as well as give you all your channel information during the show.

Local I/O

Local I/O and Connectivity

You can have all the I/O racks in the world but when you need quick connectivity, for FOH playback or microphones, you need something local and that's where the SD5's Local I/O becomes incredibly useful. Eight microphone inputs and eight line outputs, in addition to eight ways of AES I/O (mono), are easily accessible on the rear of the desk enabling quick connectivity at a moments notice.

Of course the SD5 is a sociable desk and will easily connect with other hardware and control systems using its MIDI controlled GPI and GPO ports for triggering and syncronisation. Its full compliment of MIDI In, Out and Thru connectors also allow the desk to communicate with conventional MIDI controlled systems.

The Optical Loop gives the SD5 the power to run up to 14 stage racks, while the optional second Optical Loop connectors give access to a further 14 stage racks — enough channels for the largest of events.

AES, Word and Video Sync connections bring the desk into the wonderful world of video ensuring perfectly clocked audio to picture.

Finally, dual fan-less power supplies run simultaneously, quietly keeping your desk up and running at all times.

Local I/O and Connectivity - Plug-in and go.


16 GPI / GPO
DO NOT RESTRICT AIR FLOW
Video Sync
Word Sync
Redundant MADI I/O x 3
Redundant PSU

SD and D-Rack

It's all about flexibility

The SD-Rack offers high resolution analogue to digital convertors, incredible flexibility and superior sound quality to complement the power of your SD5 console. Running sample rates up to 192kHz (coming soon), the SD-Rack can run multiple digital formats simultaneously including AES/EBU, Dante, AES-42, MADI, ADAT and Aviom.

Based around the same Stealth FPGA technology as the Digital Engines in the SD range itself, the SD-Rack can run the optical loop at 96KHz while providing a down-sampled 48KHz feed to the broadcast truck from one of the MADI output streams even with Gain Tracking™.

Of course, it all starts with the mic pre-amplifier and here is the beginning of a high quality, sophisticated and sonically superior signal path. With the same FPGA technology onboard as the console itself the SD range of racks provide industry leading A/D conversion and DiGiCo's famous Gain Tracking™.

Gain Tracking™ gives all consoles +/- 40dB of digital gain which can be set independently on a channel-by-channel basis, ensuring that once the analogue gain is set each of the maximum of five consoles on the loop can Gain Track their own mixes. Should there be a need to adjust an analogue gain each Gain Tracked channel will automatically compensate – ensuring your mix stays the same. Not only that but any of the five consoles on the loop can take control of an analogue gain should clipping occur, safe in the knowledge that everyone else's mix will be unaffected.

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- '48V present' LEDs confirm 48V is present per XLR. A further LED indicates signal present and clip at each analogue input, giving you a complete picture of activity on the SD-Rack itself.

- Dual hot swappable power supply units are located at the top of the rack for fast access, so that your connector looms can remain in place near floor level while the more frequently accessed components are right on top.

- The 56 input / 56 output arrangement, in blocks of eight, allows you to populate the SD-Rack with the I/O cards to suit your application. And the cards themselves are hot-swappable, with the SD-Rack automatically detecting the card that has been plugged in.

- Up to 14 rack IDs can be connected on a single optical loop. An SD5 has an optional second optical port giving up to 28 racks of I/O in a system.

The SD-Rack features 14 slots providing up to 56 ins and outs and comes with or without optics. Running at 48kHz the two MADI ins and outs provide 56 fully redundant input and output channels via a duplicate MADI aux. If you need to run at 96kHz you can get a full complement of 56 channels of MADI in and out.

Each interface card is hot swappable and the rack will automatically identify the type of card and configure it. The dual power supplies are also hot swappable and easily accessible at the top of the rack ensuring you won't have to fight a mass of cables to get them out.

The next rack in the DiGiCo series of high sample rate interfaces is the D-Rack. It comes complete with CAT5 audio as standard or with optional optical connection and can run sample rates up to 96kHz. Additionally, the D-Rack will now also support the new Aviom interface and provides 32 inputs and 8 outputs as standard, with the option of eight modular outputs that can either run AES or analogue. This small, flexible rack is designed to sit on the floor, but can just as easily be rack mounted using the optional ears.

SD and D-Rack: It's all about connections.

D-Rack (with optics)
32 Mic in 8 Analogue out (as standard) showing optional 8 AES Mono Stream outputs, 8 Analogue outputs, Aviom Module and 19" Rack Ears

SD-MINI Rack and SD-NANO Rack

Size is not important - it's what it can do

The SD-MINI and SD-NANO Racks are the latest additions to the DiGiCo range of high sample rate racks, complementing the SD and D racks to make a completely flexible remote rack solution for any situation.

The SD-MINI is a 4U rack and can accept SD input and output cards be they analogue or digital including AES/EBU, Dante, AES-42, ADAT, HD-SDI and Aviom. Running purely digital the MINI can run up to 32 ins and outs or if it's all analogue you need then a maximum of 32 ins or outs is possible or any combination in banks of eight (8 in and 24 out for example). The MINI has MADI connectivity as standard with optical as an option . With the ability to multi sample rate to convert external devices via MADI and also the ability for Gain Tracking™.

At the smallest end of the spectrum is the SD-NANO Rack. This 2U stage box works almost exactly the same way as the MINI except it is half the size and therefore can only handle half the amount of inputs and outputs. The NANO is only available with optical connectivity.

So, when you need smaller racks distributed around a stage or building, the MINI and the NANO are there to provide you with flexible, affordable digital I/O totally compatible and controllable with the full range of DiGiCo consoles and the larger SD and D racks.

