

Broadcast, Live and Production Mixing System

VISTA 1 CARBON

Legendary Studer mixing,
now more affordable than ever



INTRODUCING VISTA 1 CARBON

The all-in-one compact, flexible mix system for broadcast, live and production

Designed to pack everything you need within a single compact console, Vista 1 Carbon combines an industry-leading Studer control surface with advanced DSP, fully-configurable I/O and redundant power supplies - all in one unit.

Vista 1 Carbon's powerful feature set and flexible I/O configurations mean it can handle the widest range of applications, from OB and ENG vans, to small studios, to mobile productions where the console needs to be moved frequently.

Ready for easy integration with AoIP networks and expandable via Studer's D21m system and our Compact Stageboxes, Vista 1 Carbon is a cost-effective, future-proof console ready for anything that gets thrown its way.

Key Features

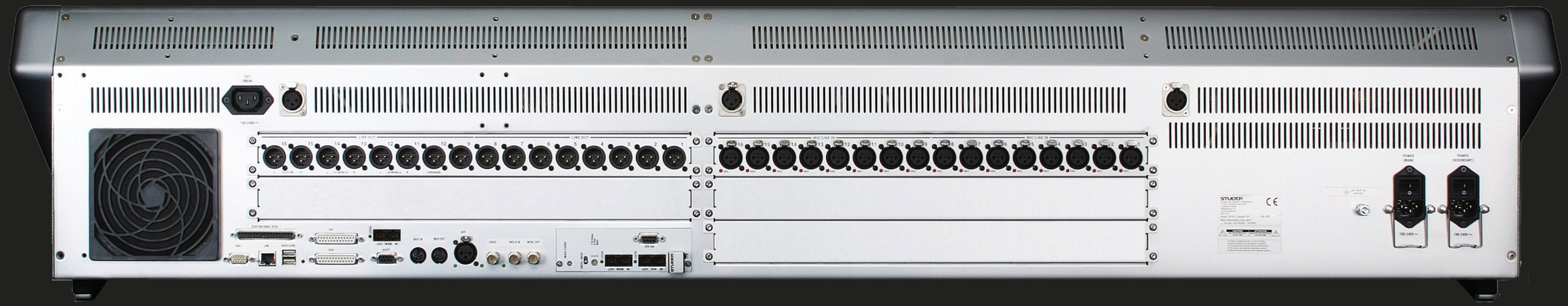
- 32 or 22 motorised faders, with Studer FaderGlow™
- Up to 248 Inputs and Outputs
  - Standard modular I/O included are:
    - 16 HQ electronically balanced MIC/LINE XLR inputs with 24-bit A/D converter
    - 16 analog XLR balanced line outputs with 24-bit D/A converter
  - Desk operator headphone
  - USB jingle player socket
  - Integral 64x64 multimode optical MADI port (audio only, not suitable for Stagebox control)
  - Slots for additional D21m I/O cards (one double-width or two single-width cards), such as AoIP (AES67/Dante®), Dual-MADI, AES/EBU, Analogue, SDI, etc.
- DSP capable of approx. 140 MEQ*, Including true mono, stereo and surround paths
- Support for Soundcraft Real-time Rack Plug-in engine (RTR to be purchased separately)
- True broadcast monitoring, talkback, red light control and 8 general-purpose control inputs/outputs (GPIO)
- Input level and gain reduction LED bargraph meter in every fader strip
- Optional TFT-Meter Bridge
- 6 high-resolution VFD master level meters
- Full mix-minus (n–x) system for live two way operations
- Vista data format compatibility for easy transfer of console snapshots between different Vista consoles
- Integrated jingle player for immediate playback of 8 different station identifier clips, background or other audio files from a jingle stick/USB memory device
- Studer Virtual Vista Online/offline editor
- Snapshot automation
- Outstanding Theatre CUE list automation
- Harman HiQnet support for controlling HiQnet compatible devices
- Ember and Probel protocol support for use with broadcast/newsroom automation systems
- Redundant PSU
- Studer's RELINK input/output sharing system allows sharing inputs and outputs with other Studer Vista consoles
- Support for the whole Studer Stagebox range via a MADI link, such as the 4U Studer Compact Stagebox
- The system can be extended by using additional Studer D21m I/O frames accepting cards from the comprehensive D21m I/O system programme

