

Prism Sound Titan - Zvučna kartica

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Line
or

microphone sources can be connected via the four XLR-1/4" combo inputs, while two front-panel 1/4" jacks accommodate instruments such as guitars or synthesizers. Phantom power is selectable as are the input pads and built-in limiters. Four rear-panel 1/4" jacks are provided for dedicated line inputs. The eight 1/4" line outputs are ideal for connection to speakers and power amps while the two front-panel 1/4" jacks offer dedicated level and mix

controls for independent headphone monitoring. Additionally, digital connectivity includes RCA coaxial for S/PDIF or AES3, TOSLINK optical for S/PDIF or ADAT, and BNC for word clock. An RJ45 port is present for future AVB integration.

The Titan is compatible with Mac OS X and Windows systems via its class-compliant USB 2.0 connectivity. An IEC power cable, USB cable, rackmount ears, and XLR-to-RCA adapters are included.

Signal Path

Eight analog input channels and up to ten digital input channels are available as inputs for your audio workstation software through the host computer's audio driver. Similarly, eight analog output channels, up to ten digital output channels, and stereo headphone outputs can play 20 different channels. For low-latency monitoring to headphone or main outputs, each output pair can optionally be driven from the built-in DSP mixer with an individual local mix of any selection of inputs through the controller applet. All analog inputs are electronically balanced with automatic unbalanced operation. Analog outputs are electronically balanced with bootstrapping (level is maintained if one leg is grounded).

Verifile Technology

Verifile is a radical new proprietary technology exclusive to Prism Sound, which allows computer audio streams and recorded files to be quickly checked for a wide range of clicks, errors and dropouts, without any compromise in the audio content or any additional metadata. Verifile is a fragile steganographic process, which embeds derivative data within the dither of the ADC, containing a rolling hash code which allows the audio data to be thoroughly and continuously checked. Recovery of this data from the audio stream or file enables verification that the stream or file contains exactly the audio data that was produced by the ADC at the time of recording. Any incorrect samples, missing or repeated audio segments, or any other audio errors in the resulting files can be reliably detected, providing complete confidence that the recorded file is error-free. Processing such as EQ, level changes, additional redithering, or sample-rate conversion done to a Verifile recording will result in a failure to decode the rolling hash code in the dither and hence indicate that the recording is not an original.

Reliable Quality

Prism Sound uses precise software calibration techniques in its converters to avoid the unreliability of pots and tweaks. Minimizing noise, interference, and hum was a priority in the design. All the analog circuits have galvanic isolation, while the unit's electronically balanced I/O allows it to handle common mode interference sources and trouble-free connection to unbalanced equipment.

USB 2.0 Compatibility

The Titan is easy to connect to your computer and to your outboard gear. For both Mac and Windows platforms, there is a controller application to configure the unit and control its built-in mixer and various functions. Aside from the monitor and headphone level controls, everything else is operated solely from the Titan controller application. The controller software opens on-screen as a separate panel alongside your existing editing software. Since the Titan is UAC2 compliant, it will also work in recent Linux and Android builds, although no control panel is provided.

Flexible I/O

The Titan offers four high-grade mic preamps with software-controlled gain in 1 dB steps, individually switchable phantom power, 20 dB pads, and low noise and distortion. Four 1/4" TRS jacks accommodate line-level signals, while the four XLR-1/4" combo jacks support both mic and line inputs, with digitally-controlled mic gain in excess of 60 dB. Two front-panel 1/4" inputs also support direct-injection (DI) instrument connections. RIAA equalization can be selected in the controller applet on channels one and two so that turntables can be connected for archiving or sampling applications. By selecting the input type (Mic or DI), low- or high-impedance cartridges can be loaded with suitable termination impedances. All analog inputs have individually-selectable Prism Sound Overkiller peak limiters built in—just as on the ADA-8XR and Orpheus—to catch those fast transients. The Overkiller threshold automatically follows the operating line-level selection (+4 dBu or -10 dBV). Overkillers are ideal for percussive sounds, particularly drums, where headroom can be a problem.

The coaxial digital I/O can be switched in the Titan controller applet between S/PDIF and AES3 formats. This control changes the operating voltage and the channel status format, and is complemented by two supplied adapters that provide external XLR connections for AES3 devices. The optical digital I/O ports on Titan can also be configured as ADAT I/O. Other connections include word clock sync I/O on BNC connectors.

