

Asus PCI Express Audio Card Xonar DX User Manual

Asus network adapter user's manual

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Troubleshooting

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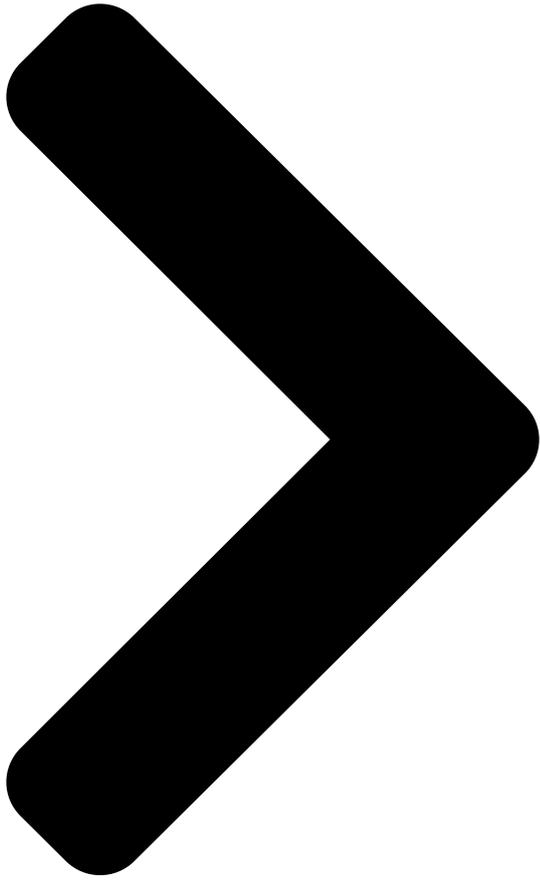
Bookmarks

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Xonar DX
ASUS[®]
Audio Card

User's manual

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User manual (100 pages)

[Sound Card ASUS Essence STX II User Manual](#)

(48 pages)

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[ASUS Strix Raid DLX/PRO, Strix Soar - Sound Card Quick Start Guide](#)

(article)

[Sound Card Asus Xonar DGX User Manual](#)

(26 pages)

Summary of Contents for Asus PCI Express Audio Card Xonar DX

[Page 1](#) Xonar DX Audio Card User's manual...

[Page 2](#) Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification or alteration is authorized in writing by

ASUS; or (2) the serial number of the product is defaced or missing.

[Page 3: Table Of Contents](#)

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About Hardware ... 4 Xonar DX Audio Processing Card ... 4 Installing the Xonar Hardware ...

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“Main Setting” Page ... 52 Find Converted Music in “PMP Music” Page ... 54 RMAA Test Guide ...

[Page 5: Notices](#)

Notices Federal Communications Commission Statement This device complies with Part 15 of
the FCC Rules. Operation is subject to the following two conditions: • This device may not cause
harmful interference, and • This device must accept any interference received including
interference that may cause undesired operation.

[Page 6: Safety Information](#)

Trademarks Xonar and ASUS logo are trademarks of ASUSTek Computer Inc. “Dolby” and
“Dolby Digital Live”, “Dolby Pro Logic IIx”, “Dolby Virtual Speaker”, “Dolby Headphone” are
trademarks of Dolby Laboratories. “DTS” and “DTS CONNECT”, “DTS Interactive”, “DTS Neo:
PC”...

[Page 7: Introduction](#)

Introduction Package Contents • ASUS Xonar DX audio card • ASUS Xonar DX support CD
(including Portable Music Processor™ Lite and RMAA V6.0.6 utilities) • Additional low-profile
bracket • S/PDIF TOSLINK optical adaptor x1 • Quick Installation Guide System Requirements
•...