STUDER® An evertz brand VISTA 1 CARBON



All the right connections

From analogue to AoIP, Vista 1 Carbon is fully configurable to suit any application



Comprehensive integral I/O

The Vista 1 Carbon series Digital Mixing System has one integrated 64-channel MADI I/O audio-only port, 2 of the 5 trusted compact I/O modules slots populated for 16-channel HQ Mic/line-in and 16-channel line out, expansion/spare Compact Stagebox I/O modules are available such as:

- CS-16MIC-HQ(1-16) — 16CH High-Quality Mic/Line Inputs (screened 1-16), 5077609
- CS-16MIC-HQ(17-32) — 16CH High-Quality Mic/Line Inputs (screened 17-32), 5077610
- CS-16LineO(1-16) — 16CH Line Out - Trim module (screened 1-16), 5023745-02
- CS-16LineO(17-32) — 16CH Line Out - Trim module (screened 17-32), 5023750-02
- CS-8Line-4AES-Out — 8CH Line Out + 4x AES Out (Trim Module)
- CS-8x8AESB — 8x XLR Balanced AES In + 8x XLR balanced AES Out, 5019847

Additional expansion made simple, Vista 1 uses Studer D21m I/O to enable a scalable, high-density 24-bit 48kHz audio system. Optional D21m I/O cards are available for popular formats and protocols - for example:

- 4-channel D-type Mic/Line In with 4 Direct Outputs
- 8-channel D-type Line In
- 8-channel D-type Line Out
- 8-channel D-type AES/EBU In/Out *
- MADI max. 64 channels of I/O
- 8 to 16-channel SDI (SD/HD/3G) In or I/O on BNC sockets
- 8 or 16-channel Dolby® E/Digital In on BNC sockets

Studer Compact Stagebox. Cost-effective flexible expansion.

Offering high-density I/O in a 4U rack space, the Compact Stagebox is the most cost-effective way to expand a Vista 1's connectivity. With the flexibility to cover the widest range of scenarios, the standard configuration features 32 mic/line inputs and 16 line outputs. However, it is also possible to replace the output module and increase the inputs to 48 inputs, in which case analogue or AES/EBU outputs can be facilitated via D-Type connections on D21m expansion cards.

Expansion slots allow connection to formats including SDI (SD/HD/3G), Dolby® E, Dolby® Digital and more.



RELINK. Share your I/O across your network.

- Vista 1 can be integrated seamlessly within the Studer RELINK (Resource Linking) managed I/O system.
- RELINK allows multiple Studer consoles across a broadcast facility to share I/O across a WAN.
- RELINK is based on Studer's existing platform which forms an integral part of every Studer console, so no extra hardware is required to complete the network.
- Communicating over TCP/IP, any combination of Studer Vista and Infinity Routers can connect via RELINK.

RELINK

Audio mixing – as intuitive as it gets

The control system
that sets the standards



Vistonics.™ See it. Touch it. Control it.

Vistonics™ puts the controls right where engineers need them, with rotary controls and switches built right into the touch screen so they can directly control the parameter they are looking at without the need to glance away or focus on two different control surface elements simultaneously. By combining display and controls in one area, the operator is immediately presented with a simple, clear mix system that streamlines workflow and enhances the creative process.



FaderGlow. Bringing clarity to the most complex mix.

In complex productions, large numbers of audio sources requiring on-the-fly adjustment, traditional fader layers can be confusing. FaderGlow solves the problem by illuminating the fader tracks in colours that match those on the Vistonics™ display, letting the operator immediately see what each fader is controlling - even before reading the text labels for each fader.

FaderGlow is simple. If the settings of the graphic equalizer are mapped to the console faders - those faders are illuminated red - corresponding to the Vistonics™ display. This simple feature reduces stress and making light work of hectic live productions.

Upgrade your workflow speed

Powerful features to simplify production tasks



Surround Sound made simple.

Vista 1 makes it easy to create stunning realistic sound fields from mono sources.

