



# NUENDO 3

THE FUTURE OF AUDIO PRODUCTION.

Nuendo is one of the most flexible and technologically advanced post-production, recording and Surround systems available today. Extraordinary sound quality and a host of unrivalled features, paired with an open architecture engineered to accommodate the audio industry's prevailing software and hardware standards, make Nuendo the system of choice for discerning professional users. Its scalability gives you the computing power you need to rise to the challenge of handling complex projects entailing hundreds of tracks, innumerable effects and even the most intricate mixer configurations – all at a remarkably affordable price. Its intuitive handling and extensive customization options will both simplify and accelerate your workflow, and Projects can be ported readily to and from all standard audio and video cutting systems. The latest Nuendo 3.2 contains a multitude of state-of-the-art features, including AAF support, optimized media management, Pull Up/Down and Warp to Picture, as well as numerous in-demand recording and Surround production functions. There's even a full-fledged Control Room section unlike anything found on any other software mixer. Record, edit and mix with up to 192-kHz and 24-bit processing power, taking advantage of the pristine 32-bit floating point internal resolution of the audio engine. Nuendo offers smooth, seamless integration into LAN and WAN environments, and you are free to select the audio hardware best suited to your needs, with the ability to use up to 192 physical inputs/outputs. Nuendo is optimized for cross-platform multiprocessor operation under Mac OS X and Windows XP.



# APPLICATION SCENARIOS FOR NUENDO<sub>3</sub>

Nuendo 3 offers a tremendous range of functions and an arsenal of powerful tools for almost every conceivable professional audio/media production scenario. With Nuendo at your fingertips, you're ready to master every post-production, live recording and studio recording/mixing challenge, as an ever-increasing number of professionals all over the world will happily attest.



## POST PRODUCTION

Producing top-class audio for film, TV, broadcast and games presents its own unique challenges, ones which Nuendo has been engineered not only to meet, but to rise beyond. Because the Nuendo production environment provides not only the raw features required for audio post, but actively supports you by offering a highly optimized workflow that makes audio post work with Nuendo both peerlessly efficient and seductively fast.

Nuendo offers streamlined processes for foley recording, lip-synched dialog dubbing, location sound editing, creative sound design and much, much more. And the system also gives you reassuring reliability alongside peerless compatibility to other audio and video systems, should you require data exchange with other video or audio software.

Nuendo offers a next-generation, pristine quality mixing engine, which readily interfaces with large film consoles via PCI MADI cards, delivering over a hundred physical audio connections which can be fed to well over two hundred audio tracks. But the internal Nuendo console also offers unsurpassed routing flexibility, an extensive automation feature set and the unique control room functionality – forming a real alternative to outboard mixing desks for small to medium scale productions. And should tactile input be required, Nuendo offers comprehensive support for third party hardware controllers, ranging through the leading Yamaha digital consoles, WK Audio's ID Controller and the renowned Euphonix controller systems. All this and many more peerless functions make Nuendo the system of choice for TV and film studios, postproduction houses and independent editors all over the world.





## LIVE RECORDING

Superlative sound quality, utmost data security, flexible remote control options and many more powerful features – all this makes Nuendo the ideal live recording system. The Nuendo Engine was developed specifically to handle the singular challenges of live recording. Be it an hour's worth of improv in a jazz club or a full-blown three-day rock festival, Nuendo gets the job done intuitively, reliably and in excellent sound quality. World-class events such as Eric Clapton's Crossroads Festival and Joe Cocker's 2005 tour were recorded with Nuendo.

Every performance is unique and can never be repeated, particularly if it's a large-scale live event. This is why the engineers who developed Nuendo put a premium on stability and data security. And Nuendo affords you the peace of mind that comes with knowing that file size constraints will not impede your recording efforts. Nuendo leverages the WAV64 format to accommodate all the factors that typically push other systems over the 2 GB size limit – high sampling rates, high bit rates, multichannel recordings and long recording times. Nuendo lets you work with confidence and convenience, and lets you prepare for mixing while you're recording. And if tracks are destined for further processing on a system other than Nuendo, it provides all the transfer formats required to hand over files to other digital audio workstations.

## STUDIO RECORDING AND MIXING

An exceedingly powerful production environment, Nuendo provides all the functions required for professional recording, editing and mixing. Inspired signal path mapping, the excellent functionality of the Nuendo Mixer, the phenomenal sound of the Audio Engine, efficient editing tools, extremely flexible automation options – all this adds up to make Nuendo the next-generation nerve center for every professional studio.