[Page 8: Specifications Summary](#)

-PCI Express Rev.1.0a specification compatible -Max. full 2.5Gbps bandwidth per direction and
optimized latency for high-definition audio processing -Compatible with X1, X4, X8, X16 PCI
Express slots ASUS AV100 High-Definition Sound Processor (Max. 192KHz/24bit) Cirrus-Logic
CS4398*1 for Front-Out (120dB SNR, Max. 192kHz/24bit) Cirrus-Logic CS4362A*1 for other 6
channels (114dB SNR, Max.

[Page 9](#) Speaker (w/ Pro-Logic II), and Smart Volume Normalization processing (Windows
Media Player 10 or above is required) Software kit with 10-ft GUI for Windows Media Center
Edition Easy but powerful software intended for testing the quality of audio equipments ASUS
Xonar DX...

[Page 10: About Hardware](#)

About Hardware Xonar DX Audio Processing Card ASUS Xonar DX...

[Page 11](#) (To monitor your TV tuner card’s audio from this Aux-In, you must enable the
“monitor” function for Aux-In in the Xonar Audio Center software’s recording mixer.) Connects
to the PCI Express slot on your motherboard ASUS Xonar AV100 Audio Processing Unit
(DuplexHD 192K/24bit) ASUS Xonar DX...

[Page 12: Installing The Xonar Hardware](#)

Do not force the audio card into the slot. Make sure that the gold pins of the card's PCI Express
connector are aligned with the motherboard’s PCI Express connector before you insert the card
into the PCI Express slot. If it does not fit properly, gently remove it and try again.) ASUS Xonar
DX...

[Page 13](#) 4-pin header first, then unplug it from the power connector as the following pictures
show. Do not forcefully remove the header from the power connector; doing so may pull up the
power connector from the audio card and cause damage! ASUS Xonar DX...

[Page 14: Connecting Tv Tuner Card](#)

Using this setup, you can even turn on sound effects such as Pro-Logic IIx to expand the stereo TV audio to 5.1 or 7.1 channel surround sound. TV audio on your PC will become even better than on your TV set! ASUS Xonar DX...

[Page 15: Installing Software](#)

"END USER LICENCE AGREEMENT" in the process and make sure you understand and accept it before you continue the installation. When the installation finishes, you may be prompted to restart your computer. You can choose to restart the computer later if desired. ASUS Xonar DX...

[Page 16: Installing The Pmp Software](#)

Installing the PMP software (Portable Music Processor) From the installation CD menu, select the option to install the PMP software. Follow the instructions on the screen to complete the installation. After the installation is complete, click Finish. ASUS Xonar DX...

[Page 17: Uninstalling Or Reinstalling Software](#)

4.3.2 Reinstalling Software Before you reinstall any software, it's recommended to uninstall the existing software first. After you finish the uninstallation of the software, please follow the installation process again to reinstall the same or updated software. ASUS Xonar DX...

[Page 18: Connecting Speakers And Peripherals](#)

PC audio sources to any digital speakers or AV Receivers with Dolby Digital decoding capabilities. Item Optical adapter Optical cable Description Plug the optical TOSLINK adapter into the S/PDIF-Out combo connector Connect your decoder's S/PDIF-In port to the optical adapter with the TOSLINK optical cable ASUS Xonar DX...

[Page 19: Connecting Headphones](#)

Connecting Headphones 5.2.1 Connecting Stereo Headphones Item Front Out/Headphone Jack Description The Front Out jack has a built-in high-quality amplifier to drive headphones. Please connect your stereo headphones directly to this jack. ASUS Xonar DX...

[Page 20](#) Description Connect the front-channel 3.5mm plug of your 5.1 headphones into this jack. Connect the surround-channel 3.5mm plug of your 5.1 headphone into this jack. Connect the Center/Bass-channel 3.5mm plug of your 5.1 headphone into this jack. ASUS Xonar DX...

[Page 21: Connecting Analog Speaker Systems](#)

Connects to the "Center" and "subwoofer" input ports of the analog amplifier with the mini-jack to RCA cable. Connects to the "left back" and "right back" input ports of the analog amplifier with the mini-jack to RCA cable. ASUS Xonar DX...

