

GeForce GT series

NVIDIA GeForce™ GT

User's Manual

Version 4.00

GeForce GT series

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Introduction

The GeForce GT is the perfect GPU for accelerating photos and video, playing games, and enjoying the new GPU-accelerated web.

Features and Specifications

Microsoft® DirectX® 11 Support

DirectX 11 GPU with Shader Model 5.0 support designed for ultra high performance in the new API's key graphics feature, GPU-accelerated tessellation.

Blu-Ray 3D Support

Enable a theater quality 3D in your home with seamless support for 1080p Blu-Ray 3D discs across any compatible 3D viewing system over HDMI 1.4, including active-shutter glasses and passive polarized displays.

Hardware Video Decode Acceleration¹

The combination of high-definition video decode acceleration and post-processing that delivers unprecedented picture clarity, smooth video, accurate color, and precise image scaling for movies and video.

TrueHD and DTS-HD Audio Bitstreaming Support

Full support for TrueHD and DTS-HD advanced lossless multi-channel HD audio codecs brings the rich sound of the master recording to your living room.

NVIDIA CUDA™ Technology

CUDA technology unlocks the power of the GPU's processor cores to accelerate the most demanding tasks such as video transcoding, physics simulation,

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ray tracing, and more, delivering incredible performance improvements over traditional CPUs.

NVIDIA PhysX® Technology

Full support for PhysX technology, enabling a totally new class of physical gaming interaction for a more dynamic and realistic experience with GeForce.

HDMI Output

Support for HDMI 1.4 output enables sending both high-definition video and audio signals to an HDTV via a single cable.

Dual-link DVI Support

Able to drive industry's largest and highest resolution flat-panel displays up to 2560x1600 and with support for High-bandwidth Digital Content Protection (HDCP).

PCI Express 2.0 Support

Designed for the new PCI Express 2.0 bus architecture offering the highest data transfer speeds for the most bandwidth-hungry games and 3D applications, while maintaining backwards compatibility with existing PCI Express motherboards for the broadest support.

Operating Systems

- Microsoft Windows 8, 7, Vista, XP

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Compatibility

- NVIDIA Unified Driver Architecture (UDA)
- Fully compliant with OpenGL including OpenGL 3.1
- Microsoft DirectX 11
- WHQL-certified for Windows 8, 7, Windows Vista, Windows XP

System Requirement

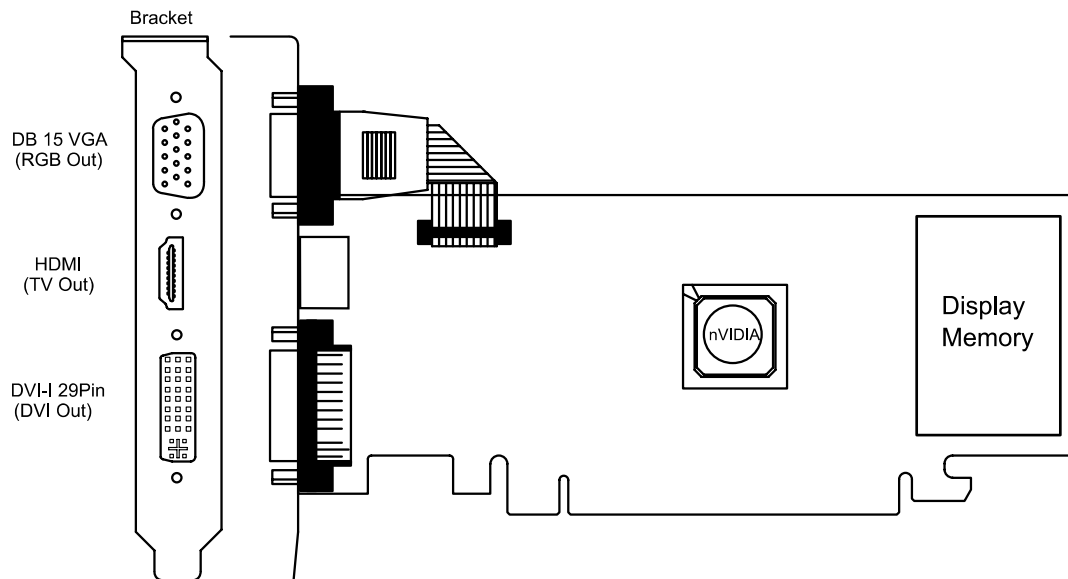
- Intel Pentium® P4 or compatible system with PCI- Express Bus (x16) Extension Slot or PCI slot (depend on card purchased)
- CD-ROM drive, Quad speed or faster
- Hard Drive with at least 200MB Free space
- MS Windows® 8/7/Vista/XP operating system
- Minimum 300 Watt power supply (Minimum recommended power supply with +12 Volt current rating of 20 Amp Amps.)