With up to a total of 14 racks on one optical loop, or 28 on a dual loop system, it is easy to see the potential for large corporate events, installations or just expansive stages. This, coupled with the ability for any of the five consoles that can sit on one optical loop being able to address all inputs and individually address output slots on any rack, giving any engineer, or system designer the flexibility and power they need to make any complex situation easy and intuitive.

SD-MINI and SD-NANO racks -
When size isn't everything.

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NANO Rack showing 8 Mic in and 8 Line out

NANO Rack showing 16 AES streams in and out

NANO Rack rear showing dual power supplies

MINI Rack rear showing dual power supplies

SD5 Specifications

Quick Reference	
Max no of Input Processing Channels	124
Maximum Buss Count	98***
Max aux / sub-group busses	56 (full processing**)
Matrix (in addition to aux / sub - group)	24 x 24 (full processing**)
Solo busses	2
Max no. of inputs - Non optic consoles	N/A
Max no. of inputs - 1 console on optic loop	632
Max no. inputs - 2 consoles on optic loop	688
Local I/O spec	8x mic/line, 8x line outputs, 8x AES/EBU I/O (mono streams)
Max no. of outputs	632
Max no. of faders	37
Screen	3 x 15" touch
Ext. overview screen	Yes
I/O expandability	Yes
Insert points / channel	2
On Board FX	24
Graphic Eqs (32-Band)	32
Dynamic EQ	24
Buss 8-band Parametric EQ	Yes
Multiband Compression	24
DiGiTuBes	24
Multi-channels	Yes
VCA - style control groups	24
Set Spill	Yes
Mute Groups (part of control groups)	24
Reorder Busses	Yes
Multi-operator	Yes
Surround	Yes
MADI connectivity	3x Redundant ports
Optics	Yes
Snapshot Offline	Yes
Snapshot Auto-Update	Yes
Sampling rates	48kHz / 96kHz / 192kHz
Signal processing	FPGA, up to 40-bit floating-point
Audio processing and OS location	Surface
Redundant Processing and Computer	No
Redundant PSU's	Yes
Stage Rack spec	Up to 56 in / 56 out / MADI split x2 (@ 48kHz)
Max no of Racks	17. On 2 loops = 31
Rack Interface	MADI / Optocore
Connector type for racks	BNC / HMA optics / ST / Opticon
Rack sharing FOH/MON	Gain Tracking
Offline Software	Yes
Recording	Virtual Soundcheck up to 168 channels
Dimensions (mm) and Weight (kg)	1465(w) x 32.99(d) x 458(h) - 116Kgs
Dimensions (inches) and Weights (lbs)	57.68(w) x 33.46(d) x 18.03(h) - 256lbs

General Specifications

Faders	37 x 100mm touch-sensitive, motorised
Screens	3 x 15" LCD high - resolution touch screens
Meterbridge	2 x Custom Mounted LCD high-resolution TFT-LCD screens
Input Channels	124
Busses	Up to 56 plus masters Aux / Group busses with full processing Mono / Stereo / LCR / 5.1
Matrix	Up to 24 Input / 24 Outputs with full processing
Control Groups	Up to 24, selectable for VCA-style, Moving fader, Mute Group
Graphic Eq	32 x 32-band, Gain +/- 12dB
Internal FX	Up to 24 stereo effects comprising up to 16 floating point reverbs and up to 24 delay/chorus/pitch/enhancer
Local I/O	8 x mic/line I/O, 8 x AES I/O
MADI interface	3 redundant interfaces, BNC connectivity
Optic interface	Fibrecast optic
Sampling rates	48kHz / 96kHz / 192kHz (processing capabilities halved at 192kHz)
GPI/GPO	16 as standard, expandable to 32
Ext Sync	Wordclock, AES, Video, MADI, Optics
Physical Dimensions	1465 mm (w) x 838mm (d) x 458 mm (h)
Weight	116Kg (233 Kg with flightcase)
Power Requirements	90V-260V, 50-60Hz, 532VA (340W)

Audio Specification

Sample rate	96kHz / 48kHz
Processing delay	1ms Typical (channel, SD Rack input through L-R buss to stage output @96kHz)
Internal processing	Up to 40-bit, floating point A>D & D>A 24-bit Converter Bit Depth
Frequency response	+/- 0.6dB (20Hz – 20kHz)

** Full Processing - Includes Delay, DiGiTuBe, HP/LP Filters, 4 or 8 Band EQ, Dynamics 1 and Dynamics 2.
*** Max Buss Count is calculated as Aux / Group Buss + Master Buss (LCR or 5.1 depending on product) + Matrix Buss + 2 Solo Busses (up to 5.1 depending on product)

DiGiCo

THD	<0.05% @ unity gain, 10dB input @ 1kHz
Channel Seperation	Better than 90dB (40Hz – 15kHz)
Residual output noise	<90dBu Typical (20Hz - 20kHz)
Microphone Input	Better than -126dB Equivalent Noise
Maximum Output Level	+22dBu
Maximum Input Level	+22dBu

