

Quantum ES4

Website: <https://www.presonus.com/pages/quantum-es>

Quantum ES

Introducing the ES tabletop series.

A giant leap forward into the next generation of PreSonus audio interfaces and the culmination of nearly 30 years of pro audio equipment design, Quantum ES 2 and Quantum ES 4 are the ultimate tools for self-produced recording and studio-quality music production.

The new face of desktop recording.

Ergonomic tabletop chassis packed with pristine MAX-HD preamps and class-leading converters for self-made audio creators.

Low-latency. High performance.

Quantum's custom drivers provide exceptionally low signal lag when recording, while high-performance converters and powerful headphone outs complete the front end — ensuring flexible audio monitoring and superior sound throughout your entire signal chain.

Flow-friendly front panel.

Plug into instrument inputs co-developed by Fender engineers and specifically designed for guitar and bass, then start studio-quality recordings fast by setting perfect gain levels on your mics and instruments with easy-to-use Auto Gain.

Quantum ES4

All the connections you need—highlighted by two or four newly redesigned MAX-HD mic preamp inputs delivering transparent, low-noise, digitally-controlled analog. With +75 dB of gain range, MAX-HD mic preamps are ideally suited for today's most popular mics.

Pro DAW, control app, and more included.

Studio One Pro

Access to Studio One Pro recording software included with all Quantum interfaces.

Quantum interfaces include completely free, 6-month (Quantum ES) or 12-month (Quantum HD) memberships to Studio One Pro+, a complete music production ecosystem including access to Studio One Pro recording software, collaboration tools, sample and loop libraries, add-ons, and exclusive learning content. No credit card required. And with Quantum HD interfaces, you'll also get a Studio One Pro Perpetual License—yours to keep after your 12-month membership ends.

Already a Studio One Pro+ member? You can stack your free membership period onto your current plan when you register your Quantum ES or HD interface.

Universal Control

One app. For every essential hardware function.

Custom Audio Driver & Firmware Management | Software Control | Monitor Mixing | Audio Loopback | Available on Mobile, Desktop, & Tablet

Universal Control brings Quantum ES's entire front panel of features into one digital application, facilitating easy remote hardware control from your desktop, tablet, or mobile phone. Monitor mixing, loopback audio, and MAX-HD preamp functions like gain, phantom power, and more can all be controlled right from the app.

MyPreSonus

Web-based User Portal & Mobile App

Product Registration | Manuals | Software Downloads | Studio One+ | Account Management | Learning Content | Workspaces

MyPreSonus is your one-stop shop for registering your hardware and software, downloading user guides, manuals and documentation, contacting technical support, and accessing all your available software downloads. On a Studio One+ plan? MyPreSonus is also home to all cloud-based Studio One+ tools and features like Workspaces, 100GB cloud storage, exclusive livestreams, learning content, and more.

Specifications:

Quantum ES 4

4 x 4, 24-bit 192 kHz Recording Audio Interface

4 MAX-HD Mic Preamps

Transparent, low-noise, and digitally-controlled analog.

+75dB MAX-HD Mic Preamp Gain Range

2 Instrument Inputs

Co-developed by Fender engineers

2 Headphone Outputs

1x Front-Panel ¼-inch Female, TRS Stereo

Auto Gain

Set the perfect gain level for microphones and instruments.

High-performance converters

+120dB Digital Audio Dynamic Range (DAC)

Studio One +6 Months

Free access to Studio One Pro, add-ons, Workspaces, sound libraries, and learning content.

Universal Control

Full control and metering from your desktop, tablet, or mobile device.

Loopback Audio

Quickly create monitor and streaming mixes.

USB-C Bus-Powered

4 Line Outputs

4x Main Outs ¼-inch Female, TRS

Speaker Switching

Check your mixes on two sets of studio monitors.

Website: <https://www.presonus.com/pages/studio-one-pro>

Studio One Pro

Studio One Pro 7 One DAW for All.

Your all-in-one production powerhouse with everything you need to record, produce, mix, master, and perform.