Check List

- Video-PX630GT-EX, Video-PX630GT-LX Video-PX620GT-EX, Video-PX620GT-LX, Video-PX610GT-EX, Video-PX520GT-LX, Video-PX430GT-LX, Video-PX658-DLP, Video-PX658-DLP-LX , Video-PX658-DLP-EX , Video-PX678-DLP or Video-PX678-DLP-EX Multimedia Accelerator
- DVI to VGA converter
- LFH to Dual DVI adapter cable (part# CB59DVI-I2C00) – Video-PX658-DLP, Video-PX658-DLP-LX, Video-PX658-DLP-EX, Video-PX678-DLP, Video-PX678-DLP-EX
- Software & Documents CD
- Quick Start Guide (Printed)

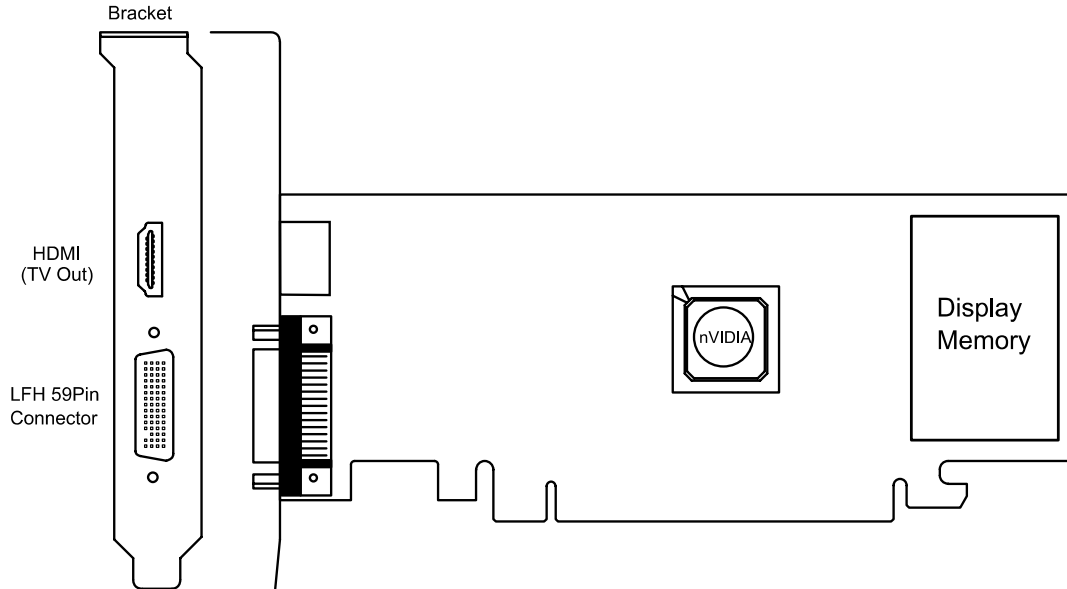
Hardware Description

Video-PX430GT-LX / Video-PX520GT-LX / Video-PX610GT-EX / Video-PX610GT-LX / Video-PX620GT-LX / Video-PX620GT-EX