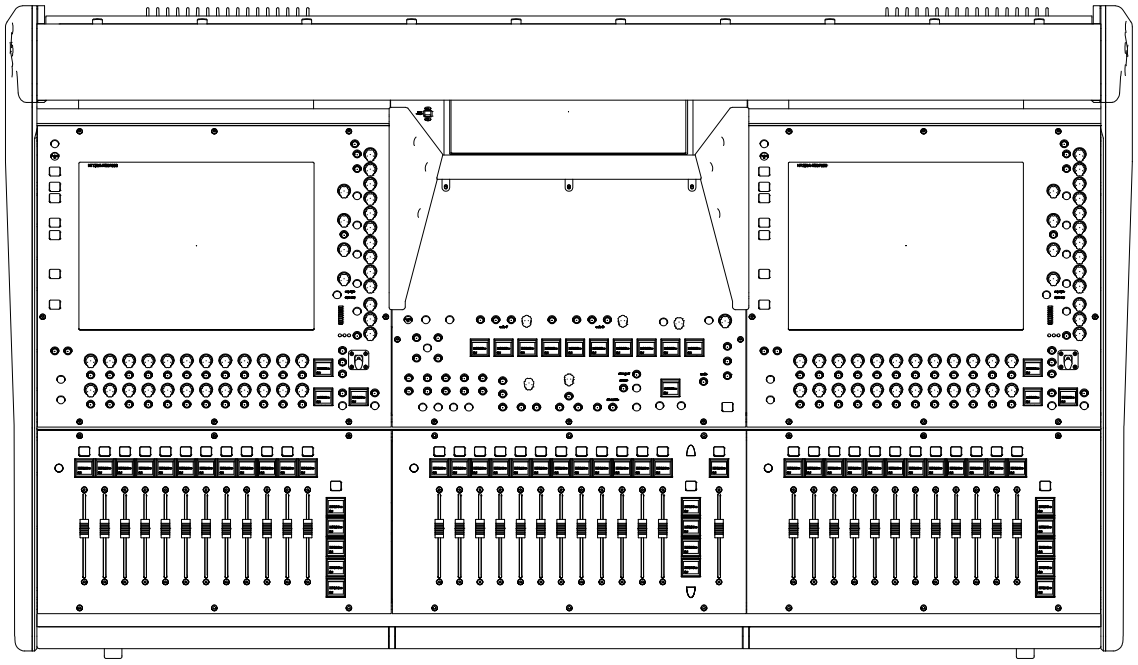
Processing Channel Specification
Input Channel

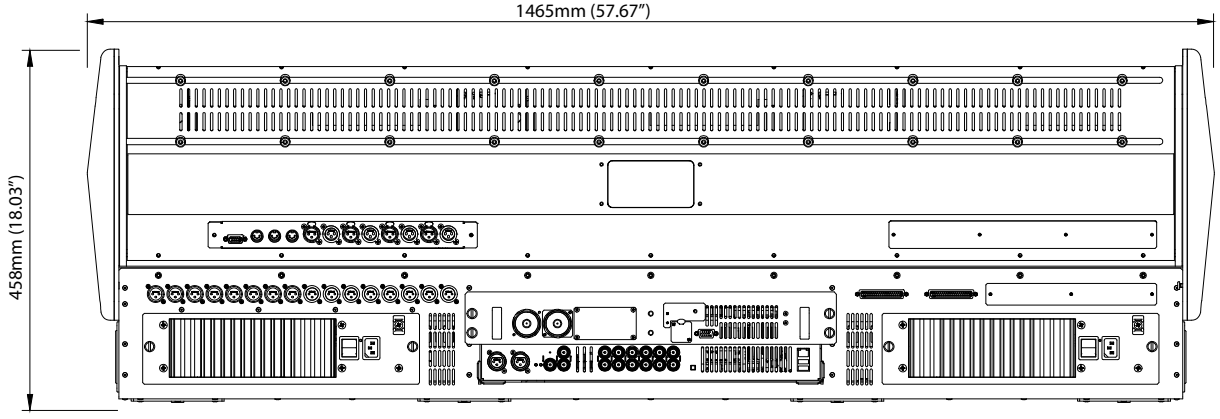
Name	User-defined / Presets
Channel Selection	Mono / Stereo / Multi
Input Routing	Main & Alternate Input
Analogue Gain	-20 to +60dB
Phase	Normal / Reverse
Digital Trim	-40 to +40dB
Delay	>1 sec (coarse & fine control)
DiGiTuBe	Drive 0.01 - 50.0 Bias 0 - 6
LPF	20 – 20kHz, 24dB / Oct
HPF	20 – 20kHz, 24dB / Oct
Insert A	(pre eq/dyn) On/off
Equalisation	4 band EQ: Parametric or Dynamic (low/lowshelf, lower-mid/ lowshelf, upper-mid/hishelf, hi/ hishelf) on/off Freq; 20 – 20kHz Gain; +/- 18dB Q: 0.1 -20 (parametric) / 0.10-0.85 (shelf) Dynamic Eq on/off Over/under Band on/off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1
Dynamics 1	Single or multiband (3-band)
Compressor	on / off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1 Gain; 0 to +40dB with Autogain option Link; any channel / buss Hi crossover; 20Hz – 20kHz Lo crossover; 20Hz – 20kHz Knee : hard, med, soft
De-Esser	Threshold : 20us – 20ms Release : 1ms – 100ms Ratio : 1:1 – 50:1 Ess-band : Listen on/off Ess-band filter freq / width: 20Hz – 20kHz
Dynamics 2	on/off
Gate / Ducker	Threshold; -60 – 0dB Attack; 50us – 100ms Hold; 2ms – 2s Release; 5ms – 5s Range; 0 - 90dB Key; Any source Key listen Freq/width; 20 – 20kHz
Compressor	on / off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1 Gain; 0 to +40dB with Autogain option Link; any channel / buss Hi crossover; 20Hz – 20kHz Lo crossover; 20Hz – 20kHz s/c source : Any source s/c listen : on/off s/c filter freq / width: 20Hz – 20kHz
Insert B	(post eq/dyn) On/off
EQ/Dyn order	EQ/Dyn or Dyn/EQ
Mute	Channel mute / hard mute
Solo	Solo Buss 1 / Solo Buss 2 / Both, Auto solo
Channel Safe	Input, eq, dyn, aux, pan, fade/ mute, inserts, buss, directs, full safe
Output Routing	Buss, Insert A, Insert B, FX Direct: on/off, pre-mute / pre-fade / post-fade, level +/- 18dB
Fader	100mm motorised fader ∞ to +10dB