Rather than relying on conventional amplitude panning techniques which usually result in unrealistic stereo or surround mixes, Vista 1 uses Studer's acclaimed Virtual Surround Panning (VSPII). Using VSPII the operator has a powerful creative tool to position a source within the sound field by using the channel's pan control. VSPII automatically takes care of generating the directionality and time delays on all speakers.



Everyone's talking? Let VistaMix deal with the headache.

Live multi-microphone productions such as talk-shows, discussion panels and game-shows can all suffer from excess noise due to microphone-spill and background noise from equipment. The result? Reduced intelligibility and unpredictable distortion and feedback issues.

Offering lightning fast relief to this audio headache, VistaMix mimics the actions of a highly skilled human operator in these environments but at a fraction of human reaction time. Once activated, VistaMix is always listening - increasing gain for 'talking' mics while reducing gain for others to ensure intelligibility, while simultaneously keeping the total gain at a consistent optimum level for the clearest live mix.



APPLICATION

Outside Broadcast

Powerhouse performance when space is at a premium

Outside broadcast vehicles present a series of challenges to equipment providers. As well as the inherent audio functionality required, consoles in particular need to be robust and reliable, have suitable redundancy, be very space efficient as audio space is always a premium in OB vans, and be flexible enough to handle different types of production very easily. Studer's history in OB vehicle installations is well known. Not only does the Vista 1 fit perfectly into small spaces, but it is easily expanded through the D21m I/O and Stageboxes. Integral MADI connectivity allows huge reductions in analogue patching systems.

The console itself offers all the functionality that may be required of it for OB:

- Full surround source management with up and down-mixing for sports events
- Mix minus feeds
- Audio-follows-video which can be tied to camera feeds and VT sources using several protocols, including Probel
- Multi-track capabilities for music events
- Dynamic automation for live mixdown of multi-track audio
- Integral audio router which saves on further external equipment, with control possible from video switchers
- Remote Stagebox systems using environment-proof fibre-based MADI community

With the existing popularity of Studer Vista consoles in fixed and mobile broadcast facilities, most engineers will already be familiar with the operation of the console, but new users will find themselves easily assimilating the Vistonics™ user interface.

With its compact footprint, The Vista 1 is fully-equipped to handle large numbers of sources and feeds, along with full surround management, integral interfacing capabilities to numerous source formats including SDI, Dolby® D/E, AES, MADI and more. The integral audio router functionality means that systems may be much more closely integrated and controlled than before.

APPLICATION

Broadcast Production

Stress-busting workflows for the most challenging broadcasts

In addition to the standard functionality, the input channels provide several broadcast live production specific features. Dedicated controls for extensive snapshot filtering are available to deal with the most complex live productions. Dedicated buttons for talkback (e.g. to Direct Out, N-1 etc) and for user programmable functions provide more flexibility and ease during live operation. Dedicated Matrix busses can be configured which suits the fixed install application but can also offer a fast and easy method of handling complex headphone feeds in a broadcast environment. 16 dedicated Mute Groups are also available.

Simple outside source management

In the last few minutes before the studio goes on-air or the show starts, stress is at its highest and many things are happening at once. Problems with outside sources and reporters often induce a high stress factor; setting up the correct return feeds and talkback on-air needs to be as simple as possible. In some cases the n-1 feed may not be what the outside source wants to hear while waiting to go on-air. The Vista 1offers a dedicated switch per channel that automatically sends the outside source and alternative signal to the n-1 whilst the outside source is not on-air.

When the outside source is put out on-air (fader opened), the correct n-1 feed is automatically switched to the outside source without the user having to disable the switch manually. In addition, any number of outside sources are able to talk off line together in a conference mode (MPX), with the outside source automatically removed from the conference and sent the correct n-1 feed when put on-air.

On the spot playout

For ease of use, the Vista 1 contains an integrated jingle/spot player, which accepts a variety of audio formats from a USB memory device, which may be triggered from 8 dedicated buttons on the surface. DAW interfacing Studer Vista consoles interface with the major DAW systems available on the market. Many DAW functions can now be directly controlled from the console, where innovative operating concepts such as StripSetup and Ganging bring DAW integration to a new level and greatly enhance the production workflow. Editing is faster, customers are happier.

