PCI Express 2D Power Saving Graphics Card

User Manual

ver.1.0

Driver & Manual Download :

Please visit SUNIX website *http://www.sunix.com* by searching keyword "VGA0419" or "VGA0449M" for manual & driver update.

Introduction

SUNIX PCI Exress graphics card which built-in ultra power saving graphics controller is specializes in commercial and industrial applications environments, only 2W ultra low power consumption, no heat-sink or fan needed, it is not only substantial increase in system MTBF rate and also best choice for green environmental protection energy conservation. With high quality 2D 1920x1080 FullHD resolutions, VGA (& DVI-I) outputs, various drivers supporting, and PCI Express Bus cost efficient design. This the high value and reliable graphics solution for server and cost conscious systems, such as servers, Thin Clients, ATM, POS system and industrial PC. This card is the best solution for multi-screen and expanding business opportunities.

Package Checklist

Please Check if the following items are present and in good condition upon opening your package. Contact your vendor if any item is damaged or missing.

1. SUNIX PCI Express 2D Power Saving Graphics Card
2. User Manual
3. CD Driver

System Requirement

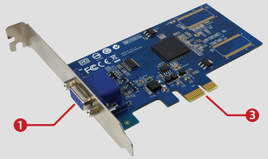
- One available x1, x4, x8 or x16 PCI Express slot. (Recommend PCI Express Gen2)
- Microsoft Windows XP, 7, 8.x and 10 operation systems.
- INTEL Core i Processor with 2GB DDR RAM or above.
- CD/DVD-ROM drive for driver installation, or user can download driver from SUNIX Website.

Features

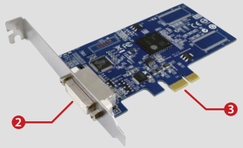
- Fully compliant with PCI Express 1.1 specification.
- Built-in both VGA RGB and DVI-I (single-Link) connections. (Product Dependent)
- Ultra-Low power consumption 2W makes heat sink free.
- Max 2D resolution FullHD 1920x1080 resolution.
- Certified by CE, FCC, VCCI, BSMI, C-Tick, and RoHS.
- Supports variety Windows and Linux operation systems.
- CE, FCC, VCCI, C-Tick, BSMI and RoHS certified, with Microsoft WHQL approval

Hardware Guide

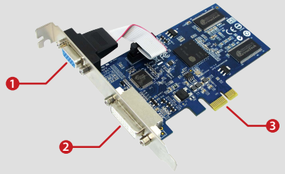
VGA0419 - PCIe Graphics Card with VGA Ouput :



VGA0429 - PCIe Graphics Card with DVI-I (Single Link) Ouput



VGA0449M - PCIe Graphics Card with VGA & DVI-I (Single Link) Ouput

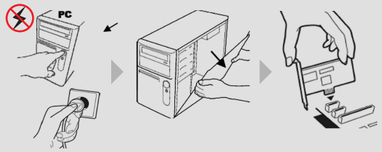


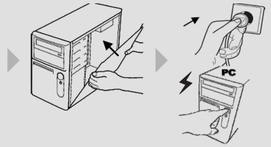
1. VGA port
2. DVI-I (Single Link) port
3. PCI Express x1 Gold Finger

Hardware Installation

Follow the instruction given below to install the PCI Express Card:

1. Turn your computer off and remove the power plug from the plug socket.
2. Remove the cover from the computer case.
3. Remove the metal cover plate on the rear of a free PCI Express slot (e.g. PCIe x1).
4. Insert the card into one free PCI Express slot and screw it firmly on the bracket side.
5. Place the cover back onto the computer.
6. Insert the plug into the plug socket.





Safety First:
To avoid damaging, make sure to discount power connection before wiring or disposing add-on card installation.