Over **30 new features and improvements**, like fast and intuitive editing and mixing, integrated pattern workflows, time-aligning drums, award-winning notation, and rock-solid live performance.

Access Splice's extensive sample library directly in your DAW and **Search with Sound** to enjoy thousands of **free, hand-picked Splice samples** perfectly synced with your project's beat, key, and tempo.

Dive into **AI-Powered Stem Separation**, experiment with the **integrated Launcher**, and explore new sonic dimensions with **Deep Flight One**.

Effortlessly build beats and sculpt your sound with **perfectly integrated loop-based production tools**.

Welcome to your new workflow.

Pro 7 delivers new tools for producers, beat-makers, and musicians to create their best work.

See all new features:

The Launcher:

Quickly craft new arrangements with ease using a dynamic grid of audio or MIDI loops and patterns that can be triggered and edited in real time. Now, creators can record or import audio and MIDI directly into cells, edit the contents, create

scenes and playlists, and capture Launcher live performances directly on the timeline.

Splice Integration:

Access Splice's extensive sample library directly in the DAW, and enjoy thousands of free, hand-picked Splice samples perfectly synced with your song's beat, key, and tempo using Search with Sound.

AI-Powered Stem Separation:

One of the most in-demand features, AI-powered Stem Separation allows creators to **un-mix audio into four separate tracks** which ultimately isolates stems from existing audio tracks. The separated audio events can be bounced again into a single file allowing for quick creation of instrumentals.

Deep Flight One:

A popular sound set prized for its soundscapes, drones, pads, percussive and lead sounds is **now available as a standalone virtual instrument** in Studio One Pro 7, offering three layers, integrated effects, and all-new presets. Experience evolving soundscapes, atmospheric textures, and cutting-edge presets perfectly suited for ambient exploration.

Global Transpose:

Change the key of an entire song with just one click and transpose audio and notes events in real time. This new feature updates the song key signature, chords, and notes all in one.

Everything you need to record, produce, mix, master, and perform.

Recording:

- **Unlimited Audio & Instrument Tracks:** Audio is recorded to Audio Tracks, while musical performance data is recorded to Instrument Tracks.
- **7 Virtual Instruments Included:** Ignite your imagination with 7 included virtual instruments: Deep Flight One, Lead Architect, Impact, Presence, Sample One, Mojito, and Mai Tai.
- **Auto Punch:** Automatically begin and end recording at specified points and the newly recorded audio is automatically crossfaded at its edges with the existing Audio Event so the transition between the old and new audio is not audible.
- **Smart Templates to Start Recording Fast:** Quick-start essential workflows for recording, mixing, mastering, beat production, or simply playing a virtual instrument – all with a single click. Load a Smart Template with Pattern editing already open and only the features you need visible, or Open a Smart Template with your favorite channel strips loaded and a drop zone to quickly load stems.
- **Note FX:** A powerful tool for working with MIDI. Create arpeggiator patterns and complex chords by transforming a set of input notes on an instrument track into a new set of notes that the instrument plays.
- **Retrospective Record/Pre-Record Audio Input:** Save the audio you create before recording begins. Capture every note you play on your MIDI keyboard or controller - even without hitting Record - and never miss another great song idea again.
- **Print Effects While Recording:** Place a compressor, EQ, or other effect on a vocal Input Channel in order to save time and computer resources later when mixing.
- **Loop Recording on Audio Tracks:** Loop a specific section while recording in order to capture multiple performances or takes of the same musical passage. If Record Takes to Layers is engaged in the Record panel, the takes are automatically placed in separate layers which are expanded when recording is stopped.
- **64-Bit WAV Recording:** Experience the highest-resolution audio production and mastering, thanks to our support for 64-bit floating-point WAV format - the recommended recording format for audio interfaces with 32-bit

resolution. With this format option, the maximum recording and processing precision now reaches 64-bit/786 kHz.

- **AI Powered Stem Separation:** Seamlessly separate samples into Drums, Bass, Vocals, and Other elements for easy instrumentals or swift and simple sample chops.
- **Lyrics Track:** Add Lyrics to your audio or MIDI production and use words to navigate your session.