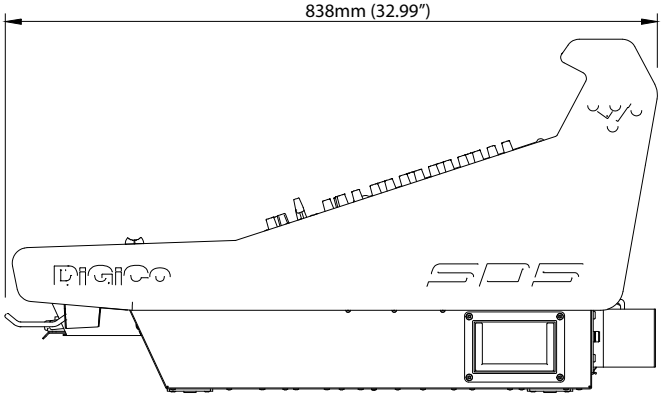
Processing Channel Specification
Aux / Group / Matrix Output

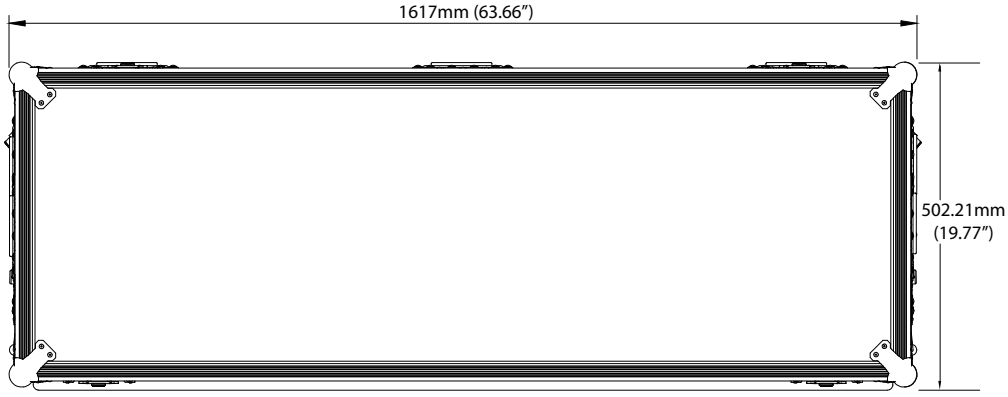
Name	User-defined / Presets
Phase	Normal / Reverse
Digital Trim	-20 to +60dB
Delay	>1 sec (coarse & fine control)
DiGiTuBe	Drive 0.01 - 50.0 Bias 0 - 6
LPF	20 – 20kHz, 24dB / Oct
HPF	20 – 20kHz, 24dB / Oct
Insert A	(pre eq/dyn) On/off
Equalisation	8 band EQ: Parametric or Dynamic 4 band EQ: Parametric Only (low/lowshelf, lower-mid/ lowshelf, upper-mid/hishelf, hi/ hishelf) on/off Freq; 20 – 20kHz Gain; +/- 18dB Q: 0.1 -20 (parametric) / 0.10-0.85 (shelf) Dynamic Eq on/off Over/under Band on/off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1
Dynamics 1	Single or multiband (3-band)
Compressor	on / off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1 Gain; 0 to +40dB with Autogain option Link; any channel / buss Hi crossover; 20Hz – 20kHz Lo crossover; 20Hz – 20kHz Knee : hard, med, soft
De-Esser	Threshold : 20us – 20ms Release : 1ms – 100ms Ratio : 1:1 – 50:1 Ess-band : Listen on/off Ess-band filter freq / width: 20Hz – 20kHz
Dynamics 2	on/off
Gate / Ducker	Threshold; -60 – 0dB Attack; 50us – 100ms Hold; 2ms – 2s Release; 5ms – 5s Range; 0 - 90dB Key; Any source Key listen Freq/width; 20 – 20kHz
Compressor	on / off Threshold; -60 – 0dB Attack; 500us – 100ms Release; 10ms – 10s Ratio; 1:1 – 50:1 Gain; 0 to +40dB with Autogain option Link; any channel / buss Hi crossover; 20Hz – 20kHz Lo crossover; 20Hz – 20kHz s/c source : Any source s/c listen : on/off s/c filter freq / width: 20Hz – 20kHz
Insert B	(post eq/dyn) On/off
EQ/Dyn order	EQ/Dyn or Dyn/EQ
Mute	Channel mute / hard mute
Solo	Solo Buss 1 / Solo Buss 2 / Both, Auto solo
Channel Safe	trim, eq, dyn, fade/mute, inserts, outputs, full safe
Output Routing	Outputs, Insert A, Insert B, FX
Fader	100mm motorised fader ∞ to + 10dB