Specification

Hardware

Interface	PCI Express x1
Controller	Silicon motion SM750
Port Type	VGA0419 : VGA RGB (D-Sub) VGA0429 : DVI-I 24pin + 5pin Female Connector (single-Link) VGA0449M: VGA & DVI-I (Single Link)
Memory	VGA0419 : 16MB DDR Synchronous DRAM (SDRAM) VGA0429 : 16MB DDR Synchronous DRAM (SDRAM) VGA0449M: 64MB DDR Synchronous DRAM (SDRAM)
Power Consumption	2W @ 3.3VDC

Driver Support

Microsoft Client	XP / 7 / 8.1 / 10 (X86/X64)
Linux	Linux Kernel 2.x / 3.x

Regulatory Approvals

Hardware EMC	- EUR: CE EN55022 Class B, EN55024 - US: FCC Part 15 Class B - TAIWAN: BSMI: CNS13438 - AS/NZS: C-Tick: CISPR22 AS/NZS - JAPAN: VCCI

Environment

Operation Temperature	-10 to 70°C (-13.9 to 158°F)
Operation Humidity	5 to 95% RH (non-condensing)
Storage Temperature	-20 to 85°C (-4 to 185°F)

Resolution Support

Resolution for Windows						
	Color-16bit			Color-32bit		
	60Hz	75Hz	85Hz	60Hz	75Hz	85Hz
640x480	V	V	V	V	V	V
800x600	V	V	V	V	V	V
1024x600	V	-	-	V	-	-
1024x768	V	V	V	V	V	V
1280x720	V	-	-	V	-	-
1280x768	V	-	-	V	-	-
1280x800	V	-	-	V	-	-
1280x1024	V	V	V	V	V	V
1360x768	V	-	-	V	-	-
1440x900	V	-	-	V	-	-
1600x900	V	V	V	-	-	-
1680x1050	V	-	-	-	-	-
1920x1080	V	-	-	-	-	-

Driver Installation

SUNIX PCIe Graphics Host card design bases on Microsoft Windows and Linux operation systems. The table in this topic provides the operating system for the driver support lists.

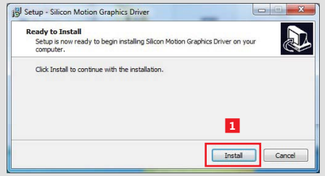
Operating System	USB3.1 Driver	Remark
Windows **10**	**Driver is Necessary**	Driver for Windows 10
Windows **8.1**		Driver for Windows 8.1
Windows **7**		Driver for Windows 7
Windows **XP**		Driver for Windows XP
Linux		Driver for Linux
MAC OS	Do NOT support	Do NOT support

PCI Express graphics card driver is necessary under Microsoft Windows operation system. Please install driver as below steps (Windows7 for example) :

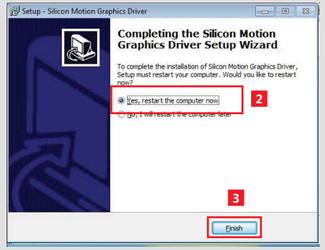
(1) Please insert the attached CD into your DVD ROM.
Specify OS driver installation folder that you are running , and click Setup.exe.
User also can go to SUNIX website to download least driver verison.

: \ Graphics Card \ PCI Express\ Siliconmotion \ Setup.exe

(2) Click "**Install**" to start driver installation.



(3) After driver installation ready, select " Yes, restart the compter now" or " No, I will restart computer later, and click "**Finish**" to end of the driver installation steps. PCI Express graphics card will enable after system rebooting.



Hardware Verify

Click on the "**Device Manager**" tab in the Windows Control Panel

Start > Control Panel > Device Manager

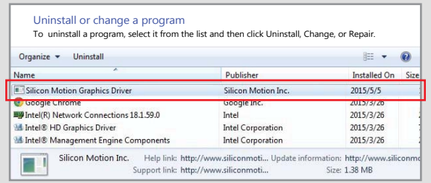
Entry Display adapters catalog, and "**SM750 Family - Silicon Motion - WDDM**" shows in the device manager.

Driver Uninstall

Click on the "**Programs and Features**" tab in the Windows Control Panel

Start > Control Panel > Programs and Features

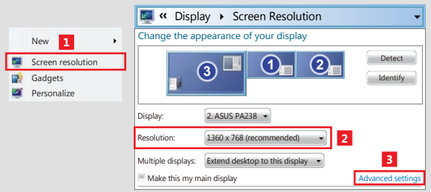
Entry Uninstall or change a program page, and double click "**Silicon Motion Graphics Driver**" to process driver uninstallation procedure.



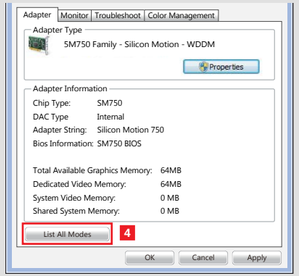
To complete the uninstallation of Silicon Motion Graphics Driver, plesae restart your computer.