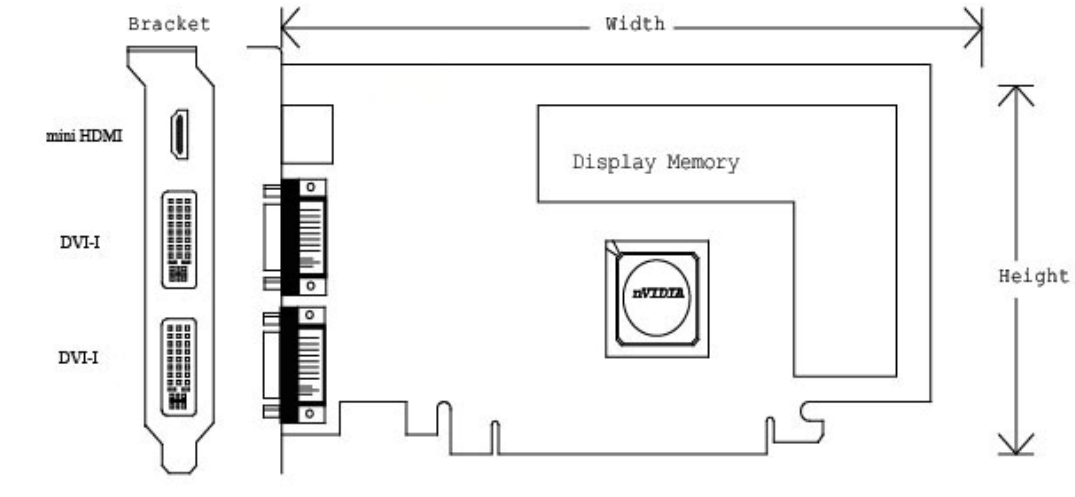


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Video-PX658-DLP/Video-PX658-DLP-LX / Video-PX658-DLP-EX / Video-PX678-DLP / Video-PX678-DLP



Video-PX630GT-LX / Video-PX630GT-EX



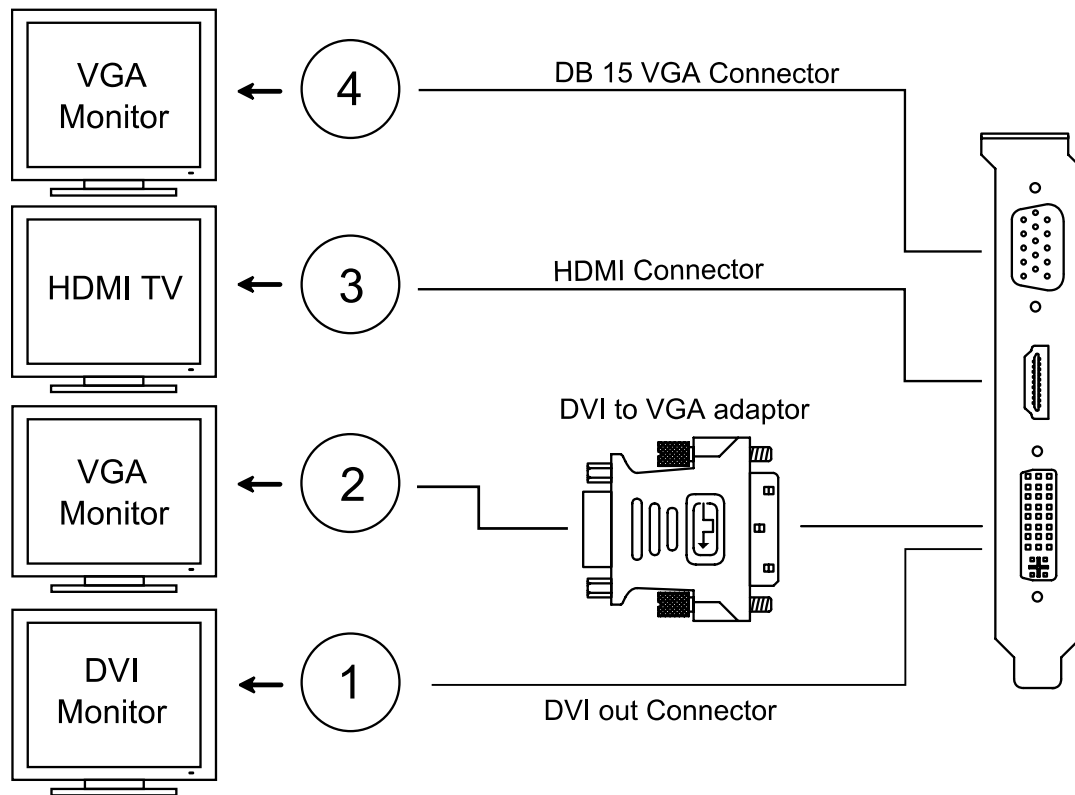
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Product name / PCB version		Core Chipset	PCB Size	Memory Size	
Video-PX430GT-LX	82658B	NVIDIA GeForce GT430	W=5.7" X H=2.713"	64M X 16 DDR3	1GB
Video-PX620GT-LX	82658C	NVIDIA GeForce GT620	W=5.94" X H=2.713"	128M X 8 DDR3	1GB
Video-PX620GT-EX	82658C	NVIDIA GeForce GT620	W=5.94" X H=2.713"	256M X 8 DDR3	2GB
Video-PX658-DLP	82658F	NVIDIA GeForce GT430	W=5.7" X H=2.713"	64M X 16 DDR3	1GB
Video-PX520GT-LX	82678A	NVIDIA GeForce GT520	W=5.7" X H=2.713"	128M X 16 DDR3	1GB
Video-PX610GT-LX	82678A	NVIDIA GeForce GT610	W=5.7" X H=2.713"	128M X 16 DDR3	1GB
Video-PX610GT-EX	82678A	NVIDIA GeForce GT610	W=5.7" X H=2.713"	128M X 16 DDR3	2GB
Video-PX678-DLP	82678F	NVIDIA GeForce GT610	W=5.7" X H=2.713"	128M X 16 DDR3	1GB
Video-PX678-DLP-EX	82678F	NVIDIA GeForce GT610	W=5.7" X H=2.713"	128M X 16 DDR3	2GB
Video-PX658-DLP-LX	82658F	NVIDIA GeForce GT630	W=5.7" X H=2.713"	64M X 16 DDR3	1GB
Video-PX658-DLP-EX	82658F	NVIDIA GeForce GT630	W=5.7" X H=2.713"	128M X 16 DDR3	2GB
Video-PX630GT-LX	82688A	NVIDIA GeForce GT630	W=6.6" X H=4.376"	64M X 16 DDR3	1GB
Video-PX630GT-EX	82688A	NVIDIA GeForce GT630	W=6.6" X H=4.376"	128M X 16 DDR3	2GB