[Page 22](#) 5.3.2 Connecting 2/2.1 Channel Speakers 2 Speakers 2.1 Speakers Item Front Out/Headphone Jack Description Connect the 2/2.1 speaker set's 3.5mm plug into this Front Out jack. ASUS Xonar DX...

[Page 23](#) 4.1 Speakers Item Front Out Side Surround Out Description Connects to the Front input port of the 4/4.1 speakers with the mini-jack cable. Connects to the Surround input port of the 4/4.1 speakers with the mini-jack cable. ASUS Xonar DX...

[Page 24](#) Connects to the Front input port of the 5.1 speakers with the mini-jack cable. Connects to the Surround input port of the 5.1 speakers with the mini-jack cable. Connects to the Center/Subwoofer input port of the 5.1 speakers with the mini-jack cable.. ASUS Xonar DX...

[Page 25](#) Connects to the Surround input port of the 6.1/7.1 speakers with the mini-jack cable. Connects to the Center/Subwoofer input port of the 6.1/7.1 speakers with the mini-jack cable. Connects to the Back Surround input port of the 6.1/7.1 speakers with the mini-jack cable. ASUS Xonar DX...

[Page 26: Connecting Microphone](#)

Connect the 3.5mm plug of the CD/MP3 Player or any other Line level analog audio sources into this Line-In jack for sound recording or real-time Dolby sound processing through the Monitoring

path (See the “Mixer” section of the driver guide). ASUS Xonar DX...

[Page 27: Xonar Dx Driver Guide](#)

DX driver. You can control the functions and features of the Xonar DX driver on the Audio Center. The following picture shows a basic overview of the Xonar DX Audio Center. The following sections of this manual will describe its functions in more detail. ASUS Xonar DX...

[Page 28](#) Music, Games, DVD Video, and effect-free (Hi-Fi) modes. This panel gives access to setting tabs, including Main Settings, Mixer/volume, Effects, Karaoke/MagicVoice, and FlexBass. (see the following details) Clicking this icon will pop up driver’s Information window. ASUS Xonar DX...

[Page 29: Main Setting](#)

The Xonar DX audio card supports sample rates up to 192KHz (44.1K, 48K, 96K, 192KHz). Typical values: -Audio CD, MP3, WMA, Wave files are 44.1KHz; -The audio of DVD-Video is 48KHz; -DVD-Audio or other HD media may contain 96KHz or 192KHz high-definition audio content. ASUS Xonar DX...

[Page 30](#) Clicking this button will pop up an advanced setting window to allow you to: -Swap center/bass outputs for 5.1/7.1-speaker set ups -Swap Side/Surround outputs for 7.1-speaker set ups Check the box if your speakers are outputting the incorrect channel. Otherwise, leave them blank. ASUS Xonar DX...

[Page 31](#) -PCM (Pulse Code Modulation, which is a typical raw audio data format.) -Dolby Digital Live real-time 5.1ch encoding This advanced setting will automatically upmix stereo (2ch) content to 5.1 channel surround with Dolby Pro-Logic II when using Dolby Digital Live output. ASUS Xonar DX...

[Page 32](#) Here are some typical suggestions: -MP3, WMA, AAC, CD, VCD, 2D games => 2 channels -DVD-Video with Dolby Digital or DTS 5.1 => 6 channels -DVD-Video with Dolby Digital EX or DTS ES => 8 channels -3D games => 8 channels ASUS Xonar DX...

[Page 33](#) Make all speakers (except Subwoofer) rotate counter- clockwise Make all speakers (except Subwoofer) rotate clockwise Manually drag and rotate all speakers (except Subwoofer) This is the default mode that allows you to manually drag each speaker or the listener with your mouse. ASUS Xonar DX...

[Page 34](#) Drag to the right side to widen the vocal sound range. The dimension parameter fades sounds to the front or rear of the listener. Reset all settings to the defaults. Movie mode is a preset optimized for movie audio. ASUS Xonar DX...