You can use any ASIO/Core Audio-compatible hardware that suits your individual requirements and budget, confident that Nuendo supports all analog and digital formats, including AES, ADAT, TDIF, MADI. Choose from amongst the many pro audio equipment vendors – Apogee, Digital Audio Denmark, Prism Sound, DCS, Euphonix or RME, to mention just a few – who offer high-quality converters that harmonize perfectly with Nuendo.

Seamless integration with analog and digital consoles is assured, courtesy of over a hundred simultaneously employable inputs and outputs. And with sampling rates ranging up to 192 kHz and 24-bit resolution, alongside the Nuendo Audio Engine's internal 32-bit floating point performance, exceptional recording quality is also assured. All this power is harnessed via a mature, configurable graphic user interface. The studio functionality is now further enhanced with the Control Room section, offering separate output busses for headphones, control room, 4 studios and main mix. There's also four freely configurable speaker setups including solo and fold-back functionality, and up to six switchable external inputs for DAT, CD, DVD, etc.



[WWW.STEINBERG.NET](http://WWW.STEINBERG.NET)

# NUENDO 3 FEATURE LIST

## General

- Support of ASIO, MME, DirectX, mLAN and CoreAudio
- Optimized multithreading: unlimited amount of processors supported, processor load is dynamically spread over all processors
- Support of Intel Hyperthreading Technology
- Timeline Formats: Timecode, Feet:Frames (16mm, 35mm), Seconds, Samples, Bars and Beats
- Multiple timelines showing various formats at once
- 1 user definable frame rate
- Complete user configurable software environment: unused menu entries can be hidden, key commands can be disabled, preferences, key commands and the menu structure can be stored and recalled.
- Configurable Track Controls and Toolbars
- User configurable project templates store windows settings, layouts, track heights/sizes, project settings, channel settings, plug-ins and their parameters as well as folders and files in the pool
- Workspaces for managing window sets or entire desktops
- 2nd track list for non scrolling tracks
- Color coding for all tracks and mixer channels, including a new color tool, expanded color palette, view/hide button and more
- Device Maps and Device Panels provide access to external MIDI equipment (synthesizers, signal processors, digital mixers, etc.) as well as access to internal plug-in parameters
- User Panel for Track Inspector allows access to sections of Device Panels or specially designed user panels
- User-definable channel strip in VST mixer as part of Device Panel integration
- Integration of Yamaha Studio Manager 2 (Studio Connections open standard) to access compatible hardware editors, edit and manage devices, and save/recall settings with Nuendo projects (Total Recall)

## Import Formats

- Audio: import of AIFF, AIFC, Wave, Broadcast Wave, Wave 64, MPEG (MP2, MP3), Ogg Vorbis, WMA (PC only), WMA Pro (PC only), WMV (PC only), WMV Pro (PC only), REX I & II files, SD2, up to 384 kHz depending on the file format
- Dolby Digital AC-3 import with optional Nuendo Dolby Digital Encoder
- AAF
- AES31
- Cubase SX project
- Open TL 3.0
- OMF 1 & 2, embedded audio or file references
- X-Send support enabling Pinnacle Liquid applications to directly transfer AV projects into Nuendo
- Ability to convert interleaved multichannel file into multiple mono files on import
- CD audio grabbing (selection inside track possible)
- MIDI File import
- MPEG, AVI, DV AVI, WMV (PC only), WMV Pro (PC only) and QT movies video import
- Extract audio from video file
- Nuendo track archive including media files, mixer channel settings & automation

## Export Formats

- Mixdown to AIFF, Broadcast Wave, Wave, Wave 64, MP3, RealAudio G2, Windows Media Audio (PC), Windows Media Audio Pro (PC), SD2 (Mac), Ogg Vorbis, Dolby Digital AC-3 (optional encoder), DTS (optional encoder)
- Supported export sampling frequencies up to 384 kHz (Broadcast Wave, Wave, AIFF), up to 32 Bit float.
- Audio mixdown to a mono or multi-channel file up to 12 channels
- AAF
- AES31
- Open TL 3.0
- OMF 1 & 2, embedded audio or file references. Complete OMF revision in Nuendo 2.0
- MIDI File
- Track sheet printing, smart track sheet functions for better overview
- Real-time mixdown option
- Nuendo track archive including media files, mixer channel settings & automation

## Synchronization and Machine Control

- Sync to MTC, ASIO Positioning Protocol or send MTC and MIDI clock
- Sync to LTC, WTC with optional Nuendo Time Base Synchronizer
- Two SONY 9-pin transport device panels for controlling external machines
- 9-Pin slave functionality with optional Nuendo Time Base Synchronizer
- User definable settings for optimum adoption to various 9-Pin devices
- MMC transport device panel for controlling external machines
- SMPTE Generator plug-in
- Fast locate and sync lock up
- Sample accurate sync with ASIO 2.0
- MMC slave with track arming support Recording/Playback
- VST System Link for sample accurate sync, audio and MIDI transport between multiple Nuendo systems