Accessories for VGA cards are sold separately. Please go to <http://www.anvshopper.net> for details

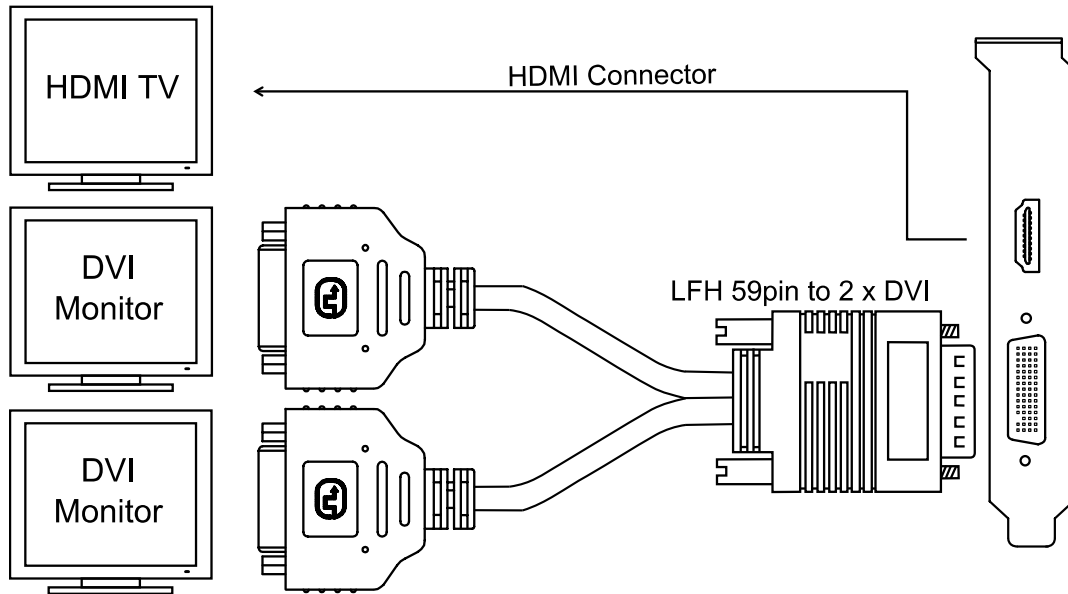
Display Devices Output

Video-PX430GT-LX / Video-PX520GT-LX / Video-PX610GT-LX / Video-PX610GT-EX / Video-PX620GT-LX / Video-PX620GT-EX