[Page 35](#) They differ in the sense of the “spatial dimension” they impart. DH1—Reference Room: Small, acoustically damped room. DH2—Livelier Room: More acoustically live than DH1 DH3—Larger Room: Larger room than DH1; more distant and diffused effect. ASUS Xonar DX...

[Page 36](#) Dolby Virtual Speaker provides two modes of virtualization: The first is Reference mode, which virtualizes the missing speakers as in the following picture. Wide mode virtualizes the necessary speakers and enhances the surround experience as in the following picture. ASUS Xonar DX...

[Page 37: Mixer/Volume](#)

The tool-tip reveals the percentage number from 1 to 100 in terms of the full scale level. The horizontal slider controls the volume between the left and right channels. Reset all volume controls to the default settings ASUS Xonar DX...

[Page 38](#) A typical benefit is to apply Dolby Pro-Logic II 7.1-ch spreading for your TV audio, CD, MP3, or stereo game console audio from Wii, Xbox, PS2/PS3/PSP, etc. To apply Dolby Virtual Speaker is suitable for two-speaker environment. ASUS Xonar DX...

[Page 39](#) You can check with “Front Panel Microphone” to enable microphone of front panel. Enabling “Microphone Boost” will increase a volume gain to boost microphone input signals. For typical low-cost PC microphone, it’s recommended to enable this function. to open the

advanced settings for the ASUS Xonar DX...

[Page 40: Effects](#)

Clicking this button will apply the environment effect that you select from the pull-down menu on the right side. There are another 23 options in this menu. There are three size settings for each environment: Large, Medium, and Small. ASUS Xonar DX...

[Page 41](#) Adjust the gain for each band (30~16KHz) Key in a name for your own "User Defined" equalizer setting Click this + button to save the parameters into User Defined list Click this - button to delete the parameters from User Defined list ASUS Xonar DX...

[Page 42: Karaoke/Magic Voice](#)

0 to +100. +100 will eliminate most original vocals (default value is 50). Select the Mic Echo function and adjust the gain for echo signals (30~16KHz) Reset all settings to the default. ASUS Xonar DX...

[Page 43: Flexbass](#)

Large speakers because the subwoofer can redirect the bass signals inside the two channels to the subwoofer speaker automatically. Colors for small/large speakers are different. Orange: large speakers Green: small speakers ASUS Xonar DX...

[Page 44: Aec \(Acoustic Echo Cancellation\)](#)

Xonar DX will filter out the bass signals below the crossover frequency from small speaker channels and forward them to the subwoofer. The higher the crossover frequency, the more bass signals will be subtracted. ASUS Xonar DX...

[Page 45: Smart Volume Normalization](#)

2 speakers and all sound effect processors will suspended except AEC function. Click "OK" to accept it; Click "Cancel" if you want to enable it later. Check "Don't remind me again" will not show this message again. ASUS Xonar DX...

[Page 46](#) When SVN is enabled, the master volume knob will be illuminated by a blue light. It will be lit red if the volume is muted. ASUS Xonar DX 0dB (Full-scale) -10 dB...

[Page 47: Ds3D Gx \(For Vista Only\) And Dsp Modes](#)

(using RMAA software or another machine-based measurement). Use the DSP mode button as the quick setup if you don't wish to know the details of the effect setup. (Note: no sound effects will be applied to high- definition 96KHz/192KHz content.) ASUS Xonar DX...

[Page 48: Vocalfx](#)

This mode is set for Music playback. This mode is set for DVD Movie playback. This mode is set for Games. ASUS Xonar DX...

[Page 49](#) You can add VOIP application into VOIP application List. It emulates different background environment effects when you chat online. Changes your voice pitch to different types for disguising your real voice or just for fun in online chatting ASUS Xonar DX...

[Page 50](#) Look for the application's location and Open it. Your VOIP application has been added into list. ASUS Xonar DX...