Simple configuration screens within the Vista 1 system allow the operator to select the DAW control interface and enable it. Then, you can mix and match DAW channels alongside Vista channels. Directly at the channel fader, tracks may be armed ready for record using console buttons. Additionally, the DAW gains features of the Vista consoles such as ganging. No additional hardware is required and connection is made through a simple Ethernet link rather than multiple MIDI cables typically found in other systems.





APPLICATION

Mixing for Worship

Simplifying production for worship events of any scale

Vista 1 Carbon is ideal for large House of Worship (HoW) venues. With a compact, easily accommodated format, the console has all the required processing power and features to manage Worship events with ease.

Workflow-enhancing features

The SpillZone lets the engineer better manage the huge amount of hundreds of processing channels by allowing to make an inverse interrogation of 'what's on my bus or group,' dramatically speeding workflow and reducing the chance of error.

The large numbers of performers involved in Worship events can often result in monitoring challenges. With Vista 1 setting up monitoring where large numbers of singers and band members need their own monitor mix is perfectly managed with Vista's new FollowSolo function, which brings the auxiliary contribution levels directly onto every single channel while FaderGlow shows the corresponding bus color. Channels can directly be assigned to the SOLO'd channel by pressing the specific Assign-Button in the Vistonics™ touch area.

Podium discussions on stage are managed and mixed by Studer's VistaMix, which automatically monitors each mic channel and adjusts gain and levels to ensure the clearest overall mix while preserving intelligibility.

CUE-based production

Since shows in HoW are often well-planned and structured, Vista 1's CUE automation is invaluable. This automated Snapshot run-down can be enhanced with Events like MUTE automation, Universal Audio Plugin snapshots, different StripSetups, and MIDI commands.

To aid in rehearsal and show build, cues containing a snapshot can now be created with a single button press, cues can be comprehensively inserted and re-numbered, and cues can be automatically recalled via a precisely timed event to give the engineer an extra pair of hands. Cues can also fire MIDI/MMC events, for example for SFX playback, where the MIDI ports can be muted for cue list navigation. Most importantly the enhanced cue list now provides a large display of the current cue, as well as an indication of whether a snapshot is masked or not made clearly visible in the cue list.

APPLICATION

Performing Arts

Streamline cue-based theatre production

Theatre sound designers and console operators make some of the highest demands when it comes to efficient workflow on the heart of their audio system. Nothing must go wrong, while everything needs to be changed quickly! To enhance workflow processes from offline programming, rehearsals through to daily performances, Studer has developed special software which makes Vista consoles the ideal choice for cue-based theatre productions. Sound designers now have a complete toolkit provided with the standard Vista Software which is available for the whole range of Studer Vista consoles. Together with the Vista's already extensive facilities which suit Theatre sound, such as high input/output capacity, the acclaimed Vistonics™ user interface, very compact footprint and outstanding sonic performance, the Studer Vista series of consoles is the perfect choice for world class theatres.

Enhanced Theatre Cue Lists

To aid in rehearsal and show build, cues containing a snapshot can now be created with a single button press, cues can be comprehensively inserted and re-numbered, and cues can be automatically recalled via a precisely timed event to give the engineer an extra pair of hands. Cues can also fire MIDI/MMC events, for example for SFX playback, where the MIDI ports can be muted for cue list navigation. Most importantly the enhanced cue list now provides a large display of the current cue, as well as an indication of whether a snapshot is masked or not made clearly visible in the cue list.

Character/Actor Library Event Handling

Characters in a production can be given any desired library entry (for example, a special EQ setting) on a cue by cue basis. This allows easy temporary or permanent adjustment of these library settings, as well as a very straightforward way to replace the settings of an actor with replacement-actor or understudy settings. There are two ways of applying library events to characters, firstly by using the two new Vistonics™ controls on the actual channel, and secondly the large overview window where a list of all cues and all characters is provided. The Library window itself enables selection of the different actors as well as very easy creation of understudy actors.