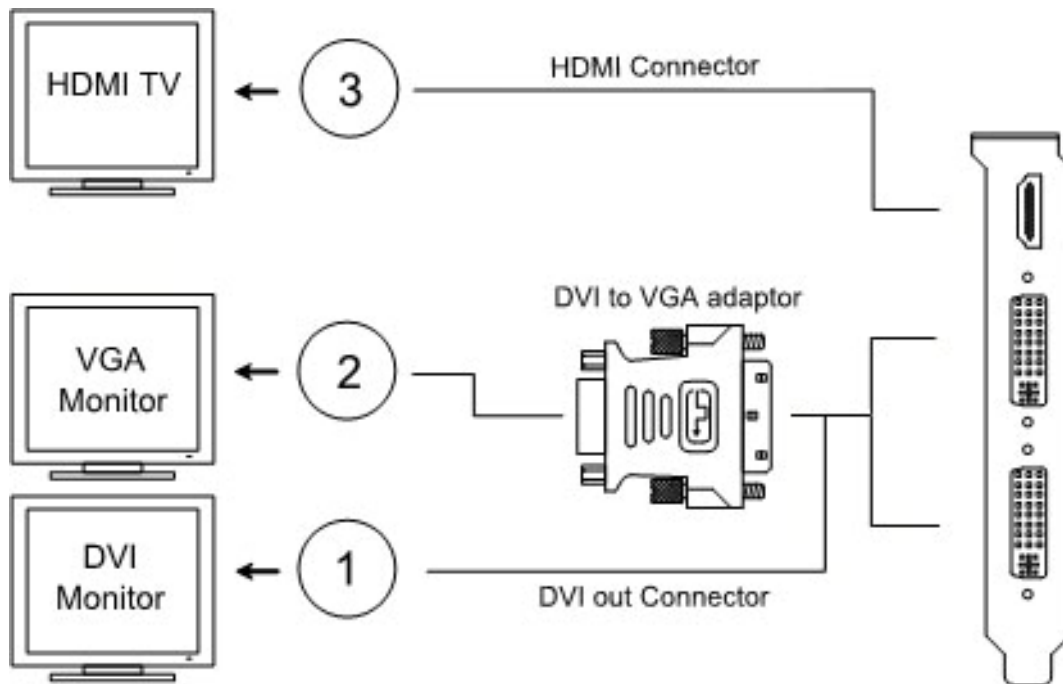


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Video-PX658-DLP / Video-PX658-DLP-LX / Video-PX658-DLP-EX / Video-PX678-DLP / Video-PX678-DLP-EX

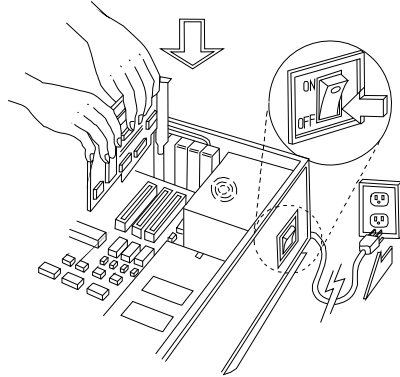


Video-PX630GT-LX / Video-PX630GT-EX



Hardware Installation

Installation Procedures



!! WARNING!!

Discharge static electricity by touching the **GROUND** such as metal part of your case connected with good power ground before you handle the electronic circuit boards.

The manufacturer assumes no liability for any damage, caused directly or indirectly, by improper installation of any components by unauthorized service personnel. If you do not feel comfortable performing the installation, consult with a qualified computer technician.

Steps:

1. Turn OFF all powers to your system, including any peripherals (printer, external drives, modem, etc.).
2. Disconnect the power cord and the monitor cable from the back of the computer.
3. Unfasten the cover mounting screws on your system and remove the system cover. Refer to your system user manual for instructions to determine the location of the mounting screws.
4. Remove the retaining screw that holds the slot cover in place. Slide the slot cover out and put the screw aside (you will need it to secure the adapter).
5. To install the adapter in PCI-E expansion slot, carefully line up the gold-fingered edge connector on the adapter directly above the expansion slot connector on the motherboard. Then press the adapter into place, completely. Use the (remaining) screw you removed to secure the adapter-retaining bracket in place.
6. Replace the computer cover. Secure the cover with the mounting screws you removed in Step 3.

You have now completed the installation of your new graphics adapter on your system.

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Upgrade Steps:

Add or change your video adapter to an existing system, you may precede a few steps before you install the new hardware and software (video display driver). The followings are some of the considerations:

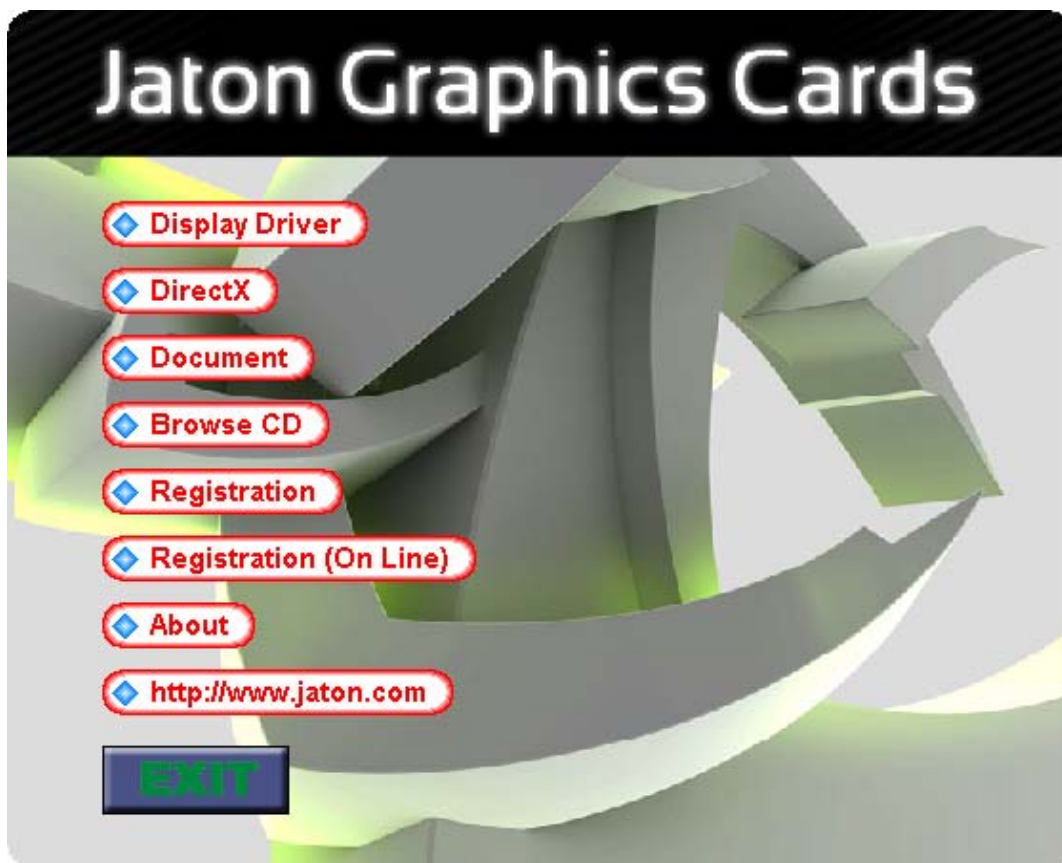
1. To add a new adapter, ensure the mainboard has available IRQ for new devices, and there is no conflict between each other.
2. If you try adding this video adapter to an ALL-IN-ONE mainboard (with a built-in video port), then you have to disable that port first in the Windows Device Manager. Otherwise, there will be a problem for the new video adapter setup.
3. The driver installation for system upgrade is the same as below, if error occurs when you proceed to step 1, 2 or 3, please consult with your system dealer or the existing hardware manufacturer support.

Software Installation

Windows® 8, 7, Vista and XP Driver Installation

InstallShield® Program:

Microsoft Windows® 7, Vista and XP detects this new hardware and places appropriate display driver from its system folder automatically - it doesn't matter if you have added a new driver or changed the existing one. To maximize the video board acceleration and increase its performance, you may install the manufacturer's display driver as follows:



1. Click on Display Driver to install video card driver.

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2. Click on "Agree and Continue" to continue the process.



3. Select Express or Customer and Click "NEXT" to continue.

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4. For Custom installation, Select the components to install and Click “NEXT” to continue.



5. Once installations has finished, Click “CLOSE” to finish.

Technical Assistance

Q: Why is the display shifted or changed sizes when I switch display modes?

Explain and Suggestion:

Some monitors lack auto-sizing features or just do not synchronize properly to the video board output. In some cases, horizontal and vertical display adjustments may be necessary. Use the monitor control panel functions to adjust screen.

In other cases, mode type and refresh rate adjustments may be necessary. Use the utility program, which provided by video card manufacturer or production developer. To center the display with normal type (mode 3), and to reduce (decrease) the refresh rate with the monitor's specification.

Q: What kind monitors can display 800x600 modes or higher resolution mode?

Explain and Suggestion:

To display 800x600 resolution at 60Hz refresh rate, the monitor must be capable of synchronizing a 31.5KHz horizontal scan rate (e.g., NEC 2A, 3D). At 72Hz refresh rate, the monitor must be capable of synchronizing a 48.0KHz scan rate (e.g., Sony HG 1304, NEC 4D, 5D, Seiko 1450).

To display 1024x768 interlaced mode; the monitor must be capable of synchronizing a 35.5KHz horizontal scan rate (e.g., NEC 3D, Seiko 1430 or 1440). To display 1024x768 non-interlaced mode at 60Hz, the monitor must be capable of synchronizing a 48.7KHz scan rate (e.g., Sony HG 1304, NEC 4D, 5D, Seiko 1450).

To display 1024x768 non-interlaced mode at 70Hz, the monitor must be capable of synchronizing a 56.4KHz scan rate (e.g., NEC 4D).

Q: System hangs-up after installing video driver.