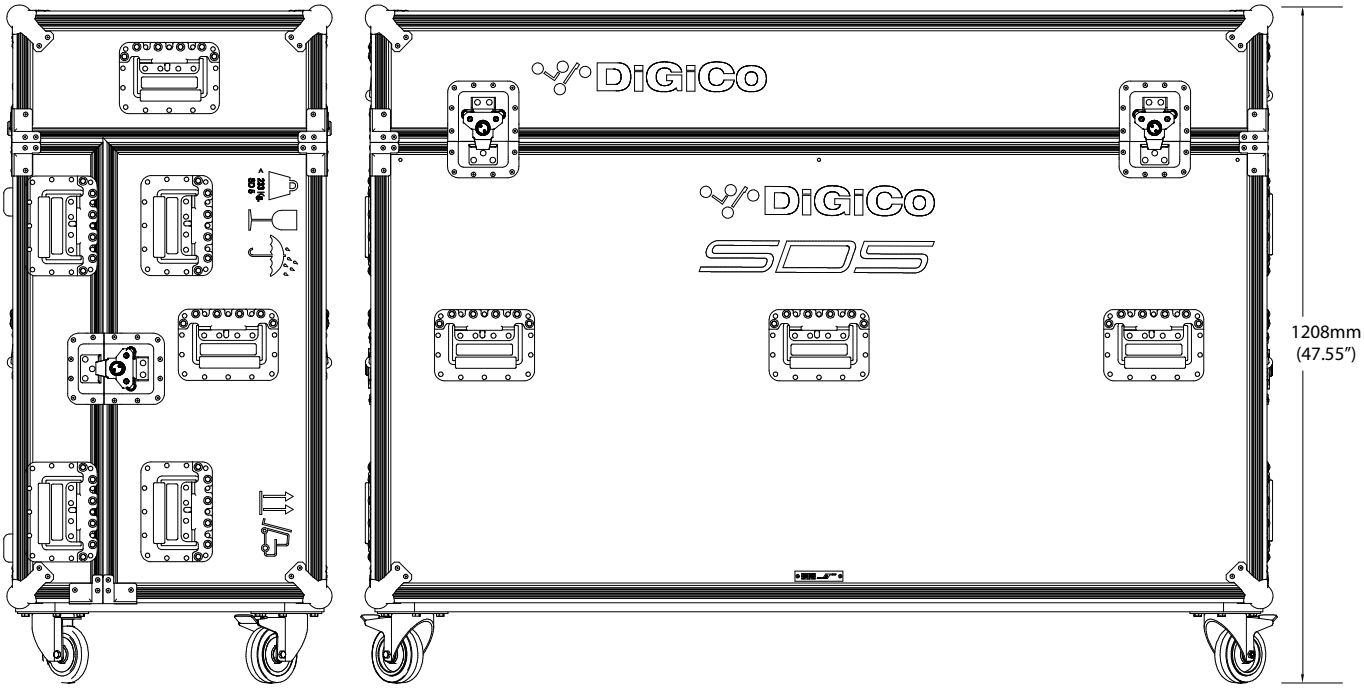
SD5 Line Drawings



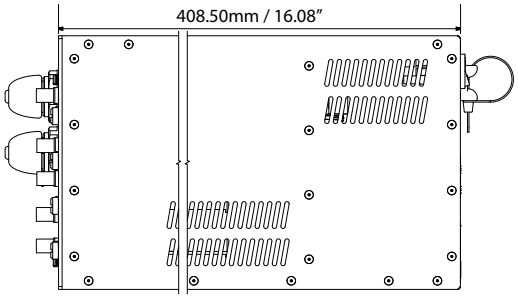


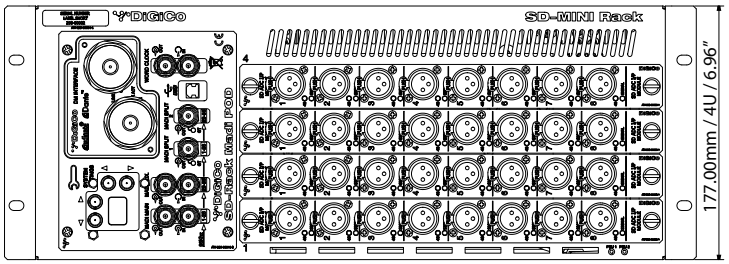


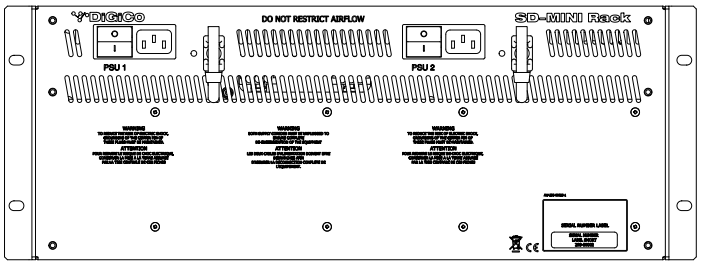

1617mm (63.66")
502.21mm
(19.77")

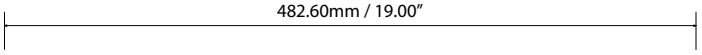

DiGiCo
DiGiCo
SD5
1208mm
(47.55")