## Recording/Playback

- Record of 16 Bit, 24 Bit and 32 Bit float audio files; all sample rates up to 192 kHz are supported, depending on the audio card
- Adjustable audio pre-record up to 10 minutes serves as a virtual audio sketch pad; audio clips can be expanded at the event start to reveal pre-recorded data
- Recording of multiple channels of audio simultaneously per track, split or interleaved
- Record of AIFF, Wave, Broadcast Wave and Wave 64 for long duration recordings
- Jog and scrub of the complete project
- Project shuttling with fixed speeds, with custom editable key commands, and lock to zoom setting option
- Linear Record modes: Normal, Merge, Replace
- Cycle record modes: Mix (MIDI only), Overwrite (MIDI only), Keep Last, Stacked lanes
- Online recording: record starts when a valid timecode signal is received
- Separate pre roll / post roll settings and separate activity displays in transport
- Multiple user-definable record destinations File Management

## File Management

- Pool with logical structure and extensive file information
- User Attributes
- Batch renaming functionality for events, parts, clips, regions
- Import and export of pool files
- Advanced search field with preview option
- Advanced file converter
- Offline processing from the pool
- Minimize function to delete silence & unused material from audio files
- Archive and backup functions
- Libraries can be created and opened including files, file references, regions, subfolders and sync points

## Editing

- Real-time non-destructive crossfades
- Advanced crossfade editor with pre & post roll
- Auto-fade and auto-crossfades with user definable fade times for smooth transitions into and out of audio events
- Volume envelope for events
- Sample editor with region list and sync point editing
- Unlimited undo/redo with edit history list
- Timestretch tool allows fast snap-based stretching of material
- Audio Warp real-time algorithm supports real-time time stretching and pitch shifting on individual or all clips
- Time-Warp content tool allows for manual audio warping of individual clips
- Hit point Detection
- Preset curve tools for automation editing
- Various options to lock events in size, fade-length, position and others
- Folder tracks for group-based overview
- Vertical view option for recording takes in the project
- Browser view allows all data (events, automation, etc.) to be edited numerically
- Edit mode for syncing events & fades to the picture

- Sync points available in events and regions, s-points scrub the audio
- Detect & strip silence
- Drag and drop regions from the sample editor to the project window
- Hit point detection for loop editing and cue splitting
- Auto select event under cursor on selected track(s) function
- Zoom presets in the project window and part editor
- Zoom undo/redo
- Automation data can move with the audio events

## Processing

- Integrated processes: Acoustic Stamp, Envelope, Fade In/Out, Gain, Merge Clipboard, Noise Gate, Normalize, Phase Reverse, Pitch-shift, Remove DC Offset, Reverse, Silence, Stereo Flip, Time Stretch, Re-sampling
- Process history with the ability to modify, disable/enable or replace previous processes
- Batch processor: Offline Process History can be saved as a batch process
- All VST and DX plug-ins can be processed offline

## Video

- Video track with thumbnail preview
- QuickTime™ video player
- DirectShow video player (PC only)
- DirectX video player (PC only) allowing for multiple tracks and simple video editing operations
- HDTV Frame Rates supported
- Pull up/down matches audio playback speedchanges of 4 % and 0.1 %
- Audio extraction from video files, replace audio in video files
- Full screen Video option
- Support for Blackmagic DeckLink video cards

## Mixing

- Configurable mixer views
- Up to 4 mixers with user defined views available at the same time for perfect overview
- Unlimited amount of channels\*
- Unlimited amount of physical inputs and outputs supported\*\*
- Unlimited amount of effect returns, VSTi & group channels\*
- VST Connection window: ASIO & master bus routing with preset management
- External FX plug-ins allow integration of external hardware signal processors into the VST mixer as insert or send effects
- Up to 12 speaker channels available for inputs, audio tracks, effects, groups and outputs
- Multiple output configurations for mono, stereo and surround formats at the same time
- Plug-in delay compensation throughout the complete signal path
- Switchable dual mono panner, combined panner or stereo balance on stereo tracks
- Flexible effect or dry recording from any physical input to any audio track
- 8 inserts on inputs channels, audio channels, effect return channels, group channels, VSTi, ReWire and output channels with global and individual soft-bypass
- 8 auxiliary sends per input, audio, VSTi and group channel with up to 12 channels
- Phase invert and gain on all channels
- Solo in Place and AFL/PFL functionality
- Automation tracks for each audio track, group channel and for plug-ins
- Waveform display visible on automation background
- Automation modes Touch, Autolatch and X-Over for all parameters, Automation modes Overwrite and Trim for volume
- Freeze for Audio Channels to reduce CPU load by audio insert Plugs