Display Setting

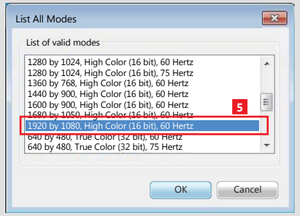
1. Right click your mouse on the desktop, and select "**Screen resolution**".
2. You can configure screen resolution in this page.
3. Click "**Advanced settings**" for detail configuration.



4. You can read Graphics information in "**Adapter**" page.
Click "**List All Modes**" to select the resolution that does not show in the display setting page.



5. You can read all support resolutuon list in the table, such as 1920x1080 @ 16-bit, 60Hertz.



Note:
Due to hardware limitation, this PCIe graphics card supports maximum 1440x900 @ 32-bit and 1920x1080 @ 16-bit resolution. Please refer to chapter "Specification" for the detail list of resolution table on page4.

Troubleshooting

Q 1. If card and display connected to the computer do not seem to be working properly, please perform below basic troubleshooting steps:
Ans: a. Check video cables are correct and securely connected.
b. Make sure monitor display's ower is turned on.
c. Make sure the monitor display's video source from VGA(RGB) or DVI.
d. Make sure add-on card installation ready. User can verify it in the device manager

Q 2. Computer failed to start after inserting the PCI Express card.
Ans: Turn off the computer, remove the PCI Express card, and try to restart the computer. If the computer starts successfully, it means that the card has not been inserted into the PCI Express slot correctly. Please clean PCI golden finger by rubber firstly, then change another PCI-E slot!

Q 3. How to deal with there is a yellow exclamation point on controller?

Ans: a. Please shutdown your computer and move the card to another available slot then re-install graphics driver again.

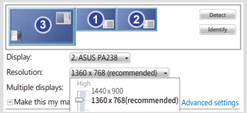
b. Please point on this device then right-check on the mouse.
Selecting "Update Driver" to renew graphics card's driver.

c. This exclamation point usually means there is a resource conflict between the this card and another card in your system. Please move the card to another available slot. Restart your computer. Windows will re-configure itself and re-assign resources. Check your device manager again.

Q 4. Could I run Mirror mode display with my on-board VGA source?
Ans: PCI Express Graphics card supports Extension mode in system, and it does NOT support Mirror mode with on-board VGA source. However, if your bought VGA0499M - PCIe VGA & DVI dual channels card, VGA and DVI output can run Mirror mode from the card. User can set Extend or Mirror mode in the Dsiplay Setting page.

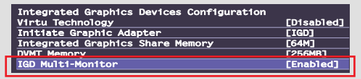
Q 5. How many graphics card that I can install in my PC system?
Ans: We recommed there is only graphics card in single PC system.

Q 6. I could not run 1080P 1920x1080 resolutiuon?
Ans: Make sure your display supports 1080P 1920x1080 resolutiuon.
Second please refer to Display Settings chapter to modify resolution from graphics card "Advanced settings" option. Due to hardware limitation, this PCIe graphics card supports maximum 1440x900 @ 32-bit and 1920x1080 @ 16-bit resolution.



Q 7. Will my USB 3.0/2.0 graphics adapter co-work with this PCIe graphics card?
Ans: Due to graphics driver design, this PCIe graphics card does not work with USB 3.0/2.0 graphics adapters.

Q 8. Will my onboard INTEL graphics controller co-work with this PCIe graphics card?
Ans: Yes, but you have to enable "**IGD Multi-Monitor**" feature in the motherboard's BIOS. But if you can not read this option under BIOS graphics device configuration catalog, you may contact with motherboard vendor to break the seal. Here is the example.



Regulatory Compliance

FCC Class B Declaration

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. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications not authorized by the manufacturer may void users authority to operate this device.

CE

This equipment meets the requirements of EC Electromagnetic Compatibility Directive (2004/108/EC and 2014/30/EC)

WEEE Information

For EU (European Union) member users: According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

Contact Information

Customer satisfaction is our number one concern, and to ensure that customers receive the full benefit of our products, SUNIX services has been set up to provide technical support, driver updates, product information, and user's manual updates.

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