

# Pro Tools | HDX Thunderbolt 3 Systems



Pro Tools | HDX is the *real-time mixing and processing engine* at the heart of a fully optimized Pro Tools hardware, software, and control surface solution.

As the hardware extension of Pro Tools | Ultimate software, it delivers the **DSP power, scalability, and reliable performance** that make the most demanding music and audio post-production workflows possible.



## Why should a customer choose Pro Tools | HDX?

- **The heart of the complete Pro Tools solution** – Pro Tools | HDX is the DSP nerve center and hardware extension of Pro Tools | Ultimate software, making your fully optimized hardware, software, and control surface system a reality.
- **Unrivaled DSP power** – Pro Tools | HDX provides the industry’s most powerful and reliable DSP platform, so you can handle the largest, most complex sessions, and record and mix thousands of tracks and plugins in real time.
- **The professional DSP tracking and mixing experience** – Experience the most intuitive, creative, and flexible DSP plugin workflow. Set effects chains entirely in Pro Tools | Ultimate—without requiring a secondary application.
- **Track with zero latency** – Track through AAX DSP plugins with the lowest latency in the industry (0.7 ms) and capture stellar performances—without the technology getting in the way.
- **Integrate outboard gear automatically** – Insert your favorite hardware into Pro Tools | Ultimate without needing to manually calibrate hardware delay compensation.
- **Scale your system for any project** – Scale DSP and physical I/O with multiple cards, or connect multiple Pro Tools hardware units to a single 64 channel HDX card and meet your workflow’s needs.
- **Connect with Thunderbolt 3** – Bring the power of HDX to your desktop or studio rack with the Pro Tools | HDX Thunderbolt 3 Chassis, providing portability and easy connection to today’s Thunderbolt 3-equipped computers.
- **Get everything you need in one easy bundle** – Easily and cost-effectively complete your studio with an Pro Tools | HDX Thunderbolt 3 Chassis, one HDX card, Pro Tools | Ultimate software, and Pro Tools hardware I/O interface.

## Key Competitor Comparison and Kill Shots

HDX enables a *premium tracking and mixing experience* that is *more powerful, scalable, and intuitive than any other DSP-enabled workflow*.

### HDX Thunderbolt Solutions vs. UA Apollo Interfaces

- 2.33x aggregate DSP power vs Apollo
- Lowest latency in the industry
- Comes with Pro Tools | Ultimate (a \$2499 value)
- More intuitive, creative DSP tracking workflow entirely in PTU, without context switching to a secondary console application
- Use AAX DSP plugins in native processing mode without the hardware connected (UA requires HW attached)
- Use your favorite outboard gear like plugins in Pro Tools, without manually calibrating hardware latencies

	<i>HDX TB Systems</i>	<i>UA Apollo Interfaces</i>
Price range	\$6,999 - \$9,999	\$2,199 - \$3,499
DSP power	18 DSP chips / card (6.3 GHz aggregate)	6 DSP chips / card (2.7 GHz aggregate)
Latency	0.7 ms	1.1 ms
DAW included	Pro Tools   Ultimate	None
DAW integration	Work entirely in Pro Tools   Ultimate	Secondary Application Required
Plugins included	74 AAX DSP Plugins	14 DSP Plugins
Use plugins without HW	Yes	No

<ul style="list-style-type: none"> <li>Scale your system bigger with more I/O and DSP – multiple HW units connected to a single 64 channel HDX card or stack multiple cards to aggregate DSP and I/O</li> </ul>	Automatic delay compensation	Yes	No
	Industry standard workflows	Yes	No

### HDX Thunderbolt Solutions vs. Apogee Ensemble & Element

- Far more DSP power than any Apogee interface configuration (*Ensemble can run 30 FX Rack plugins; HDX can run more than 30 plugins per TI DSP chip, depending on the plugin*)
- Lowest latency in the industry
- Comes with Pro Tools | Ultimate (a \$2499 value)
- More intuitive, creative DSP tracking workflow entirely in PTU (*Apogee FX Rack requires secondary application running in the background*)
- Use your favorite outboard gear like plugins in Pro Tools, without manually calibrating hardware latencies
- Scale your system bigger with more I/O and DSP – multiple HW units connected to a single 64 channel HDX card or stack multiple cards to aggregate DSP and I/O

	<i>HDX TB Systems</i>	<i>Apogee Element &amp; Ensemble</i>
Price range	\$6,999 - \$9,999	\$595 - \$2,495
DSP power	18 DSP chips / card (6.3 GHz aggregate)	Not advertised (1 FX Rack instance per audio channel)
Latency	0.7 ms	1.1 ms
DAW included	Pro Tools   Ultimate	None
DAW integration	Work entirely in Pro Tools   Ultimate	Logic Pro X & FX Rack simulates DAW integration
Plugins included	74 AAX DSP Plugins	5 DSP Plugins
Use plugins without HW	Yes	Yes
Automatic delay compensation	Yes	No
Industry standard workflows	Yes	No