Explain and Suggestion:

Today, most video drivers are developed for 32-bit processing and may require a channel to Code/Decode. Conflict between device drivers and TSR (terminate-and-stay-resident) programs will inverted the display, and are particularly effectual at crashing computer. The most effective way to check for conflicts is to replace with the original video driver, or delete and re-install the current video driver to the system.

Accomplishing IRQs (Interrupt Request Query) settings or troubleshooting the conflicts on hardware source may necessary. Most AGP video cards designed for Plug-n-Play, that means video card IRQ's setup which controls by main board's (motherboard) circuitry and BIOS. Physically pulling out other devices from system, and re-starts the computer. Confirm and modify your IRQ addresses with qualified computer technician.

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Q: Multiple images or unreadable screen after loading video driver.

Explain and Suggestion:

There are a variety of reasons why the display might be distorted. One common reason is a monitor mis-match. Some older multi-frequency monitors are unable to switch video modes without being turned off, then turned on again.

If the problem occurring in windows, make sure that you have loaded that proper video driver, and that the driver is compatible with the monitor being used. Try re-configuring your application software to use a compatible video mode. If problem persist in windows, load the standard generic VGA driver. The generic VGA driver should function properly with virtually every video board and VGA (or SVGA) monitor available.

If that is an unsatisfactory solution, you may have to upgrade to a monitor that supports the desired video mode.

Some new monitors are also synchronizing this problem because built-in DDC (Data-Digital-Channel) feature. Sometime that DDC automatically setup the display frequency without loading video driver. Try to turn it off, or change settings of monitor type in your system.

Q: Selection of color, resolution and refresh rate combination that always backs to default after restart the system.

Explain and Suggestion:

Accordingly, there must be a bug (defected source-code) in video driver, or in the system. Debug the source-code or fix the error in video driver that should be done by the driver developer. Likewise, upgrade the video driver from the manufacturer or from the original software developer is necessary.

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Technical Support

In the event you have a technical problem with this product, please read the README files in the software CD_ROM. Updated drivers are available through Jatón Web site. Have following information handy when you contact technical support:

- Name of the product.
- Software Driver and Version.
- System Information, such as CPU speed, BIOS version, Monitor Specification, etc.
- Description of the problems including any error messages.

Telephone: (510) 933-8886 (Mon. - Fri. 9am-5pm PST)

FAX: (510) 933-8887

email: vgasupport@jaton.com

Website: www.jaton.com

How to Obtain Warranty Service

In the worldwide contact:

<http://www.jaton.com>

In United States contact:

Jatón Corporation.

Service Center

47677 Lakeview Blvd.,

Fremont, CA 94538

Tel: 510-933-8886

Fax: 510-933-8887

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In Taiwan contact:

Jaton Technology Co., Ltd.

新北市汐止區大同路三段 194 號 10F

10F, No.194, Sec.3, Ta-Tung Rd., Hsi-Chih District,

New Taipei City, TAIWAN R.O.C.

Tel : 886-2-8647-1899

Fax : 886-2-8647-2679

The information in this document is subject to change without notice.

FCC SHIELDED CABLE WARNING:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation,

“SHIELD INTERFERENCE CABLE (S) MUST BE USED ACCORDING TO FCC 15.27©.”

CAUTION:

Changes or modifications not expressly approved by the Manufacturer could void your authority to operate this equipment in accordance with FCC rules and regulations.

SOFTWARE LICENSE AGREEMENT:

The Company grants the customer a non-exclusive, non-transferable license to use the software in this package for internal use on a single computer system. No other license of any kind is granted to any part of the product or any of the intellectual property therein.

Limited Warranty

Manufacturer warrants that all PC Products sold in United States are free from defects in material and workmanship for a period of one year from manufacturing date or from date of purchase.

For Users that register product within 60 days of purchase Jatón will provide Two years warranty from manufacturing date or from date of purchase. Some specific models may warrant for one year. (All Jatón Products Sold in U.S.A) Limited warranty applies only to the original purchaser of Jatón Product and is not transferable. This limited warranty does not apply if customer failed to Register Product, or over sixty (60) days from date of purchase (original invoice date). Users MUST register product within 60 days of purchase (from original invoice date) to receive Two years warranty. All products not registered within 60 days will ONLY receive a 1 year limited warranty from the purchase date (original invoice date).