Low-Latency Digital Mixer

A built-in digital mixer can be configured from the host computer to provide foldback feeds to performers, each with their own stereo mix of workstation playback and any of the inputs. This provides console quality local mixing—each output has its own independent mixer, with channel strips for all inputs and workstation feeds, complete with fader, pan/balance pot, solo and mute buttons, and full metering. Strips can be stereo or mono, and the mixes are dithered with filtered coefficients, just as in a top-end digital mixer. With the Prism Sound DSP mixer, the latency is as low as 0.08 ms at a 192 kHz sampling rate.

Flexible Monitoring

To facilitate surround sound monitoring for HDTV and DVD, the eight analogue outputs allow monitor setups from multi-stereo up to 7.1 surround. The Titan's volume knob can be assigned to any or all of the analogue or digital outputs for use as a control room monitor level. There are two headphone amps, suitable for all types of headphones, each with its own independent volume control. As well as having its own workstation feed and mixer, the headphones can also be quickly switched across the other output pairs, which is handy for setting up.

Sample Rate Conversion & Noise Shaping

Prism Sound's renowned synchronous sample-rate conversion allows outputting to various external devices at other sampling rates. The sample rate converter can be used at the outputs as well as the inputs, so as well as dealing with unsynchronised or wrong-rate digital inputs, the Titan can also generate, say, a live 44.1 kHz output from a 96 kHz session. The digital output is equipped with the four Prism Sound SNS noise-shaping curves, allowing you to reduce to 16 bits for CDs at mastering-house quality.

Stable Clocking

State-of-the-art clock generation with proprietary hybrid 2-stage DPLL keeps jitter to a minimum. The sample rate can be sourced from the local clock, BNC word clock, or digital input stream.

Standalone Operation

The Titan can also operate in a standalone mode using its ADAT or coaxial digital I/O connections. Once set up using the Titan controller applet, the unit can be disconnected from the host computer and used independently. The Titan will retain its settings when powered down so even if it is switched off, it can be re-powered and standalone operation can continue with the automatically stored settings.

Comprehensive Indicators

With ten multi-segment bargraphs with overload indication (assignable to inputs or outputs), Overkiller LEDs, digital input lock-status indication, sample rate conversion and host/master sync LEDs, and illuminated volume controls, the Titan makes viewing interface activity easy.

Expansion Slot

The expansion slot supports Prism Sound's MDIO expansion cards, which provide alternative host connections. The host is usually a computer, and the Titan interface provides a means of connection between the host and the external analog and digital audio I/O ports. Without an MDIO expansion card fitted, the host connection would always default to the USB connection. The MDIO expansion slot provides an alternative host connection. It does not necessarily disable the USB port, but in the case of the Pro Tools

interface MDIO-PTHDX, the USB port is switched off when the Pro Tools interface is to be used.

Prism Sound TITAN Specs

Form Factor Rackmount

Display 1 x Color

Channels of I/O 8 Input / 8 Output

Maximum Sampling Rate 192 kHz / 24-Bit

Number of Microphone Preamps 4 Preamps

Built-In Microphone None

Input Level Adjustment 1 x Knob

Expansion Slots 1 x Digital I/O Slot

Signal Processing

Pad Mic:

-20 dB (Switchable per Channel)

Hi-Z:

-18 dB

Gain/Trim Range Mic Inputs:

+10 dB to +65 dB (in 1 dB Steps)

Hi-Z Inputs:

+10 dB to +65 dB (in 1 dB Steps)

High-Pass Filter Line Input:

80 Hz, 12 dB/Octave (-3 dB, on 4 Channels)

Connectivity

Analog Audio I/O 4 x Combo XLR-1/4" TRS Balanced/Unbalanced Mic/Line Input

4 x 1/4" TRS Balanced/Unbalanced Line Input

2 x 1/4" TS Unbalanced Hi-Z Input

8 x 1/4" TRS Balanced/Unbalanced Line Output

2 x 1/4" TRS Unbalanced Headphone Output

Phantom Power 48 V, Selectable On/Off

Digital Audio I/O 1 x TOSLINK Optical ADAT / S/PDIF Input

1 x RCA Coaxial AES3 / S/PDIF Input

1 x TOSLINK Optical ADAT / S/PDIF Output

1 x RCA Coaxial AES3 / S/PDIF Output

Host Connection / USB 1 x USB-B

Host Connection Protocol USB 2.0

Sync I/O 1 x BNC Word Clock Input

1 x BNC Word Clock Output

Network I/O 1 x RJ45 AVB

MIDI I/O None

Wireless Connectivity None

Performance

Frequency Response 20 Hz to 20 kHz

Impedance BNC Word Clock :