## Control Room

- Additional Control Room- and Headphone monitoring busses
- Up to four user specific Monitor Setups
- "Foldback" and "easy solo" functionality
- Up to six External Inputs like DAT, Tape, CD, etc.
- Up to four separate Studio mixes for artists

## Plug-ins

- Real-time support for VST plug-ins (may also be applied offline)
- Real-time support for DirectX plug-ins (may also be applied offline)
- Support for TC Powercore and UAD-1
- Dummy plug-in replaces missing plug-ins when transferring projects to another system; thereby preserving the original plug-in when moving back to the original system
- Included Stereo plug-ins : Flanger, Phaser, Overdrive, Chorus, Symphonic, Reverb A, Reverb B, QuadraFuzz, SPL DeEsser, Double Delay, ModDelay, Dynamics, Magneto, DaTube, Chopper, Transformer, Metalizer, Rotary, Vocoder, StepFilter, Bitcrusher, Ringmodulator, Grungelizer, MIDI Gate, UV22 HR (Apogee), Multiband Compressor, Test Generator, DeNoise, DeClicker, Q, Nuendo EQ
- Included surround plug-ins: MatrixDecoder, MatrixEncoder, Mix6to2, Mix6to2, SurroundPan, MultiScope, MixerDelay, MixConvert; Roomworks Reverb

## Surround

- Surround architecture: mixer is fully multi-channel based, in every aspect, up to 12 speaker channels
- MixConvert plug-in for easy up-, down and cross mixing
- Surround encoding: down-mix plug-in for fast monitoring in other multi-channel formats
- Sub-mixer and distance compensation plug-in
- AUX send panners linkable to channel panners
- Matrix Encoder/Decoder for LCRS or 3/2 encoding
- Optional Nuendo Dolby Digital Encoder
- Optional Nuendo DTS Encoder

## Network

- Standard network access allows Nuendo to record, play back and copy files from dedicated servers, other workstations or library servers.
- Network collaboration feature set with online merge functionality and user chat window for direct communication
- Permission sets of users with individual read/write permissions allow hierarchical sharing of complete projects down to single tracks using TCP/IP
- VST System Link for sample accurate sync, audio and MIDI transport between multiple Nuendo systems

## MIDI/Music

- MIDI Device Manager for naming and hiding MIDI devices
- MIDI Device Panels for controlling external MIDI devices directly from within Nuendo
- 64 VST instrument slots
- Key editor
- List editor
- Logical editor
- Drum editor
- Score Editor
- MIDI step recording
- Beat calculator
- MIDI, ReWire and VSTi channels available in the mixer
- Extended Freeze for VSTi instruments offers more options for freezing VSTi's and VSTi channels
- Play Order Track for intuitive arranging and re-arranging of projects
- Tempo processing for fast and accurate tempo operations based on the project's tempo track
- In Place Editor puts the key editor directly on the project page and allows for MIDI event editing (notes and controllers) in context with other tracks and track types
- Relative snapping of objects: parts keep their relative start position when moved by snap values

\* Depending on your computer hardware  
\*\* Depending on used ASIO hardware

## MINIMUM SYSTEM REQUIREMENTS

The minimum system requirements state the minimal specification your computer must have to be able to use the software. A more powerful system may be required for certain tasks or larger projects. You can find more information about computer system specification and setup here: [www.steinberg.net/daw](http://www.steinberg.net/daw)

### MACINTOSH

- Mac OS X v10.4
- Power Mac G4 1 GHz Minimum
- 512 MB RAM
- DVD drive required for installation
- CoreAudio compatible audio hardware is required
- USB port required for Steinberg Key (copy protection device)\*
- Internet connection required for license activation

### WINDOWS

- Windows XP Home or XP Professional
- Intel / AMD Prozessor 1.4 GHz minimum
- 512 MB RAM
- DVD drive required for installation
- Windows MME compatible audio hardware is required (ASIO compatible audio hardware required for low latency operation).
- USB port required for Steinberg Key (copy protection device)\*
- Internet connection required for license activation

\* The Steinberg Key (USB copy protection device) required to run this product is only available in the full version.

Customers who are upgrading or updating from another version or product and who do not own a Steinberg Key must purchase one separately. The same Steinberg Key copy protection device is then used for all Steinberg products that require it.