### HDX Thunderbolt Solutions vs. Antelope Orion32 HD

- Far more DSP power (*Orien32 can run a total of 16 channel strips and 128 FX instances; HDX can run more than 30 plugins per TI DSP chip, depending on the plugin*)
- Lowest latency in the industry
- Comes with Pro Tools | Ultimate (a \$2499 value)
- More intuitive, creative DSP tracking workflow entirely in PTU (*Antelope FX must be configured in separate app and added into PT as hardware inserts*)
- Use AAX DSP plugins in native processing mode without the hardware connected
- Use your favorite outboard gear like plugins in Pro Tools, without manually calibrating hardware latencies
- Scale your system bigger with more I/O and DSP – multiple HW units connected to a single 64 channel HDX card or stack multiple cards to aggregate DSP and I/O

	<i>HDX TB Systems</i>	<i>Antelope Orion32 HD</i>
Price range	\$6,999 - \$9,999	\$3,995
DSP power	18 DSP chips / card (6.3 GHz aggregate)	Not advertised (8 DSP FX instances per audio channel)
Latency	0.7 ms	1.1 ms
DAW included	Pro Tools   Ultimate	None
DAW integration	Work entirely in Pro Tools   Ultimate	Secondary Application Required
Plugins included	74 AAX DSP Plugins	38 DSP Plugins
Use plugins without HW	Yes	No
Automatic delay compensation	Yes	No
Industry standard workflows	Yes	No

## SPECIFICATIONS

DSP processing	18 x 350 MHz TI Processors <i>(per card)</i>
Latency**	0.7 ms

Simultaneous voices/audio tracks @ 48/96/192 kHz*	256/128/64 <i>(scalable up to 768 with 3 HDX cards)</i>
Channels of I/O	64 <i>(scalable up to 192 with 3 HDX cards)</i>
Instrument tracks	256
MIDI tracks	1,024
Aux tracks	512
Busses	unlimited
Automatic Delay Compensation (ADC) for hardware inserts	16,383 samples
Processing depth	32-bit floating point
Mixer depth	64-bit floating point
Included Software	Pro Tools   Ultimate <i>(perpetual license)</i>

\* Audio tracks based on sample rates of 48/96/192 kHz, respectively. Installing additional cards will increase track counts to the maximum allowable.

\*\* Latency calculated using a 96 kHz sample rate with a 64-sample buffer. Tests run using Pro Tools | HDX and Pro Tools | HD Native with Pro Tools | HD I/O, and Pro Tools | HD Accel with 192 I/O.

## Hardware bundles

### Pro Tools | HDX Thunderbolt 3 HD Omni

Pro Tools | HDX Thunderbolt 3 combined with HD OMNI delivers the essentials for music or post-production and is ideal for anyone that need top sound quality in a convenient 1U form factor. Track with two pristine mic preamps and mix and monitor from stereo to 7.1 surround. Route audio independently from Pro Tools or even without turning on your computer with the 14-input persistent monitor mixer. Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.

### Pro Tools | HDX Thunderbolt 3 HD 8x8x8

Pro Tools | HDX Thunderbolt 3 with HD 8x8x8 is the perfect choice when you need a balance of analog and digital I/O for music or audio post production projects. As your studio requirements evolve, you can expand 8x8x8 with one analog or digital expansion card. Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.

### Pro Tools | HDX Thunderbolt 3 HD 16x16A

Pro Tools | HDX Thunderbolt 3 with HD 16x16 Analog is the ideal choice for musical productions. Get the maximum complement of analog inputs and outputs of any HD I/O. As your studio requirements evolve, you can replace input / output modules with other expansion cards.\* Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.

\* You can replace a card, but not expand the I/O.

### Pro Tools | HDX Thunderbolt 3 HD 16x16D

Pro Tools | HDX Thunderbolt 3 with HD 16x16 Digital is an ideal choice for post-production studios that need to interface with a digital mixer, dubber, or other digital infrastructure. As your studio requirements evolve, you can expand the I/O with up to two expansion cards. Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.

**Pro Tools | HDX Thunderbolt 3 MTRX Studio**

Pro Tools | HDX Thunderbolt 3 with MTRX Studio is the ultimate studio centerpiece for either music or audio post production environments. Get flexible routing and the ability to monitor 7.1.4 Dolby Atmos. Interface with the Dante network with 64 channels of audio over IP. Streamline your studio and connect all your gear to a single 1U MTRX Studio. Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.

**Pro Tools | HDX Thunderbolt 3 HD MADI**

Connect Pro Tools | HDX Thunderbolt 3 MADI systems to live, audio post production, and broadcast environments with. Facilitate complex workflows, like Dolby Atmos mixing, over coax connectivity. Interface with digital mixing consoles and routers. Choose the Pro Tools | HDX Thunderbolt 3 desktop chassis if you are using a MacBook Pro, iMac, or other Thunderbolt-equipped Windows PC. Or install a Mac Mini alongside HDX in the rackmount chassis and configure a completely self-contained HDX system.