75 Ohms

Line Inputs:

14.5 Kilohms

Mic Inputs:

5.5 Kilohms

Hi-Z Inputs:

1 Megohm

Outputs:

100 Ohms (Balanced)

50 Ohms (Unbalanced)

Dynamic Range Line Inputs:

116 dB (-60 dBFS)

Analog Outputs:

115 dB (-60 dBFS)

THD Line Inputs:

-117 dB / 0.00014% (at -0.1 dBFS)

Mic Inputs:

-116 dB / 0.00016% (+10 dB Gain, at -0.1 dBFS)

-110 dB / 0.00032% (+40 dB Gain, at -0.1 dBFS)

Analog Outputs:

-107 dB / 0.00045% (at -1 dBFS)

THD+N Line Inputs:

-111 dB / 0.00028% (at -0.1 dBFS)

Mic Inputs:

-108 dB / 0.0004% (+10 dB Gain, at -0.1 dBFS)

Analog Outputs:

-106 dB / 0.0005% (at -0.1 dBFS)

Crosstalk Line Inputs:

< -140 dB (1 kHz)

< -120 dB (20 Hz to 20 kHz)

Analog Outputs:

< -135 dB (1 kHz)

< -120 dB (20 Hz to 20 kHz)

EIN Mic Inputs:

-128.5 dBu (0-Ohm Source, +30 dB Gain)

-126.3 dBu (150-Ohm Source, +30 dB Gain)

-130.9 dBu (0-Ohm Source, +40 dB Gain)

-127.6 dBu (150-Ohm Source, +40 dB Gain)

-131.2 dBu (0-Ohm Source, +50 dB Gain)

-127.7 dBu (150-Ohm Source, +50 dB Gain)

-131.4 dBu (0-Ohm Source, +60 dB Gain)

-127.8 dBu (150-Ohm Source, +60 dB Gain)

CMRR Line Inputs:

> 70 dB (20 Hz to 20 kHz)

Mic Inputs:

> 110 dB (50/60 Hz)

> 100 dB (1 kHz)

> 90 dB (20 kHz)

Digital Audio

Sample Rates Up to 192 kHz

Sample Rate Conversion On S/PDIF I/O (Any Sample Rate)

Bit Depths 24-Bit (A/D Conversion)

16 / 24-Bit (D/A Conversion)

Latency 0.57 ms at 44.1 kHz

0.52 ms at 48 kHz

0.2 ms at 88.2 kHz

0.18 ms at 96 kHz

0.09 ms at 176.4 kHz

0.08 ms at 192 kHz

Sync Sources ADAT, Internal, S/PDIF, Word Clock

Clocking Accuracy: ± 50 ppm

Jitter Suppression: > 60 dB (above 100 Hz)

Audio Storage & Playback

Memory Card Slot None

Compatibility

OS Compatibility macOS 10.4 or Later

Windows Vista

Windows 7

Windows 8 (32/64-Bit)

*As of November, 2021: Check with manufacturer for the most up-to-date compatibility

Included Software None

Supported Drivers/API & Plug-Ins Core Audio (Mac)

ASIO

Mobile Device Compatibility None

Required Hardware USB 2.0 Port

Power

Power Requirements AC/DC Power Adapter (Included)

AC Input Power 90 to 250 VAC, 50 / 60 Hz

Power Consumption 35 W

Physical

Rackmount Size 1 RU

Operating Humidity 0 to 85%

Operating Temperature 32 to 95°F / 0 to 35°C

Dimensions 17.3 x 11.4 x 2" / 440 x 290 x 50 mm (with Feet)

19 x 11.4 x 1.8" / 483 x 290 x 44.5 mm (with Rack Ears)

Weight 8.2 lb / 3.7 kg