This Limited Warranty does not cover any incompatibilities due to the user's computer, hardware, software or any related system configuration in which the Jatón Products interfaces. Manufacturer does not guarantee the compatibility of the video cards with any hardware components, systems or software that's available in the market. If a product is deemed incompatible by Manufacturer tech support, the product in question is therefore not defective and thus no warranty will be provided. It is the buyer's sole responsibility to do their own research and determine if the products to be purchased are compatible to the hardware components, systems or software they intend to use with. Proof of purchase will be required before any consideration by Manufacturer occurs. If you find any damage or missing items, please contact your dealer (point-of-purchase) as soon as possible.

Products purchased second hand or from an auction site do not carry any warranty.

Jatón Corp. does not offer refund on products not purchased directly from Jatón Corp. Refund claims would need to be processed through the vendor that sold the product, congruent to their return policy.

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Jaton Corp. reserves the right to claim for shipping fees along with a service charge from the customer for any incomplete or modified product that is returned and requires repair or replacement, or when the customer is not entitled to any coverage under this warranty.

Trademark and Copyright:

This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation.

Reverse engineering and disassembly are prohibited.

All Trademarks and Registered Trademarks belong to respective owners.

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Other Limits

The forgoing is in lieu of all other warranties, expressed or implied. Including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Manufacturer does not warrant against damages or defects arising out of improper or abnormal use of handling of the products; against defects or damages arising from improper installation (where installation is by persons other than Manufacturer), against defects in products or components not manufactured or installed by Manufacturer, or against damages result from non-manufacturer made products or components. This warranty does not apply if accident, abuse, nor misuse has damaged the Product. This warranty also does not apply to products upon which repairs have been affected or attempted by persons other than pursuant to written authorization by Manufacturer.

Exclusive Obligation

This warranty is exclusive. The sole and exclusive obligation of Manufacturer shall repair or replace the defective products in the manner and for the period provided above. Manufacturer shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, and strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, Manufacturer shall not be liable for incidental, special, or consequential damage.

Other Statements

Manufacturer's employees or representatives' **ORAL OR OTHER WRITTEN STATEMENTS DO NOT CONSTITUTE WARRANTIES**, shall not be relied upon by Buyer, and is not a part of the contract for sale or this Limited Warranty.

Terms and Conditions

Direct Jatón Customer: This warranty applies only for a period of two (2) years from purchase date of Jatón original invoice.

Reseller/ Vendor: This warranty applies only for a period of two (2) years from manufacturing date.

Registered User: This warranty applies only for a period of two (2) years from purchase date and **MUST** register within 60 days of purchase date from legal reseller. If Failure to register within 60 days from date of purchase then the warranty is one (1) year from the purchase date.

Others: If the products do not conform to this Limited Warranty (as herein above described), Manufacturer should charge services such as repair, replacement whether based on its costs. Shipping and installation of the replacement Products or replacement parts shall be at User's expense.

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Services agreement:

- (1) All applicants shall complete service request form from Manufacturer.
- (2) All returned checks will be charged a \$20.00 fee by Manufacturer.
- (3) All repair and replacement services allow 4-6 weeks from the date of receiving by Manufacturer.
- (4) All products without warranties require service processing fee \$20 (payment in advance), which is not refundable.

Entire Obligation

This Limited Warranty states the entire obligation of Manufacturer with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in force and effect. Some states do not allow limitation of implied warranties, or exclusive or limitation on product incidental or consequential damages, so above limitation may not apply to you. This warranty gives you specific legal rights. You may have other rights, which may vary from state to state.

This warranty applies only to this product, and is governed by the law of the State of California.

Reducing Warranty Claim Rejections

To reduce the potential of incurring damages not covered by Manufacturers warranties, we strongly recommend the following:

- Read your manuals before installing peripherals and/or before making changes to the machine's configuration;
- Ask your dealer if there are any known problems with the system requirements or installation procedures for any add-on products that your are purchasing;
- Buy industry standard products where compatibility issue are less likely to surface;
- If you are unsure about installation for a new product, contact your dealer's service department.

We believe it is important for you to know and understand what your warranty coverage provides and what it does not.

We also want you to be aware that most hardware warranties only relate to the function of the hardware. In most cases, no assurances are given by the manufacturer that the hardware item will work in conjunction with any other hardware item. If a computer product is not working because it is not compatible with another product, or because it has not been properly installed and set-up, the manufacturer does not pay for the service time. To help avoid these inconveniences, contact a professional consultant that one can help you determine the possibility of incompatibility issue before you purchase add-on or accessories.

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Warranty Service Use Only

Video-PX520GT-LX

1GB



A118E60028S

Product Label / Serial Number Sticker / Manufacture Date code

Part Number: Video-PX520GT-LX

Serial Number : A118E60028S

11 – Manufactured in 2011

8 – Manufactured in August