SD-MINI Rack Line Drawings

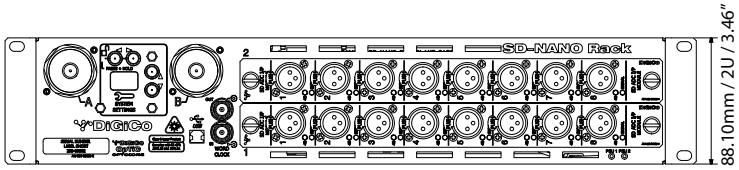


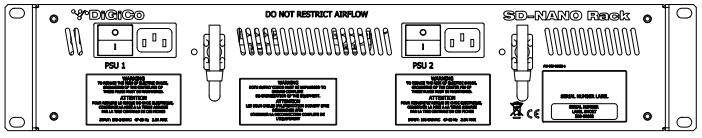


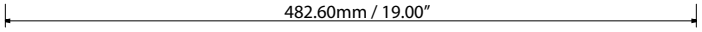




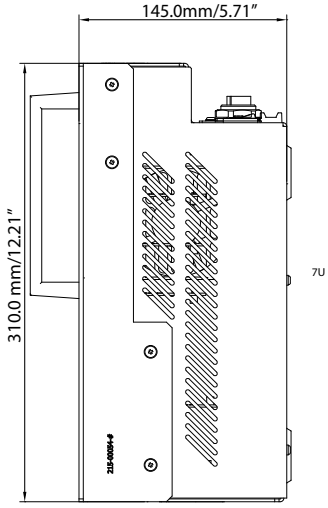
SD-NANO Rack Line Drawings

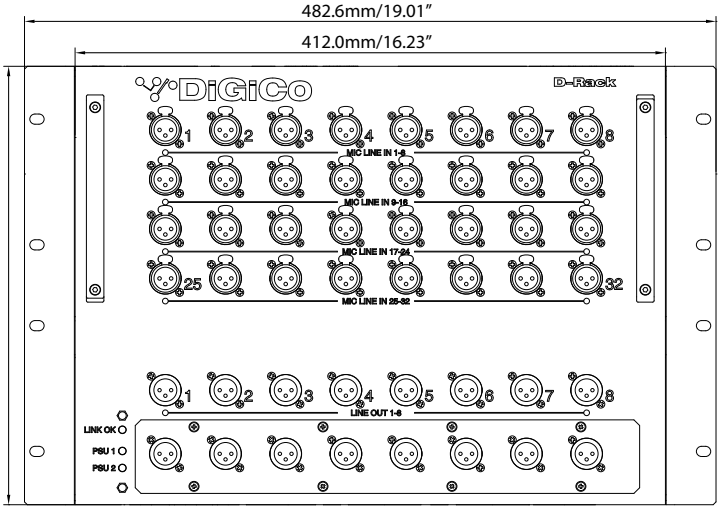




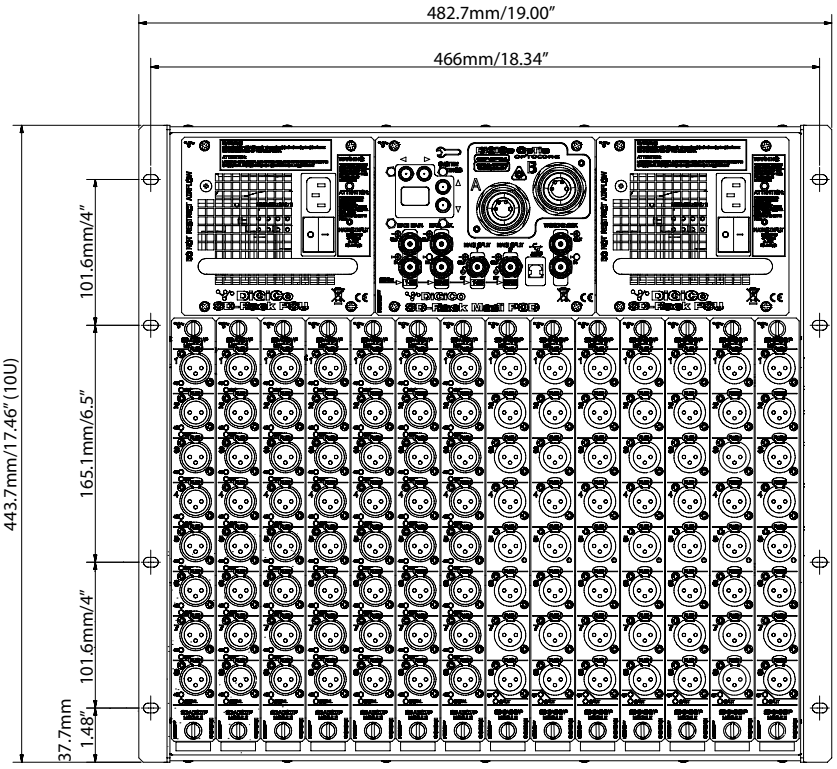


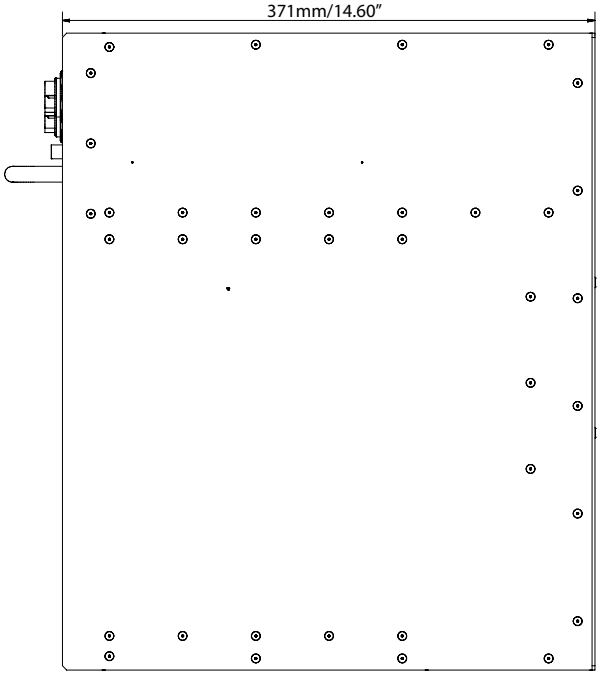
D-Rack Line Drawings

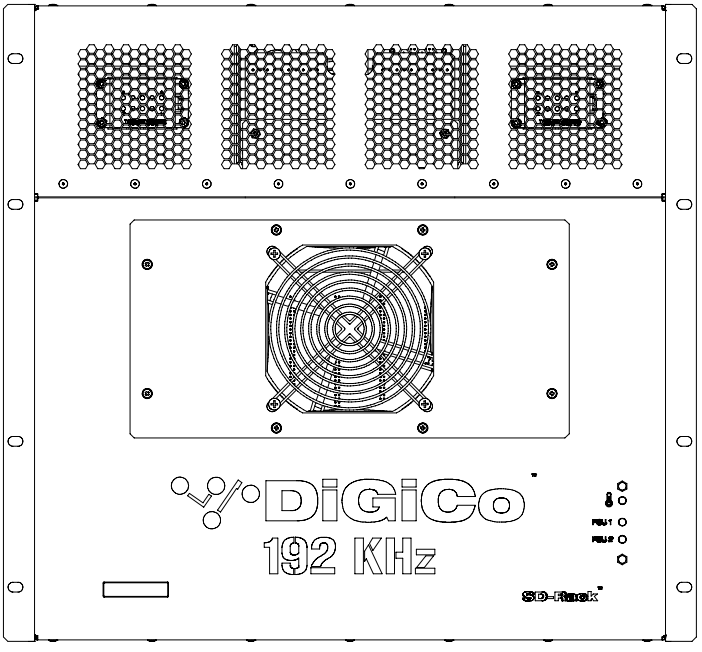




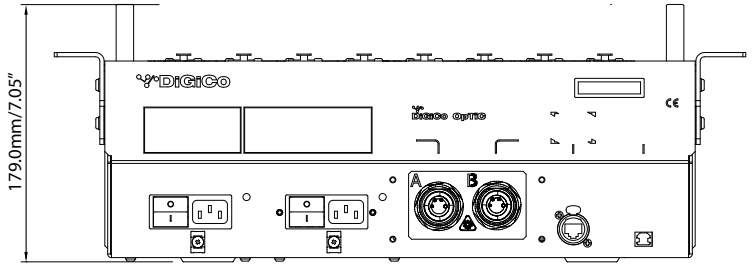
SD-Rack Line Drawings







D-Rack Line Drawings



Product Comparison

	SD11i	SD9 Supercharged	
Max no of Input Processing Channels	32 Flexi*	48 Flexi*	
Maximum Buss Count	39***	47***	
Max aux / sub-group busses	12 Flexi* (full processing**)	16 Flexi* (full processing**)	
Matrix (in addition to aux / sub - group)	8 x 8 (full processing**)	12 x 8 (full processing**)	
Solo busses	2	2	
Max no. of inputs - Non optic consoles	130	180	
Max no. of inputs - 1 console on optic loop	N/A	N/A	
Max no. inputs - 2 consoles on optic loop	N/A	N/A	
Local I/O spec	16x mic/line inputs, 8x line outputs, 2x AES/EBU I/O (mono streams)	8x mic/line, 8x line outputs , 4x AES/EBU I/O (mono streams)	
Max no. of outputs	122	180	
Max no. of faders	12	24	
Screen	1x 15" touch	1x 15" touch	
Ext. overview screen	Yes	Yes	
I/O expandability	Yes	Yes	
Insert points / channel	1	1	
On Board FX	6	8	