[Page 51](#) This message implies the record device will be set to microphone. Make sure the GX function is enabled. Click "OK" to accept it, or "Cancel" if you want to enable it later. Check "Don't remind me again" if you don't want to see this message pop up next time. ASUS Xonar DX...

[Page 52: Asio 2 Driver](#)

PCs, which is very important for professional music creation and editing. The Xonar DX package also provides Ableton Live and Sonar LE audio editing software, which all support ASIO output. The setup reference is described below. When Using Ableton Live... ASUS Xonar DX...

[Page 53](#) Step 2 is to select "ASIO" as the driver type. (WDM and MME are other Windows driver types) Step 3 is to choose "ASUS Xonar DX ASIO" as the Audio Device. Step 4 is to click the Hardware Setup to configure the Bit- depth (16/24bit) and latency (1ms~300ms).

[Page 54](#) ASUS Xonar DX...

[Page 55](#) (WDM and MME are Windows driver types) The changes will take effect after you restart the program next time. After step 2, Sonar LE will display 4 output drivers: "ASUS Xonar DX ASIO Out -00~06". Make sure you are using 00 or another one.

[Page 56: Portable Music Processor™ Software Guide](#)

MP3 encoder) After PMP is installed, you will find a PMP shortcut icon on the desktop. Double click the icon and PMP will show up as below. (referred to as PMP hereafter) ASUS Xonar DX...

[Page 57](#) "PMP Music" folder Software Update This button is used to check online for upgrades to the PMP software and download it for upgrade (make sure your computer is connected to the Internet before you click the button) ASUS Xonar DX...

[Page 58: Converting Music In "Main Setting" Page](#)

PMP. You can select all or click each check box to choose which file to be converted later. The files that have been converted during the process will show a check mark in the status column. ASUS Xonar DX...

[Page 59](#) Display for converting This display window will tell you the music being converted, status file type, bitrate, spent time, converted percentage, and speed. Information page Clicking the information button will display the version of PMP that you have installed. ASUS Xonar DX...

[Page 60: Find Converted Music In "Pmp Music" Page](#)

Find Converted Music in "PMP Music" Page The default conversion destination folder is C:\Program Files\ASUS PMP Lite\PMP Music\. You can easily click the PMP Music page to find the converted music library. The new file name will be copied and suffixed with the data rate and DH (ie.

[Page 61: Rmaa Test Guide](#)

RMAA stereo signals in the driver) Turn off all sound effects including Dolby, 7.1 speaker shifter, EQ, Environment, etc. A quick way to do so is to enable the "Hi-Fi mode" button in the Audio Center. ASUS Xonar DX...

[Page 62](#) You should use an external 3.5mm line cable as follows (as short as possible) to connect the Front-Out jack to the Line-In jack for loop-back testing. In that case, please select "Line In" as the recording source on the mixer page. 3.5mm Line Cable ASUS Xonar DX...

[Page 63](#) Click "Reset" on the playback volume mixer page to keep the volume setting on default. Turn the master volume to the MAX level (0dB) ASUS Xonar DX...

[Page 64: Configuration And Test With Rmaa](#)

Configuration and Test with RMAA Start RMAA and follow the setup procedure below. Select both of the playback/recording devices as "ASUS Xonar DX Audio". Select 24bit and 48KHz for the test signals. (If you change the format here, please remember to go back to set the same sample rate output in the Xonar DX Audio Center) Click "Test options"...

[Page 65](#) Go to the Sound Card tab and select "DirectSound" as the Driver Model (because Windows MME mode doesn't support high-resolution 24bit audio playback and the data may be manipulated by Windows so that the real hardware quality can not be measured properly.) Click loop-back mode test button ASUS Xonar DX...

[Page 66](#) If the recording volume level is not high enough, please check and make the WAVE and Master Volume have been at the maximum level; Instead, if the recording volume level is too high, please lower the WAVE and Master volumes gradually until the level is ok. ASUS Xonar DX...