Editing:

- **Integrated Launcher:** Audition new arrangements, experiment with loops and patterns, and effortlessly drag and drop them into your Timeline when they're done.
- **Interactive Scale and Loop Tools:** All scale-related features are in one convenient spot: Work with preset scales, or create your own; use the time-saving Loop Tool as an intuitive alternative to duplicating events; or use the Event Loop to quickly create looped copies.
- **Harmonic Editing:** Only Studio One Pro features harmonic editing for both audio and MIDI.
- **Arranger Track:** Reorder, duplicate, and remove entire Song sections across all of your Tracks at the same time. You can experiment with different arrangements, swap verses, lengthen or shorten choruses, and structure a Song exactly the way you want.
- **Pitch correction with advanced Melodyne integration:** Time- and pitch-correcting audio made quick and easy with Celemony Melodyne 5 Essential included.
- **Video Track Video Editing:** Particularly useful for scoring motion pictures, enjoy basic video editing, Audio sub-track and Channel, extended video export options, apply video frame rate to song, Spot option for Events, Timecode overlay, and Video file support for Drop Zones.
- **Time Stretching:** Tempo changes cause Audio Events on the selected Track to be dynamically stretched so that the Events' start and end times stay in sync with their Bars (bars and beats) positions. The length and internal

timing of the Event is affected in the stretching process but the pitch of the audio remains unaffected.

- **Comping:** Record take after take without ever stepping out of your groove, and when you've built up enough layers, use the Range Tool to promote the best parts.
- **Pattern Editor:** Effortlessly create drums, basslines, and synth leads using variable sequence lengths, unlimited variations, and more.
- **Scratch Pads:** Test out remix ideas or capture a synth riff without affecting your arrangement or creating a new session.
- **Phase-Coherent Multitrack Quantization/Groove Extraction:** Easily detect transients, tap to transients, and quantize recorded audio to match your song.

Mixing:

- **The Dolby Atmos Renderer:** Studio One Pro 7 provides essential mixing tools for mixing, monitoring, and exporting in Dolby Atmos. All audio and plan information routed to the Main Output of the Console is processed by the Dolby Atmos Renderer before being passed to your speakers and headphones.
- **Advanced tempo detection:** Find the tempo of a loop or performance and match the song tempo with a single click.
- **FX Chains:** Store presets of an entire chain of effects plug-ins as an FX Chain, allowing quick recall of complex effects setups on any Track.
- **Fader Flip:** One-click, intuitive fader control of all Channel Sends to effects or Cue mixes.
- **Groups/Folders:** Group multiple tracks together so that any edits done to an Event on one Track in the Group are automatically done to all Events for all Tracks in the Group, and organize existing tracks in Folders.

Mastering:

- **Made for Mastering — The Project Page:** Studio One Pro is the only DAW with an integrated mastering suite—called the Project Page—giving you

everything you need for professional Mastering, including a Spectral Analyzer, Goniometer, Level Meter, Digital Release Maker, and more. And only Studio One Pro links Songs with Mastering Projects, so you can update mixes as needed without losing Fades, Clip Gain edits, or any other mastering work.

- **Target loudness options:** Choose from several Target Loudness options to automatically adjust your digital releases for Apple Music, YouTube, Spotify, and many more.
- **Ultra-high sample rate support:** Studio One Pro 7 supports sample rates up to 768 kHz for recording and playback. Compatible interface required.
- **Easy upload and distribution:** Upload songs and albums directly to SoundCloud and TuneCore for distribution on social and streaming platforms.
- **Audio Batch Converter Included:** The powerful Audio Batch Converter handles automated file format conversion, audio repair, volume adjustments, and even plug-in processing for multiple files simultaneously. Audio files can be sent directly to the Audio Batch Converter from the Browser.

Live Performance:

- **The (Live) Show Page:** This powerful, fully-integrated live performance environment combines Setlist management, backing track playback, virtual and real instrument Players, and Patch management inside a single window—making it possible to run shows simply and reliably from a single computer.
- **Integrated Launcher:** Seamlessly create custom live arrangements of your songs. Always in sync and endlessly mixable. Experiment with loops and patterns, and effortlessly drag and drop them into new playlists and scenes to keep the show going.
- **Performance View. Focused Control. :** Navigate Setlists, control loops, playback backing tracks, and manage virtual and real instruments all in one Show window or from Studio One Remote.