Technical Specifications

HQ Mic / Line Input Module	Conditions / Details	Value
General Conditions:	Gain Setting 15 dBu 0 dBFS unless otherwise noted	
Input Impedance	(electronically balanced)	3.6 kΩ
Gain	for 0 dBFS (adjustable in steps of 1 dB)	–11 to +75 dB
Maximum Input Level	–11 dB gain, Rsource = 600 Ω	+26 dBu
	0 dB gain, Rsource = 150 Ω	+15 dBu
Frequency Response	20 Hz to 20 kHz, 40 dB gain	+0 / –0.9 dB
	30 Hz to 20 kHz, 40 dB gain	+0 / –0.6 dB
THD + Noise	1 kHz, –1 dBFS	< –87 dB
	1 kHz, –9 dBFS (nominal level)	< –94 dB
	20 Hz to 20 kHz, –30 dBFS	< –102 dBFS
Equivalent Input Noise / Noise Figure (NF)	Ri = 200 Ω, gain = 60 dB	–127.6 dBu / NF = 2
Crosstalk	1 kHz	< –100 dB
Input Delay		12 samples 250 µs @ 48 kHz
Common Mode Rejection Ratio (CMRR)	30 Hz to 20 kHz, all gain settings	> 46 dB
	1 kHz, –11 dB to +26 dB gain	60 dB typ.

Line Output Module	Conditions / Details	Value
Output Impedance	(electronically balanced)	50 Ω
Frequency Response	20 Hz to 20 kHz	+0 dB / –0.3 dB
THD + Noise	–1 dBFS, 1 kHz	–90 dB
	—30 dBFS, 20 Hz to 20 kHz	–103 dB
Crosstalk	1 kHz	–115 dB
Output Level	RL = 600 Ω; globally adjustable with hardware switches (steps: +24, +22, +20, +18, +15, +12, +9, +6 dBu)	+6 to +24 dBm for 0 dBFS
Output Delay		10.4 samples 217 µs @ 48 kHz

AES / EBU Input / Output Module	Conditions / Details	Value
Input/Output Impedance		110 Ω
Input Sensitivity		min. 0.2 VRMS
Output Level	into 110 Ω	4.0 VRMS
THD + Noise		max. –115 dB
SRC Range		22-108 kHz

Power Supply	Conditions / Details	Value
Primary Input Voltage Range	Power supply auto-ranging, with power factor correction (PFC); EN/UL approved	100 to 240 V AC ± 10% 50 to 60 Hz
Power Consumption, Studer Vista 1	22-fader version, incl. GC screen	190 W typ., 250 W peak
	32-fader version, incl. GC screen	220 W typ., 300 W peak

Ambient Conditions	Details	Value
Operating Temperature Range		–5 to 45 °C / 23 to 113 °F
Relative Humidity	non-condensing	95%

Weights (approx.)	Details	Value
Studer Vista 1	22-fader version, incl. GC screen	55 kg / 121 lbs
	32-fader version, incl. GC screen	59 kg / 130 lbs

DSP configurations

Correct at time of going to press. Subject to change without notice.

1. MONO

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	Vista-Mix
Qty	105	-	-	8	-	-	-	2	-	16	-	10	-	-	2 VMX-16
Processing Blocks	ALL	-	-	GEQ DYN	-	-	-	DYN	-	GEQ	-	-	-	-	ALL

2. STEREO

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	Vista-Mix
Qty	60	24	-	8	-	-	-	4	-	8	4	10	-	8	2 VMX-12
Processing Blocks	ALL	ALL	-	ALL	-	-	-	DYN	-	GEQ	-	-	-	-	ALL

3. SURROUND

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	Vista-Mix
Qty	32	8	6	2	-	4	-	-	2	6	4	10	6	6	2 VMX-12
Processing Blocks	ALL	ALL	ALL	ALL	-	ALL	-	-	DYN	PAR. EQ	-	-	-	-	ALL

4. FOH

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	Vista-Mix
Qty	145	10	-	-	-	-	4	6	-	10	-	3	-	-	2 VMX-20
Processing Blocks	EQ DEL INS	EQ DEL INS	-	-	-	-	ALL	ALL	-	GEQ DEL	-	-	-	-	ALL