[Page 67](#) Begin the test by clicking the “Done” button. If you cannot get the level to be “OK” after the previous step, click “Done” anyways and proceed. Enter “ASUS Xonar DX Audio” in the New slot name and select one Empty slot. Then click “OK”.

[Page 68](#) 10. RMAA will pop up the Test results window. You can click the “Select” checkbox and click to “Make html report”. 11. Check and key in the report name/options as follows and then click “OK”. ASUS Xonar DX...

[Page 69: Rmaa Testing Results](#)

Xonar DX audio card is for both output and input (one of the world’s finest sound cards, it has higher quality than most CE devices.) You can also try testing the performance for other sample rates and bit-depths with the same procedure. ASUS Xonar DX...

[Page 70: Rightmark Audio Analyzer Test](#)

From 20 Hz to 20 kHz, dB From 40 Hz to 15 kHz, dB Summary +0.01, -0.05 -112.7 112.6 0.0006 0.0009 -102.4 0.0010 Frequency response Response -0.11, +0.01 -0.05, +0.01 ASUS Xonar DX Excellent Excellent Excellent Excellent Excellent Excellent Excellent...

[Page 71: Dynamic Range](#)

Noise level Parameter RMS power, dB: RMS power (A-weighted), dB: Peak level, dB FS: DC offset, %: Dynamic range ASUS Xonar DX Left Right -111.4 -112.0 -112.4 -113.0 -87.5 -88.4 -0.00 -0.00...

[Page 72](#) DC offset, % Parameter THD, %: THD + Noise, %: THD + Noise (A-weighted), %: Left +111.4 +112.4 -0.00 THD + Noise (at -3 dB FS) Left 0.0006 0.0008 0.0010 ASUS Xonar DX Right +111.8 +112.8 -0.00 Right 0.0006 0.0008 0.0009...

[Page 73](#) Intermodulation distortion Parameter IMD + Noise, %: IMD + Noise (A-weighted), %: Stereo crosstalk Left Right +0.0010 +0.0009 +0.0008 +0.0007 ASUS Xonar DX...

[Page 74](#) Crosstalk at 10 KHz, dB Parameter IMD + Noise at 5 KHz, IMD + Noise at 10 KHz, IMD + Noise at 15 KHz, Left -109 -101 IMD (swept tones) Left 0.0011 0.0009 0.0009 ASUS Xonar DX Right -107 -101 Right 0.0011 0.0009 0.0009...

[Page 75: Troubleshooting And Faqs](#)

Panel and double click the “Xonar DX Audio Center” icon to make it visible in the system tray again. After the driver installation is complete, it’s recommended that you reboot your computer to complete the setup. If the icon still doesn’t appear, please try installing the driver package again. ASUS Xonar DX...

[Page 76](#) If you are using Windows Vista, please also go to system audio control panel to see the current default recording/ input device is right. Please remember to turn on the digital monitoring button for that recording source. ASUS Xonar DX...

[Page 77](#) (Ableton Live, Cakewalk, CoolEdit, Soundforge, etc.) to convert the sounds into 48KHz files. Please note that the frequency meter on Xonar DX Audio Center panel will not take effect either when the playback source is 96KHz or 192KHz sample rate to prevent any processing distortion. ASUS Xonar DX...

[Page 78: \[Faqs\]](#)

Fidelity SNR at 192K/24bit, which is the high quality consumer audio card in the world. Therefore, it’s also the best card to deliver the high quality audio through an analog connection to your home theater system or high-end multi-channel speakers. ASUS Xonar DX...

[Page 79](#) For attaining 5.1 channel surround sounds, you can select Dolby Digital Live encoding output from the S/PDIF out menu, which will allow the Xonar DX to deliver 5.1 surround sound for games, DVD movies, and even stereo music. ASUS Xonar DX...

[Page 80](#) ASUS Xonar DX...

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[Xonar dx 7 - xonar dx sound card](#)

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