Graphic Eqs (32-Band)	12	16	
Dynamic EQ	6	8	
Buss 8-band Parametric EQ	No (4 band only)	No (4 band only)	
Multiband Compression	6	8	
DiGiTubes	6	8	
Multi-channels	Yes	Yes	
VCA - style control groups	8	8	
Set Spill	Yes	Yes	
Mute Groups (part of control groups)	8	8	
Reorder Busses	Yes	Yes	
Multi-operator	By remote only	By remote only	
Surround	No	No	
MADI connectivity	1x Port	1x Port	
Optics	No	No	
Snapshot Offline	Yes	Yes	
Snapshot Auto-Update	No	No	
Sampling rates	48 kHz	48 kHz	
Signal processing	FPGA, up to 40-bit floating-point	FPGA, up to 40-bit floating-point	
Audio processing and OS location	Surface	Surface	
Redundant Processing and Computer	No	No	
Redundant PSU's	Yes - by remote PSU option only	Yes - Option	
Stage Rack spec	D-Rack - 32/8 I/O (expandable to 16 O)	D-Rack - 32/8 I/O (expandable to 16 O)	
Max no of Racks	2 (with Little Red Box)	3 (With Little Red Box)	
Rack Interface	MADI / RJ45 CAT 5	MADI / RJ45 CAT 5	
Connector type for racks	BNC / CAT 5	BNC / CAT 5	
Rack sharing FOH/MON	Gain Tracking	Gain Tracking	
Offline Software	Yes	Yes	
Recording	Virtual Soundcheck up to 56 channels	Virtual Soundcheck up to 56 channels	
Dimensions (mm) and Weight (kg)	483(w) x 577(d) x 232(h) - 24Kgs	878(w) x 785(d) x 262(h) - 36Kgs	
Dimensions (inches) and Weights (lbs)	19.02(w) x 22.72(d) x 9.13(h) - 53lbs	34.57(w) x 30.90(d) x 10.31(h) - 80lbs	