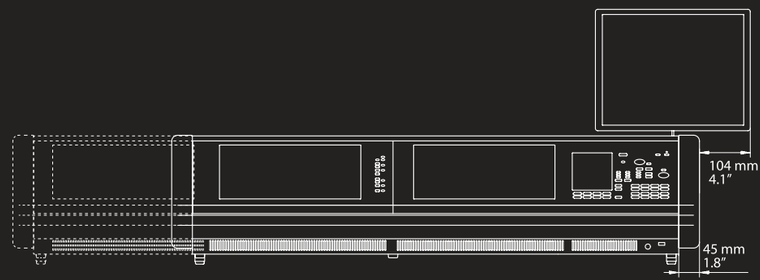
5. MONITOR

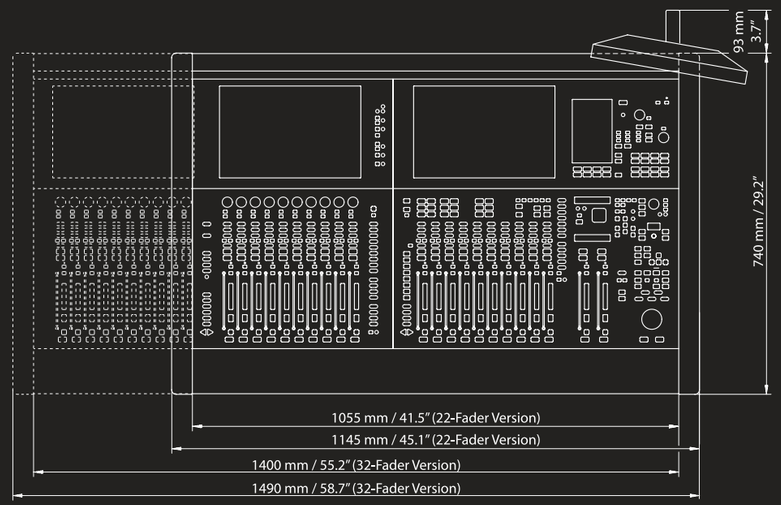
Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	Vista-Mix
Qty	85	10	-	-	-	-	10	-	-	15	15	30	-	-	
Processing Blocks	ALL	ALL	-	-	-	-	INS	-	-	GEQ	GEQ	-	-	-	ALL

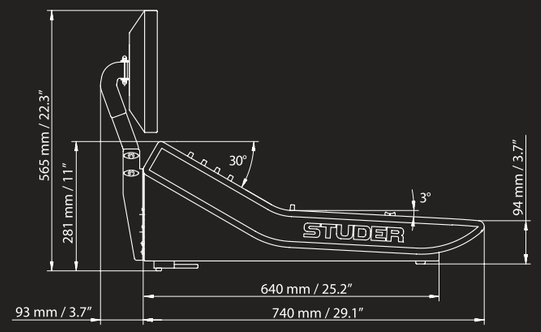
Monitoring and TB I/O

The requirements for monitoring and talkback inputs/outputs are different, depending on which configuration is used. Therefore these inputs and outputs are automatically allocated to the rear-panel connectors in a reasonable way when selecting a configuration.

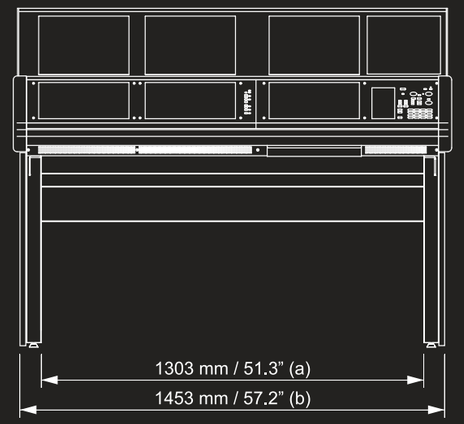
Dimensions

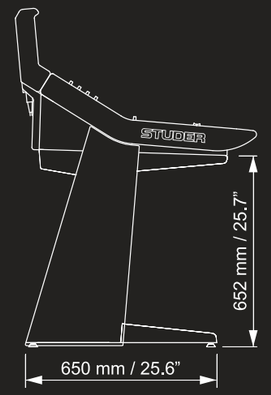






Optional floorstand dimensions





Frame Sizes



Vista 1 Carbon 32 Fader Console



Vista 1 Carbon 22 Fader Console

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