- **Perform with Setlists.** : Design a complete live performance using songs you create in Studio One Pro. Easily incorporate live instruments, pre-recorded backing tracks, and virtual instruments.

A Composer's DAW, too.

Studio One Pro includes advanced notation features from our award-winning Notion® notation software to deliver an unmatched combination of traditional scoring and modern sequencing.

Add words to music: Assign whole words or syllables to music or directly to notes with Lyrics Track.

Multiple Note Views: Switch between Score View, Drum View, and Piano View—or look at the same note data in different Views all at the same time.

Traditional, drum, and tablature notation. : Edit your music in three notation formats and print Scores directly from Studio One.

Musical Symbol Support: Trigger Sound Variations by simply placing their musical symbols onto the Score View. Sound Variations make it easy to manage and control articulations in complex virtual instruments and orchestral libraries.

45 Native Effects Included.

Supercharge your mixing and get inspired for your productions with Studio One Pro 7's core library of included effects plug-ins – all entirely updated to support immersive audio mixing and Dolby Atmos.

Ampire: Feature five State-Space models of classic guitar and bass amps with unparalleled realism. 13 stompboxes and 16 classic cabinets are also included to build the ultimate guitar rig.

OpenAIR2: With its new look and feel and a brand-new library of true 7.1.4 impulse responses (HDIRs), OpenAIR2 convolution reverb creates authentically immersive 3D spaces.

Multi-Tap Surround Delay: All-new eight-tap delay plug-in with individual surround panners. Delay taps can be synchronized to the song tempo for exciting dimensional and rhythmic effects.

ProEQ3: Even-band parametric equalizer for precise, granular sound control. Phase-linear low-cut, variable high-cut, low-frequency, and high-frequency multimode filters included, plus solo and dynamics on every band.

Analog Delay: Create deteriorating echoes; modulate delay and pitch; and create retro flanging and chorus effects with this classic analog bucket-brigade delay to add vintage character to your sound!

Beat Delay: Create pulsating patterns and complex polyrhythms with this a tempo-synced delay plug-in with optional cross-delay and filtered feedback.

Binaural Pan: This panning effect employs phase-manipulation to alter the perceived width of stereo signals, from mono to double the normal width. Check for mono compatibility using the Mono switch.

Bitcrusher: Perfect for audio abuse, Bitcrusher combines overdrive, bit-depth reduction, downsampling, and clipping to create a wide variety of tonal options to distort and warp your sound.

Channel Strip: Four powerful processors in one. You get a low-cut filter, compressor, expander, and three-band parametric EQ in single plug-in instance.

Fat Channel XT: The ultimate channel strip for any input or bus, with a variable high-pass filter, gate/expander, compressor, EQ, and limiter. Get classic StudioLive compressor and EQ modules plus State-Space Modeled compressors and EQs re-created from vintage gear.

Chorder: This intelligent chord generator lets you trigger chords by playing single notes. You can set chord intervals manually or capture chord shapes played on the keyboard.

Chorus: Thicken guitar, vocal, or synth parts with lush, modulating textures. Choose one-, two-, or three-voice chorus processing and set an optional LFO delay time modulation, as well as a Stereo Width control.

Compressor: This full-featured, RMS-based compressor features easy to use sidechain options utilizing an external signal to control the compressor behavior.

Console Shaper: Utilizing state-of-the-art State Space Modeling technology, this Mix Engine effect processes every channel on the bus insert independently, to capture the character of legendary analog consoles.

De-Esser: This full-featured dynamics processor used to selectively reduce the sibilance (S-sounds) of recordings by selectively compressing only the problematic frequencies.

Easy Sidechain Routing: Every native dynamics plug-in has easy sidechain routing to get the sound you want without routing headaches. Sidechain routing can be controlled both to and from a plug-in with one click.