DiGiCo




	SD8 Overdrive II	SD10 Nitrous	SD5	SD7 MACH 3
	60 Flexi*	96 channels, 12 Flexi*	124	253
	67***	71***	98***	160**
	24 Flexi* (full processing**)	48 (full processing**)	56 (full processing**)	128 (full processing**) (inc 2x solo buss)
	16 x 12 (full processing**)	16 x 16 (full processing**)	24 x 24 (full processing**)	32 x 32 (full processing**)
	2	2	2	2
	N/A	N/A	N/A	N/A
	576	576	632	696
	632	632	688	752
	8x mic/line, 8x line outputs, 8x AES/EBU I/O (mono streams)	8x mic/line, 8x line outputs, 8x AES/EBU I/O (mono streams)	8x mic/line, 8x line outputs, 8x AES/EBU I/O (mono streams)	12x mic/line, 12x line outputs, 12x AES/EBU I/O (mono streams)
	576	576	632	696
	37	37	37	52 (plus 48 if used with 2 x EX007)
	1 x 15" touch	1x 15" touch	3 x 15" touch	3 x 15" touch
	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes
	2	2	2	2
	12	16	24	48
	24	24	32	32
	10	16	24	256
	No (4 band only)	Yes	Yes	Yes
	10	16	24	256
	10	16	24	256
	Yes	Yes	Yes	Yes
	12	24	24	36
	Yes	Yes	Yes	Yes
	12	24	24	36
	Yes	Yes	Yes	Yes
	By remote only	By remote only	Yes	Yes
	No	No	Yes	Yes
	2x Redundant ports	2x Redundant ports	3x Redundant ports	4x Redundant ports
	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes
	48 / 96 kHz	48 / 96 kHz	48 / 96 / 192 kHz	48 / 96 / 192 kHz
	FPGA, up to 40-bit floating-point	FPGA, up to 40-bit floating-point	FPGA, up to 40-bit floating-point	FPGA, up to 40-bit floating-point
	Surface	Surface	Surface	Surface
	No	No	No	Standard
	Yes	Yes	Yes	Yes
	Up to 56 in / 56 out / MADI split x2 (@ 48kHz)	Up to 56 in / 56 out / MADI split x2 (@ 48kHz)	Up to 56 in / 56 out / MADI split x2 (@ 48kHz)	Up to 56 in / 56 out / MADI split x2 (@ 48kHz)
	16	16	17. On 2 loops = 31	18. On 2 loops = 32
	MADI / Optocore (option)	MADI / Optocore (option)	MADI / Optocore	MADI / Optocore
	BNC / HMA optics / ST / Opticon (option)	BNC / HMA optics / ST / Opticon (option)	BNC / HMA optics / ST / Opticon	BNC / HMA optics / ST / Opticon
	Gain Tracking	Gain Tracking	Gain Tracking	Gain Tracking
	Yes	Yes	Yes	Yes
	Virtual Soundcheck up to 112 channels	Virtual Soundcheck up to 112 channels	Virtual Soundcheck up to 168 channels	Virtual Soundcheck up to 224 channels
	1347(w) x 811(d) x 254(h) - 71.3Kgs	1398(w) x 818(d) x 285(h) - 60Kgs	1465(w) x 850(d) x 753(h) - 116Kgs	1496(w) x 875(d) x 503(h) - 107Kgs
	53.03(w) x 31.93(d) x 10(h) - 157lbs	55.04(w) x 32.2(d) x 11.22(h) - 132lbs	57.68(w) x 33.46(d) x 29.65(h) - 256lbs	58.9(w) x 34.45(d) x 19.8(h) 236lbs

* Flexi - Configurable Mono or Stereo without the loss of any resources
** Full Processing - Includes Delay, DiGiTuBe, HP/LP Filters, 4 or 8 Band EQ, Dynamics 1 and Dynamics 2.
*** Max Buss Count is calculated as Aux / Group Buss + Master Buss (LCR or 5.1 depending on product) + Matrix Buss + 2 Solo Busses (up to 5.1 depending on product)

Company Profile

The Ultimate in Digital Consoles

Concert Sound
(U2 360° Tour)

Permanent Install
Wolftrap Arts Centre

Houses of Worship
Gateway Church Southlake Texas

Musical Theatre
Mother Courage

When the professional audio world first set eyes on the DiGiCo D5 Live there was a collective sharp intake of breath. Here was the digital mixing console that gave you the best of analogue working practices and audio finesse with all the versatility and feature richness that the digital environment could offer.

A decade on, the SD Series is the new standard setter and its fast, engineer friendly user interface has yet to be beaten. And to many engineers it continues to offer the optimum sonic combination of analogue smoothness and digital clarity.

But expectations continue to rise. In a world as competitive for engineers as it is for console owners, you want the best tools you can lay your hands on. You also want a console as well thought out for every major application as it is designed for the art and science of sound engineering.

Above all, you want to do more. That's why we've added yet more depth and versatility to the SD Series, in which the DiGiCo SD7 is complemented by the new SD5, powerful SD Ten, compact SD8, the ultra compact SD9 and rackmount SD11.

What Makes the SD Series different from the D Series and other digital consoles?

The SD Series gives you more. More power, more flexibility and more creativity, wrapped in frames which are more serviceable, more compact and more user-friendly than ever.

Selected features include:

All audio processing on one chip Stealth Digital Processing™
From input to output all the audio processing on an SD Series console is carried out on one chip using Super FPGA technology with floating-point processing, resulting in enhanced clarity, unique sound characteristics and a smaller console footprint.

The Power of Waves The SD Series is the world's first range of digital mixers to offer the power of Waves SoundGrid® as a fully integrated option, complementing the array of built-in Stealth digital effects.

Slicker Interface With 15inch touch screen LCD TFT technology and user defined RGB back lit LCD scribble strips delivering uninterrupted user feedback.

Advanced Software UI
Building on the fine qualities of over 20 years of digital development, our engineers have delivered a user experience that's even faster, easier and more productive than ever.

After the briefest introduction it's clear that the DiGiCo range was designed for audio engineers by audio engineers.

Designed and manufactured in the UK.

DiGiCo

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