Expander: This fully variable downward or upward expander with range control and a sidechain reduces the levels of unwanted noise or bleed from other sources in the desired signal or restores dynamic range to a compressed signal.

Flanger: Perfect for use on guitar tracks to create interesting shifts in timbre and tone, Flanger creates spatial depths, swirls, timbral shifts, and percussive effects.

Gate: This noise-gate processor features sidechain capability with a sidechain filter that includes variable low cut and high cut. Use Gate to eliminate unwanted noise or low levels—or sidechain it to your favorite virtual instrument and let Gate create a new rhythm for you.

Groove Delay: Create everything from rhythmic echoes to out-of-control repeating pitch shifts with Groove Delay. This four-tap, tempo-synced delay offers variable filters and an independent beat grid.

Input Filter: Input Filter lets you filter out unwanted notes before they reach your instrument or MIDI device. Specify a range of allowed note pitches and velocities; to filter out any note outside either range.

Level Meter: Throw Level Meter on your main bus, and you'll always have an eye on your mix. Choose from Peak/RMS, K-20, K-14, and K-12 modes; set RMS and Hold Length; engage to display phase correlation; even display True Peak metering.

Limiter2: This brickwall limiting processor features optional K-System Metering, three attack speeds, and two different modes to control distortion.

Mixtool: Mixtool provides common track utilities to correct for phase cancellation and correlation issues as well as adding volume trim options anywhere in the signal chain and independent from the main channel fader.

MixVerb®: A simple and efficient reverb designed to be used as an insert on mono or stereo tracks. Use it to add just the right amount of atmosphere to any signal.

Multiband Dynamics: This compressor/expander features five completely independent bands. Use it to reduce unwanted signals or banded noise and to emphasize or limit certain instruments.

Phase Meter: This utility plug-in makes it easy to check stereo playback issues and mono compatibility using a large goniometer and a phase correlation meter.

Phaser: The unmistakable rising and falling effect of a phaser may have been popularized by guitarists of the 1970s but it sounds good on nearly anything: synths, drum overheads, and even vocals.

Pipeline XT: This Studio One exclusive makes using analog processors as easy as adding a plug-in. Pipeline XT manages the signal flow to and from the external processor and can measure and compensate for latency automatically.

Redlight Dist™: Run your audio through up to three stages of tubes, transistor, op-amps, and fuzz to add just a little noise or pure distorted delight. An internal filter provides even more control over the distortion color, from rich and fuzzy to ear-piercing noise.

Arpeggiator: Create repeating patterns of notes that travel upward in pitch, downward, up-and-down, down-and-up, or in a randomized pattern.

Autofilter: Create complex, tempo-synced, rhythmic filter patterns and lush filter sweeps. The State Space Modeled Drive stage lets you add natural analog saturation for vintage character.

Pedalboard: Use Ampire's collection of 13 stompboxes without the amps, and easily drag and drop stompbox settings between Ampire and Pedalboard.

All Virtual Instruments Included.

Ignite your imagination with virtual instruments and hundreds of accompanying audio samples and loops. You can also combine multiple virtual instruments to design your own unique sound.

Mojito: From buzzing bass lines to funky leads, this monophonic, subtractive synth with built-in effects delivers a wide range of tones.

Deep Flight One: A popular sound set prized for its soundscapes, drones, pads, percussive and lead sounds is now available as a standalone instrument in Studio One Pro 7, offering three layers, integrated effects, and all-new presets.

Impact: Create beats faster than ever with our comprehensive rhythm production environment.

Lead Architect: Lead Architect is now included with all Studio One Pro 7 perpetual licenses. This virtual instrument combines post-processed synthesis and sampling, integrated audio and effects, and an intuitive new user interface to generate powerful leads and sizzling solo sounds for hybrid melodic sequencing.

Mai Tai: This Polyphonic Analog Modeling Synthesizer produces sounds that can change character, with drastic morphing changes and unique timbres.

Presence: From real-world to really wild, Presence is loaded with deeply-sampled instruments.

Sample One: Build your own sampled instrument with Sample One's intuitive interface.

Creator Spotlights.

See Studio One Pro in action with talented artists, producers, and engineers using the DAW in unique ways to record, produce, mix, master, and perform.

Website: [ES 4 and ES 2: How to properly power your bus-powered Quantum interface – Knowledge Base | PreSonus](#)

PreSonus

ES 4: How to properly power your bus-powered Quantum interface

For Reference purposes, the Quantum ES4 user manual (page 8) states:

Auxiliary Power Connector (USB-C) – When the device you are connected to does not provide enough power via USB-C, auxiliary power is required using an additional power cable (not included).

For the ES 4, a USB-C to USB-C cable and corresponding USB-C, 5VDC 2.6A 9W wall plug / external battery is required for auxiliary power.

USB-A to USB-C cables or adapters will not provide adequate power for either interface.

Bus Power

To power your Quantum ES, it is recommended to use the supplied USB C-to-C cable. With this cable, connect it from a USB-C port on your host machine to the USB port on your Quantum ES.

These USB C-to-C cables are rated to deliver the power necessary to the Quantum ES series from USB-C ports. USB A-to-C cables are not able to deliver the power necessary for your interface.

If your host machine does not have a USB-C port, you can plug a USB A-to-C cable into the USB port on your Quantum ES, but a USB C-to-C cable must be plugged into the Aux port of the Quantum ES.

This USB C-to-C cable must then be connected to an alternate power source such as a USB-C power adapter or a battery power bank. These alternate power

sources must also have USB-C ports and must be rated to deliver 3.0+ amps and at least 15W or more of power.

Aux Power Adapter

Also referred to as: USB-C Wall Charger, Power Brick.

Pictured below are examples of USB power chargers that can be obtained almost anywhere. These were purchased at Five Below here in Baton Rouge. You can find similar power adapters at retail stores and online worldwide. As these may differ by brand depending on which country you may live in, just be sure to obtain a power adapter providing 13W or more of power over the USB-C connector will be sufficient.

If you're looking for a commercial brand name for us to recommend, we recommend the Anker 511 Charger which provides up to 30W of power or the Anchor 312 Charger which provides up to 25W of power.

More power will not gain you a better experience, the Quantum ES will only draw what it needs from the adapter, see page 8 in the manual.

Note the power is 5VDC @ 3.1A ~ 15.5W

(Voltage multiplied by Current gives you power rating in Watts)

Make sure to only use USB-C to USB-C Cables with these adapters, using a USB-A to USB-C cable will not work, see the chart below. The USB-A port in the picture has been crossed out to denote this behavior.

USB Power Adapters typically do not come with the USB-C cable already attached. Some computer power supplies like those for the Google ChromeBook (45W) do come with cables attached, and yes that works for Quantum ES4.

The longest cable you can attach according to the USB standard for USB-C cables is 4 meters. We recommend shorter cables for best experience. Not all USB-C cables are the same and quality differs based on which cable you get.

Power Banks

The same power requirements for Power Adapters applies to Power Banks (or Battery Packs). Power Banks that we have tested include the Anker 533 model. When this model from this company is no longer available, another one will certainly take its place, check to make sure you're getting a power bank providing more than 13W of power over the USB-C connector.

NOTE:

Some Power Banks claiming they are USB-C compatible providing only USB-A Ports and come with A-to-C cables, the verbiage on the box will say something like "USB-C Charging Cable Included" which will not work for the Quantum, the Battery Pack must have a USB-C port to connect to.

Refer to the grid below for a detailed breakdown of possible power scenarios:

Power Source	USB Port on Quantum ES	Aux Port on Quantum ES	Result
Computer	USB-C to USB-A	Empty	Insufficient Power
Computer	USB-C to USB-A	USB-C to USB-A	Insufficient Power
Computer	USB-C to USB-A	USB-C to USB-C	Sufficient Power
Computer	USB-C to USB-C	Empty	Sufficient Power
Power Adapter	Empty	USB-C to USB-C	Sufficient Power
Power Adapter	Empty	USB-C to USB-A	Insufficient Power
Power Adapter	USB-C to USB-A	USB-C to USB-A	Insufficient Power
